

JSM 2012

PROGRAM BOOK

SAN DIEGO, CALIFORNIA • JULY 28–AUGUST 2, 2012



Computer Training Workshops:

All of the CTWs will be presented on

Wednesday, August 1, of JSM.

Here are the scheduled times:

- 1.** Advances in Tree-Based Modeling Tools, DataMining, Predictive Analytics, and Modeling Automation Technology: Introduction to SPM, Salford Predictive Modeler
■👉 **8:00 a.m. – 9:45 a.m.**
- 2.** Friedman: GPS (Generalized Pathseeker), ISLE (Importance Sampled learning Ensembles), and Rulefit Rule Extraction
■👉 **8:00 a.m. – 9:45 a.m.**
- 3.** Introduction to CART: Data Mining with Decision Trees
■👉 **10:00 a.m. – 11:45 a.m.**
- 4.** Introduction to MARS:
Predictive Modeling with Nonlinear Automated Regression Tools
■👉 **1:00 p.m. – 2:45 p.m.**
- 5.** Advances in Data Mining: Jerome Friedman's TreeNet/MART and Leo Breiman's Random Forests
■👉 **3:00 p.m. – 4:45 p.m.**

Presentation:

Interaction Detection With TreeNet(R)

Boosted Tree Ensembles for Predictive Modeling

Presented by Dan Steinberg, CEO and President, Salford Systems

Tuesday, 7/31/2012 beginning at 8:30 AM

YOU'RE INVITED

to learn more about ASA Accreditation

Accreditation Information Session

Tuesday, July 31

12:30 p.m.–1:30 p.m.

Room 30E of the San Diego Convention Center

Join Accreditation Committee chair, Iain Johnstone, for an overview of the accreditation process. Four accredited members—Sunita Ghosh, Colleen Kelly, Michael Posner, and Kelly Zou—will speak briefly about why they sought accreditation and offer advice. You will learn about the potential value of ASA accreditation to you and what is involved in applying.

The PStat[®] designation is a portfolio-based credential available to only ASA members. It is completely voluntary and intended for those who think such a credential would be meaningful in their professional lives. It recognizes:

- Advanced statistical training and knowledge
- Experience in competently applying appropriate statistical concepts and techniques
- Maintenance of appropriate professional development
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- Ability to communicate effectively

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- **Conference on Statistical Practice:** 20% discount on registration and short courses



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Association Contacts

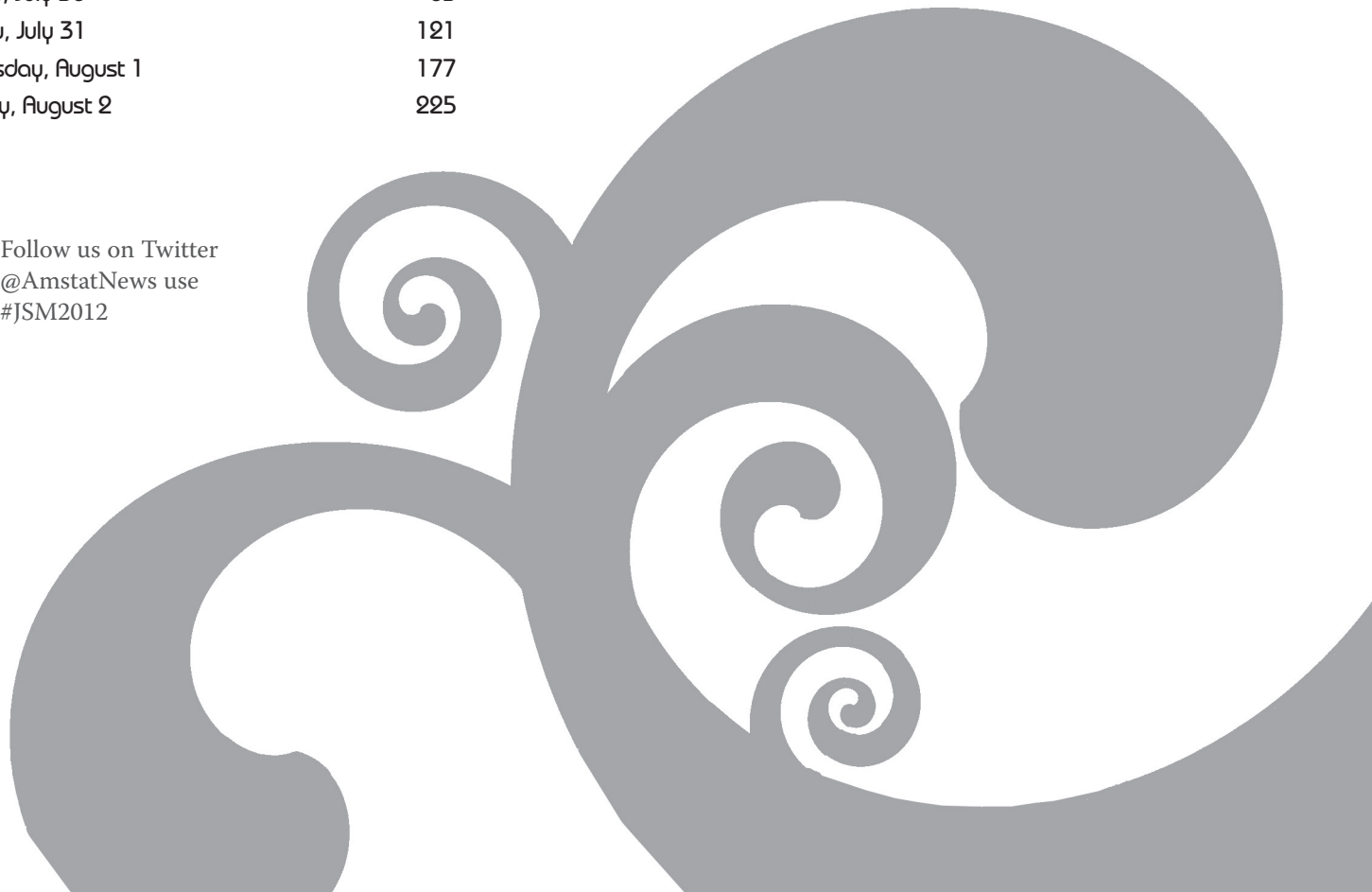
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2012 JSM Program Committee

Advisory Committee on Continuing Education

Mary C. Christman, Chair
MCC Statistical Consulting

Steven McKay Curtis
The Walt Disney Company

John G. Gabrosek
Grand Valley State University

Mithat Gonen
Memorial Sloan Kettering Cancer Center

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Young K. Kim
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Parthasarathi Lahiri
University of Maryland

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Emory University

Ronald E. McRoberts
U.S. Forest Service

ASA Continuing Education

Rick G. Peterson
American Statistical Association

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Meetings Planner

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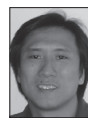
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Section on Teaching of Statistics in the Health Sciences
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Keynote Speakers



ASA President's Invited
Address

Alan Krueger
*White House Council of
Economic Advisors*

Monday, July 30, 4:00 p.m.



IMS Medallion Lecture I

Yoav Benjamini
Tel Aviv University

“Selective Inference”

Monday, July 30, 10:30 a.m.



ASA Deming Lecture

Jeff Wu
Georgia Tech

“Quality Evolution and Revolution: From Autos and Chips to Nano and Bio”

Tuesday, July 31, 4:00 p.m.



IMS Medallion Lecture II

Emmanuel Jean Candes
Stanford University

“Sparse and Low-Rank Models in Statistics: Theory and Applications”

Tuesday, July 31, 10:30 a.m.



ASA Presidential Address

Robert N. Rodriguez
SAS Institute, Inc.

“Building the Big Tent for Statistics”

Tuesday, July 31, 8:00 p.m.



IMS Medallion Lecture III

Donald Geman
The Johns Hopkins University

“Order Statistics and Gene Regulation”

Wednesday, August 1, 10:30 a.m.



COPSS Fisher Lecture

Roderick Little
University of Michigan

“In Praise of Simplicity, Not Mathematistry! Ten Simple, Powerful Ideas for the Statistical Scientist”

Wednesday, August 1, 4:00 p.m.

Hotel Listing

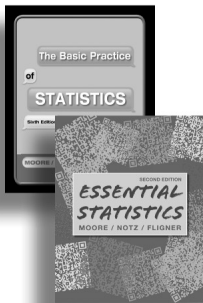
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|---------------------------------------|------------------------------------|--|
| A Hilton Bayfront San Diego (HQ) | E Hilton San Diego Gaslamp Quarter | I Hampton Inn San Diego Downtown |
| B Omni San Diego Hotel | F Horton Grand Hotel | J Holiday Inn on the Bay |
| C San Diego Marriott Marquis & Marina | G The Sofia Hotel | K The 500 West Hotel (economy housing) |
| D Manchester Grand Hyatt | H Courtyard by Marriott San Diego | |





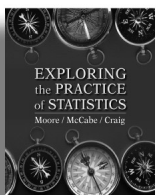
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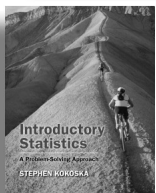


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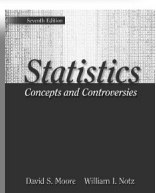


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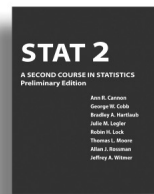
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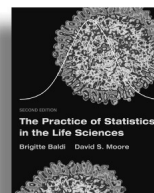
**INTRODUCTORY STATISTICS:
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Stephen Kokoska



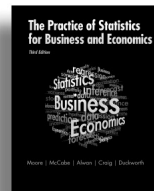
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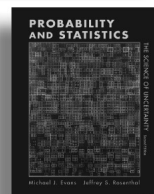
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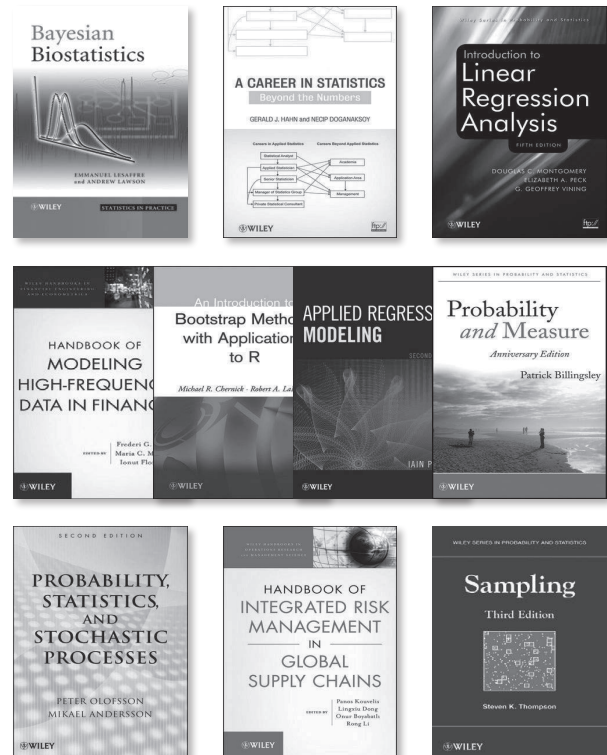
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- Use one of our e-readers to view our electronic books and other online features
- Scan our QR codes with your mobile device to view any of our leading statistics journals online
- Pick up a FREE copy of the Frommer's Guide to San Diego when you sign up for one of our mailing lists or Social Media sites
- Take part in our raffle for a chance to win a new e-reader device
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- Request your FREE journal sample copies, E-Content Alerting, or take part in our survey and collect your free USB



Leading and New Journals






Featured Books

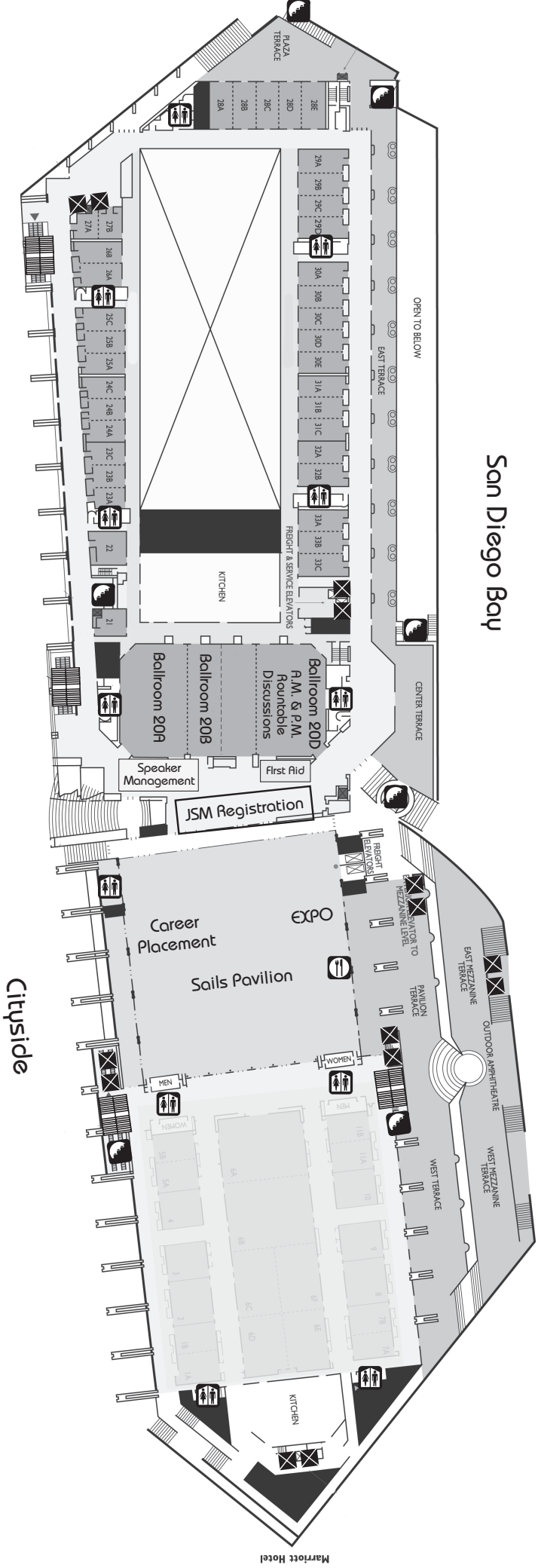


Convention Center Floor Plans

Upper Level

Key

-  Stairs
-  Handicap Access
-  Restrooms
-  Concession
-  Escalator
-  Elevators

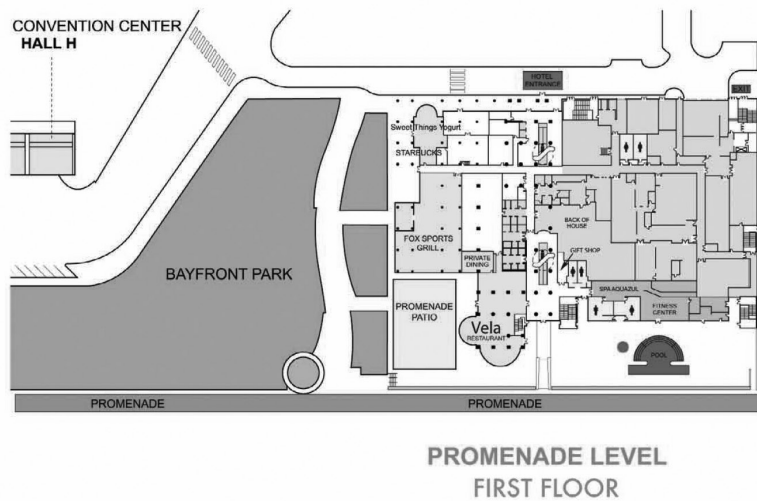
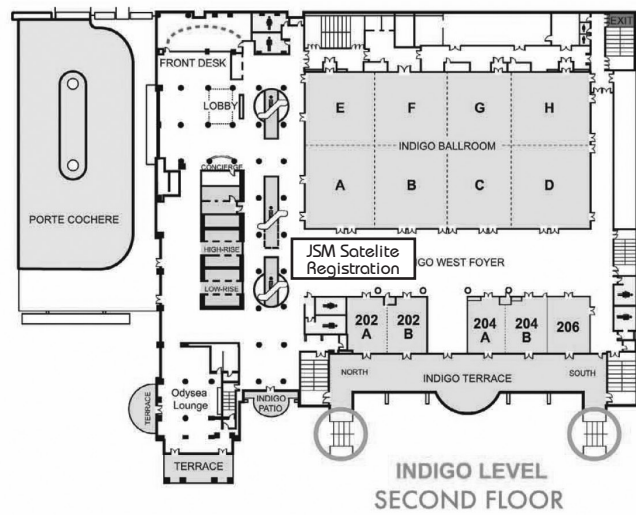
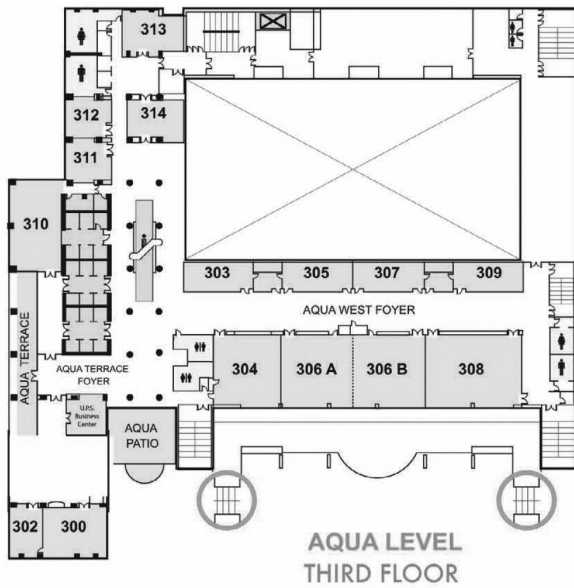
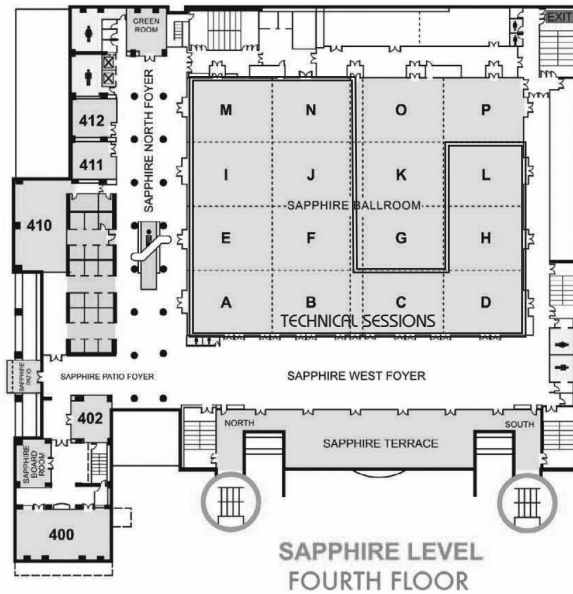
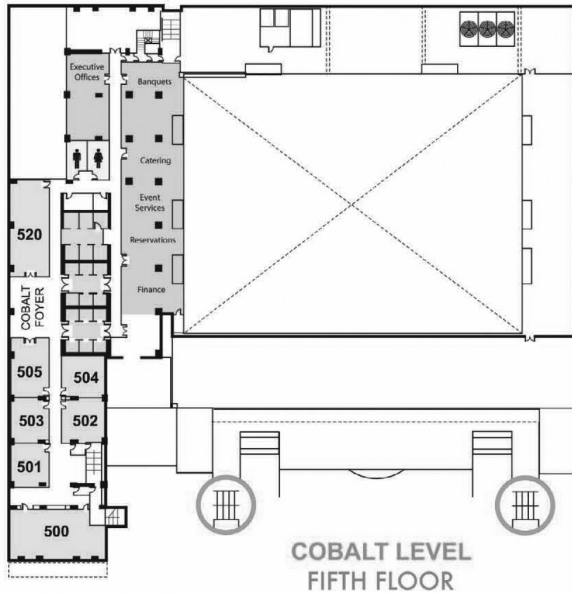


San Diego Bay

Citruside

Marriott Hotel

Hilton Bayfront San Diego Floor Plans



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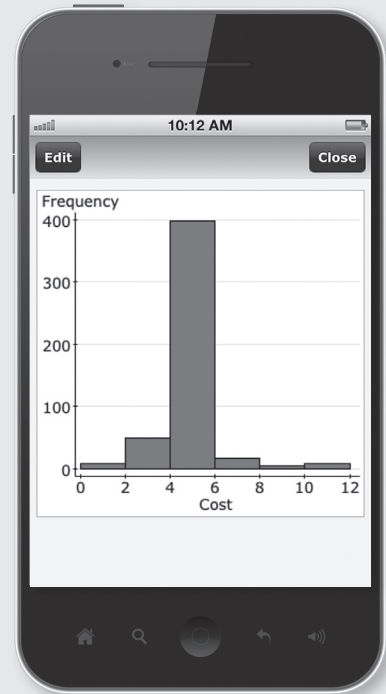
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3.1 Measures of Central Tendency

Objective: Explain what it means for a statistic to be resistant.

A random sample of 15 college students were asked "How many hours per week typically do you work outside the home?" Their responses are shown on the right.

11	31	2
14	8	15
16	21	16
19	24	29
22	9	28

Determine the shape of the distribution of hours worked by drawing a frequency histogram and computing the mean and median. Which measure of central tendency better describes hours worked?

Choose the correct frequency histogram below.

A. Hours Worked per Week B. Hours Worked per Week C. Hours Worked per Week

Is the histogram for the data set skewed right, skewed left, or symmetric?

skewed right
 symmetric
 skewed left

The mean number of hours worked by college students outside the home is approximately 17.667 hours. (Type an integer or decimal rounded to three decimal places as needed.)

The median number of hours worked by college students outside the home is 16 hours.

Which measure of central tendency better describes hours worked?

Click to select your answer, then click Check Answer.

Visit www.mystatlab.com for more information.

What You Need to Know

Emergency Telephone Messages

In case of emergency, messages may be left during registration hours. On Saturday only, please call (619) 321-6564. For Sunday through Thursday, please use (619) 525-6221. We will make every attempt to contact the person using information provided in their registration.

Convention Housing

Courtyard by Marriott San Diego	(619) 446-3000
Hampton Inn San Diego Downtown	(619) 233-8408
Hilton Bayfront San Diego (HQ)	(619) 564-3333
Hilton San Diego Gaslamp Quarter	(619) 231-4040
Holiday Inn on the Bay	(619) 232-3861
Horton Grand Hotel	(619) 544-1886
Manchester Grand Hyatt	(619) 232-1234
Omni San Diego Hotel	(619) 231-6664
San Diego Marriott Marquis & Marina	(619) 234-1500
The 500 West Hotel	(619) 234-5252
The Sofia Hotel	(619) 234-9200

Assistance for Those with Disabilities

Please contact a staff member at the Help Desk in the registration area of the San Diego Convention Center if you have a disability that may impede your participation.

Child Care

While JSM will not have organized child care available, services may be organized through Kiddie Corp (www.kiddiecorp.com, (858) 455-1718) or Marion's Childcare and Playtime Pros (www.playtimepros.com, (619) 303-4379).

Policies

Electronic Devices

All cell phones, pagers, and other electronic devices should be turned off before attending any session or meeting.

Smoking

Smoking is not permitted at any JSM function.

Photographs and Videotaping

Taking photographs or using video equipment during any JSM session or event is prohibited.

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Please use the paper, plastic, and aluminum trash containers located throughout the San Diego Convention Center. Also, participating in the towel and linen programs at area hotels makes a significant difference in the amount of energy and water used. You also can change the option from print to not print or use the paper recycling containers available at the Cyber Center. Finally, return JSM badges and badge holders to one of the designated bins in the registration area.

JSM Proceedings

Eligibility guidelines and author instructions for JSM 2012 presenters are available at www.amstat.org/meetings/jsm/2012/proceedings.cfm. The submission site will open on August 23, 2012, and close on September 28, 2012.

JSM 2013

The 2013 Joint Statistical Meetings will be held in Montréal, Québec, Canada, from August 3–8 at the Palais des congrés de Montréal. Check out the details at Booth #408 in the exhibit hall.

Membership

Information about the ASA, ENAR, WNAR, IMS, SSC, ICOSA, and IISA is available at the society booths in the registration area and exhibit hall. Each society provides a variety of publications and activities to anyone interested in applied and or theoretical statistics, and student membership is offered at substantially reduced rates.

Hours of Operation

Registration/ASA Membership/Help Desk/Press Desk

Hilton Bayfront San Diego
HQ-Indigo Foyer

Saturday	7:30 a.m. – 6:00 p.m.
Sunday	7:30 a.m. – 1:00 p.m.

San Diego Convention Center

CC-Ballroom 20 Lobby

Sunday	7:30 a.m. – 8:30 p.m.
Monday	7:30 a.m. – 6:00 p.m.
Tuesday – Wednesday	7:30 a.m. – 4:30 p.m.
Thursday	7:30 a.m. – 10:30 a.m.

Speaker Management Room

Speakers are required to check in at least four hours prior to their presentations to upload their materials to the speaker management system or confirm their materials were uploaded correctly. Session chairs also should check in to confirm all speakers have uploaded their materials.

Hilton Bayfront San Diego
(Satelite Speaker Management)
HQ-Sapphire 410

Sunday	9:00 a.m. – 7:00 p.m.
Monday – Wednesday	7:00 a.m. – 6:00 p.m.
Thursday	7:00 a.m. – 10:30 a.m.

CC-Ballroom 20A Workroom

Sunday	9:00 a.m. – 7:00 p.m.
Monday – Wednesday	7:00 a.m. – 6:00 p.m.
Thursday	7:00 a.m. – 10:30 a.m.

Career Placement Service

CC-Sails Pavilion

Saturday	9:00 a.m. – 5:00 p.m. (job posting and résumé submission only)
Sunday	1:00 p.m. – 6:00 p.m.
Monday – Tuesday	8:00 a.m. – 5:30 p.m.
Wednesday	8:00 a.m. – 2:30 p.m. (onsite registration closes at noon)

EXPO 2012

CC-Sails Pavilion

Visit publishers, software companies, and recruiters. See state-of-the-art products designed for the statistical community. WiFi is available in marked areas of the exhibit hall with support from Revolution Analytics.

Sunday	1:00 p.m. – 6:00 p.m.
Monday – Tuesday	9:00 a.m. – 5:30 p.m.
Wednesday	9:00 a.m. – 2:30 p.m.

Cyber Center

CC-Ballroom 20 Lobby

There are 15 terminals with Internet access available for your emailing needs, as well as three printers. The Cyber Center is available with support from IBM.

Sunday	7:30 a.m. – 8:30 p.m.
Monday – Wednesday	7:30 a.m. – 8:00 p.m.
Thursday	7:30 a.m. – 10:30 a.m.

Introductory Overview Lectures

Sunday, July 29, 4:00 p.m. – 5:50 p.m.

HQ-Sapphire MN

Session 46 – Causal Inference in Statistics

Monday, July 30, 8:30 a.m. – 10:20 a.m.

HQ-Sapphire MN

Session 97 – Adaptive Design and Personalized Medicine: The Future Is Now

Tuesday, July 31, 8:30 a.m. – 10:20 a.m.

HQ-Sapphire MN

Session 264 – Sparsity in Modern High-Dimensional Statistics

Wednesday, August 1, 8:30 a.m. – 10:20 a.m.

HQ-Sapphire MN

Session 435 – Statistics and Climate

Late-Breaking Session

Monday, July 30, 2:00 p.m. – 3:50 p.m.

HQ-Sapphire MN

Session 209 – The Role of Statisticians in Health Care Reform

ASA Marketplace

CC-Sails Pavilion, Booths #403, #405, #407

The ASA Marketplace is your store for the official JSM 2012 T-shirt and other JSM and ASA souvenirs.

Sunday	1:00 p.m. – 6:00 p.m.
Monday – Tuesday	9:00 a.m. – 5:30 p.m.
Wednesday	9:00 a.m. – 2:30 p.m.

San Diego Visitors Information Center

CC-Hall E Lobby

Operated by the Greater San Diego Convention and Visitors Bureau, this center provides extensive information about and referrals for restaurants and sightseeing. Stop by the desk and pick up current maps and travel information.

Sunday – Wednesday	9:00 a.m. – 6:00 p.m.
Thursday	9:00 a.m. – 3:00 p.m.

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Amazon.com



Amgen



Bank of America



Capital One



Chase



Eli Lilly and Company



FDA – Center for Devices and Radiological Health



FDA – Center for Drug Evaluation and Research



Merck and Company



NORC at the University of Chicago



Novartis Oncology



Pacific Northwest National Laboratory



SAS



Travelers

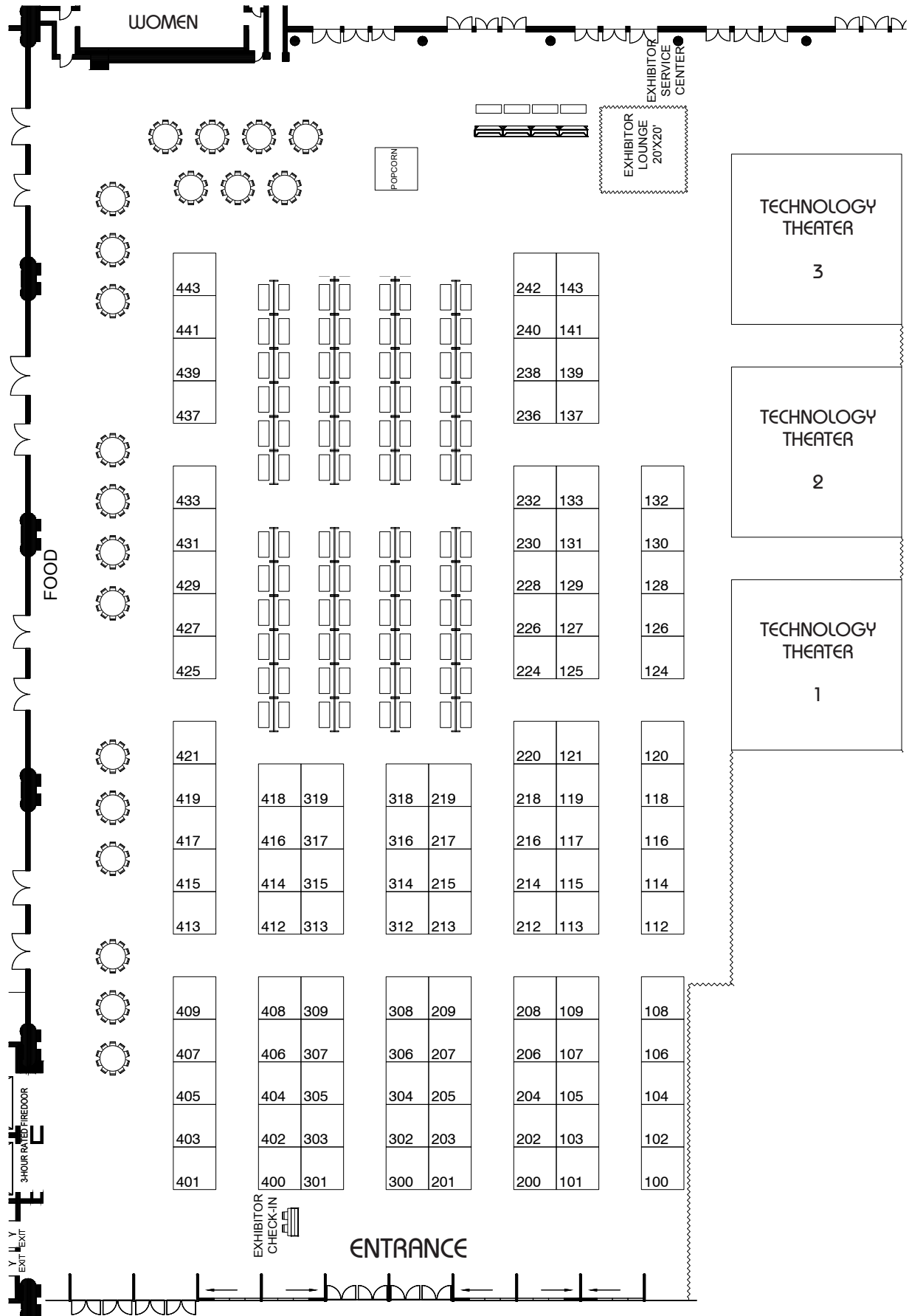
Virtual Message Center Access

Access the JSM Career Placement Service Message Center from anywhere! Employers and applicants will be able to communicate and arrange interviews anywhere there is Internet access. No need to come to the onsite placement service to check or send messages; just come for your scheduled interviews!

Registered Employers

American Institutes for Research
Axio Research LLC
BioStat Solutions, Inc.
Bureau of Labor Statistics
Caterpillar Inc
Chick-Fil-A, Inc.
CNA
eBay Inc.
The EMMES Corporation
Exponent
Fudan University, School of Management
IBM T. J. Watson Research Center
National Security Agency
Novartis Pharmaceuticals
OSI Pharmaceuticals
Shell Global Solutions
University of Mississippi Medical Center
University of South Carolina
University of Wisconsin-La Crosse
Villanova University, Department of Mathematics and Statistics
W. L. Gore
Westat

EXPO 2012 Floor Plan



Who's Who at EXPO 2012

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103	Tech Observer	301, 303	SAS Institute Inc., JMP Division
105, 107, 109	Springer	305, 307	SAS Books
112, 114	Pearson	306, 308	SAS Global Academic Program
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115, 117	SYSTAT Software, Inc.	313, 412	RTI International
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119	AAAS Science & Technology Policy Fellowships	316	National Cancer Institute/ National Institutes of Health
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Who's Who at EXPO 2012

AAAS Science & Technology Policy Fellowships (119)

Washington, DC

AAAS science and technology policy fellowships are one-year fellowships that seek to foster scientifically informed, evidence-based policy and practice by engaging scientists and engineers from a broad range of disciplines and career stages. A doctoral-level degree (or MS in engineering) is required. <http://fellowships.aaas.org>

Alaska Department of Fish and Game (116)

Juneau, AK

The Alaska Department of Fish and Game is a government agency constitutionally mandated to protect, maintain, and improve the fish and game resources of Alaska through sustained yield. ADF&G manages approximately 750 fisheries, 26 game management units, and 32 special areas. Our careers are unlike any other. Come discover Your Career in the Last Frontier™!

American Institutes for Research (238)

Washington, DC

AIR is one of the largest behavioral and social science research organizations in the world. Our over-riding goal is to use the best science available to bring the most effective ideas and approaches to enhancing everyday life. For us, making the world a better place is not wishful thinking. It is the goal that drives us.

American Statistical Association (401)

Alexandria, VA

The American Statistical Association, a scientific and educational society founded in Boston in 1839, is the second-oldest, continuously operating professional society in the United States. For 170 years, the ASA has provided its members and the public with up-to-date, useful information about statistics.

Aptiv Solutions/ADDPLAN (137, 236)

Southborough, MA

Aptiv Solutions is a global biopharmaceutical and medical device development company that specializes in the design, simulation, and execution of adaptive clinical trials. Aptiv Solutions recently launched ADDPLAN PE, our newest software specifically developed to support adaptive design and simulation for population-enrichment trials.

ASA-SIAM (404)

Alexandria, VA

Browse titles from the ASA-SIAM Series on Statistics and Applied Probability—the ASA's only book series. Save 20%–30% on books and complete a short survey for a chance to win an iPad.

BioStat Solutions, Inc. (419)

Mount Airy, MD

BSSI is a statistical consulting corporation in service to the pharmaceutical, biotechnology, and biodefense industries worldwide. Founded on the principle that effective communication is critical to success in translational research, BSSI provides expertise in the development and execution of analytical strategies in support of biomarker, vaccine, and medical device studies.

Brooks/Cole Cengage Learning (414, 416)

Belmont, CA

Cengage Learning is a leading provider of innovative teaching and learning solutions for the academic, professional, and library markets worldwide. The company's products and services are designed to foster academic excellence and professional development, increase student engagement, improve learning outcomes, and deliver authoritative information to people whenever and wherever they need it.

Bureau of Economic Analysis (127)

Washington, DC

The Bureau of Economic Analysis is an agency of the Department of Commerce. BEA produces economic accounts statistics that enable government and business decisionmakers, researchers, and the American public to follow and understand the performance of the nation's economy.

Bureau of Labor Statistics (219)

Washington, DC

The Bureau of Labor Statistics is the principal fact-finding agency for the federal government in the broad field of labor economics and statistics. The BLS is an independent national statistical agency that collects, processes, analyzes, and disseminates essential statistical data.

Cambridge University Press (218, 220)

New York, NY

Cambridge's publishing combines state-of-the-art content with the highest standards of scholarship, writing, and production. Visit us to browse and buy new titles at a 20% discount, including the latest in the Cambridge Series in Statistical and Probabilistic Mathematics, and to discuss your own publishing plans. www.cambridge.org/us/statistics

Centers for Disease Control and Prevention (242)

Atlanta, GA

The Centers for Disease Control and Prevention is one of the 13 major operating components of the Department of Health and Human Services, which is the principal agency in the United States government for protecting the health and safety of all Americans and for providing essential human services and information.

Who's Who at EXPO 2012

CRC Press - Taylor & Francis Group LLC (131, 133, 228, 230, 232)

Boca Raton, FL

Chapman & Hall/CRC - Taylor & Francis Group is a premier books and journals publisher, as well as a publishing partner with the ASA for six of its journals. Visit our booth to browse our newest books at a discount of up to 50% or to pick up a journal sample copy.

Cytel Inc. (125, 224)

Cambridge, MA

In 2012, Cytel celebrates 25 years of pioneering statistical software for designing, simulating, and analyzing clinical trials and research studies. Cytel also provides biostatistical consultancy, data monitoring committee support, study data management, SAS programming, and CDISC migration tools and services. www.cytel.com

Elsevier (143)

San Diego, CA

Elsevier is committed to bringing you the best research and reference tools from the most influential authors in the field. Stop by our booth and browse our new and best-selling statistics titles—available in print and for e-readers—and discover our suite of online products.

Experis Business Analytics (132)

Portage, MI

Since 1982, Experis Business Analytics has been providing tactical and strategic services that help our clients get the most value from their data. Our services enable our clients to integrate, analyze, and distribute their data across the organization and to key stakeholders outside of the organization.

Fred Hutchinson Cancer Research Center (226)

Seattle, WA

Fred Hutchinson Cancer Research Center, home of three Nobel laureates, is an independent, nonprofit research institution dedicated to the development and advancement of biomedical research to eliminate cancer and other potentially fatal diseases. Recognized internationally for its pioneering work in bone marrow transplantation, the center's five scientific divisions collaborate to form a unique environment for conducting basic and applied science.

Frontline Systems, Inc. (217)

Incline Village, NV

Frontline Systems, developers of the Solver in Microsoft Excel, has the software you need to build business analytics models in Excel or teach analytics methods to MBA students. One integrated tool set gives you data exploration and visualization, forecasting and data mining, decision trees, mathematical optimization, Monte Carlo simulation, and stochastic optimization.

Green Key Resources (128)

New York, NY

Green Key Resources is one of the fastest-growing professional recruitment firms offering a complete portfolio of staffing solutions, including temporary and contract staffing, executive search, and payroll services to leading pharmaceutical, biotechnology, medical device, and CRO companies nationwide.

Hawkes Learning Systems (100)

Mt. Pleasant, SC

With more than 30 years' experience specializing in mathematics and statistics courseware, Hawkes Learning Systems knows what it takes to provide the best learning tools to help students excel. Its unique approach to mastery learning motivates students and gives them the opportunity to succeed. That's why with Hawkes, "Students matter. Success counts."

IBM SPSS (200, 202)

Westford, MA

IBM SPSS predictive analytics software is a recognized leader in helping organizations predict what will happen next so they can take the best action to drive better business outcomes. The IBM SPSS portfolio of solutions enables organizations to analyze all of their structured and unstructured data to discover powerful new insights.

Institute of Mathematical Statistics (400)

Beachwood, OH

The Institute of Mathematical Statistics is a non-profit scholarly society. The purpose of the IMS is to foster the development and dissemination of the theory and applications of statistics and probability. The IMS publishes five core journals and partners with other organizations on an additional 17 publications.

TUESDAY JULY 31

Visit Taylor & Francis at Booth 131 for a Meet the Editor event with Sam Behseta and other editors of CHANCE!

While you're there, pick up a free copy of *CHANCE*, an official magazine of the American Statistical Association. Visit tandfonline.com/t/CHANCE to learn more about the magazine and sign up for table of contents alerts.

Who's Who at EXPO 2012

JSM 2013 (408)

Montréal, QC

Bonjour! Visit this booth for information about the 2013 JSM Host city, Montréal. Learn about Montréal's Old World charm infused with North-American energy. Representatives will have information about hotels, restaurants, and attractions, as well as be able to help answer your border questions. A perfect city for the 2013 JSM theme, "Celebrating the International Year of Statistics."

Mango Solutions (429)

Chippenham, Wiltshire

Mango Solutions is a statistical analysis company providing application development, training and consultancy to many of the world's largest companies. Our expertise lies in harnessing the power of complex statistical analysis to support business critical decisions. We engage in projects from statistical outsourcing to application building and delivery.

Marketplace (403, 405, 407)

Alexandria, VA

Stop by the JSM Marketplace, located on the exhibit hall floor this year. Check out our statistical T-shirts, children's wear, ASA souvenir items, and more.

Minitab Inc. (213, 312)

State College, PA

Minitab is the leading provider of quality improvement software. For more than 40 years, thousands of distinguished organizations and educational institutions in more than 100 countries have turned to Minitab for tools that help quality initiatives yield bottom-line benefits. Visit www.minitab.com.

National Cancer Institute/National Institutes of Health (316)

Rockville, MD

The National Institutes of Health is the primary federal agency for conducting and supporting medical research. NIH scientists investigate prevention, causes, treatments, and cures for diseases. Composed of 27 institutes and centers, the NIH provides leadership and financial support to researchers in every state.

National Center for Health Statistics (421)

Hyattsville, MD

The National Center for Health Statistics is the Nation's principal health statistics agency. We compile statistical information to guide actions and policies to improve the health of our people.

We are a unique public resource for health information—a critical element of public health and health policy.

National Science Foundation (120)

Arlington, VA

The National Science Foundation's Division of Mathematical Sciences supports innovative research in all areas of mathematical and statistical sciences. Most of these projects are awarded to individual or small groups of investigators working with students and postdoctoral researchers. DMS also invests in work force development, broadening participation, conferences, and research institutes and networks.

National Security Agency (124, 126)

Ft. Meade, MD

The National Security Agency is a federal government agency that provides foreign signals intelligence to decisionmakers and protects U.S. national security information systems.

NCHS Research Data Center (433)

Hyattsville, MD

The National Center for Health Statistics Research Data Center allows researchers access to restricted data. Today, in addition to providing access to NCHS data, the RDC also hosts restricted data from a variety of groups within the Department of Health and Human Services.

NCSS (207, 209)

Kaysville, UT

NCSS, a leader in statistical and sample size software, is demonstrating our sample size software, PASS 11, and a brand new edition of our statistical package, NCSS 8.

Oxford University Press (409)

Cary, NC

Oxford University Press is one of the world's leading publishers of books and journals on statistics. Visit us in San Diego at Booth 408 to browse our latest titles and take advantage of a 20% discount on all orders—and to pick up free sample copies of journals! www.oup.com/us

Pearson (112, 114)

Upper Saddle River, NJ

As the premier publisher in statistics, Pearson offers innovative content, robust online teaching tools, and powerful statistical software. Browse our booth to find the perfect solution for your classes, your students, and you.

Penn State World Campus (417)

University Park, PA

Penn State World Campus' 100% online graduate certificate and master of applied statistics are designed to provide training focused on developing data analysis skills and exploring core areas of applied statistics (DOE, ANOVA, Analysis of Discrete Data, MANOVA, and more) without going too deeply into the mathematical statistics foundations. <http://worldcampus.psu.edu>

ProQuest (118)

Ann Arbor, MI

ProQuest has forged a 70-year reputation as a gateway to the world's knowledge—from dissertations to governmental and cultural archives to news in all its forms. This energetic, fast-growing organization includes the Summon web-scale discovery service; the new ProQuest Dialog service; and business units ebrary, Serials Solutions, RefWorks-COST, and Bowker.

Who's Who at EXPO 2012

Provalis Research (216)

Montréal, QC

Provalis Research is the world's leading developer of text analysis software with groundbreaking qualitative and quantitative analysis programs such as QDA Miner, an innovative mixed methods qualitative data analysis software; WordStat, a powerful add-on module for computer-assisted content analysis and text mining; and Simstat, an easy yet powerful statistical software.

P-STAT Inc. (431)

Hopewell, NJ

P-STAT emphasizes extensive stub-and-banner survey analysis, sample balancing, and a very fast TURF procedure. P-STAT's programming language has macros, DO loops, IF-THEN-ELSE blocks, and date-and-time functions. Names of variables can be 64 characters; values can have 50,000 characters. P-STAT Inc. was incorporated in 1979.

Randstad Pharma (130)

Deerfield, IL

Randstad Pharma has been matching professionals with career opportunities at the world's leading biopharma and life sciences companies for more than 20 years. We focus on specific areas of clinical research and development, which includes clinical operations, pharmacovigilance, medical writing, clinical IT, biometrics, regulatory affairs, and much more.

Revolution Analytics (309)

Palo Alto, CA

Revolution Analytics delivers advanced analytics software at half the cost of existing solutions. By building on open source R—the world's most powerful statistics software—with innovations in big data analysis, integration, and user experience, Revolution Analytics meets the demands and requirements of modern data-driven businesses.

RStudio Inc. (208)

Boston, MA

RStudio is an open source integrated development environment for the R programming language. It combines the various components of R into a seamless and productive workbench for both new and advanced users. RStudio runs on Windows, OSX, Linux, or as a server to enable access via a web browser.

RTI International (313, 412)

Durham, NC

RTI International is an independent, nonprofit research institute based in Research Triangle Park, North Carolina. Established in 1958, RTI conducts research in health and pharmaceuticals, education and training, surveys and statistics, advanced technology, international development, economic and social policy, energy and the environment, and laboratory testing and chemical analysis.

SAGE (418)

Thousand Oaks, CA

SAGE is a leading international publisher of journals, books, and electronic media for academic, educational, and professional markets. Since 1965, SAGE has helped educate a global community spanning a wide range of subject areas, including business; humanities; social sciences; and science, technology, and medicine. Visit us at www.sagepub.com.

Salford Systems (215)

San Diego, CA

Salford Systems offers an accurate, ultra-fast data mining platform used by major organizations, including leaders in fraud detection, credit risk, direct marketing, online analytics, manufacturing, pharmaceuticals, logistics, natural resources, auditing, and national defense. The SPM software suite includes CART, MARS nonlinear regression, TreeNet boosted trees, RandomForests, GPST, RuleFit, and ISLET.

SAS Global Academic Program (306, 308)

Cary, NC

SAS is the leader in business intelligence and analytical software and services. The SAS Global Academic Program works with professors, students, and researchers to support industry partnerships with academia; deliver technology and resources for teaching and learning; and educate students about business intelligence, analytics, and data mining for business advantage. www.sas.com/academic

SAS Institute Inc. (300, 302, 304)

Cary, NC

SAS will exhibit its analytical software for statistics, data mining, econometrics, and statistical quality control. Please visit the SAS booth to learn more about recent and upcoming software, including SAS/STAT and SAS/ETS releases, and meet some of the SAS R&D statisticians.

SAS Institute Inc., JMP Division (301, 303)

Cary, NC

JMP is the SAS software designed for dynamic data visualization on the desktop. Interactive, comprehensive, and highly visual, JMP enables you to interact with your data to explore relationships, see hidden trends, dig into areas that interest you, and move in new directions you hadn't yet considered.

SAS Books (305, 307)

Cary, NC

Visit us to learn more about SAS Press, SAS product documentation, social media, and e-books. Also, save 20% on book orders.

Who's Who at EXPO 2012

SIAM (406)

Philadelphia, PA

SIAM's mission is to build cooperation between mathematics and the worlds of science and technology. Stop by our booth to save 20%–30% on popular SIAM titles in probability, statistics, computational science, and applied mathematics. Complete a short survey for a chance to win an iPad.

PharmaNet/i3 Strategic Resourcing (121)

New York, NY

Our two divisions, permanent placement and contract staffing, offer targeted recruitment in statistics, biostatistics, SAS programming, data management, market research, health outcomes, and epidemiology. Since 1980, we've provided clients and recruits dedicated service, experience, and insight into industry trends for positions at all levels. Permanent: www.smithhanley.com Contract: www.smithhanleyconsulting.com

Springer (105, 107, 109)

New York, NY

Visit the Springer booths and get further acquainted with an abundant selection of top-notch titles by award-winning authors. Springer's statistics publishing program is world-renowned and has produced many bestselling textbooks, monographs, reference works, and journals. Stop by and see for yourself!

StataCorp LP (201, 203, 205)

College Station, TX

Stata statistical software is a general purpose system intended for use by medical researchers, biostatisticians, epidemiologists, psychologists, economists, sociologists, political scientists, geographers, social scientists, and other research professionals. It is available for Windows, Mac, and Unix computers and provides full data management, graphics, statistical, and matrix language capabilities.

Stat-Ease, Inc. (206)

Minneapolis, MN

Stat-Ease, Inc. produces two easy-to-use Windows programs for design of experiments, including Design-Ease for finding breakthrough factors and Design-Expert for optimization. The company also offers computer-intensive DOE workshops, including Experiment Design Made Easy, Response Surface Methods for Process Optimization, and Mixture Design for Optimal Formulations.

STAT-HAWKERS (Sarjinder) (437)

Kingsville, TX

Come and learn how to teach elementary statistics through Sarjinder's own parables. Do not forget to ask for a desk copy of today's prestigious journal Model Assisted Statistics and Applications. Come and have fun with us, and get a free elephant for your kids or friends' kids.

Statistical Society of Canada (402)

Ottawa, ON

The Statistical Society of Canada is devoted to the development of the professional interests of statisticians and probabilists. It has four sections: Biostatistics, Business & Industrial Statistics, Probability, and Survey Methods. The SSC also offers two levels of accreditation: the Professional Statistician (P.Stat.) and the Associate Statistician (A.Stat.).

Statistical Solutions (214)

Saugus, MA

Statistical Solutions offers software tailored to researchers' needs. Products include nQuery Advisor/nTerim for both fixed and group sequential study designs; Solas Missing Data Analysis, including five multiple imputation techniques; BMDP, encompassing a library of statistical routines; and EquivTest, offering extensive test and CI for equivalence including PK calculations.

Statistics.com (315, 317)

Arlington, VA

Statistics.com, the leading provider of online education in statistics, offers 100+ courses in introductory and advanced analytics and statistics, as well as certificate programs. Students from around the world study with renowned authorities via private discussion boards on flexible schedules. Teaching assistants provide individual feedback on practical exercises.

StatPoint Technologies, Inc. (113, 212)

Warrenton, VA

StatPoint Technologies, Inc. offers statistical software for data analysis and visualization, including Statgraphics Centurion for Windows (an industry-leading product with a 30-year continuous development history), Statgraphics Sigma Express (for Microsoft Excel), and Statgraphics Online (for web use on many devices, including the Apple iPad). Training and consulting services also are offered.

StatSoft, Inc. (413, 415)

Tulsa, OK

StatSoft, Inc. is one of the largest global producers of enterprise and desktop software for data analysis, data mining, quality control, web-based analytics, and business decisioning. Our STATISTICA products are used at most major universities, corporations, and government agencies and are supported with training and consulting through 30 offices worldwide.

SYSTAT Software, Inc. (115, 117)

Chicago, IL

SYSTAT 13 is the most comprehensive and powerful statistical software for its price. SYSTAT's sister company, Advise Analytics, produces AdviseStat, a new intelligent statistics adviser that makes its own observations about your data and chooses the appropriate analysis for you. The perfect companion to any statistics package!

Who's Who at EXPO 2012

Tech Observer (103)

Hackensack, NJ

Tech Observer is a client-centric global clinical research organization and clinical staffing company helping you with all your statistical needs. Our BioStatistics and Clinical Programming group consists of more than 50 professionals having a PhD in biostatistics and 3–20+ years of clinical experience and statistical programmers with 2–15+ years of clinical SAS programming experience.

Texas A&M Statistical Services, LP (318)

Bryan, TX

Texas A&M Statistical Services is a newly established company dedicated to developing companies and organizations able to harness their data from internal operations and customers to guide strategic decisions and promote innovation. Its services include planning, training, and project support in statistics, business analytics, and process improvement.

Tigermed-MacroStat (129)

Wilmington, DE

Tigermed Consulting Co., Ltd. is a leading contract research organization in China dedicated to providing regulatory affairs, Phase I–IV clinical trials, biometrics, medical translation, and GCP training services for health care products. MacroStat is a fully owned subsidiary of Tigermed that focuses on biometrics. Ninety-five percent of its statistical projects come from global trials. www.tigermed.net

U.S. Census Bureau (314)

Washington, DC

The U.S. Census Bureau measures America's people, places, and economy. We produce economic and demographic statistics on business and industry, income, poverty, population, housing, transportation, and more. To identify socioeconomic changes, track trends, or see what's new, visit Booth #314. Follow us on Facebook, Twitter, and YouTube at uscensusbureau.gov.

University of Washington (443)

Seattle, WA

The departments of biostatistics and statistics at the University of Washington are recognized leaders in the statistical sciences. They offer MS and PhD training in biostatistics and statistics on campus, and they have online programs and summer short courses.

USDA, Economic Research Service (427)

Washington, DC

The Economic Research Service is a primary source of economic information and research within USDA on issues involving food, farming, natural resources, and rural development. ERS's economists and social scientists conduct research, analyze food and commodity markets, produce policy studies, and develop economic and statistical indicators. www.ers.usda.gov

USDA, National Agricultural Statistics Service (425)

Washington, DC

The National Agricultural Statistics Service disseminates data on every facet of U.S. agriculture. The agency conducts surveys and issues 500 reports annually. NASS conducts the Census of Agriculture every five years, providing the only source of agricultural data for every county in the nation. NASS reports are available at www.nass.usda.gov.

Valesta Clinical Research Solutions (319)

Calabasas, CA

Valesta Clinical Research Solutions is a proven industry leader in placing skilled clinical research professionals at all career levels in project-based, contract-to-hire, and direct hire opportunities. We have a long track record of making successful job matches in specialized areas, including clinical data, clinical monitoring, medical writing, biometrics, and regulatory affairs.

W.H. Freeman (101)

New York, NY

W.H. Freeman/Macmillan publishes high-quality textbooks and media. Visit Booth #101 to learn about our new and popular titles for introductory statistics, second course in statistics, business statistics, statistics for the life sciences, and others. We also will have demonstrations of our popular online homework StatsPortal (www.yourstatsportal.com) and new LearningCurve. Visit us today!

Wiley (102, 104, 106, 108)

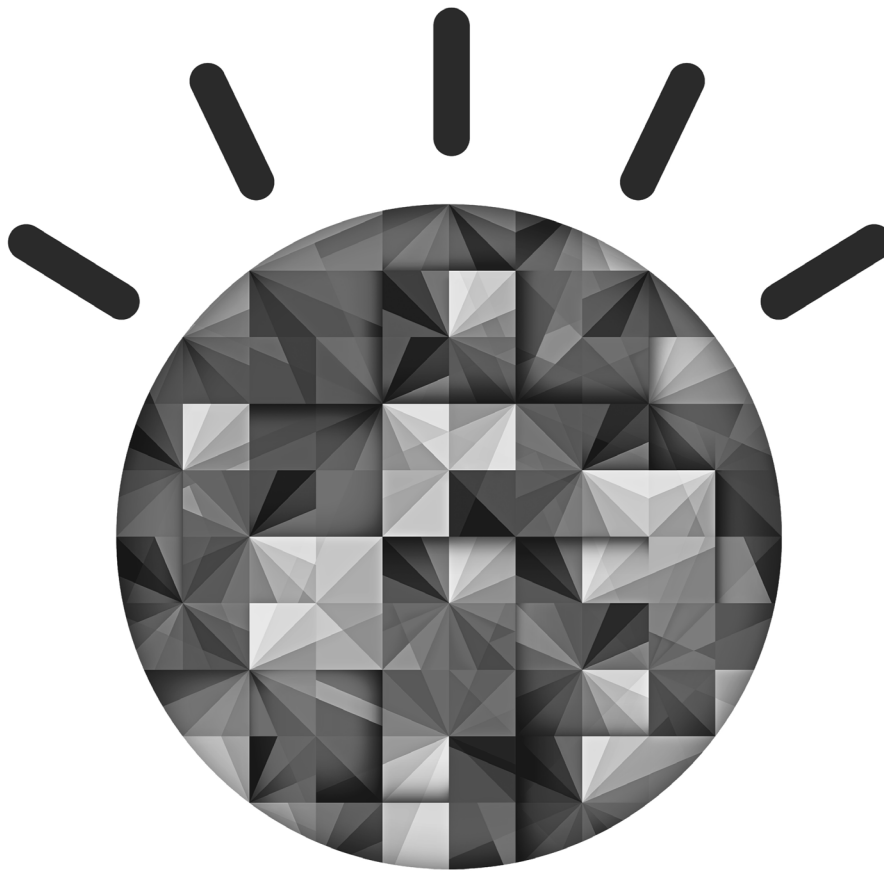
Hoboken, NJ

Wiley-Blackwell publishes a vast array of leading book, journal, and electronic content in statistics across a wide range of disciplines. Our international portfolio provides applications for statisticians and researchers. We publish more than 20 journals and partner with leading societies. Visit www.wiley.com/WileyCDA/Section/id-351216.html for book offerings and www.wileyonlinelibrary.com/subject/statistics for journal and online information.

Wolfram Research (204)

Champaign, IL

Wolfram Research is the company where "computation meets knowledge." A powerhouse in technical innovation, the company is the developer of Mathematica, the ultimate computation platform, and Wolfram|Alpha, the computational knowledge engine. Wolfram also sponsors the world's largest free network of technical information websites, including MathWorld and the Wolfram Demonstrations Project.



A smarter planet is built on smarter analytics.

From the Industrial Age to the rise of the globally integrated enterprise, every new era has been driven by a fundamental change in how organizations relate to the world. But it's how businesses adapt to these changes that defines who will succeed and who will be left behind. Mounting evidence suggests that we're entering a new era right now, and the change that's driving it is the rise of big data—the 2.5 quintillion bytes being produced each day, which represents the collective output of every person, every organization and every instrumented thing.

In a world defined by big data, it's hard to overstate the importance of analytics, which makes it possible to find opportunities in the noise, to see the patterns hidden in the data and, ultimately, to predict what's coming next and act on it.

In fact, a 2011 *MIT Sloan Management Review* and IBM study found that organizations that embrace analytics are 2.2 times more likely to substantially outperform industry peers.

But not all approaches to analytics are equally smart. A smarter approach means the ability to apply analytics to *all* of an organization's data—not just the structured data from databases or applications, but also the more elusive data that exists outside a business's four walls: things like weather patterns, economic trends, even tweets.

This isn't just theory. Top businesses are putting it into practice, moving beyond *using* analytics to actually *becoming* analytic.

For Belgium's leading ticket vendor, Tele Ticket Service, this has meant changing one of the most fundamental parts of their business: their pricing model. By using analytics to "read" trends in ticket sales, they've been able to introduce flexible pricing that

automatically adjusts the prices of tickets in different seating areas based on trends in demand.

Other leading businesses are using analytics to transform their financial processes. By leveraging tools like real-time dashboards, financial close process automation and financial forecasting, Omnicom Group was able to reduce its investment in working capital by \$200 million.

And for McKesson, a pharmaceutical distributor, analytics is reshaping the very core of their business. With a holistic view of their entire supply chain, they can now cost out services based on product line, mode of transportation, even their carbon footprint, allowing them to be more responsive to customer needs and to reduce their working capital by more than \$100 million.

These aren't isolated examples. In more than 20,000 engagements over the last three years, IBM has helped organizations internalize a smarter approach to analytics—giving IBM the unique vantage point to track patterns across industries and apply those insights to every new client engagement. This commitment to analytics has resulted in well over 500 analytics-related patents every year, contributing to IBM's record as the number one recipient of U.S. patents for 19 years running.

As we move deeper into the era of big data, IBM will continue to push the boundaries of what's possible with analytics, including pioneering new systems like Watson that not only are able to assess and predict, but also are able to learn and reason. On a smarter planet, the opportunities are as vast as the data.

Let's build a smarter planet. Join us and see what others are doing at ibm.com/smarteranalytics



Continuing Education at a Glance

Time	Course	Instructor(s)	Course Title
Saturday, July 28			
8:30 a.m.–5:00 p.m.	CE_01C	Alan Agresti/Bernhard Klingenberg	Modeling Ordinal Categorical Data (Part 1 of two-day course)
8:30 a.m.–5:00 p.m.	CE_02C	John Emerson/Hadley Wickham	Introduction to Data Visualization and Analysis with R
8:30 a.m.–5:00 p.m.	CE_03C	Alex Dmitrienko/Devan Mehrotra/Keaven Anderson	Analysis of Clinical Trials: Theory and Applications
8:30 a.m.–5:00 p.m.	CE_04C	Thomas Mathew/Kalimuthu Krishnamoorthy	Statistical Methodologies for Exposure Data Analysis
8:30 a.m.–5:00 p.m.	CE_05C	Hongzhe Li/Wei Pan	Statistical Methods for Genome-Wide Association, Copy Number Variants, and Rare Variants Analysis
8:30 a.m.–5:00 p.m.	CE_06C	Daniel Cooley	Introduction to Analysis of Extremes: Univariate and Multivariate Cases
Sunday, July 29			
8:30 a.m.–5:00 p.m.	CE_01C	Alan Agresti/Bernhard Klingenberg	Modeling Ordinal Categorical Data (Part 2 of two-day course)
8:30 a.m.–5:00 p.m.	CE_07C	Christopher Wikle/Neil Cressie	Statistics for Spatio-Temporal Data
8:30 a.m.–5:00 p.m.	CE_08C	Mark van der Laan/Maya Petersen/Sherri Rose	Targeted Learning: Causal Inference for Observational and Experimental Data
8:30 a.m.–5:00 p.m.	CE_09C	Bradley P. Carlin/Laura A. Hatfield	Introduction to Bayesian Methods and Software for Data Analysis
8:30 a.m.–5:00 p.m.	CE_10C	Yuedong Wang	Smoothing Splines: Methods and Applications
8:30 a.m.–5:00 p.m.	CE_11C	Thomas Lumley	Analysis of Data from Complex Surveys Using R
Monday, July 30			
8:00 a.m.–noon	CE_12C	Bertrand Clarke	Nonlinear Regression and Ensemble Methods
8:30 a.m.–5:00 p.m.	CE_13C	Fang Chen	Practical Bayesian Computation
8:30 a.m.–5:00 p.m.	CE_14C	Ben Hansen	Propensity Score Matching in R
8:30 a.m.–5:00 p.m.	CE_15C	Roderick Little/Trivellore Raghunathan	Statistical Analysis with Missing Data
8:30 a.m.–5:00 p.m.	CE_16C	Raquel Prado/Mike West	Bayesian Time Series Analysis and Forecasting: Models and Methods
8:30 a.m.–5:00 p.m.	CE_17C	Frauke Kreuter	Paradata in Survey Research
1:00 p.m.–5:00 p.m.	CE_18C	Christopher Schmid/Ingram Olkin	Meta-Analysis: Combining the Results of Multiple Studies
Tuesday, July 31			
8:00 a.m.–noon	CE_19C	Tianxi Cai/Yingye Zheng	Design and Analysis of Biomarker Studies for Risk Prediction
8:30 a.m.–5:00 p.m.	CE_20C	Scott Berry/Kert Viele	Bayesian Clinical Trials
8:30 a.m.–5:00 p.m.	CE_21C	Gareth James/Yufeng Liu	An Introduction to Statistical Learning
8:30 a.m.–5:00 p.m.	CE_22C	Simon Wood	Generalized Additive Models and Their Extensions: The Penalized Regression Spline Approach
8:30 a.m.–5:00 p.m.	CE_23C	Brian Wiens	Design and Analysis of Noninferiority Trials
8:30 a.m.–5:00 p.m.	CE_24C	Peter Bajorski	Principles and Applications of Multivariate Analysis
8:30 a.m.–5:00 p.m.	CE_25C	Jorge Morel/Nagaraj Neerchal	Analysis of Overdispersed Data Using SAS
1:00 p.m.–5:00 p.m.	CE_26C	Rick Wicklin	Simulation and Sampling of Data
Wednesday, August 1			
8:00 a.m.–9:45 a.m.	CE_27T	Pushpal K. Mukhopadhyay	SAS Procedures for Analyzing Survey Data
8:00 a.m.–9:45 a.m.	CE_28T	Russ Wolfinger/Richard Zink	Predictive Modeling in the Life Sciences
8:00 a.m.–9:45 a.m.	CE_29T	Dan Steinberg	Advances in Tree-Based Modeling Tools, Data Mining, Predictive Analytics, and Modeling Automation Technology: Introduction to SPM, Salford Predictive Modeler
8:00 a.m.–9:45 a.m.	CE_30T	Mikhail Golovnya	Advances in Data Mining, State-of-the-Art Algorithms from Jerome Friedman: GPS (Generalized Pathseeker), ISLE (Importance Sampled Learning Ensembles), and Rulefit Rule Extraction Engine
10:00 a.m.–11:45 a.m.	CE_31T	Warren Kuhfeld	Creating Statistical Graphics with SAS
10:00 a.m.–11:45 a.m.	CE_32T	Jeffrey Pitblado	Survey Data Analysis with Stata
10:00 a.m.–11:45 a.m.	CE_33T	Mikhail Golovnya	Introduction to CART: Data Mining with Decision Trees
10:00 a.m.–11:45 a.m.	CE_34T	Cyrus Mehta	East Architect: A Powerful New Statistical Environment for Designing, Monitoring, and Simulating Clinical Trials
1:00 p.m.–2:45 p.m.	CE_35T	Yang Yuan	Group Sequential Analysis Using SAS Software
1:00 p.m.–2:45 p.m.	CE_36T	Bill Rising	Multilevel and Mixed Models in Stata
1:00 p.m.–2:45 p.m.	CE_37T	Mikhail Golovnya	Introduction to MARS: Predictive Modeling with Nonlinear Automated Regression Tools
1:00 p.m.–2:45 p.m.	CE_38T	Christopher Corcoran/Pralay Senchaudhuri	25 Years of Cytel Exact Software: Overview of StatXact for Nonparametric Tests with Special Application to Correlated Categorical Data
3:00 p.m.–4:45 p.m.	CE_39T	Yiu-Fai Yung/ Xinming An	Structural Equation Modeling Using the CALIS Procedure in SAS/STAT Software: Basic and Advanced Topics
3:00 p.m.–4:45 p.m.	CE_40T	Mikhail Golovnya	Advances in Data Mining: Jerome Friedman's TreeNet/MART and Leo Breiman's Random Forests

Technical Sessions at a Glance

Sunday, July 29

Key

15

Session Number

CC

San Diego
Convention Center

23

(A/B/C/D/E/F)

Room Number

HQ

Hilton Bayfront
San Diego Hotel

Sapphire

(A/B/C)

Room Number

Sponsor	8:30 AM	10:30 AM	2:00 PM	4:00 PM
ASA				46 HQ-Sapphire MN
B&E			38 CC-Room 23B / 19 CC-Room 23A	61 CC-Room 23A
BIOM			32 CC-Room 25C / 31 CC-Room 28B / 17 CC-Room 26B / 1 CC-Room 26A	77 CC-Room 29C / 74 CC-Room 24B / 65 HQ-Sapphire IJ / 62 CC-Room 29A
BIOP			35 CC-Room 27B / 13 HQ-Sapphire MN / 3 HQ-Sapphire IJ	70 CC-Room 26A / 59 CC-Room 28E / 58 CC-Room 28D
COMP			30 CC-Room 24B / 4 HQ-Sapphire A	
EDUC			10 HQ-Sapphire H	73 CC-Room 28C / 71 HQ-Sapphire H
ENAR			7 HQ-Sapphire B	79 CC-Room 24A / 46 HQ-Sapphire MN / 63 CC-Room 29D
ENVR			24 CC-Room 24A / 21 CC-Room 33B	85 CC-Room 27A / 84 CC-Room 27B / 52 HQ-Sapphire L
EPI			20 CC-Room 28D	86 CC-Room 23C / 48 CC-Room 26B
GM				53 CC-Room 32A
GOVT			23 CC-Room 31A / 27 CC-Room 31B / 8 CC-Room 30E	69 CC-Room 28A
GRAPH			11 HQ-Sapphire D	
HPSS			22 CC-Room 33A	83 HQ-Sapphire D / 82 HQ-Sapphire C
Host Chpt			9 HQ-Sapphire EF	
ICSA				46 HQ-Sapphire MN
IISA				46 HQ-Sapphire MN / 64 CC-Room 24C
IMS			39 CC-Room 30C / 12 CC-Room 30B	46 HQ-Sapphire MN / 56 CC-Room 33B
MGM				57 CC-Room 31B
MHR				49 CC-Room 28B
NPAR			29 CC-Room 30A / 28 CC-Room 29D / 5 CC-Room 29C	60 CC-Room 21
Q&P			18 CC-Room 30D	
SAMSI				54 HQ-Sapphire B
SBS			40 CC-Room 29A / 26 CC-Room 29B	47 HQ-Sapphire A
SLDM			33 CC-Room 24C / 15 CC-Room 25A	76 CC-Room 25A / 75 CC-Room 30D / 50 CC-Room 30B
SOC			45 CC-Room 32B / 6 CC-Room 32A	67 CC-Room 25C
SPAIG			2 CC-Room 31C	
SRMS			25 HQ-Sapphire C / 16 CC-Room 21	66 CC-Room 22 / 51 HQ-Sapphire EF
SSC				46 HQ-Sapphire MN
SSPA			14 CC-Room 25B	
Stat Board				68 CC-Room 25B
WUNAR				46 HQ-Sapphire MN / 55 CC-Room 30A

Technical Sessions at a Glance

Monday, July 30

Sponsor	8:30 AM	10:30 AM	2:00 PM	4:00 PM
ASA	97 HQ-Sapphire MN		209 HQ-Sapphire MN	255 CC-Ballroom 20AB
B&E	109 CC-Room 29D	160 CC-Room 29C	247 CC-Room 26B / 212 HQ-Sapphire EF	
BIOM	131 CC-Room 24B / 130 CC-Room 24C / 120 CC-Room 25A / 110 CC-Room 25B	178 CC-Room 24A / 177 CC-Room 23C / 168 CC-Room 25A / 158 CC-Room 23B	243 CC-Room 24A / 242 CC-Room 24B / 241 CC-Room 24C / 227 CC-Room 26A / 210 HQ-Sapphire C	
BIOP	118 HQ-Sapphire A / 117 CC-Room 25C / 113 CC-Room 23A / 100 CC-Room 26A	179 CC-Room 23A / 167 CC-Room 21 / 165 HQ-Sapphire A / 161 CC-Room 22	246 CC-Room 23A / 245 CC-Room 23B / 244 CC-Room 23C / 231 CC-Room 25A / 223 CC-Room 25B	
CAUWOM			215 CC-Room 30E	
CNSL	127 CC-Room 29B / 192 CC-Sails Pavilion	148 CC-Room 29D / 191 CC-Sails Pavilion		
COMP	114 CC-Room 30A	174 CC-Room 30B / 236 HQ-Sapphire D	224 CC-Room 28C / 219 CC-Room 28D	
DEF	115 CC-Room 27A			
EDUC	128 CC-Room 28B / 107 HQ-Sapphire H	156 CC-Room 28B / 172 CC-Sails Pavilion / 235 CC-Room 31B / 193 CC-Sails Pavilion		
ENAR	97 HQ-Sapphire MN / 101 CC-Room 26B	146 CC-Room 25C	209 HQ-Sapphire MN / 248 CC-Room 21	255 CC-Ballroom 20AB
ENVR	138 CC-Room 28D / 137 CC-Room 28C	166 CC-Room 28C / 144 HQ-Sapphire L	230 CC-Room 32A	
EPI	139 CC-Room 23B / 119 CC-Room 21	184 CC-Room 24B / 183 CC-Room 24C / 164 CC-Room 25B	211 CC-Room 22	
ETHICS	102 HQ-Sapphire IJ			
GM	104 HQ-Sapphire EF	188 CC-Room 30E / 189 CC-Sails Pavilion		
GOVT	116 CC-Room 27B	182 CC-Room 28D / 170 CC-Room 28E / 153 HQ-Sapphire H	234 CC-Room 31A	
GRAPH		175 CC-Room 30A	216 CC-Room 28E	
HPSS		163 CC-Room 26A / 159 CC-Room 27A / 143 CC-Room 26B	229 CC-Room 33A	
ICSA	97 HQ-Sapphire MN	145 HQ-Sapphire IJ	209 HQ-Sapphire MN	255 CC-Ballroom 20AB
IISA	97 HQ-Sapphire MN		209 HQ-Sapphire MN / 214 HQ-Sapphire IJ	255 CC-Ballroom 20AB
IMS	135 CC-Room 30E / 97 HQ-Sapphire MN / 106 CC-Room 31A	180 CC-Room 31C / 151 HQ-Sapphire MN	209 HQ-Sapphire MN / 249 CC-Room 29D / 222 CC-Room 30A	255 CC-Ballroom 20AB
JASA		150 HQ-Sapphire C		
MEM			221 HQ-Sapphire L	
MHR			226 CC-Room 33B	
MKTG		194 CC-Sails Pavilion / 240 CC-Room 27A / 220 HQ-Sapphire B		
NPAR	124 CC-Room 33A	147 CC-Room 33B	238 CC-Room 30B / 217 CC-Room 30D	
PRIV		152 HQ-Sapphire D		
Q&P	111 CC-Room 31C		239 CC-Room 29A	
RISK		169 CC-Room 31B / 190 CC-Sails Pavilion		
SBS	136 CC-Room 32B / 121 HQ-Sapphire C	181 CC-Room 32B / 142 HQ-Sapphire B	250 CC-Room 29B / 228 CC-Room 29C	
SIS		195 CC-Sails Pavilion		
SLDM	129 CC-Room 30D / 105 CC-Room 30C	176 CC-Room 30D / 155 CC-Room 30C	225 CC-Room 28B	
SOC	103 CC-Room 28A	187 CC-Room 27B / 186 CC-Room 28A	237 HQ-Sapphire H	
SPES	125 CC-Room 32A	157 CC-Room 32A		
SRMS	122 HQ-Sapphire L / 141 CC-Room 28E / 123 HQ-Sapphire D	185 CC-Room 29A / 162 CC-Room 29B	213 HQ-Sapphire A	
SSC	97 HQ-Sapphire MN	171 CC-Room 31A	209 HQ-Sapphire MN	255 CC-Ballroom 20AB
SSPA	112 CC-Room 22			
TSHS	108 CC-Room 31B	196 CC-Sails Pavilion		
UNAR	97 HQ-Sapphire MN	149 HQ-Sapphire EF	209 HQ-Sapphire MN / 218 CC-Room 25C	255 CC-Ballroom 20AB

Key

15
Session Number

CC
San Diego
Convention Center

23
(A/B/C/D/E/F)
Room Number

HQ
Hilton Bayfront
San Diego Hotel

Sapphire
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Room Number

Technical Sessions at a Glance

Tuesday, July 31

Key

15
Session Number

CC
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23
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Room Number

HQ
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Room Number

Sponsor	8:30 AM	10:30 AM	2:00 PM	4:00 PM	8:00 PM
AME			380 CC-Room 21		
ASA	264 HQ-Sapphire MN				426 CC-Ballroom 20AB
B&E	273 CC-Room 33B	344 CC-Room 33B / 327 CC-Room 33A	406 CC-Room 29C / 385 CC-Room 29B		
BIOM	297 CC-Room 27B / 296 CC-Room 28A / 294 CC-Room 28B / 277 CC-Room 29B / 275 CC-Room 29A	341 CC-Room 28B / 340 CC-Room 28C / 326 CC-Room 29B / 320 CC-Room 28D	403 CC-Room 27B / 383 CC-Room 24C / 372 HQ-Sapphire C		
BIOP	300 CC-Room 28E / 299 CC-Room 26A / 298 CC-Room 27A / 281 CC-Room 29C / 278 CC-Room 28D	343 CC-Room 27B / 325 HQ-Sapphire L / 319 CC-Room 28E / 318 CC-Room 29A / 315 HQ-Sapphire D	405 CC-Room 27A / 404 CC-Room 25A / 393 CC-Room 24B / 390 CC-Room 25C / 387 CC-Room 26A / 384 HQ-Sapphire E		
CAS			386 HQ-Sapphire B		
CNSL			382 HQ-Sapphire D		
COC		312 CC-Room 32A			
COMP	267 HQ-Sapphire B	322 CC-Room 30B	401 CC-Room 33B		
DEF	287 CC-Room 29D				
DEM				425 CC-Ballroom 20AB	
EDUC	293 CC-Room 31B / 290 CC-Room 23A	316 CC-Room 31B	388 CC-Room 31C		
ENAR	264 HQ-Sapphire MN / 268 HQ-Sapphire L		391 CC-Room 26B / 375 HQ-Sapphire H		
ENVR	271 HQ-Sapphire D	329 CC-Room 21			
EPI	304 CC-Room 26B / 272 HQ-Sapphire H	348 CC-Room 27A / 324 CC-Room 29C	412 CC-Room 23C / 411 CC-Room 23B / 392 CC-Room 24A		
GM	276 CC-Room 25C	310 CC-Room 31C			
GOVT	286 CC-Room 24C	332 CC-Room 22 / 333 CC-Room 23A	409 CC-Room 31A / 395 CC-Room 30E		
GRAPH	265 CC-Room 25A	337 CC-Room 30A / 355 CC-Sails Pavilion			
HPSS	283 CC-Room 31A	308 HQ-Sapphire A			
ICSA	264 HQ-Sapphire MN				
IISA	264 HQ-Sapphire MN / 266 HQ-Sapphire J	334 CC-Room 31A			
IMS	301 CC-Room 31C / 264 HQ-Sapphire MN / 279 CC-Room 30C	345 CC-Room 24B / 314 HQ-Sapphire MN	407 CC-Room 28E / 381 HQ-Sapphire MN		
JBES	269 CC-Room 30D				
JCGS		307 CC-Room 29D			
MEM	274 HQ-Sapphire A				
MKTG			398 CC-Room 29D		
NPAR	280 CC-Room 30B	335 CC-Room 24A / 330 CC-Room 23C	399 CC-Room 28C		
Q&P	291 CC-Room 30A		376 HQ-Sapphire L		
RISK	292 CC-Room 28C		374 HQ-Sapphire J		
SBS	302 CC-Room 32A / 289 HQ-Sapphire E	347 CC-Room 24C / 321 HQ-Sapphire J	408 CC-Room 28B / 373 CC-Room 28A		
SLDM	295 CC-Room 24A / 285 CC-Room 24B	338 CC-Room 30D / 328 HQ-Sapphire E	402 CC-Room 33A		
SOC	284 CC-Room 30E / 282 CC-Room 21	311 HQ-Sapphire B	394 CC-Room 31B		
SPES			400 CC-Room 28D / 377 CC-Room 29A		
SRMS	288 CC-Room 33A	350 CC-Room 26A / 349 CC-Room 25C / 331 CC-Room 25A / 317 HQ-Sapphire H	414 CC-Room 30D / 413 CC-Room 30C / 397 CC-Room 30B / 396 CC-Room 30A		
SSC	264 HQ-Sapphire MN	323 CC-Room 32B	415 CC-Room 23A / 379 HQ-Sapphire A		
SSPA	270 HQ-Sapphire C	346 CC-Room 25B	389 CC-Room 32B		
TECH			378 CC-Room 22		
TSHS	306 CC-Room 22				
UNAR	264 HQ-Sapphire MN	351 CC-Room 26B / 309 HQ-Sapphire C			

Technical Sessions at a Glance

Wednesday, August 1

Sponsor	8:30 AM	10:30 AM	2:00 PM	4:00 PM
ASA	435 HQ-Sapphire MN			
B&E	450 CC-Room 29A	480 CC-Room 29B	563 CC-Room 31A	
BIOM	470 CC-Room 23C / 469 CC-Room 24A / 455 CC-Room 24C / 442 HQ-Sapphire L	512 CC-Room 23A / 511 CC-Room 23B / 510 CC-Room 23C / 495 CC-Room 24C	571 CC-Room 24A / 570 CC-Room 24B / 569 CC-Room 24C / 562 CC-Room 25B / 558 CC-Room 25A / 540 HQ-Sapphire B	
BIOP	473 CC-Room 23A / 454 CC-Room 25B / 452 CC-Room 25C / 447 CC-Room 26A	494 CC-Room 25A / 493 CC-Room 25B / 491 CC-Room 25C	572 CC-Room 23B / 556 CC-Room 21 / 554 CC-Room 23A / 542 CC-Room 22	
CAS		502 CC-Room 31A		
CMRR	461 HQ-Sapphire D			
CNSL	445 CC-Room 31A	507 CC-Room 28D / 483 CC-Room 28E		
COMP	464 CC-Room 29D / 458 CC-Room 30A	486 HQ-Sapphire B	567 CC-Room 33A	
DEF		487 HQ-Sapphire L		
EDUC	459 HQ-Sapphire H	501 CC-Room 31B	544 HQ-Sapphire L	
ENAR	435 HQ-Sapphire MN / 460 CC-Room 31B / 437 CC-Room 22	516 CC-Room 27A	575 CC-Room 27A / 553 CC-Room 26A / 541 CC-Room 26B	
ENVR	456 CC-Room 28A		561 CC-Room 28E / 545 HQ-Sapphire EF	
EPI	475 CC-Room 21 / 448 CC-Room 25A / 581 CC-Room 27B / 580 CC-Room 25C / 560 CC-Room 28A	520 CC-Room 22 / 484 HQ-Sapphire D / 526 CC-Sails Pavilion		
GOVT	453 CC-Room 26B	518 CC-Room 32B / 498 CC-Room 33A	549 HQ-Sapphire H	
HPSS		503 HQ-Sapphire H		
ICSA	435 HQ-Sapphire MN / 443 HQ-Sapphire C		577 CC-Room 28B	
IISA	435 HQ-Sapphire MN		564 CC-Room 28C	
IMS	435 HQ-Sapphire MN / 444 HQ-Sapphire EF	489 HQ-Sapphire MN	576 CC-Room 30B / 559 CC-Room 30A	
ISBA		479 HQ-Sapphire C		
JASAAPP			548 HQ-Sapphire MN	
MEM			550 HQ-Sapphire C	
MIN	446 CC-Room 28B			
MKTG	467 CC-Room 28D			
NOETHER		478 HQ-Sapphire IJ		
NPAR	439 CC-Room 32B	504 CC-Room 29C / 497 CC-Room 29D	566 CC-Room 30C	
PUB		488 HQ-Sapphire EF		
Q&P			552 CC-Room 30D	
RISK			546 HQ-Sapphire A	
SBS	474 CC-Room 33A / 436 CC-Room 33B		579 CC-Room 29D / 578 CC-Room 29C / 555 CC-Room 29B	
SIS	438 HQ-Sapphire B			
SLDM	466 CC-Room 30B / 451 CC-Room 30D	509 CC-Room 30B / 490 CC-Room 30C	568 CC-Room 33B / 551 HQ-Sapphire D	
SOC	457 CC-Room 27A	492 CC-Room 33B	584 CC-Room 28D / 547 CC-Room 29A	
SPES	463 CC-Room 30E / 441 CC-Room 31C	505 CC-Room 30E		
SRMS	449 HQ-Sapphire A / 440 HQ-Sapphire IJ	500 CC-Room 28B / 496 CC-Room 28C	583 CC-Room 32B / 582 CC-Room 32A / 557 CC-Room 31C	
SSC	435 HQ-Sapphire MN	485 CC-Room 30A		
Stat Board	435 HQ-Sapphire MN			
TSHS			565 CC-Room 31B	
UNAR	435 HQ-Sapphire MN	499 CC-Room 26A / 481 CC-Room 26B		

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Technical Sessions at a Glance

Thursday, August 2

Key

15
Session Number

CC
San Diego
Convention Center

23
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Room Number

HQ
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San Diego Hotel

Sapphire
(A/B/C)
Room Number

Sponsor	8:30 AM	10:30 AM	2:00 PM	4:00 PM
B&E	617 CC-Room 32A / 591 CC-Room 31C	645 CC-Room 29C		
BIOM	628 CC-Room 24C / 615 CC-Room 24B / 614 CC-Room 24A / 597 CC-Room 23C / 589 HQ-Sapphire B	659 CC-Room 24B / 658 CC-Room 24C / 657 CC-Room 25A / 641 CC-Room 25B / 640 CC-Room 25C		
BIOP	619 CC-Room 23B / 616 CC-Room 23A / 606 CC-Room 22 / 602 CC-Room 21 / 588 HQ-Sapphire EF	663 CC-Room 22 / 661 CC-Room 23A / 660 CC-Room 23B / 650 CC-Room 23C / 648 CC-Room 24A		
CNSL	600 CC-Room 30E			
COMP	587 CC-Room 30B	655 CC-Room 27B		
EDUC	611 CC-Room 29A / 610 HQ-Sapphire H	651 HQ-Sapphire D		
ENAR	618 CC-Room 25A / 586 HQ-Sapphire A	631 HQ-Sapphire L		
ENVR	601 CC-Room 29C / 596 CC-Room 29B	667 CC-Room 32A / 646 CC-Room 33B / 643 CC-Room 32B / 632 CC-Room 33A		
EPI	624 CC-Room 25C / 623 CC-Room 25B	668 CC-Room 26A / 634 CC-Room 26B		
GOVT	605 CC-Room 30A / 603 CC-Room 28E	665 CC-Room 31C		
GRAPH	612 CC-Room 30C			
HPSS	594 CC-Room 29D	666 CC-Room 30D		
IRSS	592 HQ-Sapphire C			
IISA		647 CC-Room 30C		
IMS	620 CC-Room 28C / 604 CC-Room 28B / 593 HQ-Sapphire L	639 HQ-Sapphire IJ		
MHR	621 CC-Room 28D			
MKTG		656 CC-Room 30A		
MSR		637 CC-Room 31B		
NPAR	627 CC-Room 27A / 590 CC-Room 26B	642 CC-Room 28C		
Q&P	599 CC-Room 26A	653 CC-Room 27A		
RISK		654 CC-Room 21		
SBS	622 CC-Room 28A / 598 CC-Room 27B	629 HQ-Sapphire EF		
SLDM	613 CC-Room 30D	672 CC-Room 28D		
SOC	595 HQ-Sapphire D	670 CC-Room 30E / 649 CC-Room 31A		
SPES		638 HQ-Sapphire B		
SRMS	626 CC-Room 33B / 625 CC-Room 33A / 607 CC-Room 32B	671 CC-Room 29B / 669 CC-Room 29A / 644 CC-Room 28E / 633 HQ-Sapphire C		
SSC		636 CC-Room 30B		
Stat Bus	609 CC-Room 31B			



Session Tag Descriptions

We expect both theme and applied sessions to draw a diverse audience.

THEME ●

JSM theme sessions are directly relevant to the 2012 JSM theme, "Growing to Serve a Data-Dependent Society." Theme sessions are designed to expand the frontiers of statistical thought, emphasize new directions, and promote interdisciplinary collaboration.

APPLIED ■

JSM applied sessions have applications at the heart of their presentations. Because these sessions are grounded in applications across many areas of science and engineering, they may involve interdisciplinary work and include presentations by nonstatisticians. Applied sessions vary in scope, ranging from presentations on state-of-the-art statistical methodology applied to real-world problems to those that are tutorial in nature.

Late-Breaking Session

Monday, July 30, 2:00 p.m. – 3:50 p.m.

HQ-Sapphire MN

Session 209 – The Role of Statisticians in Health Care Reform

Saturday, July 28

Committee/Business Meetings & Other Activities

7:00 a.m.–3:00 p.m. HQ-Sapphire 400

ASA Board of Directors Meeting (closed)

Chair(s): Robert N. Rodriguez, SAS Institute

7:30 a.m.–6:00 p.m. HQ-Indigo Foyer

ASA Membership/Help Desk/Press Desk (satellite location)

7:30 a.m.–6:00 p.m. HQ-Indigo Foyer

JSM Registration (satellite location)

9:00 a.m.–5:00 p.m. CC-Sails Pavilion

Career Placement Service (job posting and resume submission only)

10:30 a.m.–5:15 p.m. HQ-Sapphire 411

Sixth Annual Workshop for Chairs of Programs in Statistics and Biostatistics—ASA Caucus of Academic Representatives

Chair(s): Michael Lavine, University of Massachusetts

11:30 a.m.–5:30 p.m. HQ-Aqua 308

Association of Clinical and Translational Statisticians

Organizer(s): Brad Pollack, University of Texas Health Science Center

12:00 p.m.–1:15 p.m. HQ-Sapphire 412

ASA Caucus of Academic Representatives 2012 Chairs Workshop Lunch —ASA Caucus of Academic Representatives

Chair(s): Michael Lavine, University of Massachusetts

3:00 p.m.–6:00 p.m. HQ-Aqua 304

NISS/SAMSI Affiliates Meeting

Organizer(s): Alan F. Karr, NISS

6:00 p.m.–10:00 PM HQ-Sapphire 412

ASA Caucus of Academic Representatives 2012 Chairs Workshop Reception & Dinner —ASA Caucus of Academic Representatives

Chair(s): Michael Lavine, University of Massachusetts

Thursday, July 26

Committee/Business Meetings & Other Activities

7:00 p.m.–8:30 p.m.

ASA Executive Committee Working Dinner

Chair(s): Robert N. Rodriguez, SAS Institute

Friday, July 27

Committee/Business Meetings & Other Activities

7:00 a.m.–3:00 p.m. HQ-Sapphire 400

ASA Board of Directors Meeting (closed)

Chair(s): Robert N. Rodriguez, SAS Institute



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Saturday, July 28

Continuing Education (Fee Events)

CE_01C

Modeling Ordinal Categorical Data Part 1 (Two-Day Course)

8:30 a.m.–5:00 p.m. HQ-Indigo A
ASA

Instructor(s): Alan Agresti, University of Florida; Bernhard Klingenberg, Williams College

CE_02C

Introduction to Data Visualization and Analysis with R

8:30 a.m.–5:00 p.m. HQ-Indigo D
ASA, Section on Statistical Computing, Section on Statistical Graphics, Section for Statistical Programmers and Analysts

Instructor(s): John W Emerson, Yale University; Hadley Wickham, Rice University

CE_03C

Analysis of Clinical Trials: Theory and Applications

8:30 a.m.–5:00 p.m. HQ-Indigo E
ASA, Biopharmaceutical Section

Instructor(s): Alex Dmitrienko, Quintiles, Inc.; Devan Mehrotra, Merck Research Laboratories; Keaven Anderson, Merck

CE_04C

Statistical Methodologies for Exposure Data Analysis

8:30 a.m.–5:00 p.m. HQ-Indigo H
ASA, Section on Statistics and the Environment

Instructor(s): Thomas Mathew, University of Maryland Baltimore County; Kalimuthu Krishnamoorthy, University of Louisiana at Lafayette

CE_05C

Statistical Methods for Genome-Wide Association, Copy Number Variants, and Rare Variants Analysis

8:30 a.m.–5:00 p.m. HQ-Indigo 202
ASA, Biometrics Section

Instructor(s): Hongzhe Li, University of Pennsylvania; Wei Pan, University of Minnesota

CE_06C

Introduction to Analysis of Extremes: Univariate and Multivariate Cases

8:30 a.m.–5:00 p.m. HQ-Indigo 204
ASA, Section on Statistics and the Environment

Instructor(s): Daniel Cooley, Colorado State University

Sunday, July 29

Committee/Business Meetings & Other Activities

7:30 a.m.–9:00 a.m. HQ-Aqua 314

Committee on Women in Statistics Executive Committee Meeting

Chair(s): Dalene Kay Stangl, Duke University

7:30 a.m.–10:00 a.m. HQ-Sapphire 400

Joint Committee on Publications/Editors Meeting

Chair(s): Leonard Stefanski, North Carolina State University

7:30 a.m.–1:00 p.m. HQ-Indigo Foyer

JSM Registration (satellite location)

7:30 a.m.–8:30 p.m. CC-Ballroom 20 Foyer

JSM Main Registration

7:30 a.m.–8:30 p.m. CC-Ballroom 20 Foyer
ASA Membership/Help Desk/Press Desk

7:30 a.m.–8:30 p.m. CC-Ballroom 20 Foyer
Cyber Center, Sponsored by IBM

8:00 a.m.–11:00 a.m. HQ-Aqua 313
Council of Sections Governing Board Meeting

Chair(s): Eileen King, Cincinnati Children's Hospital Medical Center

8:00 a.m.–12:00 p.m. HQ-Aqua 308
Association of Clinical and Translational Statisticians

Organizer(s): Brad Pollack, University of Texas Health Science Center

8:00 a.m.–4:00 p.m. HQ-Indigo 206
Train the Trainer Course: How to Present a Short Course on Effective Presentations



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

8:30 a.m.–4:30 p.m. HQ-Aqua 310
JSM Diversity Workshop and Mentoring Program
 Chair(s): Brian Millen, Eli Lilly and Company

1:00 p.m.–6:00 p.m. CC-Sails Pavilion
Career Placement Service (full placement service open)

9:00 a.m.–10:30 a.m. HQ-Aqua 314
Caucus for Women in Statistics Executive Committee Meeting
 Organizer(s): J Lynn Palmer, MD Anderson Cancer Center

1:00 p.m.–6:00 p.m. CC-Sails Pavilion
ASA Marketplace

1:00 p.m.–6:00 p.m. CC-Sails Pavilion
EXPO 2012

9:00 a.m.–5:00 p.m. HQ-Aqua 300
NISS/ASA Writing Workshop for Junior Researchers
 Chair(s): Keith Crank

1:00 p.m.–6:00 p.m. CC-Sails Pavilion
American Statistical Association Booth #401

9:00 a.m.–5:00 p.m. HQ-Aqua 309
JSM Diversity Workshop: Breakout
 Chair(s): Brian Millen, Eli Lilly and Company

2:00 p.m.–4:00 p.m. HQ-Aqua 314
Council of Sections Business Meeting
 Chair(s): Eileen King, Cincinnati Children's Hospital Medical Center

9:00 a.m.–7:00 p.m. CC-Ballroom 20A Workroom
Speaker Management Room

4:00 p.m.–5:30 p.m. HQ-Aqua 311
Professional Issues and Visibility Council Meeting (closed)
 Chair(s): Mary Mulry, U.S. Census Bureau

10:00 a.m.–1:00 p.m. HQ-Aqua 304
Social Science Planning Meeting
 Organizer(s): Richard L. Smith, SAMSI/The University of North Carolina

4:00 p.m.–5:30 p.m. HQ-Sapphire 411
Awards Council Meeting (closed)
 Chair(s): Nancy L. Geller, National Heart, Lung, and Blood Institute

10:30 a.m.–12:30 p.m. CC-Room 22
JSM Presentation Skills Workshop (open to JSM speakers)
 Chair(s): Brian Wiens, Alcon Laboratories

4:00 p.m.–5:30 p.m. HQ-Aqua 312
Membership Committee Council (closed)
 Chair(s): David Morganstein, Westat

11:00 a.m.–12:30 p.m. HQ-Sapphire 411
Accreditation Committee Meeting

5:00 p.m.–7:00 p.m. HQ-Aqua 313
University of California at Los Angeles, Department of Statistics Mixer
 Organizer(s): Jan Deleeuw, University of California at Los Angeles

11:30 a.m.–1:30 p.m. HQ-Sapphire 412
Statistica Sinica Editorial Board Meeting
 Organizer(s): Jeng-Min Chiou, Academia Sinica

5:30 p.m.–6:30 p.m. HQ-Aqua 305
SIGMEDD Executive Committee Meeting
 Chair(s): Greg Campbell, FDA

12:00 p.m.–1:30 p.m. HQ-Cobalt 500
JSE Editorial Board Meeting
 Chair(s): John G Gabrosek, Grand Valley State University

6:00 p.m.–7:00 p.m. HQ-Aqua 308
Texas A&M Statistical Services, LP
 Organizer(s): Simon Sheather

12:00 p.m.–2:00 p.m. HQ-Aqua 312
Leadership Support Council
 Chair(s): Marie Davidian, North Carolina State University

6:00 p.m.–7:30 p.m. HQ-Aqua 306
Cancer Center Biostatistics Directors Annual Meeting
 Organizer(s): Terry Hyslop, Thomas Jefferson University

12:00 p.m.–2:00 p.m. HQ-Sapphire 402
Korean International Statistical Society Board Meeting
 Organizer(s): Dongseok Choi, Oregon Health and Science University

6:00 p.m.–7:30 p.m. HQ-Aqua 312
Education Council (closed)
 Chair(s): Roderick Little, University of Michigan/U.S. Census Bureau

12:30 p.m.–2:00 p.m. CC-Ballroom D
JSM First-Time Attendee Orientation and Reception

6:00 p.m.–7:30 p.m. HQ-Indigo 206
Current Index to Statistics Management Committee
 Organizer(s): Shyamal Peddada, National Institute of Environmental Health Sciences

12:30 p.m.–4:00 p.m. HQ-Aqua Boardroom
ENAR Executive Committee Meeting
 Organizer(s): Dan Heitjan, ENAR; Karen Bandeen-Roche, ENAR



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

6:00 p.m.–8:00 p.m. HQ-Cobalt 500
Committee on Scientific Freedom and Human Rights Business Meeting
Chair(s): William Seltzer, Fordham University

6:00 p.m.–9:00 p.m. HQ-Aqua 304
Section on Physical and Engineering Sciences Executive Committee Meeting
Chair(s): Angela Dean, The Ohio State University/Southampton University

6:00 p.m.–9:00 p.m. HQ-Aqua 310
ICSA Board Meeting
Organizer(s): Shuyen Ho, GlaxoSmithKline

6:30 p.m.–8:00 p.m. HQ-Sapphire 402
Section on Statistical Computing Executive Committee (closed)
Chair(s): Karen Kafadar, Indiana University

6:30 p.m.–8:30 p.m. HQ-Aqua Terrace Foyer
Purdue University Alumni and Friends Reception
Organizer(s): Julie Paolillo, Purdue University

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

7:00 p.m.–8:30 p.m. HQ-Aqua 309
Isolated Statisticians Meeting
Organizer(s): Patricia B Humphrey, Georgia Southern University

7:00 p.m.–9:00 p.m. HQ-Aqua 300
JMP Reception for Friends and Users
Organizer(s): Katie Taylor, SAS Institute, JMP Division

8:00 p.m.–10:30 p.m. CC-Ballroom D
JSM Opening Mixer, Sponsored by Eli Lilly and Company

Continuing Education (Fee Events)

CE_01C
Modeling Ordinal Categorical Data Part 2 (Two-Day Course)
8:30 a.m.–5:00 p.m. HQ-Indigo A
ASA
Instructor(s): Alan Agresti, University of Florida; Bernhard Klingenberg, Williams College

OPENING MIXER

Sunday, July 29
8:00 p.m. – 10:30 p.m.

San Diego Convention Center
Ballroom 20D

Special thanks to Eli Lilly & Co.
for its support of this event



Answers That Matter.





● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

CE_07C

Statistics for Spatio-Temporal Data

8:30 a.m.–5:00 p.m.

HQ-Indigo D

ASA

Instructor(s): Christopher Wikle, University of Missouri; Noel Cressie, The Ohio State University

CE_08C

Targeted Learning: Causal Inference for Observational and Experimental Data

8:30 a.m.–5:00 p.m.

HQ-Indigo E

ASA

Instructor(s): Mark van der Laan, University of California at Berkeley School of Public Health; Maya Petersen, University of California at Berkeley School of Public Health; Sherri Rose, Johns Hopkins Bloomberg School of Public Health

CE_09C

Introduction to Bayesian Methods and Software for Data Analysis

8:30 a.m.–5:00 p.m.

HQ-Indigo H

ASA, Section on Bayesian Statistical Science

Instructor(s): Bradley P Carlin, University of Minnesota; Laura A. Hatfield, Harvard Medical School

CE_10C

Smoothing Splines: Methods and Applications

8:30 a.m.–5:00 p.m.

HQ-Indigo 202

ASA, Biometrics Section

Instructor(s): Yuedong Wang, University of California at Santa Barbara

CE_11C

Analysis of Data from Complex Surveys Using R

8:30 a.m.–5:00 p.m.

HQ-Indigo 204

ASA, Section on Statistical Computing

Instructor(s): Thomas Lumley, University of Auckland

Invited Sessions 2:00 p.m.–3:50 p.m.

1 CC-Room 26A

Recent Methodology Developed for the Design of Early Phase Clinical Trials—Invited

Biometrics Section, Biopharmaceutical Section, International Chinese Statistical Association, International Indian Statistical Association

Organizer(s): Thomas M Braun, University of Michigan

Chair(s): Jin Zhang, University of Michigan

2:05 p.m. **Intermediary Grade Toxicities in Phase I Clinical Trials: How Much Information Is There?**—◆Alexia Iasonos, Memorial Sloan-Kettering Cancer Center; John O'Quigley, Universite Paris VI

2:30 p.m. **A Bayesian Dose-Finding Design for Drug Combination Trials with Delayed Toxicities**—◆Ying Yuan, MD Anderson Cancer Center; Suyu Liu, MD Anderson Cancer Center; Jing Ning, MD Anderson Cancer Center

2:55 p.m. **Designs for Partially Ordered Phase I Trials**—◆Mark Conaway, University of Virginia; John O'Quigley, Universite Paris VI; Nolan Wages, University of Virginia

3:20 p.m. **The Bayesian Continual Reassessment Method Using a Mixture of Uniforms Prior**—◆Thomas M Braun, University of Michigan

3:45 p.m. **Floor Discussion**

2 CC-Room 31C

The Impact of Collaborations Between Academe and Business/Industry/Government on the Profession—Invited

SPSIA Committee, Section on Survey Research Methods, International Indian Statistical Association, Section on Government Statistics

Organizer(s): Morteza Marzjarani, Saginaw Valley State University

Chair(s): Morteza Marzjarani, Saginaw Valley State University

2:05 p.m. **Introduction to Regulatory Statistics: Principles for Drug Approval at FDA**—◆Peter (Tony) Lachenbruch, Oregon State University

2:25 p.m. **Partnerships to Engage and Train the Next Generation: Challenges and Opportunities**—◆Marie Davidian, North Carolina State University

2:45 p.m. **SMACS: Invisible Sciences with Impeccable Impact**—◆Sastry G. Pantula, National Science Foundation

3:05 p.m. **Application of the Shewhart Philosophy and Methodology to Create Insights from Analytics**—◆Chris H. Holloman, The Ohio State University; Thomas A. Bishop, The Ohio State University; Wes Hunt, Nationwide Insurance

3:25 p.m. **Nurturing Research and Recruitment Partnerships Between a Federal Statistical Agency and Academic Teams**—◆Robert M Groves, U.S. Census Bureau

3:45 p.m. **Floor Discussion**

3 HQ-Sapphire 1J

Recent Developments in Addressing Missing Data Issues in Clinical Trials—Invited

Biopharmaceutical Section, Biometrics Section, International Chinese Statistical Association, Section on Statistics in Epidemiology, International Indian Statistical Association

Organizer(s): Tao Song, Biogen Idec

Chair(s): Tao Song, Biogen Idec

2:05 p.m. **The Role of Direct Likelihood, Inverse Probability Weighting, and Multiple Imputation for the Analysis of Incomplete Trial Data**—◆Geert Molenberghs, I-BioStat/Universiteit Hasselt/Katholieke Universiteit Leuven



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 2:30 p.m. **Sensible Analysis Plans for Incomplete Longitudinal Clinical Trial Data**—◆Craig H Mallinckrodt, Eli Lilly and Company
- 2:55 p.m. **How Much Missing Data Are Too Much in Clinical Trials of Neuropharmacological Drug Products**—◆Ohidul I Siddiqui, FDA
- 3:20 p.m. Disc: Roderick Little, University of Michigan/U.S. Census Bureau
- 3:40 p.m. **Floor Discussion**

- 3:20 p.m. **Nonparametric and Semiparametric Quantile Regression via Global MM Algorithms**—◆Bo Kai, College of Charleston; Mian Huang, Shanghai University of Finance and Economics; Weixin Yao, Kansas State University
- 3:45 p.m. **Floor Discussion**

4 HQ-Sapphire A

● ● Stochastic Blockmodels: New Uses and Directions—Invited

Section on Statistical Computing, International Indian Statistical Association

Organizer(s): Carey E Priebe, The Johns Hopkins University

Chair(s): Carey E Priebe, The Johns Hopkins University

- 2:05 p.m. **Large-Scale Inference in Errorfully Observed Attributed Graphs**—◆Carey E Priebe, The Johns Hopkins University; Daniel Sussman, The Johns Hopkins University; Minh Tang, The Johns Hopkins University; Donniell Fishkind, The Johns Hopkins University; Joshua Vogelstein, The Johns Hopkins University
- 2:30 p.m. **Sampling and Peer-to-Peer Networks: Is What You See Really What You've Got?**—◆Eric D Kolaczyk, Boston University; Qi Ding, Boston University; Mark Crovella, Boston University
- 2:55 p.m. **Characterizing the Asymmetric Flow of Information in Directed Networks**—◆Karl Rohe, University of Wisconsin-Madison; Bin Yu, University of California at Berkeley
- 3:20 p.m. Disc: David J Marchette, Naval Surface Warfare Center
- 3:40 p.m. **Floor Discussion**

6 CC-Room 32A

● ● Statistical Challenges in Mental Health Research—Invited

Social Statistics Section, Biopharmaceutical Section, Section on Statistics in Epidemiology, Statistics Surveys Online Journal, Statistics in Mental Health Research

Organizer(s): Yuanjia Wang, Columbia University

Chair(s): Booil Jo, Stanford University

- 2:05 p.m. **An Overview of Statistical Opportunities in Psychiatric Research**—◆Douglas R Langbehn, University of Iowa
- 2:30 p.m. **Examining Item Response Theory Analyses of DSM Psychiatric Disorders**—◆Melanie M Wall, Columbia University
- 2:55 p.m. **Unsupervised Learning to Describe Heterogeneity in Psychiatric Conditions**—◆Thaddeus Tarpey, Wright State University; Eva Petkova, NYU School of Medicine
- 3:20 p.m. **Variable Selection for Disease Screening with and Without a Gold Standard Outcome**—◆Yuanjia Wang, Columbia University
- 3:45 p.m. **Floor Discussion**

5 CC-Room 29C

● Quantile Regression: Recent Advances and Challenging Issues—Invited

Section on Nonparametric Statistics, Business and Economic Statistics Section, Statistics Surveys Online Journal

Organizer(s): Lan Wang, University of Minnesota

Chair(s): Yunwen Yang, Drexel University

- 2:05 p.m. **Simultaneous Linear Quantile Regression: A Semiparametric Bayesian Approach**—◆Surya T Tokdar, Duke University
- 2:30 p.m. **The Quantile Approach to the Power Transformed Location-Scale Model**—◆Hyokyung Grace Hong, City University of New York
- 2:55 p.m. **On Shrinkage Estimation of Varying Covariates Effects Based on Quantile Regression**—◆Limin Peng, Emory University; Jinfeng Xu, National University of Singapore; Nancy Kutner, Emory University

7 HQ-Sapphire B

● Recent Advances in the Analysis of Functional Data—Invited

ENAR, Biometrics Section, Biopharmaceutical Section, Statistics Surveys Online Journal

Organizer(s): Andrada Ivanescu, East Carolina University

Chair(s): Fabian Scheipl, Ludwig-Maxilians-Universität München

- 2:05 p.m. **Estimation and Testing for Spatially Distributed Curves**—◆Piotr Stefan Kokoszka, Colorado State University; Sasha Gromenko, Utah State University
- 2:30 p.m. **Forecasting Energy Demand with Dynamic Factor Models**—◆Goeran Kauermann, Ludwig-Maxilians-Universität München
- 2:55 p.m. **Pseudo-Likelihood Ratio Tests for Longitudinal and Functional Data Analysis**—◆Ana-Maria Staicu, North Carolina State University; Yingxing Li, Wang Yanan Institute for Studies in Economics; Ciprian Crainiceanu, The Johns Hopkins University; David nmi Ruppert, Cornell University
- 3:20 p.m. **Wavelet-Based Regression with Images as Predictors**—◆Todd Ogden, Columbia University
- 3:45 p.m. **Floor Discussion**



8 CC-Room 30E **Protecting Confidentiality of Complex Data—Invited**

Section on Government Statistics, Section on Survey Research Methods, Section for Statistical Programmers and Analysts, Statistics Surveys Online Journal, Social Statistics Section, Committee on Gay and Lesbian Concerns in Statistics, CHANCE

Organizer(s): Jerome P Reiter, Duke University
 Chair(s): Jerome P Reiter, Duke University

- 2:05 p.m. **Synthesizing Bipartite Graphs: An Application to Employer-Employee-Linked Data**—◆ Jared Scott Murray, Duke University; Jerome P Reiter, Duke University
- 2:30 p.m. **Generating Synthetic Graphs Under Differential Privacy**—◆ Vishesh Karwa, Penn State University; Aleksandra Slavkovic, Penn State University
- 2:55 p.m. **Protecting Interrelated Time Series with Synthetic Data Models**—◆ Matthew John Schneider, Cornell University
- 3:20 p.m. **Estimating Identification Disclosure Risk Using Mixed Membership Models**—◆ Daniel Manrique-Vallier, Duke University; Jerome P Reiter, Duke University
- 3:45 p.m. **Floor Discussion**

9 HQ-Sapphire EF **Journeys to Targeted Therapies and Personalized Medicines: Three Stories—Invited**

JSM 2012 Host Local Chapter - San Diego, Biopharmaceutical Section
 Organizer(s): Qiang Casey Xu, FDA; Christy Chuang-Stein, Pfizer Inc.; Xin Huang, Pfizer Inc.
 Chair(s): Christy Chuang-Stein, Pfizer Inc.

- 2:05 p.m. **Gefitinib from Phase I Responses to a Personalized Medicine**—◆ Anna Osmukhina, AstraZeneca; Andrew Stone, AstraZeneca
- 2:30 p.m. **Alimta (Pemetrexed) as a Treatment for Nonsquamous, Nonsmall-Cell Lung Cancer**—◆ Patrick M Peterson, Eli Lilly and Company
- 2:55 p.m. **Xalkori/E The First Prospectively Identified Precision Medicine for Treatment of Non-Small Cell Lung Cancer (NSCLC): Development Opportunities and Challenges**—◆ Paulina Selaru, Pfizer Inc.; Yiyun Tang, Pfizer Inc.; Bo Huang, Pfizer Inc.
- 3:20 p.m. **Disc: Rajeshwari Sridhara, FDA**
- 3:40 p.m. **Floor Discussion**

Invited Panels 2:00 p.m.–3:50 p.m.

10 HQ-Sapphire H **Models and Modeling in Introductory Statistics Classes—Invited**

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences, International Indian Statistical Association

Organizer(s): Joan Garfield, University of Minnesota
 Chair(s): Joan Garfield, University of Minnesota

- Panelists:**
- ◆ Daniel Kaplan, Macalester College
 - ◆ Cliff Konold, University of Massachusetts-Amherst
 - ◆ Robin Lock, St. Lawrence University
 - ◆ Andrew Zieffler, University of Minnesota

3:35 p.m. **Floor Discussion**

11 HQ-Sapphire D **The Evolution of Statistical Graphics and Visual Analytics—Invited**

Section on Statistical Graphics, Section on Statistical Education, CHANCE

Organizer(s): John W Emerson, Yale University
 Chair(s): John W Emerson, Yale University

- Panelists:**
- ◆ Antony Unwin, Universität Augsburg
 - ◆ Robert Kosara, The University of North Carolina at Charlotte
 - ◆ Michael J. Kane, Yale Center for Analytical Sciences
 - ◆ Andrew Gelman, Columbia University

3:45 p.m. **Floor Discussion**

Topic-Contributed Sessions 2:00 p.m.–3:50 p.m.

12 CC-Room 30B **Don't Count on Poisson: Statistical Methods for Dispersed Count Data and Their Applications—Topic-Contributed**

IMS, International Indian Statistical Association
 Organizer(s): Kimberly Flagg Sellers, Georgetown University
 Chair(s): Kary Myers, Los Alamos National Laboratory

- 2:05 p.m. **The Conway-Maxwell-Poisson Distribution and Extensions**—◆ Kimberly Flagg Sellers, Georgetown University
- 2:25 p.m. **Hyper-Extended: Weighting the Extended Crow-Bardwell Distribution**—◆ Michael Anderson, The University of Texas at San Antonio
- 2:45 p.m. **A Zero-Modified Generalized Negative Binomial Distribution Based on Stacy's Generalized Gamma**—◆ Ram Tripathi, The University of Texas at San Antonio; Ramesh Gupta, University of Maine



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 3:05 p.m. **Methods of Handling Extra-Dispersion in Negative Binomial Models**—◆ Joseph Hilbe, Arizona State University
- 3:25 p.m. **On the Generalized Poisson Regression Model**—◆ Felix Famoye, Central Michigan University
- 3:45 p.m. **Floor Discussion**

- 3:05 p.m. **Developing a Demand Framework to Inform Customer Strategy: Application of Cluster Analysis in CPG Industry**—Belinda Zeng, The Nielsen Company; ◆ Mike Zenor, The Nielsen Company
- 3:25 p.m. Disc: Belinda Zeng, The Nielsen Company
- 3:45 p.m. **Floor Discussion**

13 HQ-Sapphire MN

■ ● Increasing Clinical Program Success with Modeling and Simulation—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Olga V Marchenko, Quintiles, Inc.

Chair(s): Olga V Marchenko, Quintiles, Inc.

- 2:05 p.m. **Improving Clinical Study Design and Understanding via Modeling and Simulation**—◆ Chyi-Hung Hsu, Janssen Pharmaceuticals, Inc.; Jose Carlos Pinheiro, Johnson & Johnson; Fei Chen, Janssen Pharmaceuticals, Inc.
- 2:25 p.m. **Comparison of Drug Development Outcomes with and Without Model-Based Drug Development: A Case Study**—◆ Russell Reeve, Quintiles, Inc.
- 2:45 p.m. **Utilizing Modeling and Simulation to Optimize Phase 2 for Decisionmaking**—◆ Brenda Gaydos, Eli Lilly and Company
- 3:05 p.m. **Improving Oncology Clinical Program by Use of Innovative Designs and Comparing via Simulations**—◆ Joel Miller, Eli Lilly and Company/ImClone; Tom Parke, Tessella Inc.; Donald Berry, MD Anderson Cancer Center; Olga V Marchenko, Quintiles, Inc.; Inna Perevozskaya, Pfizer Inc.; Yanping Wang, Eli Lilly and Company
- 3:25 p.m. Disc: Martin Kimber, Tessella Inc.
- 3:45 p.m. **Floor Discussion**

15 CC-Room 25A

● Recent Theory and Method Developments on Statistical Learning—Topic-Contributed

Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Xingye Qiao, Binghamton University

Chair(s): Lingsong Zhang, Purdue University

- 2:05 p.m. **A Monte Carlo Regression Analysis for Interval-Valued Data**—◆ Jeongyoun Ahn, University of Georgia; Cheolwoo Park, University of Georgia; Muliang Peng, University of Georgia; Yongho Jeon, Yonsei University
- 2:25 p.m. **Flexible High-Dimensional Discrimination**—◆ Xingye Qiao, Binghamton University; Lingsong Zhang, Purdue University
- 2:45 p.m. **General Consistency Results of PCA in High Dimension**—◆ Sungkyu Jung, University of Pittsburgh; J. Steve Marron, The University of North Carolina at Chapel Hill; Jason Fine, The University of North Carolina at Chapel Hill
- 3:05 p.m. **A Sparse Conditional Graphical Model for Non-Independent Measurements**—◆ Hyonho Chun
- 3:25 p.m. **Improved Statistical Significance of Clustering**—◆ Hanwen Huang, The University of Texas Health Science Center; Yufeng Liu, The University of North Carolina at Chapel Hill; Ming Yuan, Georgia Institute of Technology; J. Steve Marron, The University of North Carolina at Chapel Hill
- 3:45 p.m. **Floor Discussion**

14 CC-Room 25B

■ Statistical Modeling and Analytical Professionals—Topic-Contributed

Section for Statistical Programmers and Analysts, Biopharmaceutical Section

Organizer(s): Colin Chen, Wells Fargo & Co.

Chair(s): Colin Chen, Wells Fargo & Co.

- 2:05 p.m. **Utilization Models in Health Care**—◆ Jordan Slavov
- 2:25 p.m. **The Professional Pharma Statisticians: Thinkers, Practitioners, and Leaders**—Kao-Tai Tsai, Celgene Corporation; ◆ Karl E. Peace, Georgia Southern University
- 2:45 p.m. **Statistical Modeling for Large Financial Data Sets**—◆ Antonello Loddo, Capital One

16 CC-Room 21

Bayesian Analysis of Complex Survey Data—Topic-Contributed

Section on Survey Research Methods, International Indian Statistical Association, Section on Government Statistics

Organizer(s): Qixuan Chen, Columbia University

Chair(s): Guangyu Zhang, National Center for Health Statistics

- 2:05 p.m. **Inference for Finite Population Quantiles of Non-Normal Survey Data Using Bayesian Mixture of Splines**—◆ Qixuan Chen, Columbia University; Xuezhou Mao, Columbia University; Michael R. Elliott, University of Michigan; Roderick Little, University of Michigan/U.S. Census Bureau



- 2:25 p.m. **A Bayesian Test of Independence in a Two-Way Contingency Table Under Two-Stage Cluster Sampling**—◆ Dilli Bhatta, Worcester Polytechnic Institute
- 2:45 p.m. **Bayesian Inference for the Finite Population Total from a Heteroscedastic Probability Proportional to Size Sample**—◆ Sahar Zangeneh, University of Michigan; Roderick Little, University of Michigan/U.S. Census Bureau
- 3:05 p.m. **Design-Based Evaluation of Bayesian Methods for Complex Survey Data**—◆ Santanu Pramanik, NORC; Partha Lahiri, University of Maryland
- 3:25 p.m. **Using the Fraction of Missing Information to Tailor Survey Design**—◆ Rebecca Andridge, The Ohio State University
- 3:45 p.m. **Floor Discussion**

17 CC-Room 26B **Advances in the Analysis of Rare Variants from Next-Generation Sequencing Data—Topic-Contributed**

Biometrics Section, Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics Surveys Online Journal
 Organizer(s): Marinela Capanu, Memorial Sloan-Kettering Cancer Center
 Chair(s): Marinela Capanu, Memorial Sloan-Kettering Cancer Center

- 2:05 p.m. **Powerful and Versatile Tests for Disease Association with Rare Variants**—◆ Wei Pan, University of Minnesota
- 2:25 p.m. **Assessment of Rare Variants of Unknown Significance Using Hierarchical Modeling**—◆ Colin B Begg, Memorial Sloan-Kettering Cancer Center; Marinela Capanu, Memorial Sloan-Kettering Cancer Center
- 2:45 p.m. **Informative Variable Selection for Rare Variant Association Studies**—◆ Melanie Quintana, University of Southern California; David V Conti, University of Southern California
- 3:05 p.m. **Developing Strategies for Follow-Up of Rare Variants in Genome-Wide Association Studies**—◆ Arpita Ghosh, National Cancer Institute; Joshua Sampson, National Cancer Institute; Nilanjan Chatterjee, National Cancer Institute
- 3:25 p.m. **Disc: David V Conti, University of Southern California**
- 3:45 p.m. **Floor Discussion**

18 CC-Room 30D **Modern Reliability and Structure Health Management—Topic-Contributed**

Quality and Productivity Section, International Indian Statistical Association

Organizer(s): Ming Li, GE Global Research
 Chair(s): Ming Li, GE Global Research

- 2:05 p.m. **The Interplay Between Failure Time and Degradation Data Analyses: A Case Study**—◆ Necip Doganaksoy
- 2:25 p.m. **Photodegradation Path Modeling and Analysis with Nonlinear Mixed Models**—◆ Yili Hong, Virginia Tech; William Q. Meeker, Iowa State University
- 2:45 p.m. **Estimating a Parametric Lifetime Distribution from Superimposed Renewal Process Data**—◆ Ye Tian, Iowa State University; William Q. Meeker, Iowa State University
- 3:05 p.m. **Reliability and Statistical Issues in Managing Aging Aircraft Within the Damage-Tolerant Design Framework**—◆ Peter Hovey, University of Dayton
- 3:25 p.m. **A Simulation Study on Confidence Interval Procedures of Some Mean Cumulative Function Estimators**—◆ Huaqing Wu, Iowa State University; Jianying Zuo, Bank of America; William Q. Meeker, Iowa State University
- 3:45 p.m. **Floor Discussion**

19 CC-Room 23A **Uncertainty and Real-Time Business Cycle Analysis—Topic-Contributed**

Business and Economic Statistics Section

Organizer(s): Gian Luigi Mazzi, Eurostat
 Chair(s): Riccardo Gatto, Eurostat-C4

- 2:05 p.m. **Statistical Design of Leading Indicators: A Systematic Approach with Applications to OECD-CLIs**—◆ Marc Wildi
- 2:25 p.m. **Comprehensive Benchmark Revisions for the Conference Board Leading Economic Index for the United States**—◆ Ataman Ozyildirim, The Conference Board; Gad Levanon, The Conference Board; Brian Schaitkin, The Conference Board; Justyna Zabinska La-Monica, The Conference Board; Jean-Claude Manini, The Conference Board
- 2:45 p.m. **Nowcasting Business Cycle Turning Points in an Uncertain Environment**—◆ Francesco Ravazzolo, Norges Bank; Knut Are Aastveit, Norges Bank; Herman van Dijk, Tinbergen Institute/Erasmus University Rotterdam
- 3:05 p.m. **Direct Versus Indirect Approach to Estimates Euroarea Business Cycle Fluctuations**—◆ Gian Luigi Mazzi, Eurostat; Monica Billio, University of Venice; Laurent Ferrara, Bank of France; Filippo Moauro, Eurostat
- 3:25 p.m. **Disc: Aleksandar Tomic, Hendyplan**
- 3:45 p.m. **Floor Discussion**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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20 CC-Room 28D

● Latent Variable Models in Epidemiology Studies—Topic-Contributed

Section on Statistics in Epidemiology, Biometrics Section, Social Statistics Section

Organizer(s): Tanzy Love, University of Rochester

Chair(s): Tanzy Love, University of Rochester

- 2:05 p.m. **Latent Factor Regression Models for Grouped Outcomes**—◆ Dawn Woodard, Cornell University; Tanzy Love, University of Rochester; David Ruppert, Cornell University; Sally Thurston, University of Rochester
- 2:25 p.m. **Mixture Modeling as an Exploratory Framework for Genotype-Trait Associations**—◆ Rongheng Lin, University of Massachusetts-Amherst; Kinman Au, University of Massachusetts-Amherst; Andrea S Foulkes, University of Massachusetts-Amherst
- 2:45 p.m. **Ordinal Latent Variable Models and Their Application to Newly Licensed Teenage Drivers**—◆ John Jackson, U.S. Military Academy
- 3:05 p.m. **Bayesian Models for Multiple Outcomes in Domains with Application to the Seychelles Child Development Study**—Luo Xiao, Cornell University; ◆ Sally Thurston, University of Rochester; David Ruppert, Cornell University; Tanzy Love, University of Rochester; Philip W. Davidson, University of Rochester
- 3:25 p.m. **Effect Modification Using Latent Mixture Analysis**—◆ Tanzy Love, University of Rochester; Sally Thurston, University of Rochester; Philip W. Davidson, University of Rochester
- 3:45 p.m. **Floor Discussion**

21 CC-Room 33B

■ ● Spatial Modeling to Identify Relationships and Trends—Topic-Contributed

Section on Statistics and the Environment, Section on Statistical Graphics, Section on Statistics in Epidemiology, International Indian Statistical Association

Organizer(s): Elizabeth Mannshardt, North Carolina State University

Chair(s): Denise A Abreu, USDA/National Agricultural Statistics Service

- 2:05 p.m. **A Spatio-Temporal Bayesian Model for Syndromic Surveillance: Properties and Model Performance**—◆ Jian Zou, Indiana University Purdue University Indianapolis
- 2:20 p.m. **Comparison of Time and Spatial Scales in Global Temperature Data**—◆ Ming Luo, SUNY at Albany; Igor Zurbenko, SUNY at Albany

- 2:35 p.m. **Climate Change and Heat-Related Health Effects for Florida**—◆ Emily Leary, University of Florida; Linda J Young, University of Florida; Chris DuClos, Florida Department of Health; Melissa Jordan, Florida Department of Health
- 2:50 p.m. **On Inference for the K-Function for Spatial Point Patterns**—◆ Michael Hyman
- 3:05 p.m. **Inference for Map Comparisons**—◆ Shu Wang, University of Florida
- 3:20 p.m. **Two-Stage Methods for Regression with Spatially Misaligned Data**—◆ Kenneth K Lopiano, University of Florida; Linda J Young, University of Florida; Carol Gotway, CDC
- 3:35 p.m. **Floor Discussion**

22 CC-Room 33A

■ ● Risk Versus Propensity Scoring as a Basis for Matched Estimation of Treatment Effects—Topic-Contributed

Health Policy Statistics Section, Biopharmaceutical Section, Committee on Applied Statisticians, Section on Statistics in Epidemiology

Organizer(s): Ben Hansen, University of Michigan

Chair(s): Jake Bowers, University of Illinois at Urbana-Champaign

- 2:05 p.m. **Comparison of Disease Risk Score Methodologies for Matched Sampling Designs**—◆ Patrick Arbogast, Kaiser Permanente
- 2:25 p.m. **Matching with Propensity Scores, Prognostic Scores, and Prognostic Propensity Scores**—◆ Ben Hansen, University of Michigan
- 2:45 p.m. **Value of Disease Risk Scores for Comparative Effectiveness Research with Emerging Therapies**—◆ Robert Glynn, Harvard Medical School
- 3:05 p.m. **Estimating Causal Effects with Prognostic Scores: An Alternative Use of Outcome Regression Models for Dimension Reduction**—◆ Ingeborg Waernbaum, Umeå University
- 3:25 p.m. **The Role of PS Estimation and Implementation in the Presence of Heterogeneous Effects of Measured and Unmeasured Covariates on Treatment**—◆ Til Stürmer, The University of North Carolina at Chapel Hill; Richie Wyss, The University of North Carolina at Chapel Hill; Mark Lunt, University of Manchester
- 3:45 p.m. **Floor Discussion**



23 CC-Room 31A

● Statistical and Bioinformatical Innovations in Genomics Research in the VA Cooperative Studies Program—Topic-Contributed

Section on Government Statistics, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Ilana Belitskaya-Levy, VA Palo Alto Cooperative Studies Program Coordinating Center

Chair(s): Ilana Belitskaya-Levy, VA Palo Alto Cooperative Studies Program Coordinating Center

2:05 p.m. **A Distributed Markov Random Field Algorithm for Genome-Wide Association Studies**—◆ Joong-Ho Won, VAPAHCS; Ilana Belitskaya-Levy, VA Palo Alto Cooperative Studies Program Coordinating Center

2:25 p.m. **Capabilities and Challenges in Utilizing Mega Genomics Cohort: An Introduction to the Million Veteran Program, an Upcoming VA's Nationwide Genomics Resource**—◆ Kelly Cho, MAVERIC, Veterans Administration Boston Healthcare System; David Gagnon, Department of Veterans Affairs; Hongsheng Wu, VA Boston Healthcare; Elizabeth Lawler, VA Boston Healthcare; J. Michael Gaziano, VA Boston Healthcare

2:45 p.m. **Development of Analysis Pipeline for a Genome-Wide Association Study of Schizophrenia and Bipolar Disorders: An Integrated SNP, Gene, and Pathway Analysis**—◆ Clarence K. Zhang, VA Connecticut Healthcare System; Hongyu Zhao, VA Connecticut Healthcare System; John Concato, VA Connecticut Healthcare System; J. Michael Gaziano, VA Boston Healthcare; Philip Harvey, Miami VA Healthcare System; Larry Siever, Bronx VA Medical Center; Timothy O'Leary, VA Office of Research and Development

3:05 p.m. **Refining Association Mapping in a Heterogeneous Population**—◆ Amrita Ray, Stanford University; Laura Lazzeroni, Stanford University

3:25 p.m. **Implications of Extreme P-Values for Power and Replication in Large-Scale Genomic Studies**—◆ Laura Lazzeroni, Stanford University; Ilana Belitskaya-Levy, VA Palo Alto Cooperative Studies Program Coordinating Center; Ying Lu, Stanford University; Amrita Ray, Stanford University

3:45 p.m. **Floor Discussion**

24 CC-Room 24A

Discovering Climate Patterns Using Large Data Analysis—Topic-Contributed

Section on Statistics and the Environment, Section for Statistical Programmers and Analysts, Section on Statistical Computing, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal, ASA Advisory Committee on Climate Change Policy

Organizer(s): Snigdhanu Chatterjee, University of Minnesota

Chair(s): Bac Tran, U.S. Census Bureau

2:05 p.m. **Statistical Characterization of Relationships Between Precipitation Extremes and Atmospheric Covariates**—◆ Evan Kodra, Northeastern University; Snigdhanu Chatterjee, University of Minnesota; Auroop R Ganguly, Northeastern University

2:25 p.m. **Change Detection in Climate Extremes**—◆ Ying Lu, University of Minnesota-Twin Cities

2:45 p.m. **Testing the Significance of Spatio-Temporal Teleconnection Patterns**—◆ Jaya Kawale; Snigdhanu Chatterjee, University of Minnesota; Vipin Kumar, University of Minnesota; Dominick Ormsby, University of Minnesota; Karsten Steinhäuser, University of Minnesota; Stefan Liess, University of Minnesota

3:05 p.m. **Sparse Group Lasso: Consistency and Climate Applications**—◆ Soumyadeep Chatterjee, University of Minnesota-Twin Cities

3:25 p.m. **Disc:** Snigdhanu Chatterjee, University of Minnesota

3:45 p.m. **Floor Discussion**

25 HQ-Sapphire C

Transdisciplinary Advances in the Hard-to-Count Group Quarter Population to Better Inform Public Policy—Topic-Contributed

Section on Survey Research Methods, Statistics Surveys Online Journal, Statistics Without Borders

Organizer(s): Asaph Chun, U.S. Census Bureau; Anna Y. Chan, U.S. Census Bureau; Fritz Scheuren, NORC

Chair(s): Anna Y. Chan, U.S. Census Bureau

2:05 p.m. **Using 2010 Census Data to Evaluate Imputation Methods to Improve the American Community Survey Estimates of the Group Quarters Population for Small Geographies**—◆ Michael A Beaghen, U.S. Census Bureau; Mark E Asiala, U.S. Census Bureau

2:25 p.m. **Lessons Learned Administrative Data and Ethnographic Observation of Frail Population: Health Related Facilities**—◆ Sonia Salari, University of Utah; Anna Y. Chan, U.S. Census Bureau

2:45 p.m. **What Counts as Group Quarters? A Glimpse of Total Coverage Errors and Costs Model in Census**—◆ Asaph Chun, U.S. Census Bureau; Anna Y. Chan, U.S. Census Bureau; Diane Barrett, U.S. Census Bureau; Andre Williams, U.S. Census Bureau; Judy Belton, U.S. Census Bureau



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- 3:05 p.m. **Design Effect Anomalies in the American Community Survey**—◆ Michel Boudreaux, University of Minnesota; Michael Davern, NORC; Peter Graven, University of Minnesota
- 3:25 p.m. **Disc:** Fritz Scheuren, NORC
- 3:45 p.m. **Floor Discussion**

26 CC-Room 29B Bayesian Methods in Time-to-Event Data and Other Applications—Topic-Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Sanjib Basu, Northern Illinois University

Chair(s): Arpita Chatterjee, Northern Illinois University

- 2:05 p.m. **Empirical Bayes-Type Shrinkage Estimators for Evaluating Multiple Exposures in Epidemiology Studies**—◆ Jaya Satagopan, Memorial Sloan-Kettering Cancer Center; Qin Zhou, Memorial Sloan-Kettering Cancer Center; Susan Oliveria, Memorial Sloan-Kettering Cancer Center; Stephen Dusza, Memorial Sloan-Kettering Cancer Center; Martin Weinstock, Brown University; Marianne Berwick, University of New Mexico; Allan Halpern, Memorial Sloan-Kettering Cancer Center
- 2:25 p.m. **Semiparametric Bayesian Approach for Benefit-Risk Assessments in Dose-Finding Trials**—◆ Satrajit Roychoudhury, Novartis
- 2:45 p.m. **Bayesian Planning and Inference of a Progressively Censored Sample from Linear Hazard Rate Distribution**—◆ Ananda Sen, University of Michigan
- 3:05 p.m. **Empirical Likelihood-Based Bayesian Methodology for Complex Survey Data Sets**—◆ Sanjay Chaudhuri, National University of Singapore
- 3:25 p.m. **Bayesian Analysis of Competing Risks in Accelerated Life Testing**—◆ Sanjib Basu, Northern Illinois University
- 3:45 p.m. **Floor Discussion**

Topic-Contributed Panels 2:00 p.m.–3:50 p.m.

27 CC-Room 31B ■ ● Statistical Pipeline: Made in the USA in Honor of Nampeo McKenney and Nagambal Shah—Topic-Contributed

Section on Government Statistics, Social Statistics Section

Organizer(s): Juanita Tamayo Lott, Tamayo Lott Associates

Chair(s): John Monahan, North Carolina State University

- Panelists:**
- ◆ Guillermina Jasso, New York University
 - ◆ Clemencia Cosentino, Mathematica Policy Research
 - ◆ Derrick Rollins, Iowa State University

3:35 p.m. **Floor Discussion**

Contributed Sessions 2:00 p.m.–3:50 p.m.

28 CC-Room 29D Dimension Reduction and Model Selection—Contributed

Section on Nonparametric Statistics, Biopharmaceutical Section, Biometrics Section, Section on Statistical Computing, Section on Statistical Learning and Data Mining

Chair(s): Jong-Hyeon Jeong, University of Pittsburgh

- 2:05 p.m. **Highly Efficient Robust Estimation and Inference Based on Focused Information Criterion and Model Averaging**—◆ Ganggang Xu, Texas A&M University; Suojin Wang, Texas A&M University; Jianhua Huang, Texas A&M University
- 2:20 p.m. **Fence Methods in Jointly Selecting Regression Variables and Covariance Structure for Longitudinal Autoregression Data**—◆ Jiani Mou, University of California at Davis; Jiming Jiang, University of California at Davis
- 2:35 p.m. **Lag Selection in Stochastic Additive Models**—◆ Shuping Jiang,
- 2:50 p.m. **Sliced Inverse Mean Difference Regression for Sufficient Dimension Reduction**—◆ Andreas Artemiou, Michigan Technological University; Lipu Tian, Michigan Technological University
- 3:05 p.m. **Sparse Group Sufficient Dimension Reduction**—◆ Xuerong Wen, Missouri University of Science and Technology; Bilin Zeng, Missouri University of Science and Technology; Lixing Zhu, Hong Kong Baptist University
- 3:20 p.m. **Sharp RIP Bound for Sparse Signal and Low-Rank Matrix Recovery**—◆ Anru Zhang, University of Pennsylvania; Tony Cai, University of Pennsylvania
- 3:35 p.m. **An Adaptive Estimation of MAVE**—◆ Qin Wang, Virginia Commonwealth University; Weixin Yao, Kansas State University

29 CC-Room 30A Generalized Additive, Varying Coefficient, and Stochastic Models—Contributed

Section on Nonparametric Statistics, Section on Statistics and the Environment

Chair(s): Carlos Lamarche, University of Oklahoma

- 2:05 p.m. **Variable Selection in Generalized Additive Mixed Models**—◆ Ahmet Sezer, Anadolu University; Cüneyt Toyganözü, Suleyman Demirel University
- 2:20 p.m. **Model Selection and Estimation in Generalized Additive Models**—◆ Dong Wang, North Carolina State University; Daowen Zhang, North Carolina State University



- 2:35 p.m. **Model-Building for Partially Time-Varying Coefficient Models**—◆Ting Zhang, The University of Chicago
- 2:50 p.m. **Domain Selection for Varying Coefficient Model via Local Polynomial Regression**—◆Dehan Kong, North Carolina State University; Howard Bondell, North Carolina State University; Yichao Wu, North Carolina State University
- 3:05 p.m. **Parametrically Guided Estimation for Varying Coefficient Models**—◆Clemontina A. Davenport, North Carolina State University; Yichao Wu, North Carolina State University; Arnab Maity, North Carolina State University
- 3:20 p.m. **Analysis of Interaction Between Genetic Pathway and Environment Using Kernel Machine Varying Coefficient Model**—◆Xiaoshan Li, North Carolina State University
- 3:35 p.m. **New Stochastic Models of Human Eye Cancer Involving Both Hereditary and Non-Hereditary Cancers**—◆Hong Zhou, Arkansas State University; Wai-Yuan Tan, University of Memphis

30 CC-Room 24B Testing/Estimation—Contributed

Section on Statistical Computing, Committee on Applied Statisticians
Chair(s): Alyssa Frazee, The Johns Hopkins University

- 2:05 p.m. **Efficient Maximum Likelihood Estimation for Fixed-Rank Kriging**—◆Karl Pazdernik; Ranjan Maitra, Iowa State University; Douglas William Nychka, National Center for Atmospheric Research; Stephan Sain, Geophysical Statistics Project
- 2:20 p.m. **The Generalized Lambda Distribution-Based Calibration Model**—◆Wei Ning, Bowling Green State University; Steve Su, University of Western Australia
- 2:35 p.m. **A Mixture-Truncated Pareto Distribution**—◆Mei Ling Huang, Brock University; Vincenzo Coia, Brock University; Percy Brill, University of Windsor
- 2:50 p.m. **Chi-Square Orthogonal Components for Assessing Goodness-of-Fit of Multidimensional Multinomial Data**—◆Jelena Milovanovic
- 3:05 p.m. **Moment Confidence Intervals for the Difference Between Two Poisson Means and Comparison**—◆Meesook Lee, South Louisiana Community College; Kalimuthu Krishnamoorthy, University of Louisiana at Lafayette
- 3:20 p.m. **A Power Comparison of a Robust Approach to Multiple Testing**—◆Nasrine Bendjilali, University of California at San Francisco; Wei-Min Huang, Lehigh University; Boualem Bendjilali, RVCC
- 3:35 p.m. **Data Collection and Estimation in Networks Through Cognitive Social Structures**—◆Deniz Yenigun, Bilkent University; Gunes Ertan, University of Pittsburgh; Michael Siciliano, University of Pittsburgh

31 CC-Room 28B New Methods in Generalized Linear Models—Contributed

Biometrics Section, Biopharmaceutical Section, Committee on Applied Statisticians, Section on Statistics in Epidemiology
Chair(s): Yuping Zhang, Stanford University

- 2:05 p.m. **A Multivariate Hidden Markov Model for the Analysis of Correlated Monotone Binary Processes**—◆Maria Jose Garcia Zattera, Pontificia Universidad Católica de Chile; Alejandro Jara, Pontificia Universidad Católica de Chile; Emmanuel Lesaffre, Katholieke Universiteit Leuven; Guillermo Marshall, Pontificia Universidad Católica de Chile
- 2:20 p.m. **Incorporating Retests Into Group Testing Regression Model Estimation**—◆Boan Zhang, University of Nebraska; Christopher Bilder, University of Nebraska; Joshua Tebbs, University of South Carolina
- 2:35 p.m. **Lung Cancer Risk Prediction with Stochastic Covariates**—◆Denise M Danos, Louisiana State University Health Sciences Center; Neal Simonsen, Louisiana State University Health Sciences Center; Elizabeth Fontham, Louisiana State University Health Sciences Center; Evrim Oral, Louisiana State University Health Sciences Center
- 2:50 p.m. **Diagnostics for Logistic-Type Regression Models Using Stochastic Processes**—◆Ivy Liu, Victoria University of Wellington; Estate Khmaladze, Victoria University of Wellington; Haizhen Wu, Massey University
- 3:05 p.m. **Test for the Coefficient Parameters of the Logistic Regression from a Small Sample**—◆Toshinari Kamakura, Chuo University
- 3:20 p.m. **Logistic Regression of Binary Independent Variables in a Bahadur Framework**—◆Wenyaw Chan, The University of Texas at Houston; Chih-Hsien Wu, The University of Texas at Houston; Lin-An Chen, National Chiao-Tung University; Elaine Symanski, The University of Texas at Houston
- 3:35 p.m. **A New Class of Flexible Link Functions with Application to Species Co-Occurrence Study**—◆Xun Jiang, University of Connecticut; Dipak K Dey, University of Connecticut

32 CC-Room 25C Recent Advances in Survival Analysis—Contributed

Biometrics Section, Biopharmaceutical Section, Committee on Applied Statisticians, Section on Statistics in Epidemiology
Chair(s): Ludi Fan, University of Michigan

- 2:05 p.m. **Semiparametric Survival Regression Analysis for the Generalized Gamma Distribution**—◆Sangbum Choi, MD Anderson Cancer Center; Xuelin Huang, MD Anderson Cancer Center



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- 2:20 p.m. **Assessing Life Extension from Medical Interventions**—◆ Jerry Cheng, Robert Wood Johnson Medical School; Kezhen Liu, Rutgers University; Javier Cabrera, Rutgers University; John Kostis, Robert Wood Johnson Medical School
- 2:35 p.m. **Variable Selection for Proportional Hazards Cure Model**—◆ Xiang Liu, Abbott Laboratories; Yingwei Peng, Queen's University; Dongsheng Tu, Queen's University; Hua Liang, University of Rochester
- 2:50 p.m. **Another Look at the Proportional Mean Residual Life Model**—◆ David Oakes, University of Rochester
- 3:05 p.m. **Proportional Hazard Model for Bivariate Interval-Censored Data**—◆ Bin Zhang, Cincinnati Children's Hospital Medical Center; Xingwei Tong, Beijing Normal University
- 3:20 p.m. **When Is It Inappropriate to Use the Generalized Proportional Hazards Model?**—◆ Jian-Lun Xu, National Cancer Institute
- 3:35 p.m. **Bayesian Approach in Detecting Change Points of a Hazard Rate**—Peter Guarino, VA Cooperative Studies Program; Bingqing Zhou, Yale University/VA CSPCC West Haven; ◆ Jane Zhang, VA Cooperative Studies Program

33 CC-Room 24C Statistical Learning in Genetics and fMRI Analysis—Contributed

Section on Statistical Learning and Data Mining, Section on Statistics in Imaging
Chair(s): Alexander Blocker, Harvard University

- 2:05 p.m. **A Likelihood-Based Method for Clustering Pathogen Variants with Multiple-Trait Data**—◆ Ziqian Zhou, University of Iowa; Michael Kosoy, CDC; Kung-Sik Chan, University of Iowa
- 2:20 p.m. **On the Analysis of Next-Generation Sequencing Data for Identifying CNV Regions**—◆ Jie Chen, University of Missouri-Kansas City; Ayten Yigiter, Hacettepe University
- 2:35 p.m. **An Integrated Hierarchical Bayesian Approach to Normalizing Left-Censored miRNA Data**—◆ Jia Kang, Merck
- 2:50 p.m. **Multi-Scale Geometry and Motif Matching in Relational Data Learning**—◆ Hui Wang, University of California at Davis
- 3:05 p.m. **Multivariate Outlier Nominators for fMRI Data**—◆ John F. Magnotti, Auburn University; Nedret Billor, Auburn University
- 3:20 p.m. **Modeling Functional Connectivity in the Human Brain with Incorporation of Structural Connectivity**—◆ Wenqiong Xue, Emory University; F. DuBois Bowman, Emory University
- 3:35 p.m. **Boosting Discrete Choice Model with Applications to Mobile Computer Sales Data**—◆ Jay Wang, Hewlett-Packard Labs

34 CC-Room 27A Recent Advances in Large-Scale Hypothesis Testing—Contributed

Biometrics Section
Chair(s): Catherine Mary Crespi, University of California at Los Angeles

- 2:05 p.m. **Stability Properties of Resampling-Based Multiple Testing Procedures with Applications to Genomic Studies**—◆ Dongmei Li, University of Hawaii at Manoa; Gang Han, Moffitt Cancer Center
- 2:20 p.m. **Type I Error Control by Step-Up-Down Multiple Testing Procedures**—◆ Alexander Gordon, The University of North Carolina at Charlotte
- 2:35 p.m. **Multiple Test Procedure for Detecting Disease-Associated Rare Variants**—◆ Jianping Sun, Fred Hutchinson Cancer Research Center; Li Hsu, Fred Hutchinson Cancer Research Center; Yingye Zheng, Fred Hutchinson Cancer Research Center
- 2:50 p.m. **General Quality Assessment Metrics for Whole-Genome Gene Expression Profiling by Illumina's DASL Assay**—◆ Douglas Mahoney, Mayo Clinic; Terry M. Therneau, Mayo Clinic; S. Keith Anderson, Mayo Clinic; Jin Jen, Mayo Clinic; Jean-Pierre A. Kocher, Mayo Clinic; Monica Reinholz, Ventana Medical Systems, Inc.; Edith A. Perez, Mayo Clinic; Jeanette E. Eckel-Passow, Mayo Clinic
- 3:05 p.m. **Further Results on Controlling the False Discovery Proportion**—◆ Wenge Guo, New Jersey Institute of Technology; Li He, Temple University; Sanat Sarkar, Temple University
- 3:20 p.m. **A Statistical Method for Identifying Trait-Associated Copy Number Variants**—Jessie Jeng, University of Pennsylvania; ◆ Qian Wu, University of Pennsylvania; Hongzhe Li, University of Pennsylvania
- 3:35 p.m. **Logistic Bayesian Lasso for Detecting Rare Haplotypes Using Family Trios**—◆ Meng Wang, The Ohio State University; Shili Lin, The Ohio State University

35 CC-Room 27B Clinical Trial Design and Randomization—Contributed

Biopharmaceutical Section, Biometrics Section
Chair(s): Mark A. Gamalo, FDA/CDER

- 2:05 p.m. **A Unified Method for Balancing Continuous and Categorical Baseline Covariates in Randomized Clinical Trials**—◆ Yunzhi Lin, University of Wisconsin-Madison; Zheng Su, Genentech
- 2:20 p.m. **A Randomization Method to Match Multivariate Profiles of Treatment Groups**—◆ Anthiyur Kannappan, Cytel Inc.



- 2:35 p.m. **Balancing Treatment Allocation Over Continuous Covariates: A New Randomization Procedure**—◆ Yanqing Hu, West Virginia University; Feifang Hu, University of Virginia
- 2:50 p.m. **A Phase II Design for Combination Codevelopment Based on the Probability of Correct Selection**—◆ Xinyu Tang, University of Arkansas for Medical Sciences; Xinyu Tang, University of Arkansas for Medical Sciences
- 3:05 p.m. **The Actual Practice of Randomization: Is Your Study as Balanced as You Planned?**—◆ Michael Collins, ICON Clinical Research; Eva Ruth Miller, ICON Clinical Research
- 3:20 p.m. **Designs for Randomized Phase II Clinical Trials**—◆ Myron Chang, University of Florida; Wei Hou, University of Florida; Sin-Ho Jung, Duke University; Yang Li, University of Florida
- 3:35 p.m. **Impact of Stratified Randomization on Estimating Treatment Effect in ANCOVA Models**—◆ Peter G Mesenbrink, Novartis; Jeff Maca, Novartis

36 CC-Room 28E **■ Innovations in Adaptive Design—Contributed**

Biopharmaceutical Section

Chair(s): Chengxing Lu, Novartis

- 2:05 p.m. **Model Combining in a Covariate-Adjusted Response-Adaptive Design**—◆ Wei Qian, University of Minnesota; Yuhong Yang, University of Minnesota
- 2:20 p.m. **Adaptive Designs for Vaccine Clinical Trials**—◆ Ghideon Ghebregiorgis, FDA
- 2:35 p.m. **Novel Adaptive Design for Integrated Development of Therapies with Competitive Challenge**—◆ Yijie Zhou, Merck; Ziliang Li, Merck; Amarjot Kaur, Merck Research Laboratories
- 2:50 p.m. **Sources of Bias in Adaptive Seamless Phase II/III Designs**—◆ Jing Zhang, FDA; Kun He, FDA
- 3:05 p.m. **Fractional Two-Step Adaptive Randomization Procedure for Delayed Response in Clinical Trials**—◆ Jiajing Xu, The University of Hong Kong
- 3:20 p.m. **Optimize Promising Zone in an Adaptive Design for a Confirmatory Study**—◆ Jung Wook Park, Astellas Pharma Global Development, Inc.; Xiaosha Sherman Zhang, Astellas Pharma Global Development, Inc.; Jay Yang, Astellas Pharma Global Development, Inc.; Chaofeng Charles Liu, Astellas Pharma Global Development, Inc.
- 3:35 p.m. **Adaptive Extensions of a Two-Stage Group Sequential Procedure for Testing a Primary and Secondary Endpoint with Sample Size Re-Estimation**—◆ Yi Wu; Ajit C. Tamhane, Northwestern University; Cyrus R Mehta, Cytel Inc.

37 CC-Room 28A **■ Benefit-Risk Assessment and Risk Management—Contributed**

Biopharmaceutical Section

Chair(s): Samir Lababidi, FDA

- 2:05 p.m. **A New Approach for Evaluating Benefit-Risk in Anticoagulation Studies: A Case Study**—Vijay Chauhan, Alpha Stats Inc.; ◆ May Tang, Alpha Stats Inc.
- 2:20 p.m. **A Counterfactual P-Value Approach for Benefit-Risk Assessment in Clinical Trials**—◆ Donglin Zeng, The University of North Carolina at Chapel Hill; Guanghui Wei, Amgen, Inc.; Joseph Ibrahim, The University of North Carolina at Chapel Hill; Ming-Hui Chen, University of Connecticut; Beiying Ding, Amgen, Inc.; Chunlei Ke, Amgen, Inc.; Qi Jiang, Amgen, Inc.
- 2:35 p.m. **Dissecting Drug Safety Data of Controlled Clinical Trials**—◆ Kao-Tai Tsai, Celgene Corporation
- 2:50 p.m. **Combining Information to Develop a Safety Biomarker**—◆ Sock-Cheng Lewin-Koh, Genentech; Nicholas Lewin-Koh, Genentech; Jacqueline Tarrant, Genentech
- 3:05 p.m. **Bayesian Safety Monitoring and Stopping Rules with Incorporation of Historical Data in Medical Device Clinical Trials**—◆ Zengri Wang
- 3:20 p.m. **Cost-Effectiveness Comparison of Whole Breast Irradiation, Brachytherapy, and No Radiation Treatment in Elderly Patients with Breast Cancer**—◆ Jing Jiang, MD Anderson Cancer Center; Jinhai Huo, MD Anderson Cancer Center; Hui Zhao, The University of Texas School of Public Health; Weiguo He, The University of Texas School of Public Health; Benjamin D. Smith, MD Anderson Cancer Center
- 3:35 p.m. **Estimation of Controlled Direct Effects for Dynamic Treatment Regimes**—◆ Tomohiro Shinozaki, University of Tokyo; Yutaka Matsuyama, University of Tokyo; Satoshi Iimuro, University of Tokyo; Yasuo Ohashi, University of Tokyo; Hideki Ito, Tokyo Metropolitan Geriatric Hospital

38 CC-Room 23B **■ Multivariate Time Series, Dimension Reduction, and Miscellaneous Topics—Contributed**

Business and Economic Statistics Section, Section on Statistical Learning and Data Mining

Chair(s): James McDonald, Brigham Young University

- 2:05 p.m. **Coherence Estimation and Dimension Reduction in Multivariate Nonstationary Time Series**—◆ Timothy Park, Lancaster University; Idris Eckley, Lancaster University; Hernando Ombao, University of California at Irvine



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● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 2:20 p.m. **Dimension Reduction on Multivariate Time Series Data**—Prabir Burman, University of California at Davis; Wolfgang Polonik, University of California at Davis; ◆Yinhong Weng
- 2:35 p.m. **Design of a Coincident Index Using Dynamic Common Factors**—◆Wilmer Martinez, Central Bank; Fabio H. Nieto, Universidad Nacional de Colombia; Pilar Poncela, Universidad Autónoma de Madrid
- 2:50 p.m. **Factor Model for Forecasting with Multi-Collinearity and Nonlinear Dependence**—◆Joseph Egbulefu, Rice University
- 3:05 p.m. **Bayesian Multivariate Inference for a Non-Standard Fuzzy Regression Discontinuity Design**—◆Fan Li, Duke University; Fabrizia Mealli, University of Florence; Alessandra Mattei, University of Florence; Fei Liu, IBM T. J. Watson Research Center
- 3:20 p.m. **A New Method for Interval Forecasting of Autoregressive Time Series with a Root Near 1**—◆Staffan Fredricsson
- 3:35 p.m. **Floor Discussion**

39 CC-Room 30C Statistical Methods and Applications for Complex Data Structures—Contributed

IMS, Biometrics Section, Section on Statistical Learning and Data Mining

Chair(s): June Luo, Clemson University

- 2:05 p.m. **Testing for Heterosis in Gene Expression**—◆Heng Wang, Iowa State University; Daniel Nettleton, Iowa State University
- 2:20 p.m. **Dynamic Community Detection in Networks with Edge Noise**—◆Weston Viles, Boston University; Eric D Kolaczyk, Boston University; Mark Kramer, Boston University
- 2:35 p.m. **Inference of Network Summary Statistics Through Network Denoising**—◆Prakash Balachandran, Boston University; Edoardo M Airoidi, Harvard University; Eric D Kolaczyk, Boston University
- 2:50 p.m. **A Bayesian Approach for a Spatial Probit Model for Complex Survey Data: An Application with Chilean Crime Survey Data**—◆Rolando De La Cruz, Pontificia Universidad Católica de Chile; Cristian Meza, Universidad de Valparaiso
- 3:05 p.m. **Statistical Consideration of Correlation Among Genes in Gene Set Analysis of Paired Case-Control Studies**—◆Martina Fu; Wenjiang Fu, Michigan State University
- 3:20 p.m. **Optimal and Efficient Crossover Designs Under Subject Dropout**—◆Wei Zheng, Indiana University Purdue University Indianapolis
- 3:35 p.m. **Floor Discussion**

40 CC-Room 29A Bayesian Theory and Methods—Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section
Chair(s): Christine Peterson, Rice University

- 2:05 p.m. **Online User Reviews and the Evolution of Perceived Quality**—◆Peter Lenk, University of Michigan
- 2:20 p.m. **Bayesian Gaussian Process Regression for High-Dimensional Data**—◆Qing He, Emory University; Jian Kang, Emory University; Qi Long, Emory University
- 2:35 p.m. **Generalized Bayesian Infinite Factor Models**—◆Kassie Fronczyk, Rice University
- 2:50 p.m. **Joint Modeling of Binomial and Rank Responses**—◆Bradley Barney, Kennesaw State University; Federica Amici, Max Planck Institute for Evolutionary Anthropology; Josep Call, Max Planck Institute for Evolutionary Anthropology; Filippo Aureli, Liverpool John Moores University; Valen E Johnson, MD Anderson Cancer Center
- 3:05 p.m. **Use of Bayesian Formula in Evaluating People**—◆Shriniwas Katti, University of Missouri
- 3:20 p.m. **Bayesian Smoothing Splines Using Stochastic Differential Equations**—◆Yu Yue, Baruch College
- 3:35 p.m. **Fully Nonparametric Regression for Bounded Data Using Dependent Bernstein Polynomials**—◆Alejandro Jara, Pontificia Universidad Católica de Chile; Andrés Felipe Barrientos, Pontificia Universidad Católica de Chile; Fernando Andrés Quintana, Pontificia Universidad Católica de Chile

41 CC-Room 23C Animal Populations and Habitat—Contributed

Section on Statistics and the Environment

Chair(s): G. Gordon Brown, RTI International

- 2:05 p.m. **Deriving Distributions via Simulation: Easy Ways to Incorporate Hard Distributions**—◆Megan D. Higgs, Montana State University
- 2:20 p.m. **Joint Modeling of Survey and Survival Data to Estimate Population Trends in Mourning Doves**—◆Nicholas Michaud, Iowa State University; Philip Dixon, Iowa State University
- 2:35 p.m. **Comparing Changes in Population Density via Deformation Metrics**—◆Miriam Hodge, University of Canterbury
- 2:50 p.m. **Hierarchical Bayesian Functional Data Models with Model-Based Time-Frequency Predictors**—◆Wen-Hsi Yang, University of Missouri-Columbia; Christopher Wikle, University of Missouri; Scott Holan, University of Missouri; Mark Wildhaber, U.S. Geological Survey



- 3:05 p.m. **Modeling River Water Temperature Using Clustered Data Collected at Haphazard Times and Random Spatial Locations**—◆ Brian Gray, U.S. Geological Survey; Jim Rogala, U.S. Geological Survey
- 3:20 p.m. **Modeling Spatio-Temporal Data with Additive Models**—◆ Xiangming Fang, East Carolina University
- 3:35 p.m. **Bayesian Approach to Estimating Reproductive Inhibition Potency in Aquatic Toxicity Testing**—◆ Jing Zhang, Miami University; A. John Bailer, Miami University; James T. Oris, Miami University

42 CC-Room 28C ■ Measurement Error—Contributed

Section on Statistics in Epidemiology

Chair(s): Jimmy Thomas Efird, Brody School of Medicine

- 2:05 p.m. **Measurement Errors and Misclassifications in Covariates in Logistic Regression: Bayesian Adjustment of Main and Interaction Effects and the Sample Size Implications**—◆ Shahadut Hossain, UAE University
- 2:20 p.m. **The Impact of Covariate Measurement Error on Risk Prediction**—◆ Polyna Khudyakov, Harvard School of Public Health; Malka Gorfine, Technion; David M. Zucker, Hebrew University of Jerusalem; Donna Spiegelman, Harvard School of Public Health
- 2:35 p.m. **A Conditional Likelihood Approach for Regression Analysis Using Biomarkers Measured with Batch-Specific Error**—◆ Ming Wang, Emory University; W. Dana Flanders, Emory University; Robert M. Bostick, Emory Winship Cancer Institute; Qi Long, Emory University
- 2:50 p.m. **Binary Regression with Differentially Misclassified Response and Exposure Variables**—◆ Li Tang, Emory University; Robert H. Lyles, Emory University
- 3:05 p.m. **Design Considerations for Case Series Models with Exposure Onset Measurement Error**—◆ Sandra Mohammed, University of California at Davis; Lorien Dalrymple, University of California at Davis School of Medicine; Damla Senturk, University of California at Los Angeles; Danh Nguyen, University of California at Davis
- 3:20 p.m. **Threshold Modeling in the Presence of Measurement Error: Application to Serum Vitamin D**—◆ Maria Joseph, Iowa State University; Alicia L. Carriquiry, Iowa State University; Wayne A. Fuller, Iowa State University; Christopher T. Sempos, National Institutes of Health
- 3:35 p.m. **Optimal Design for Diagnostic Accuracy Studies When the Biomarker Is Subject to Measurement Error**—◆ Matthew Thomas White, University of Pennsylvania; Sharon Xie, University of Pennsylvania

43 HQ-Sapphire L ■ Methodology for Applications in Sports—Contributed

Section on Statistics in Sports

Chair(s): James Piette, Krossover Intelligence, Inc./The Wharton School

- 2:05 p.m. **Ranking Bias in the 'USA Today' Coaches Poll for the NCAA Football Bowl Subdivision**—◆ Pavel Chernyavskiy, University of Nebraska; Christopher Bilder, University of Nebraska
- 2:20 p.m. **The College Sports Project: What Have We Learned?**—◆ John Emerson, Middlebury College
- 2:35 p.m. **Properties of Logistic Regression Estimates of Team Strengths in Sports**—◆ Richard Auer, Loyola University Maryland; Jennifer Ellis, Loyola University Maryland
- 2:50 p.m. **Measuring Game Competitiveness Using Team Box Score Data**—◆ Max Buot, Xavier University; Matthew Dulle, The Kroger Co.
- 3:05 p.m. **Multiple Testing Procedures for Sports Data: An Analysis of the MLB Hall of Fame**—◆ Leah Jager, U.S. Naval Academy
- 3:20 p.m. **Evolutionary Madness!: Applying an Evolutionary Algorithm to Optimize Team Selections for an NCAA Tournament Contest**—◆ Douglas Noe, Miami University; Geng Chen, The University of Texas Health Science Center at Houston
- 3:35 p.m. **Ranking Colleges by Categories**—◆ Jerome Keating, The University of Texas at San Antonio; Robert L. Mason, Southwest Research Institute; Ryan S Gill, University of Louisville

44 CC-Room 22 ■ ● Address Based, RDD and Cell Phone, and Respondent-Driven Sampling—Contributed

Section on Survey Research Methods

Chair(s): Nancy Clusen, Mathematica Policy Research

- 2:05 p.m. **Using Address-Based Sampling Frames in Lieu of Traditional Listing: A New Approach**—◆ Sylvia Dohrmann, Westat; Jill M. Montaquila, Westat; Graham Kalton, Westat; Martha Berlin, Westat
- 2:20 p.m. **Quasi Address-Based Sampling: A New Cost-Efficient Rejective Sampling Design for Reducing Undercoverage, Nonresponse Rate, and Nonrespondent Substitution Bias**—◆ Avinash Singh, NORC; Kyle Fennell, NORC; Ned English, NORC; Jizhou Fu, NORC
- 2:35 p.m. **Using New IT in Area Sampling: An Experience in Korea**—◆ Young-je Woo, Dongguk University; Sun Woong Kim, Dongguk University
- 2:50 p.m. **Unpacking the DSF and NoStat Files in an Attempt to Better Reach the Drop Point Population**—◆ Katherine Dekker, NORC; Ned English, NORC; Ashley Amaya, NORC

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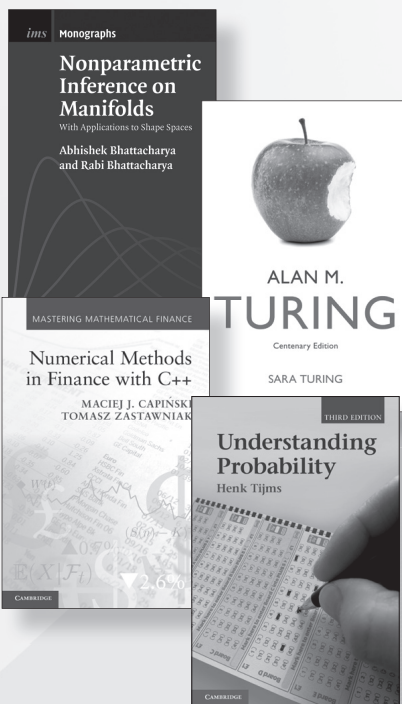
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- 3:05 p.m. **A Review of the Cell Phone Sample Component of the California Health Interview Survey**—◆ Jennifer Kali, Westat; J. Michael Brick, Westat; Ismael Flores Cervantes, Westat; Greg Norman, Westat; David Grant, University of California at Los Angeles
- 3:20 p.m. **Geographical Screening in Cell Phone Surveys: Sampling Variability and Bias in the March 2011 National Flu Survey**—◆ Nicholas Davis, NORC; Tammy Santibanez, CDC; Lin Liu, NORC; Kennon R. Copeland, NORC
- 3:35 p.m. **Exploring Error Properties of Respondent-Driven Sampling**—◆ Sunghee Lee, University of Michigan; Tuba Suzer-Gurtekin, University of Michigan; James Wagner, University of Michigan; Richard Valliant, University of Maryland

45 CC-Room 32B Innovative Methods for Education Research—Contributed

Social Statistics Section, Section on Statistical Education

Chair(s): Natalya Verbitsky-Savitz, Mathematica Policy Research

- 2:05 p.m. **A Data-Mining Approach to Value-Added Models**—◆ Arturo Valdivia, Arizona State University; Sharon Lohr, Arizona State University
- 2:20 p.m. **A Correlated Random-Effects Model for Nonignorable Missing Data in Value-Added Assessment of Teacher Effects**—◆ Yan Yang, Arizona State University; Andrew Karl, Arizona State University; Sharon Lohr, Arizona State University
- 2:35 p.m. **Hierarchical Network Models for Education Research: Hierarchical Latent Space Models**—◆ Tracy M Sweet, Carnegie Mellon University; Andrew C Thomas, Carnegie Mellon University; Brian Junker, Carnegie Mellon University
- 2:50 p.m. **Identifying Gender-Specific Factors Related to Stem Retention at a Large State University**—◆ Ulrike Genschel, Iowa State University; John Riddles, Iowa State University; Ian Mouzon, Iowa State University; Alicia L. Carriquiry, Iowa State University; Monica Degnan, Iowa State University; Elgin Johnston, Iowa State University; Kenneth Koehler, Iowa State University; Wolfgang Kliemann, Iowa State University; Hien Nguyen, Iowa State University
- 3:05 p.m. **Investigation of Cornell Critical Thinking Results as Affected by Science Writing Heuristic Using the Rasch Model**—◆ Michael McGill, Iowa State University; Brian M Hand, University of Iowa; William J Therrien, University of Iowa
- 3:20 p.m. **Assessing Supplemental Instruction Using Mixed Effects Modeling**—◆ Daniel Yanosky, Kennesaw State University
- 3:35 p.m. **Floor Discussion**

Special Presentation 4:00 p.m.–5:50 p.m.

46 HQ-Sapphire MN Introductory Overview Lecture: Causal Inference in Statistics—Other

ASA, ENAR, IMS, International Chinese Statistical Association, International Indian Statistical Association, SSC, WNAR

Organizer(s): Judea Pearl, University of California at Los Angeles

Chair(s): Steven MacEachern, The Ohio State University

4:05 p.m. **Causal Inference in Statistics: A Gentle Introduction**—◆ Judea Pearl, University of California at Los Angeles

5:30 p.m. **Floor Discussion**

Invited Sessions 4:00 p.m.–5:50 p.m.

47 HQ-Sapphire A Recent Advances in Markov Chain Monte Carlo—Invited

Section on Bayesian Statistical Science, SSC, Section on Statistical Computing, Section on Statistical Learning and Data Mining, International Indian Statistical Association

Organizer(s): Jingchen Liu, Columbia University

Chair(s): Xuan Yang, Columbia University

4:05 p.m. **Interacting Multiple-Try Metropolis Sampling**—◆ Radu V Craiu, University of Toronto; Roberto Casarin, University of Venice; Fabrizio Leisen, Universidad Carlos III de Madrid

4:35 p.m. **Convergence Analysis of the Gibbs Sampler for Bayesian General Linear Mixed Models with Improper Priors**—◆ James P. Hobert, University of Florida; Jorge Carlos Roman, University of Florida

5:05 p.m. **Self-Learning Markov Chain Monte Carlo from a Large Deviations Point of View**—◆ Jingchen Liu, Columbia University; Xuan Yang, Columbia University; Henrik Hult, Royal Institute of Technology, Sweden

5:35 p.m. **Floor Discussion**

48 CC-Room 26B Innovations in Latent Variable Modeling with Epidemiological Applications—Invited

Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Brisa N Sánchez, University of Michigan School of Public Health

Chair(s): Mary D. Sammel, University of Pennsylvania

4:05 p.m. **Shrinkage Estimators for Latent Variable Models in the Presence of Measurement Model Misspecification**—◆ Brisa N Sánchez,



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 4:35 p.m. **Multivariate Zero-Inflated Proportional Odds Model (MZIPO): A Joint Latent Variable Approach to Scale Development in the Presence of a Preponderance of Zeros**—◆Steffanie Marie Halberstadt, The EMMES Corporation; Mary D. Sammel, University of Pennsylvania
- 5:05 p.m. **Differential Item Functioning: When Does It Matter?**—◆Karen Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health; Janne Petersen, Hvidovre University Hospital
- 5:35 p.m. **Floor Discussion**

- 4:35 p.m. **Maximum Likelihood Estimation in Network Models**—◆Alessandro Rinaldo, Carnegie Mellon University
- 5:05 p.m. **Efficient and Fast Fitting of Block Models**—◆Aiyu Chen, Google; Arash Amini, University of Michigan; Peter Bickel, University of California at Berkeley; Liza Levina, University of Michigan
- 5:35 p.m. **Floor Discussion**

49 CC-Room 28B

■ ● Role of Pilot Studies for the Development of Confirmatory Studies: Valuable Guidance for Allocation of R&D Resources, or ‘Regression Toward the Mean for R01’s’?—Invited

Statistics in Mental Health Research, Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Naihua Duan, Columbia University

Chair(s): Robert D Gibbons, The University of Chicago

- 4:05 p.m. **The Role of Hypothesis-Generating and Pilot Studies as Precursors to Hypothesis-Testing in Clinical Research**—◆Helena Chmura Kraemer, Stanford University/University of Pittsburgh
- 4:25 p.m. **Pilot Studies in a Community-Academic Learning Enterprise**—◆Kenneth Wells, University of California at Los Angeles; Loretta Jones, HAAF; Thomas R. Belin, University of California at Los Angeles
- 4:45 p.m. **Design and Assessment of Outcomes in Mental Health Research**—◆Amita Manatunga, Emory University; Limin Peng, Emory University; Ying Guo, Emory University
- 5:05 p.m. **From Pilot Studies to Confirmatory Studies: Confidence Intervals, Statistical Significance, and Clinical Significance**—◆Naihua Duan, Columbia University
- 5:25 p.m. Disc: Elizabeth Stuart, Johns Hopkins Bloomberg School of Public Health
- 5:45 p.m. **Floor Discussion**

51 HQ-Sapphire 6F

■ ● International Census Coverage—Invited

Section on Survey Research Methods, Section for Statistical Programmers and Analysts, Section on Government Statistics, Statistics Without Borders

Organizer(s): Vincent T Mule, U.S. Census Bureau

Chair(s): John Thompson, NORC

- 4:05 p.m. **Errors of Non-Observation: Dwelling Nonresponse and Coverage Error in Traditional Censuses**—◆David Dolson, Statistics Canada
- 4:30 p.m. **The 2011 UK Census and Its Coverage**—◆Owen Abbott, Office for National Statistics; Garnett Compton, Office for National Statistics
- 4:55 p.m. **United States Census Coverage Survey Results**—◆Vincent T Mule, U.S. Census Bureau
- 5:20 p.m. Disc: Howard Hogan, U.S. Census Bureau
- 5:45 p.m. **Floor Discussion**

50 CC-Room 30B

● Statistical Inference for Networks—Invited

Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Liza Levina, University of Michigan

Chair(s): Liza Levina, University of Michigan

- 4:05 p.m. **Statistical Inference on Networks**—◆Peter Bickel, University of California at Berkeley

52 HQ-Sapphire L

■ ● Spatio-Temporal Statistical Methods Applied to the Environment—Invited

Section on Statistics and the Environment, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Peter F Craigmile, The Ohio State University

Chair(s): Peter F Craigmile, The Ohio State University

- 4:05 p.m. **Seeing a Complex Natural Environment Through a Statistical Glass**—◆Marian Scott, University of Glasgow; Campbell Gemmill, Scottish Environment Protection Agency
- 4:30 p.m. **Nonparametric Estimation of Space-Time Covariance Function**—◆Bo Li, Purdue University; InKyung Choi, Purdue University; Xiao Wang, Purdue University
- 4:55 p.m. **Computer Model Calibration with High-Dimensional Multivariate Space-Time Observations**—◆Murali Haran, Penn State University; Klaus Keller, Penn State University; Roman Olson, Penn State University; K. Sham Bhat, Los Alamos National Laboratory; Won Chang, Penn State University



5:20 p.m. **Spatial Measurement Error in Two-Stage Regression, with Application to Air Pollution Epidemiology**—◆ Christopher J Paciorek, University of California at Berkeley; Adam A Szpiro, University of Washington

5:45 p.m. **Floor Discussion**

53 CC-Room 32A

● **Statistical Research in Chile: Some Examples of International Collaboration—Invited**

General Methodology, International Indian Statistical Association
Organizer(s): Alejandro Jara, Pontificia Universidad Católica de Chile
Chair(s): Alejandro Jara, Pontificia Universidad Católica de Chile

4:05 p.m. **Flexible Regression Modeling and Inference via Dependent Polya Trees**—◆ Wesley Johnson, ASA; Alejandro Jara, Pontificia Universidad Católica de Chile; Fernando Andrés Quintana, Pontificia Universidad Católica de Chile

4:30 p.m. **Regularization and Prediction of Long-Memory Time Series**—◆ Wilfredo Palma, Pontificia Universidad Católica de Chile; Mohsen Pourahmadi, Texas A&M University

4:55 p.m. **Application of Dependent Processes to Covariate-Adjusted Frailty Distributions in the Proportional Hazards Model**—◆ Timothy Hanson, University of South Carolina; Alejandro Jara, Pontificia Universidad Católica de Chile; Lianming Wang, University of South Carolina

5:20 p.m. **A Simple Class of Bayesian Nonparametric Autoregression Models**—◆ Fernando Andrés Quintana, Pontificia Universidad Católica de Chile; Peter Mueller, The University of Texas at Austin; Maria Anna Di Lucca, Università Bocconi; Alessandra Guglielmi, Politecnico de Milano

5:45 p.m. **Floor Discussion**

54 HQ-Sapphire B

● **The Uncertainty Quantification Program at SAMSI—Invited**

Statistical and Applied Mathematical Sciences Institute, International Indian Statistical Association, Statistics Surveys Online Journal
Organizer(s): Richard L Smith, SAMSI/The University of North Carolina
Chair(s): Daniel Cooley, Colorado State University

4:05 p.m. **Statistics and Uncertainty Quantification for Physics-Based Models**—◆ Don Estep, Colorado State University

4:30 p.m. **Uncertainty Quantification for Numerical Methods Based on Sparse Representation: A Bayesian Approach**—◆ Jeff Wu, Georgia Institute of Technology

4:55 p.m. **Uncertainty Quantification and Climate Science**—◆ Amy Braverman, California Institute of Technology

5:20 p.m. **Disc:** Richard L Smith, SAMSI/The University of North Carolina

5:40 p.m. **Floor Discussion**

55 CC-Room 30A

■ ● **Translational Bioinformatics: Secondary Analysis of High-Dimensional Public Genomic Data—Invited**

WINAR, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Haiyan Huang, University of California at Berkeley
Chair(s): Zhijin Wu, Brown University

4:05 p.m. **Pathway Analysis and Improved Discriminant Analysis of Microarray Data from Genomic Expression Omnibus**—◆ Herbert Pang, Duke University

4:30 p.m. **Integrative Genomic Modeling and Data Analysis in Major Depressive Disorder**—◆ George C Tseng, University of Pittsburgh

4:55 p.m. **Statistical Issues in Disease Diagnosis Using Public Gene Expression Data**—◆ Haiyan Huang, University of California at Berkeley

5:20 p.m. **A Chromosome-Centered Association Test for Case-Control Studies with Related Individuals**—◆ Joshua Sampson, National Cancer Institute; Jianxin Shi, National Cancer Institute; Peng Li, National Cancer Institute; William Wheeler, Information Management Services

5:45 p.m. **Floor Discussion**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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56 CC-Room 33B ● **Statistical Analysis of Brain Images—Invited**

IMS, International Chinese Statistical Association, WNFAR, International Indian Statistical Association, Statistics Surveys Online Journal, Section on Statistics in Imaging

Organizer(s): Hongtu Zhu, The University of North Carolina at Chapel Hill

Chair(s): Hernando Ombao, University of California at Irvine

- 4:05 p.m. **Multimodal Brain Imaging Studies for Prediction—**
◆ Brian Scott Caffo, The Johns Hopkins University
- 4:35 p.m. **Functional Analysis of Brain Images: Smoothing or Not Smoothing?—**
◆ Hongtu Zhu, The University of North Carolina at Chapel Hill
- 5:05 p.m. **A Spatial Bayesian Approach for Interpretable Modeling of Neuroimaging Meta-Analysis Data—**
◆ Thomas E. Nichols, University of Warwick
- 5:35 p.m. **Floor Discussion**

Invited Panels 4:00 p.m.–5:50 p.m.

57 CC-Room 31B Memorial Session: A Tribute to Martha Aliaga—Invited

Memorial, ASA, Section on Statistical Education, Statistics Surveys Online Journal, Committee on Scientific Freedom and Human Rights, Committee on Gay and Lesbian Concerns in Statistics

Organizer(s): Michelle Gaddy Everson, University of Minnesota

Chair(s): Jerry Moreno, John Carroll University

- Panelists:**
- ◆ Brenda Gunderson, University of Michigan
 - ◆ Rebecca Nichols, ASA
 - ◆ Roxy Peck, California Polytechnic State University
 - ◆ William Seltzer, Fordham University
 - ◆ Sonya L. Vartivarian, U.S. Government Accountability Office

- 5:35 p.m. **Floor Discussion**

Topic-Contributed Sessions 4:00 p.m.–5:50 p.m.

58 CC-Room 28D ■ ● **Innovative Statistical Approaches to Adaptive Clinical Trials—Topic-Contributed**

Biopharmaceutical Section, Section for Statistical Programmers and Analysts, International Indian Statistical Association

Organizer(s): Walter Boyle, SAS Institute

Chair(s): Walter Boyle, SAS Institute

- 4:05 p.m. **Dynamic Comparison of Simulated Adaptive Trials—**
◆ Russell Wolfinger, SAS Institute; Richard Zink, SAS Institute; Walter Boyle, SAS Institute

- 4:25 p.m. **When Are Adaptive Designs Valuable and What Are the Efficiencies?—**
◆ Scott Berry, Berry Consultants

- 4:45 p.m. **Design and Comparison of Adaptive Clinical Trials Using Simulation—**
◆ William Prucka, Eli Lilly and Company

- 5:05 p.m. **Incorporating Clinical Perspectives Into the Design of Adaptive Clinical Trials: Process and Impact—**
◆ Roger Lewis, Los Angeles Biomedical Research Institute

- 5:25 p.m. **Enrollment Speed, Data Heterogeneity, and Outcome of Adaptive Designs—**
◆ Yili Pritchett, Abbott Laboratories

- 5:45 p.m. **Floor Discussion**

59 CC-Room 28E ■ ● **Recent Advances in Recurrent Events Analysis in Clinical Trials—Topic-Contributed**

Biopharmaceutical Section, Biometrics Section, International Indian Statistical Association

Organizer(s): Jiajun Liu, Merck Research Laboratories

Chair(s): Yabing Mai, Merck Research Laboratories

- 4:05 p.m. **Recurrent Event Data Analysis with Time-Dependent Covariates: The Impact of Streptococcus on Pharyngitis in Indian School Children—**
◆ Chiung-Yu Huang, National Institute of Allergy and Infectious Diseases; Dean Follmann, NIH/NIAID; Shanshan Li, The Johns Hopkins University; Richard M Krause, Fogarty International Center/National Institutes of Health; John Melbin, Christian Medical College

- 4:25 p.m. **Smoothing Spline ANOVA Frailty Model for Recurrent Event Data—**
◆ Yihua Jiang, STUBHUB.COM; Pang Du, Virginia Tech; Yuedong Wang, University of California at Santa Barbara

- 4:45 p.m. **Latent Class Model of Recurrent Events—**
◆ Yue Shentu, Merck; Yabing Mai, Merck Research Laboratories; Jiajun Liu, Merck Research Laboratories; Yue Liu, University of Virginia

- 5:05 p.m. **An Estimating Function Approach to the Analysis of Recurrent and Terminal Events—**
◆ Douglas E Schaubel, University of Michigan; John Kalbfleisch, University of Michigan; Yining Ye, Amgen, Inc.; Qi Gong, University of Michigan

- 5:25 p.m. **Some Practical Aspects of Recurrent Event Endpoints in the Assessment of Therapeutic Effects—**
◆ Heng Li, FDA/CDRH; Vandana Mukhi, FDA/CDRH; Yu (Audrey) Zhao, FDA/CDRH; Yun-Ling Xu, FDA/CDRH

- 5:45 p.m. **Floor Discussion**



60 CC-Room 21 **Recent Advances in Quantile Regression Methods for Survival Analysis—Topic-Contributed**

Section on Nonparametric Statistics, Quality and Productivity Section, Committee on Applied Statisticians, International Indian Statistical Association

Organizer(s): Guixian Lin, SAS Institute

Chair(s): Guixian Lin, SAS Institute

- 4:05 p.m. **Quantile Regression for Left-Truncated Semi-Competing Risks Data**—◆ Ruosha Li, University of Pittsburgh; Limin Peng, Emory University
- 4:25 p.m. **Censored Quantile Regression with Partially Functional Effects**—◆ Jing Qian, University of Massachusetts-Amherst; Limin Peng, Emory University
- 4:45 p.m. **Quantile Regression Analysis of Length-Biased Survival Data**—◆ Huixia Judy Wang, North Carolina State University; Lan Wang, University of Minnesota
- 5:05 p.m. **Censored Quantile Regression for Residual Lifetimes**—◆ Jong-Hyeon Jeong, University of Pittsburgh
- 5:25 p.m. **Quantile Regression Estimation of Panel Duration Models with Censored Data**—◆ Carlos Lamarche, University of Oklahoma; Matthew Harding, Stanford University
- 5:45 p.m. **Floor Discussion**

61 CC-Room 23A **Innovative Statistical Applications to Business—Topic-Contributed**

Business and Economic Statistics Section, International Indian Statistical Association

Organizer(s): Burcu Aydin, Hewlett-Packard Labs

Chair(s): Yili Hong, Virginia Tech

- 4:05 p.m. **Kernel Dimension Reduction in Data-Rich Marketing Research**—◆ Yuexiao Dong, Temple University
- 4:20 p.m. **Statistical Analysis for IBM Smarter Planet Initiative**—◆ Yasuo Amemiya, IBM T. J. Watson Research Center
- 4:35 p.m. **Innovative Statistical Applications to Business**—◆ Han Ye, The University of North Carolina at Chapel Hill
- 4:50 p.m. **Applications Using Mobile Call Detail Records for Clustering and Urban Planning**—◆ Chris Volinsky, AT&T Shannon Laboratory
- 5:05 p.m. **Topic Discovery for Online Video Ads**—◆ Sangho Yoon, Google

- 5:20 p.m. **Disc: J. Steve Marron, The University of North Carolina at Chapel Hill**
- 5:35 p.m. **Floor Discussion**

62 CC-Room 29A **San Diego Statisticians Attack Massive Data: Bayesian Variable Selection for Biomedical Problems—Topic-Contributed**

Biometrics Section, WNFAR, Section on Statistical Learning and Data Mining, International Indian Statistical Association

Organizer(s): Richard A. Levine, San Diego State University//JCGS

Chair(s): Barbara Bailey, San Diego State University

- 4:05 p.m. **Bayesian Methods for Genetics and Brain Imaging**—◆ Wesley Thompson, University of California at San Diego
- 4:25 p.m. **Covariate-Modulated Bayesian Variable Selection Model**—◆ Kelly Spoon
- 4:45 p.m. **Covariate-Modulated Local False Discovery Rate for Incorporating SNP Annotations in Genome-Wide Association Studies**—◆ Rong Zablocki, University of California at San Diego; Richard A. Levine, San Diego State University//JCGS; Wesley Thompson, University of California at San Diego
- 5:05 p.m. **Your Brain On BART: Bayesian Additive Regression Trees for Assessing Cognitive Function**—◆ George Manning Richardson, University of California at San Diego
- 5:25 p.m. **Bayesian Quantile Regression for Cystic Fibrosis Lung Function Data**—◆ Kameryn Denaro; Barbara Bailey, San Diego State University
- 5:45 p.m. **Floor Discussion**

63 CC-Room 29D **Recent Advances in Empirical Likelihood—Topic-Contributed**

ENAR, Biometrics Section, International Chinese Statistical Association, Statistics Surveys Online Journal

Organizer(s): Yichuan Zhao, Georgia State University

Chair(s): Lihong Qi, University of California at Davis

- 4:05 p.m. **Jackknife Empirical Likelihood for the Accelerated Failure Time Model with Censored Data**—◆ Yichuan Zhao, Georgia State University; Maxime Bouadoumou, GSU
- 4:25 p.m. **Joint Asymptotics and Inferences for Semiparametric Models**—◆ Zuofeng Shang, University of Notre Dame; ◆ Guang Cheng, Purdue University
- 4:45 p.m. **Empirical Likelihood Method for a High-Dimensional Covariance Matrix**—◆ Liang Peng, Georgia Institute of Technology



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 5:05 p.m. **Empirical Likelihood for Additive Hazards Regression with Current Status Data**—◆ Xuewen Lu, University of Calgary; Wanrong Liu, Hunan Normal University; Lingxue Pan, Aspire Commodities, LP
- 5:25 p.m. **An Empirical Likelihood Approach to Testing of Multivariate Symmetries**—◆ Hanxiang Peng, Indiana University Purdue University Indianapolis
- 5:45 p.m. **Floor Discussion**

- 5:05 p.m. **The Optimal Sampling Ratios in Comparative Diagnostic Trials**—◆ Liansheng Tang, George Mason University
- 5:25 p.m. **Imputation-Based Empirical Likelihood Inference for the Area Under the ROC Curve with Missing Data**—◆ Gengsheng Qin, Georgia State University; Binhuan Wang, Georgia State University
- 5:45 p.m. **Floor Discussion**

64 CC-Room 24C ■ ● Registration of Functional Data—Topic-Contributed

International Indian Statistical Association, Section on Statistical Learning and Data Mining, Statistics Surveys Online Journal
 Organizer(s): Anuj Srivastava, Florida State University
 Chair(s): Anuj Srivastava, Florida State University

- 4:05 p.m. **Registration in Functional Data Analysis**—◆ James Ramsay, McGill University
- 4:25 p.m. **Statistical Analysis of Images and Parameterized Surfaces**—◆ Sebastian Kurtek, Florida State University
- 4:45 p.m. **Bayesian Shape Matching and Protein Structure Alignment**—◆ Scott Schmidler, Duke University
- 5:05 p.m. **Registration of Functional Data Using Fisher-Rao Metric**—◆ Wei Wu
- 5:25 p.m. Disc: Ranjan Maitra, Iowa State University
- 5:45 p.m. **Floor Discussion**

66 CC-Room 22 ■ ● Topics on Small-Area Estimation—Topic-Contributed

Section on Survey Research Methods, Committee on Applied Statisticians, Section on Statistics and the Environment, International Indian Statistical Association, Section on Government Statistics
 Organizer(s): Jaekwang Kim, Iowa State University
 Chair(s): Zhengyuan Zhu, Iowa State University

- 4:05 p.m. **Small-Area Estimation Combining Information from Several Sources**—◆ Seunghwan Park, Seoul National University; Seo-young Kim, Statistics Korea; Jaekwang Kim, Iowa State University
- 4:25 p.m. **Small-Area Confidence Bounds on Small Cell Proportions in Survey Populations**—◆ Eric Slud, U.S. Census Bureau; Aaron Gilary, U.S. Census Bureau; Jerry Maples, U.S. Census Bureau
- 4:45 p.m. **Topics on Small-Area Estimation**—Wayne A. Fuller, Iowa State University; Emily J Berg, National Agricultural Statistics Service; ◆ Andreea Erciulescu, Iowa State University
- 5:05 p.m. **Small-Area Estimation Under Measurement Error Models**—◆ Malay Ghosh, University of Florida
- 5:25 p.m. **State-Level Estimates of Phosphorus and Nitrogen Levels in Wadeable Streams**—◆ David Marker, Westat; John W Rogers, Westat; Rebecca Jeffries Birch, Westat; Marla Smith, EPA
- 5:45 p.m. **Floor Discussion**

65 HQ-Sapphire U ■ ● ROC Curve Analysis and Empirical Likelihood Method—Topic-Contributed

Biometrics Section, Biopharmaceutical Section, Committee on Applied Statisticians, International Indian Statistical Association
 Organizer(s): Gengsheng Qin, Georgia State University
 Chair(s): Shan Luo, Georgia State University

- 4:05 p.m. **Confidence Intervals for the Difference Between Two Partial AUCs**—◆ Xin Huang, Fred Hutchinson Cancer Research Center; Gengsheng Qin, Georgia State University; Yan Yuan, Georgia State University; Xiao-Hua (Andrew) Zhou, University of Washington
- 4:25 p.m. **Empirical Likelihood-Based Confidence Intervals for Length-Biased Data**—◆ Jing Ning, MD Anderson Cancer Center; Jing Qin, National Institute of Allergy and Infectious Diseases; Masoud Asgharian, McGill University; Yu Shen, MD Anderson Cancer Center
- 4:45 p.m. **U-Statistic with Side Information**—◆ Ao Yuan, Howard University; Wenqing He, University of Western Ontario; Binhuan Wang, Georgia State University; Gengsheng Qin, Georgia State University

67 CC-Room 25C ■ ● Estimating Unauthorized Migration—Topic-Contributed

Social Statistics Section, Section on Survey Research Methods, International Indian Statistical Association, Section on Government Statistics
 Organizer(s): Enrico A. Marcelli, San Diego State University
 Chair(s): Enrico A. Marcelli, San Diego State University

- 4:05 p.m. **Thinking About Unauthorized Population Estimates as Residuals: The Method and Policy Implications**—◆ Karen Woodrow-Lafield, University of Maryland Population Research Center



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 4:25 p.m. **Estimating the Number and Characteristics of Illegal Migrants via the Center Sampling Technique: Methodology and Application to Italian Data**—◆ Gianluca Baio, University College London; Gian Carlo Blangiardo, University of Milano-Bicocca; Marta Blangiardo, Imperial College London
- 4:45 p.m. **Estimating Unauthorized Immigrant Populations in Sub-State Areas**—◆ Laura E Hill, Public Policy Institute of California; Hans Johnson, Public Policy Institute of California; Joseph Hayes, Public Policy Institute of California; David Ezekiel, Public Policy Institute of California
- 5:05 p.m. **Household Probability Sampling of Legal and Unauthorized Migrants**—◆ Enrico A. Marcelli, San Diego State University
- 5:25 p.m. **Unauthorized Immigrants, Trends, and Characteristics: Comparison of Estimates Based in the CPS and ACS**—◆ Jeffrey Passel, Pew Hispanic Center
- 5:45 p.m. **Floor Discussion**

68 CC-Room 25B **Capacity Building for Statistics, Research Design, and Evaluation in Developing Nations—Topic-Contributed**

Statistics Without Borders, Section on Survey Research Methods
 Organizer(s): Duncan C Thomas, University of Southern California
 Chair(s): Justin Fisher, U.S. Government Accountability Office

- 4:05 p.m. **Orphan Survey or Orphaned Survey? Design Effects in a Survey of Orphans and Vulnerable Children**—◆ Bryan Sayer, Social and Scientific Systems, Inc.
- 4:25 p.m. **Survival Estimation from Current Status Data**—◆ Hsin-Yi Weng, University of Utah
- 4:45 p.m. **Analysis of the Mobile Phone Survey of the Haitian Population**—◆ Ryung Kim, Albert Einstein College of Medicine
- 5:05 p.m. **Report on Current Statistical Capacity Building Efforts in Albania, Ethiopia, Kenya, Papua New Guinea, and Madagascar**—◆ James Cochran, Louisiana Tech University
- 5:25 p.m. Disc: Chris Barker, Statistical Planning and Analysis Service
- 5:45 p.m. **Floor Discussion**

69 CC-Room 28A **Federal Perspectives on Privacy, Confidentiality, and Data Quality—Topic-Contributed**

Section on Government Statistics, Section on Survey Research Methods
 Organizer(s): Eve Powell-Griner, National Center for Health Statistics
 Chair(s): Eve Powell-Griner, National Center for Health Statistics

- 4:05 p.m. **Inappropriate Use of Statistical Measures in the Name of Balancing Data Quality and Confidentiality of Tabular Format Magnitude Data**—◆ Ramesh A Dandekar, U.S. Energy Information Administration
- 4:25 p.m. **Disclosure Avoidance at the National Center for Health Statistics**—◆ Joe Fred Gonzalez, National Center for Health Statistics; Eve Powell-Griner, National Center for Health Statistics
- 4:45 p.m. **The Role of the NCES Disclosure Review Board in Balancing Confidentiality and Data Quality**—◆ Marilyn Seastrom, National Center for Education Statistics
- 5:05 p.m. **A Renewed Understanding of Complementary Cell Suppression**—◆ Lawrence Cox, Lawrence H. Cox Consulting
- 5:25 p.m. Disc: Jacob Bournazian, U.S. Department of Energy
- 5:45 p.m. **Floor Discussion**

70 CC-Room 26A **Bayes, Submission, and Surveillance for Medical Devices—Topic-Contributed**

Biopharmaceutical Section, International Indian Statistical Association
 Organizer(s): Theodore Lystig, Medtronic
 Chair(s): Brian Wiens, Alcon Laboratories

- 4:05 p.m. **A Comparison of Passive and Active Surveillance Approaches for Medical Devices**—◆ Jeremy Strief, Medtronic
- 4:25 p.m. **Pooling of Data Across Multiple Subgroups in FDA Submissions**—◆ Tyson Rogers, Medtronic; Jeff Cerkvenik, Medtronic
- 4:45 p.m. **A Bayesian Adaptive Design for Device Surveillance**—◆ Theodore Lystig, Medtronic; Thomas A Murray, University of Minnesota; Bradley P Carlin, University of Minnesota
- 5:05 p.m. **Commensurate Priors for Incorporating Historical Information in Clinical Trials**—◆ Brian Hobbs, MD Anderson Cancer Center; Daniel J. Sargent, Mayo Clinic; Bradley P Carlin, University of Minnesota
- 5:25 p.m. Disc: Gene Pennello, FDA
- 5:45 p.m. **Floor Discussion**

Thurs-Sun



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Topic-Contributed Panels

4:00 p.m.–5:50 p.m.

71 HQ-Sapphire H

● The Rise and Fall of Value-Added Models for Teacher Evaluations—Topic-Contributed

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences, Statistics Surveys Online Journal, Social Statistics Section, CHANCE

Organizer(s): Sam Behseta, California State University/CHANCE

Chair(s): Sam Behseta, California State University/CHANCE

- Panelists:** ◆ J.R. Lockwood, RAND Corporation
 ◆ Derek Briggs, University of Colorado
 ◆ Jesse Rothstein, University of California at Berkeley
 ◆ Catherine Durso, University of Denver

5:45 p.m. Floor Discussion

Contributed Sessions 4:00 p.m.–5:50 p.m.

72 CC-Room 30C

Miscellaneous Computational Methods—Contributed

Section on Statistical Computing

Chair(s): Robert Bell, AT&T

- 4:05 p.m. User-Oriented High-Dimensional Linear Model Estimation—◆ Taylor Arnold, Yale University
- 4:20 p.m. On Moments and Simulation of Truncated Multivariate T Random Variates—◆ Tsung-I Lin, National Chung Hsing University
- 4:35 p.m. Estimation and Algorithm for Joint Linkage and Linkage Disequilibrium Analysis in Family Data—◆ Jiangtao Luo, University of Nebraska Medical Center
- 4:50 p.m. Statistical Methods for Fractional Birth and Fractional Death Processes—◆ Dexter Cahoy, Louisiana Tech University
- 5:05 p.m. A Discussion on Quadrature for Latent Variable Models with Categorical Responses—◆ Xiangxiang Meng, SAS Institute; Xinming An, SAS Institute
- 5:20 p.m. On Imputing Binary Data Without Making Any Loglinear Assumptions via Pairwise Associations and Corresponding Conditional Probabilities—◆ Irene Helenowski, Northwestern University; Hakan Demirtas, University of Illinois at Chicago
- 5:35 p.m. On the Factorization of a Matrix Inverse—◆ Yihao Deng, Indiana University Purdue University Fort Wayne

73 CC-Room 28C

● Various Topics in Statistical Education—Contributed

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences

Chair(s): Marie Kraska, Auburn University

- 4:05 p.m. Effect Size Reporting and Interpreting Practices in Published Journal Articles—◆ Mehary Stafford
- 4:20 p.m. A Cognitive Interpretation of Data Analysis—◆ Garrett Grolemond, Rice University; Hadley Wickham, Rice University
- 4:35 p.m. Statistical Literacy: Historical References, Interpretations, and Implications—◆ Milo Schield, Augsburg College
- 4:50 p.m. Rating Student Research Across Disciplines: Assessing Reliability—◆ Kristin Duncan, San Diego State University
- 5:05 p.m. Binning by Quantile Applied to Value-Added Models in Education—◆ Pamela Fellers, University of Nebraska
- 5:20 p.m. Do Normal Probability Plots Tell the ‘Truth’ When Sample Sizes Are Small?—◆ Ananda Jayawardhana, Pittsburg State University
- 5:35 p.m. Testing Equality of the Difference in Means and the Difference in Standard Deviations for Two Normal Populations—◆ Charles Dunn, Miami University

74 CC-Room 24B

Recurrent Events and Interval-Censored Data—Contributed

Biometrics Section, Biopharmaceutical Section, Quality and Productivity Section, International Chinese Statistical Association

Chair(s): Eva Ruth Miller, ICON Clinical Research

- 4:05 p.m. Practical Study Design Methods for Interval-Censored Failure Time Data—◆ Daniel Tancredi, University of California at Davis School of Medicine; Danielle J Harvey, University of California at Davis; Laurel Beckett, University of California at Davis
- 4:20 p.m. Accelerated Recurrent Time Analysis of Doubly Censored Data: An Application to Pseudomonas Aeruginosa Infection in Young Children with Cystic Fibrosis—◆ Xiaoyan Sun, Emory University; Limin Peng, Emory University; Yijian Huang, Emory University; Amita Manatunga, Emory University; HuiChuan J. Lai, University of Wisconsin-Madison
- 4:35 p.m. Alternating Event Processes During Lifetimes: Population Dynamics and Statistical Inference—◆ Russell Shinohara, The Johns Hopkins University; Mei-Cheng Wang, The Johns Hopkins University
- 4:50 p.m. Joint Modeling of Marked Recurrent Event Data in the Presence of a Terminating Event—◆ Yu Ma, University of Michigan; Douglas E Schaubel, University of Michigan



- 5:05 p.m. **Analysis of Multiple Type Recurrent Event Data in the Presence of Terminal Events**—◆ Shankar Viswanathan, Albert Einstein College of Medicine; Jianwen Cai, The University of North Carolina at Chapel Hill
- 5:20 p.m. **A Generalized Chi-Square Goodness-of-Fit Test for Recurrent Failure Time Data**—Withanage De Mel, Missouri University of Science and Technology; ◆ Akim Adekpedjou, Missouri University of Science and Technology; Gideon K.D. Zamba, University of Iowa
- 5:35 p.m. **A Cure Rate Model for Interval-Censored Data**—◆ Walter Faig, University of California at San Diego

75 CC-Room 30D Dimension Reduction Methods—Contributed

Section on Statistical Learning and Data Mining, Biometrics Section, International Chinese Statistical Association, Section on Statistical Computing
Chair(s): Georg Matthias Goerg, Carnegie Mellon University

- 4:05 p.m. **Direction Estimation in Single-Index Models via Distance Covariance**—◆ Wenhui Sheng; Xiangrong Yin, University of Georgia
- 4:20 p.m. **Model-Based Sufficient Dimension Reduction for Longitudinal Data Analysis**—◆ Shanshan Ding, University of Minnesota-Twin Cities; Dennis Cook, University of Minnesota
- 4:35 p.m. **Groupwise Sufficient Dimension Reduction via Envelope Method**—◆ Zifang Guo, North Carolina State University; Lexin Li, North Carolina State University; Wenbin Lu, North Carolina State University
- 4:50 p.m. **Sufficient Dimension Folding for Regression Mean Function**—◆ Yuan Xue, University of Georgia; Xiangrong Yin, University of Georgia
- 5:05 p.m. **Using Principal Components Analysis to Model Muscle Force Contribution in ACL Injury**—◆ Kristin Morgan, University of Tennessee; Cyril Donnelly, University of Western Australia; Jeffrey Reinbolt, University of Tennessee
- 5:20 p.m. **Array Component Analysis with Application to Remote Sensing Atmospheric Science Data**—◆ Irina Kukuyeva,
- 5:35 p.m. **Structure-Preserving Method for Dimension Reduction**—◆ Ewa Nowakowska, Polish Academy of Sciences

76 CC-Room 25A Functional and Spatio-Temporal Data Analysis—Contributed

Section on Statistical Learning and Data Mining
Chair(s): Zsolt Talata, University of Kansas

- 4:05 p.m. **Functional Data Analysis of Blood Pressure Across and During Dialysis Sessions**—◆ Benjamin Goldstein, Stanford University; Trevor Hastie, Stanford University; Wolfgang Winkelmayr, Stanford University
- 4:20 p.m. **Movelets: A Dictionary of Movement**—◆ Jiawei Bai, The Johns Hopkins University; Jeff Goldsmith, The Johns Hopkins University; Brian Scott Caffo, The Johns Hopkins University; Thomas A Glass, The Johns Hopkins University; Ciprian Crainiceanu, The Johns Hopkins University
- 4:35 p.m. **Extension of Geographically Weighted Regression for Big Spatial-Temporal Data**—◆ Shu-Ngai Yeung, AT&T Labs; S. Tom Au, AT&T Labs; Guangqin Ma, AT&T Labs
- 4:50 p.m. **ETWR: An EEG/MEG Source Reconstruction Method Using Spatio-Temporal Two-Way Regularization**—◆ Tian Siva Tian, University of Houston; Jianhua Huang, Texas A&M University; Haipeng Shen, The University of North Carolina at Chapel Hill; Zhimin Li, Medical College of Wisconsin
- 5:05 p.m. **Clustering the Spatio-Temporal Functional Data with Multiscale Adaptive Smoothing Method and EM-Based Algorithm**—◆ Jiaping Wang, The University of North Carolina at Chapel Hill; Hongtu Zhu, The University of North Carolina at Chapel Hill
- 5:20 p.m. **Floor Discussion**

77 CC-Room 29C Applications of High-Dimensional Regression—Contributed

Biometrics Section, International Chinese Statistical Association, Section on Statistical Learning and Data Mining
Chair(s): Lingling An, University of Arizona

- 4:05 p.m. **Multiple-Scale Adaptive Mixed Model for Imaging Genetics Data**—◆ Ja-an Lin; Hongtu Zhu, The University of North Carolina at Chapel Hill; Wei Sun, The University of North Carolina at Chapel Hill; Joseph Ibrahim, The University of North Carolina at Chapel Hill
- 4:20 p.m. **Variable Selection for High-Dimensional Multivariate Outcomes with Application to Genetic Pathway/Network Analysis**—◆ Tamar Sofer, Harvard School of Public Health; Lee Dicker, Rutgers University; Xihong Lin, Harvard University



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 4:35 p.m. **Performance Evaluation of Three Methods for Predicting Quantitative Traits**—◆ Xuesong Li, Oklahoma State University; Lan Zhu, Oklahoma State University
- 4:50 p.m. **Perturbation Detection Through Modeling of Gene Expression on a Latent Biological Pathway Network**—◆ Lisa Pham, Boston University; Luis Carvalho, Boston University; Scott Schaus, Boston University; Eric D Kolaczyk, Boston University
- 5:05 p.m. **Fast eQTL Analysis for Twin Studies**—◆ Zhaoyu Yin, The University of North Carolina at Chapel Hill; Fei Zou, The University of North Carolina at Chapel Hill
- 5:20 p.m. **Classification of Patients from Time-Course Gene Expression**—◆ Yuping Zhang, Stanford University; Robert Tibshirani; Ronald Davis
- 5:35 p.m. **A Hierarchical Failure Model for Characterizing Progressive Abnormal Neuronal Network Interactions During Epileptic Seizure Evolution**—◆ Catherine Stamoulis, Harvard Medical School; Bernard S Chang, Harvard Medical School

78 CC-Room 31C

■ ● Applications in Business and Economics—Contributed

Business and Economic Statistics Section

Chair(s): Fan Li, Duke University

- 4:05 p.m. **Bright Lights, Risky Business: A Longitudinal Study of Broadway Show Success**—◆ Lan Nygren, Rider University; Kjell Nygren, ImpactRx, Inc.; Jeffrey Simonoff, New York University
- 4:20 p.m. **Who Are the Good and Bad Borrowers of the Home Affordable Loan Modification Program?**—◆ Xun Wang, George Mason University; James Gentle, George Mason University
- 4:35 p.m. **Academic Salary Compression: Winners and Losers**—◆ James McDonald, Brigham Young University; Jeff Sorensen, University of California at Berkeley
- 4:50 p.m. **Mass Transit Demand in El Paso**—◆ Thomas Fullerton, The University of Texas at El Paso; Adam G. Walke, The University of Texas at El Paso
- 5:05 p.m. **Price Movements: Online Versus Onsite**—◆ John Marcis, Coastal Carolina University; Bomi Kang, Coastal Carolina University
- 5:20 p.m. **Measuring the Economic Sentiments Using Ordinary Response Options**—◆ Inho Park, Pukyong National University
- 5:35 p.m. **Early-Life Circumstances and Late-Life Incomes**—◆ Omar Paccagnella, University of Padua; Christelle Garrouste, European Commission - Joint Research Centre

79 CC-Room 24A

Methods for Multivariate Data—Contributed

ENAR, Biopharmaceutical Section, WNNAR

Chair(s): Enayet Talukder, Pfizer Inc.

- 4:05 p.m. **Covariate Adjusted Distributions of Random Curves**—◆ Meng Li, North Carolina State University; Ana-Maria Staicu, North Carolina State University; Howard Bondell, North Carolina State University
- 4:20 p.m. **Inference for the Bivariate Mean Function of Functional Data with a Two-Dimensional Domain**—◆ Andrada Ivanescu, East Carolina University
- 4:35 p.m. **A Paradox: Can Efficiency Be Gained by Correcting for Misclassification?**—◆ Molin Wang, Harvard School of Public Health; Xiaomei Liao, Harvard School of Public Health; Donna Spiegelman, Harvard School of Public Health
- 4:50 p.m. **Gaussian Spatial Modeling on Signal Detection of fMRI Data**—◆ Shuzhen Li, Medtronic; Lynn E. Eberly, University of Minnesota
- 5:05 p.m. **Agreement Webs for Medical Decisionmaking**—◆ Hua Chen; Xiaoyan Lin, University of South Carolina; Donald George Edwards, University of South Carolina
- 5:20 p.m. **Achieving Simultaneous Factor Selection and Level Collapsing in ANOVA by Monitoring the False Selection Rate**—◆ Megan Neely, Duke University; Jung-Ying Tzeng, North Carolina State University; Howard Bondell, North Carolina State University
- 5:35 p.m. **Statistical Comparisons of Two Methods for Particle Size Distribution of Orally Inhaled Products**—◆ Monisha Dey, Merck Research Laboratories; J. David Christopher, Merck Research Laboratories; Ziqing Pan, Consulting Statistician dDimension LLC

80 CC-Room 33A

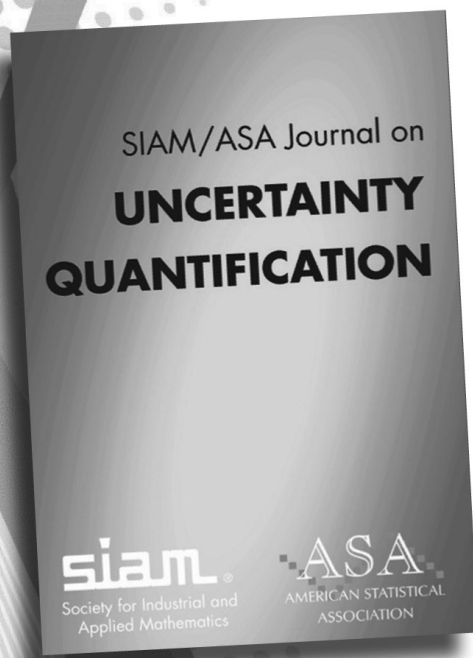
Bayesian Modeling in Life Sciences—Contributed

Section on Bayesian Statistical Science

Chair(s): Francesco Stingo, MD Anderson Cancer Center

- 4:05 p.m. **A Bayesian Analysis of Daily Weir Counts for Estimating Chinook Salmon Escapement**—◆ Margaret Short, University of Alaska Fairbanks; James Jasper, Alaska Department of Fish and Game; Chris Sheldon, Alaska Department of Fish and Game
- 4:20 p.m. **Sampling Designs for a Multispecies Assemblage with Unknown Heterogeneity**—Hongmei Zhang, University of South Carolina; ◆ Kaushik Ghosh, University of Nevada, Las Vegas; Pulak Ghosh, Indian Institute of Management, Bangalore
- 4:35 p.m. **Bayesian Analysis of Competing Risks Cure Rate Regression Model**—◆ Qian Dong, Northern Illinois University; Sanjib Basu, Northern Illinois University

New Electronic Journal Is Accepting Submissions



Uncertainty Quantification publishes research articles presenting significant mathematical, statistical, algorithmic, and application advances in uncertainty quantification and related fields such as:

- sensitivity analysis
- model validation
- model calibration
- data assimilation
- code verification

The journal also solicits review articles and papers describing new ideas that could lead to significant progress in methodology for uncertainty quantification.

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GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

- 4:50 p.m. **Bayesian Sample Size Determination for a Cost-Effectiveness Study with Censored Costs**—◆Daniel Beavers, Wake Forest University Health Sciences; James Stamey, Baylor University
- 5:05 p.m. **Improving Bayesian Methods in Pharmacovigilance with Drug Hierarchies**—◆Trevor Shaddox, University of California at Los Angeles; Marc A Suchard, University of California at Los Angeles
- 5:20 p.m. **Model-Based Estimation for Respondent-Driven Sampling**—◆Sergiy Nesterko, Harvard University; Joseph Blitzstein, Harvard University
- 5:35 p.m. **A Flexible Class of Models for Longitudinal Data Subject to Data Irregularities**—◆Liwei Wang, North Carolina State University; Sujit Kumar Ghosh, North Carolina State University

81 CC-Room 32B Topics in Bayesian Statistics—Contributed

Section on Bayesian Statistical Science

Chair(s): Debdeep Pati, Duke University

- 4:05 p.m. **Bayesian Method: Powerful, but Not Magical**—◆Freda Cooner, FDA/CDER/OTS/OB
- 4:20 p.m. **How Dependent Are Parameters Under Your Prior and Posterior?**—◆Ehsan Soofi, University of Wisconsin-Milwaukee; Nader Ebrahimi, Northern Illinois University; Nima Y Jalali, University of Wisconsin-Milwaukee
- 4:35 p.m. **Re-Examining Bayesian Posterior Checks**—◆Junni Zhang, Peking University
- 4:50 p.m. **Robust Inference via the Blended Paradigm**—◆John Lewis, The Ohio State University; Steven MacEachern, The Ohio State University; Yoonkyung Lee, The Ohio State University
- 5:05 p.m. **A Bayesian Approach to Establishing a Reference Particle Size Distribution in the Presence of Outliers**—◆Garritt Page, Pontificia Universidad Católica de Chile; Stephen Vardeman, Iowa State University
- 5:20 p.m. **Tracking Beliefs: Accurate Methods for Approximate Bayesian Computation Filtering**—◆Veronika Czellar, HEC Paris; Laurent Calvet, HEC Paris
- 5:35 p.m. **Reference Posteriors from a Mixture of Reference Priors**—◆Michael Sonksen, University of New Mexico

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

82 HQ-Sapphire C Comparative Effectiveness Research and Causal Modeling—Contributed

Health Policy Statistics Section, Biopharmaceutical Section, Section on Statistics in Epidemiology

Chair(s): Philip Twumasi-Ankrah, University of Kansas School of Medicine

- 4:05 p.m. **Measuring Changes in the Distribution of Incident-Outcome Severities and the Method's Implications for Health Care Policy**—◆William Goodman, University of Ontario Institute of Technology; Kim Sears, Queen's University
- 4:20 p.m. **Bayesian Analysis for Semicontinuous Data Distribution: Forecasting Hospital Cost of Care Using Double Hurdle Model**—◆Hsiu-Ching Chang, BlueCross BlueShield of Michigan
- 4:35 p.m. **Model Selection and Combination for Estimating Treatment Effects**—◆Craig Rolling, University of Minnesota; Yuhong Yang, University of Minnesota
- 4:50 p.m. **Calculating Expected Health Losses in Prospective Drug Safety Monitoring**—◆Jessica Myers, Brigham and Women's Hospital; Amanda Patrick, Brigham and Women's Hospital; Milton Weinstein, Harvard School of Public Health; Robert Glynn, Harvard Medical School; Sebastian Schneeweiss, Brigham and Women's Hospital
- 5:05 p.m. **Examining the Effects of Soft Drink Consumption Using the Rubin Causal Model**—◆Takisha Watson, Iowa State University; Ulrike Genschel, Iowa State University; Heike Hofmann, Iowa State University; Alicia L. Carriquiry, Iowa State University
- 5:20 p.m. **Semiparametric Methods for Estimating Health Care Costs Using the Causal Inference Framework**—◆Irina Bondarenko, University of Michigan; Trivellore Raghunathan, University of Michigan
- 5:35 p.m. **Comparative Effectiveness Studies Using Large Administrative Data: Are Designs and Methods Important?**—◆Bassam Dahman, Virginia Commonwealth University School of Medicine

83 HQ-Sapphire D Applications of Modern Regression Methodologies to Health Policy Studies—Contributed

Health Policy Statistics Section

Chair(s): Jingjing Gao, Emory University

- 4:05 p.m. **Ranking County-Level Health-Related Measures Based on Longitudinal and Joint Outcome Models**—◆Ronald Gangnon, University of Wisconsin-Madison; Jessica Athens, University of Wisconsin-Madison; Bridget Booske Catlin, University of Wisconsin-Madison; Patrick L Remington, University of Wisconsin-Madison



- 4:20 p.m. **Bayesian Spatial Cox Regression of Childhood Asthma Hospital Readmissions**—◆Chen Chen, Cincinnati Children's Hospital Medical Center; Bin Huang, Cincinnati Children's Hospital Medical Center
- 4:35 p.m. **Evaluation of a Confidence Interval Approach for Relative Inter-Rater Reliability in a Crossed Three-Way Random Effects Model**—◆Joseph Cappelleri, Pfizer Inc.; Naitee Ting, Boehringer Ingelheim Pharmaceuticals, Inc.
- 4:50 p.m. **Inference for Identifying Outlying Health Care Providers**—◆Michael Racz, Albany College of Pharmacy and Health Sciences
- 5:05 p.m. **Extending the Use of a Local Health Survey to Finer Spatial Resolutions**—◆Kevin Konty, New York City Department of Public Health and Mental Hygiene
- 5:20 p.m. **Combining Insights from Quantile and Ordinal Regression: Childhood Obesity in New York City**—◆Stuart Sweeney, University of California at Santa Barbara; Kevin Konty, New York City Department of Public Health and Mental Hygiene
- 5:35 p.m. **Floor Discussion**

84 CC-Room 27B **■ Environmental Monitoring—Contributed**

Section on Statistics and the Environment

Chair(s): Megan D. Higgs, Montana State University

- 4:05 p.m. **The Use of SETAR Models in Forecasting Missing Observations of the Ozone Hole Area in the Antarctic Between December 1994 and June 1996**—◆Bu Hyoung Lee, Temple University; William W. S. Wei, Temple University
- 4:20 p.m. **A Quadratic Regression Model and Visualization for the Toxicity of Nanoparticles**—◆Fred J. Rispoli, Dowling College
- 4:35 p.m. **Multivariate Receptor Models for Spatially Correlated Multi-Pollutant Data**—◆Eun Sug Park, Texas Transportation Institute; Mikyoung Jun, Texas A&M University
- 4:50 p.m. **Robust Permutation Tests for Homogeneity of Fingerprint Patterns of Dioxin Congener Profiles**—◆Chu-Chih Chen, National Health Research Institutes; Pranab K. Sen, The University of North Carolina at Chapel Hill
- 5:05 p.m. **Variance of Environmental Water Contaminants: Building Bayesian Priors for Use in Modeling Spatial and Temporal Variability of Emerging Contaminants**—◆Michael Messner, EPA; Song Qian, Tetra Tech
- 5:20 p.m. **A Tale of Two Measurement Tests, but What Are You Looking For?**—◆Barry Nussbaum, EPA
- 5:35 p.m. **Constructing Upper Prediction Limits (UPLS) for Hazardous Air Pollutant (HAP) Emissions**—◆Ranran Wang, Allen Analytics LLC; Jonathan O. Allen, Allen Analytics LLC

85 CC-Room 27A **■ Earthquakes and Environmental Point Processes—Contributed**

Section on Statistics and the Environment, Section on Statistical Graphics

Chair(s): Peter Bloomfield, North Carolina State University

- 4:05 p.m. **Estimating Clustered Space-Time Point Process Models for Earthquakes**—◆Frederic Schoenberg, University of California at Los Angeles
- 4:20 p.m. **Residuals for Spatial Point Processes Based on Voronoi Tessellations**—◆Andrew Bray, University of California at Los Angeles; Ka Wong, Google; Frederic Schoenberg, University of California at Los Angeles; Christopher Barr, Harvard University
- 4:35 p.m. **Point Process Analysis of Cloud-to-Ground Lightning Strikes in Oklahoma**—◆Irma Hernandez-Magallanes, Texas A&M University; Marc Genton, Texas A&M University
- 4:50 p.m. **A Semiparametric Epidemic-Type Aftershock Sequence Model and Its Efficiency Bounds**—◆Feng-Chang Lin, The University of North Carolina at Chapel Hill
- 5:05 p.m. **Comparison of Indexes of Aggregation and Association for Three-Dimensional Spatial Data Under Three Computational Scenarios**—◆Ashley E. Askew, University of Georgia; Lynne Seymour, The University of Georgia; Sydney Everhart, University of Georgia; Harald Scherm, University of Georgia
- 5:20 p.m. **Multivariate Integer-Valued Autoregressive Models Applied to Earthquake Counts**—◆Mathieu Boudreault, Université du Québec à Montréal; Arthur Charpentier, Université du Québec à Montréal
- 5:35 p.m. **Glyph-Maps for Visually Exploring Temporal Patterns in Climate Data and Models**—◆Charlotte Wickham, Oregon State University; Hadley Wickham, Rice University; Heike Hofmann, Iowa State University; Dianne H Cook, Iowa State University

86 CC-Room 23C **■ Applications to Cancer—Contributed**

Section on Statistics in Epidemiology, Biopharmaceutical Section, Biometrics Section, WNFAR

Chair(s): Ye Shen, University of Georgia

- 4:05 p.m. **Risk Estimation in Epidemiological Studies Accounting for Complex Uncertainty in Radiation Dosimetry**—◆Deukwoo Kwon, University of Miami
- 4:20 p.m. **Gender Differences in Cancer by Smoking Behavior: A National Health and Nutrition Examination Survey (NHANES) 2003–2010 Study**—◆Sunita Ghosh, Alberta Health Services Cancer Care



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

4:35 p.m. **Epidemiology of Brain Cancer: Longitudinal Studies for Contract Health Service Delivery Areas**—◆Keshav Pokhrel, University of South Florida; Chris P. Tsokos, University of South Florida

4:50 p.m. **Using Monte Carlo to Evaluate Impact of Mesothelioma Underascertainment**—◆Leonid Kopylev, EPA; Thomas Bateson, EPA

5:05 p.m. **Bayesian Approach of the Joinpoint Regression Model for Brain Cancer Data**—◆Ram Kaffle, University of South Florida; Netra Khanal, University of Tampa; Chris P. Tsokos, University of South Florida

5:20 p.m. **Relationships Between Prostate Cancer, BMI, and Alcohol**—◆Negasi Beyene, National Center for Health Statistics; Peter Meyer, National Center for Health Statistics

5:35 p.m. **Parametric Analysis on Survival Duration Time on Breast Cancer Data**—◆Venkateswara Mudunuru, University of South Florida; Chris P. Tsokos, University of South Florida

87 CC-Room 30E

■ Developments in Survey Design and Implementation—Contributed

Section on Survey Research Methods

Chair(s): David Fitch, Universidad Rafael Landivar

4:05 p.m. **Allocation of Sample for the 2010 Redesign of the Consumer Expenditure Survey**—◆Stephen Ash, U.S. Census Bureau; David Swanson, Bureau of Labor Statistics

4:20 p.m. **A 'First Cut' at Forming Rural PSUs**—◆Susan King, Bureau of Labor Statistics

4:35 p.m. **Complex Survey Sample Design in IRS' Multi-Objective Taxpayer Compliance Burden Studies**—◆Wei Liu, IRS; John Guyton, IRS; Michael Sebastiani, IRS

4:50 p.m. **State and Local Government Sample Design for the National Compensation Survey**—◆Gwyn Ferguson, Bureau of Labor Statistics; Chester H Ponikowski, Bureau of Labor Statistics; Joan Coleman, Bureau of Labor Statistics; Erin McNulty, Bureau of Labor Statistics

5:05 p.m. **Sample Allocation for the Redesigned National Compensation Survey**—◆Tiandong Li, Westat; Hyunshik James Lee, Westat; Gwyn Ferguson, Bureau of Labor Statistics; Chester H Ponikowski, Bureau of Labor Statistics; Bradley Rhein, Bureau of Labor Statistics

5:20 p.m. **Evaluation of Alternative Measures of Size for Sampling of Establishments in the National Compensation Survey**—◆Bradley Rhein, Bureau of Labor Statistics; Chester H Ponikowski, Bureau of Labor Statistics; Joan Coleman, Bureau of Labor Statistics

5:35 p.m. **Three Decades of Sampling Designs in the HUD Assisted-Housing Quality Control Studies**—◆Francine Barrington, ICF International; Pedro J Saavedra, ICF International; Sophia Zanakos, ICF International; Mary K. Sistik, ICF International

88 CC-Room 31A

■ Measuring Nonresponse and Other Nonsampling Errors in Surveys—Contributed

Section on Survey Research Methods

Chair(s): Kristen Cyffka, University of Wisconsin-Madison

4:05 p.m. **The Empirical Properties of Survey Quality Indicators Under Nonignorable Nonresponse**—◆Shin-Jung Lee, University of Michigan

4:20 p.m. **Assessing Nonresponse Bias in the Green Goods and Services Survey**—◆Brian Meekins, Bureau of Labor Statistics; Michael Sverchkov, Bureau of Labor Statistics (SCI); Justin McIllece, Bureau of Labor Statistics

4:35 p.m. **A Study Comparing CHAID Analysis to Traditional Weighting**—◆Betty Jackson, U.S. Census Bureau; Randall J. Parmer, U.S. Census Bureau; Stella K. Kim, U.S. Census Bureau; Jared Coopersmith, National Center for Education Statistics

4:50 p.m. **Using Soft Refusal Status in the Cell Phone Sample Nonresponse Adjustment**—◆Wei Zeng, NORC; David Yankey, National Center for Immunization and Respiratory Diseases; N. Ganesh, NORC; Philip J. Smith, National Center for Immunization and Respiratory Diseases

5:05 p.m. **Adjusting for Survey Measurement Error with Accuracy Variables**—◆Damiao N Da Silva, S3RI/ Universidade Federal do Rio Grande do Norte; Chris Skinner, London School of Economics

5:20 p.m. **Assessment of Total Survey Error for the National Immunization Survey (NIS) 2009–2010**—◆Vicki Jean Pineau, NORC; Kirk M. Wolter, NORC; Benjamin Skalland, NORC; Wei Zeng, NORC; Meena Khare, National Center for Health Statistics; Zhen Zhao, National Center for Immunization and Respiratory Diseases

5:35 p.m. **Examining the Use of EWMA Charts for Monitoring the National Crime Victimization Survey**—◆Elke Moons, Statistics Netherlands



Monday, July 30

Committee/Business Meetings & Other Activities

7:00 a.m.–8:00 a.m. HQ-Sapphire 402
Statistics Surveys Electronic Journal Editorial Meeting
 Organizer(s): Wendy Martinez, Bureau of Labor Statistics

7:00 a.m.–8:00 a.m. HQ-Aqua Boardroom
Committee on ASA Archives and Historical Materials Annual Committee Meeting
 Chair(s): Frank Potter, Mathematica Policy Research

7:00 a.m.–8:30 a.m. HQ-Aqua 305
Council of Chapters International Science & Engineering Fair Meeting Breakfast
 Chair(s): Theresa Utlaut, Intel Corporation

7:00 a.m.–8:30 a.m. HQ-Aqua 312
SPAIG Committee Annual Meeting
 Chair(s): Barry Nussbaum, EPA

7:00 a.m.–8:30 a.m. HQ-Aqua 307
Technometrics Management Committee
 Chair(s): David Steinberg, ASA

7:00 a.m.–8:30 a.m. HQ-Sapphire 411
Section on Health Policy Statistics Executive Committee Meeting
 Chair(s): Christopher Schmid, Brown University

7:00 a.m.–8:30 a.m. HQ-Sapphire 412
Business and Economic Statistics Section Executive Committee Meeting

7:00 a.m.–8:30 a.m. HQ-Aqua 309
Survey Review Committee Annual Meeting
 Chair(s): Trent Buskirk, The Nielson Company

7:00 a.m.–8:30 a.m. HQ-Aqua 308
Section on Statistical Graphics Executive Committee Meeting
 Chair(s): Heike Hofman, Iowa State University

7:00 a.m.–9:00 a.m. HQ-Aqua 311
Social Statistics Executive Board Meeting
 Chair(s): Joseph Salvo, New York City Department of City Planning

7:00 a.m.–12:30 p.m. HQ-Aqua 310
Biopharmaceutical Section Executive Committee Meeting
 Chair(s): Steve Gulyas, Optum, Inc.

7:00 a.m.–6:00 p.m. CC-Ballroom 20A Workroom
Speaker Management Room

7:30 a.m.–9:00 a.m. HQ-Cobalt 500
Carnegie Mellon Alumni and Faculty Breakfast
 Organizer(s): Margaret Smykla, Carnegie Mellon University

7:30 a.m.–9:00 a.m. HQ-Aqua 300
Section on Teaching of Statistics in the Health Sciences Executive Committee Meeting
 Chair(s): Carol Bigelow, University of Massachusetts-Amherst

7:30 a.m.–9:00 a.m. HQ-Aqua 313
Significance Editorial Board Meeting (closed)
 Chair(s): Julian Champkin, *Significance* Editor

7:30 a.m.–9:00 a.m. HQ-Aqua 314
USCOTS 2012 Programming Committee Meeting
 Organizer(s): Jean Scott, CAUSE

7:30 a.m.–6:00 p.m. CC-Ballroom 20 Foyer
ASA Membership/Help Desk/Press Desk

7:30 a.m.–6:00 p.m. CC-Ballroom 20 Foyer
JSM Main Registration

7:30 a.m.–8:00 p.m. CC-Ballroom 20 Foyer
Cyber Center, Sponsored by IBM

8:00 a.m.–9:30 a.m. HQ-Sapphire 400
Communications in Statistics Editorial Board Meeting
 Organizer(s): N. Balakrishnan, McMaster University

8:00 a.m.–12:00 p.m. HQ-Indigo 206
Statistics in Biopharmaceutical Research Editorial Board Meeting
 Chair(s): Steven Michael Snapinn, Amgen, Inc.

8:00 a.m.–5:30 p.m. CC-Sails Pavilion
Career Placement Service

8:30 a.m.–10:30 a.m. HQ-Sapphire Green Room
Advisory Committee on Continuing Education (ACCE) Business Meeting
 Chair(s): Mary C. Christman, MCC Statistical Consulting LLC

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

9:00 a.m.–10:30 a.m. HQ-Aqua 308
JSM Diversity Workshop: Best Practices in Recruitment and Retention Session
Chair(s): Brian Millen, Eli Lilly and Company

12:00 p.m.–2:00 p.m. HQ-Aqua 311
2013 JSM Program Committee Meeting
Chair(s): Bhramar Mukherjee, University of Michigan

9:00 a.m.–10:30 a.m. HQ-Sapphire Boardroom
Statistics MindTap Reader Focus Group
Organizer(s): Ilana Sims, Cengage Learning

12:00 p.m.–5:00 p.m. HQ-Aqua 313
Council of Chapters Governing Board Meeting
Chair(s): C. Shane Reese, Brigham Young University

9:00 a.m.–10:30 a.m. HQ-Sapphire 402
Committee on Privacy and Confidentiality Business Meeting
Chair(s): Julia Lane, National Science Foundation

12:30 p.m.–1:30 p.m. HQ-Aqua 314
Statistics, Politics, and Policy Editorial Board Meeting
Organizer(s): John Rolph, University of Southern California

9:00 a.m.–5:30 p.m. CC-Sails Pavilion
American Statistical Association Booth #401

12:30 p.m.–2:00 p.m. HQ-Sapphire 400
Statistics in Medicine Editorial Board Meeting Luncheon
Organizer(s): Ralph D'Agostino, Boston University

9:00 a.m.–5:30 p.m. CC-Sails Pavilion
ASA Marketplace

12:30 p.m.–2:30 p.m. HQ-Aqua 300
Journal of Computational and Graphical Statistics Editor's Lunch
Chair(s): Richard A. Levine, San Diego State University/JCGS

9:00 a.m.–5:30 p.m. CC-Sails Pavilion
EXPO 2012

12:30 p.m.–2:30 p.m. HQ-Cobalt 500
JSM Media Information Luncheon (*Significance* Magazine)
Chair(s): Ron Wasserstein, ASA

9:30 a.m.–10:00 a.m. HQ-Aqua 304
Committee on Federally Funded Research Business Meeting
Chair(s): Lance Waller, National Cancer Institute; Michelle Dunn, National Cancer Institute; Nandini Kannan, National Science Foundation

12:30 p.m.–2:30 p.m. HQ-Sapphire 402
Environmetrics Editorial Board Meeting
Organizer(s): Stephen Raywood, Wiley-Blackwell

10:00 a.m.–12:00 p.m. HQ-Aqua 304
Funding Opportunities: Presentations and Q&A (open)
Chair(s): Lance Waller, National Cancer Institute; Michelle Dunn, National Cancer Institute; Nandini Kannan, National Science Foundation

12:30 p.m.–2:30 p.m. HQ-Aqua Boardroom
Committee on Membership Retention and Recruitment Meeting
Chair(s): Monica Johnston, Mostly Math

10:00 a.m.–12:00 p.m. HQ-Aqua 313
Council of Chapters Governing Board Executive Committee Meeting
Chair(s): C. Shane Reese, Brigham Young University

2:00 p.m.–3:30 p.m. HQ-Sapphire Boardroom
Pfenning Brief Focus Group
Organizer(s): Ilana Sims, Cengage Learning

10:00 a.m.–12:00 p.m. HQ-Aqua 305
Council of Chapters Governing Board Committee on Chapter Status Meeting
Chair(s): Bonnie LaFleur, University of Arizona

2:00 p.m.–3:30 p.m. HQ-Aqua 308
National Institute of Health/National Science Foundation Directors of Training Programs
Organizer(s): Lance Waller, National Cancer Institute; Michelle Dunn, National Cancer Institute; Nandini Kannan, National Science Foundation

11:00 a.m.–12:30 p.m. HQ-Sapphire Boardroom
Peck 1e Focus Group
Organizer(s): Ilana Sims, Cengage Learning

2:00 p.m.–6:00 p.m. HQ-Cobalt 501
StatsRef Board Meeting
Organizer(s): Layla Harden, John Wiley & Sons, Ltd.

12:00 p.m.–1:30 p.m. HQ-Sapphire 412
Section on Statistics in Defense and National Security
Chair(s): Edward Wegman, George Mason University

4:00 p.m.–5:30 p.m. HQ-Sapphire 412
StatCom Network Business Meeting
Organizer(s): Jonathan Hobbs, Iowa State University



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

4:00 p.m.–5:30 p.m. CC-Room 21
ASA Conference on Statistical Practice Interest Meeting
 Chair(s): Philip Rocco Scinto, The Lubrizol Corporation

4:00 p.m.–5:30 p.m. HQ-Aqua 305
Section on Statistics and the Environment Executive Committee Meeting
 Chair(s): Jun Zhu, University of Wisconsin-Madison

4:00 p.m.–6:00 p.m. HQ-Aqua 310
CAUSE Activist Meeting
 Organizer(s): Dennis Pearl, The Ohio State University

5:00 p.m.–6:00 p.m. CC-Room 21
ASA Special Interest Group for Medical Devices and Diagnostics
 Chair(s): Greg Campbell, FDA

5:00 p.m.–7:00 p.m. HQ-Aqua 306
NISS/SAMSI Reception
 Organizer(s): Alan F. Karr, NISS

5:00 p.m.–7:00 p.m. HQ-Aqua 304
Statistical Society of Canada Reception
 Organizer(s): Christian Léger, Université de Montréal

5:00 p.m.–7:00 p.m. HQ-Cobalt 500
University of Washington Biostatistics and Statistics Alumni Reception
 Organizer(s): Bruce S. Weir, University of Washington

5:00 p.m.–8:00 p.m. HQ-Aqua 308
Texas A&M University, Department of Statistics, Aggie Reunion
 Organizer(s): Simon Sheather, Texas A&M University

5:00 p.m.–8:00 p.m. Offsite-Rock Bottom
Section on Health Policy Statistics Business Meeting
 Organizer(s): Christopher Schmid, Brown University

5:30 p.m.–6:15 p.m. HQ-Sapphire Green Room
ASA Caucus of Academic Representatives Executive Committee Meeting
 Chair(s): Michael Lavine, University of Massachusetts-Amherst

5:30 p.m.–6:30 p.m. CC-Room 33C
Friends of Australasia - Open Invitation
 Organizer(s): Mark Griffin, Australian Development Agency for Statistics and Information Systems

5:30 p.m.–7:00 p.m. HQ-Aqua 307
Biometrics Section Business Meeting (open)
 Chair(s): Dianne M Finkelstein, Massachusetts General Hospital/Harvard University

5:30 p.m.–7:00 p.m. HQ-Aqua 300
The University of North Carolina at Chapel Hill, Departments of Biostatistics and STOR Reception
 Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill

5:30 p.m.–7:00 p.m. HQ-Sapphire Boardroom
Section on Statistics in Epidemiology Executive Committee Meeting
 Chair(s): Melissa Begg, Columbia University

5:30 p.m.–7:00 p.m. Offsite
Section on Statistics in Sports Business Meeting (offsite)
 Chair(s): C. Shane Reese, Brigham Young University

5:30 p.m.–7:00 p.m. HQ-Sapphire 402
Colorado State Alumni and Friends Reception
 Organizer(s): Jean Opsomer, Colorado State University

5:30 p.m.–7:00 p.m. HQ-Indigo 202
Business and Economic Statistics Section Business Meeting
 Chair(s): Mark Little, SAS Institute

5:30 p.m.–7:30 p.m. HQ-Aqua 309
Social Statistics Business Meeting
 Chair(s): Joseph Salvo, New York City Department of City Planning

5:30 p.m.–7:30 p.m. HQ-Sapphire 400
Iowa State University Reception for Alumni and Friends
 Organizer(s): Kenneth Koehler, Iowa State University

5:30 p.m.–7:30 p.m. HQ-Sapphire IJ
Section on Teaching of Statistics in the Health Sciences Open Mixer and Business Meeting
 Chair(s): Carol Bigelow, University of Massachusetts-Amherst

6:00 p.m.–7:00 p.m. HQ-Aqua 312
IISA Executive Board Meeting
 Organizer(s): Nandini Kannan, The University of Texas

6:00 p.m.–7:00 p.m. HQ-Indigo E
Russian and Ex-USSR Statisticians Informal Mixer
 Organizer(s): Stan Lipovetsky, GfK Custom Research North America

6:00 p.m.–7:00 p.m. HQ-Indigo 206
ASA President's Invited Speaker Reception (by invitation only)
 Chair(s): Robert N. Rodriguez, SAS Institute

6:00 p.m.–7:30 p.m. HQ-Aqua 314
Section on Statistics and the Environment Business Meeting and Mixer
 Chair(s): Jun Zhu, University of Wisconsin-Madison

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

6:00 p.m.–7:30 p.m. HQ-Sapphire 411
Korean International Statistical Society Annual Meeting
Organizer(s): Dongseok Choi, Oregon Health and Science University

6:00 p.m.–7:30 p.m. HQ-Sapphire H
Section on Statistics and Marketing Section Meeting
Chair(s): Raghuram Iyengar, The Wharton School

6:00 p.m.–7:30 p.m. HQ-Indigo 204
Christian Statisticians Informal Discussion Group
Chair(s): Jason Wilson, Biola University

6:00 p.m.–8:00 p.m. HQ-Indigo BF
JSM Student Mixer, Sponsored by Pfizer

6:15 p.m.–7:00 p.m. HQ-Sapphire Green Room
ASA Caucus of Academic Representatives Business Meeting
Chair(s): Michael Lavine, University of Massachusetts-Amherst

6:30 p.m.–7:30 p.m. HQ-Indigo CG
ASA Longtime Member Reception (by invitation only), Sponsored by Stata

6:30 p.m.–9:00 p.m. HQ-Aqua 311
Southern Methodist University Alumni Gathering
Organizer(s): Wayne Woodward, Southern Methodist University

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

7:00 p.m.–8:30 p.m. HQ-Aqua 313
IISA Mixer
Organizer(s): Pankaj Choudhary, The University of Texas at Dallas

7:30 p.m.–10:00 p.m. HQ-Indigo H
Joint Mixer for Section on Statistical Computing and Section on Statistical Graphics
Chair(s): Karen Kafadar, Indiana University

Technology Theaters

1:00 p.m.–1:45 p.m. CC-Sails Pavilion Tech1
New Features Added in the Recent Versions of SPSS Statistics
IBM

1:00 p.m.–1:45 p.m. CC-Sails Pavilion Tech2
Getting the Most Out of R with Rstudio
Rstudio

1:00 p.m.–1:45 p.m. CC-Sails Pavilion Tech3
ADDPLAN PE: Innovative Software for Population Enrichment Designs in Adaptive Clinical Trials
Aptiv Solutions

2:00 p.m.–2:45 p.m. CC-Sails Pavilion Tech1
IBM SPSS Programmability
IBM

STUDENT MIXER

Monday, July 30
6:00 p.m. – 8:00 p.m.

Hilton San Diego Bayfront
Indigo BF

Pfizer A special thanks to Pfizer Inc. for its support of this event



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

3:00 p.m.–3:45 p.m. CC-Sails Pavilion Tech1

Introduction to Simulation Modeling (Monte-Carlo Simulation)

IBM

4:00 p.m.–4:45 p.m. CC-Sails Pavilion Tech1

Ask the Experts

IBM

4:00 p.m.–4:45 p.m. CC-Sails Pavilion Tech2

Engage Your Students with a New Online Learning System: Aplia for Statistics

Brooks/Cole Cengage Learning

4:00 p.m.–4:45 p.m. CC-Sails Pavilion Tech3

ADDPLAN PE: Innovative Software for Population Enrichment Designs in Adaptive Clinical Trials

Aptiv Solutions

Continuing Education (Fee Events)

CE_12C

Nonlinear Regression and Ensemble Methods

8:00 a.m.–12:00 p.m. HQ-Indigo H

ASA, Section on Statistical Learning and Data Mining

Instructor(s): Bertrand Clarke, University of Miami

CE_13C

Practical Bayesian Computation

8:30 a.m.–5:00 p.m. HQ-Indigo A

ASA, Section for Statistical Programmers and Analysts

Instructor(s): Fang Chen, SAS Institute

CE_14C

Propensity Score Matching in R

8:30 a.m.–5:00 p.m. HQ-Indigo D

ASA, Section on Statistics in Epidemiology

Instructor(s): Ben Hansen, University of Michigan

CE_15C

Statistical Analysis with Missing Data

8:30 a.m.–5:00 p.m. HQ-Indigo E

ASA, Biometrics Section

Instructor(s): Roderick Little, University of Michigan/U.S. Census Bureau; Trivellore Raghunathan, University of Michigan

CE_16C

Bayesian Time Series Analysis and Forecasting: Models and Methods

8:30 a.m.–5:00 p.m. HQ-Indigo 202

ASA, Section on Bayesian Statistical Science

Instructor(s): Raquel Prado, University of California at Santa Cruz; Mike West, Duke University

CE_17C

Paradata in Survey Research

8:30 a.m.–5:00 p.m. HQ-Indigo 204

ASA, Section on Survey Research Methods

Instructor(s): Frauke Kreuter, Joint Program in Survey Methodology

CE_18C

Meta-Analysis: Combining the Results of Multiple Studies

1:00 p.m.–5:00 p.m. HQ-Indigo H

ASA

Instructor(s): Christopher Schmid, Tufts University School of Medicine; Ingram Olkin, Stanford University

A.M. Roundtables 7:00 a.m.–8:15 a.m.

89

CC-Ballroom D

Biopharmaceutical Section A.M. Roundtable Discussion (fee event)

Biopharmaceutical Section

Organizer(s): Estelle Russek-Cohen, FDA/CBER

ML01 Multiple Testing and Modeling in Post-Market Medical Studies—◆ S. Stanley Young, National Institute of Statistical Sciences

ML03 Phase II Dose-Finding Studies with Rigorous Statistical Designs—◆ Lihan Yan, FDA/CBER

ML08 Estimation of Salt Intake Using List-Assisted RDD Sample—◆ Sohyung Park, Dongguk University; Sun Woong Kim, Dongguk University; Moo-Yong Rhee, Dongguk University Hospital; Sung-Joon Shin, Dongguk University Hospital

90

CC-Ballroom D

Section for Statistical Programmers and Analysts A.M. Roundtable Discussion (fee event)

Section for Statistical Programmers and Analysts

Organizer(s): Nancy Petersen, Department of Veterans Affairs

ML04 The Expanding Role of the Statistical Analyst in Trial Design—◆ Natalie Hall, Eli Lilly and Company

91

CC-Ballroom D

Section on Health Policy Statistics A.M. Roundtable Discussion (fee event)

Health Policy Statistics Section

Organizer(s): Ofer Harel, University of Connecticut

ML05 Model Comparison and Evaluation in Structural Equation Models—◆ Douglas David Gunzler, Case Western Reserve University

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

92 CC-Ballroom D Section on Physical and Engineering Sciences A.M. Roundtable Discussion (fee event)

Section on Physical and Engineering Sciences, Section on Statistics in Defense and National Security

Organizer(s): Stephanie Pickle DeHart, DuPont

ML06 DOE in an Applied Business Setting: Tips, Barriers, Blunders, and Best Practices—◆ Andrew Pulkstenis, State Farm Insurance

93 CC-Ballroom D Section on Statistical Education A.M. Roundtable Discussion (fee event)

Section on Statistical Education

Organizer(s): Amy Wagaman, Amherst College

ML02 Integrating Statistics with the Sciences—◆ Amy Wagaman, Amherst College

ML07 Online Tools Inside and Outside of the Classroom—◆ Haley Hedlin, University of Massachusetts-Amherst

94 CC-Ballroom D Section on Statistics in Defense and National Security A.M. Roundtable Discussion (fee event)

Section on Statistics in Defense and National Security

Organizer(s): Aubrey Dale Magoun, Applied Research and Analysis

ML09 The Need for Statistical Rigor in Defense Test and Evaluation—◆ Michael Gilmore, Operational Test and Evaluation (DOT&E)

95 CC-Ballroom D Section on Statistics in Epidemiology A.M. Roundtable Discussion (fee event)

Section on Statistics in Epidemiology

Organizer(s): Jing Cheng, University of California at San Francisco School of Dentistry

ML10 Educational Epidemiology and Statistical Modeling: Who Is Involved and Who Really Should Be?—◆ Madhu Mazumdar, Weill Cornell Medical College

96 CC-Ballroom D Section on Teaching of Statistics in the Health Sciences A.M. Roundtable Discussion (fee event)

Section on Teaching of Statistics in the Health Sciences

Organizer(s): Felicity Enders, Mayo Clinic

ML11 Teaching Epidemiological Thinking—◆ Milo Schield, Augsburg College

Special Presentation 8:30 a.m.–10:20 a.m.

97 HQ-Sapphire MN Introductory Overview Lecture: Adaptive Design and Personalized Medicine: The Future Is Now—Other

ASA, ENAR, IMS, International Chinese Statistical Association, International Indian Statistical Association, SSC, WUNAR

Organizer(s): Steven MacEachern, The Ohio State University

Chair(s): Steven MacEachern, The Ohio State University

8:35 a.m. Adaptive Design and Personalized Medicine: The Future Is Now—◆ Donald Berry, MD Anderson Cancer Center

10:00 a.m. Floor Discussion

Invited Sessions 8:30 a.m.–10:20 a.m.

98 CC-Room 33B ■ ● Data-Driven Nonparametric Statistical Methodology—Invited

Journal of Nonparametric Statistics, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Suojin Wang, Texas A&M University

Chair(s): Suojin Wang, Texas A&M University

8:35 a.m. Distribution-Free Tests for Unbalanced Heteroscedastic Longitudinal Data in High-Dimensional ANOVA Setting—◆ Haiyan Wang, Kansas State University; Ke Zhang, University of North Dakota; Raymond Carroll, Texas A&M University; Suojin Wang, Texas A&M University

9:00 a.m. Computationally Easy Outlier Detection via Projection Pursuit with Finitely Many Directions—◆ Robert Serfling, The University of Texas at Dallas

9:25 a.m. Nonlinear Nonparametric Regression Models—◆ Yuedong Wang, University of California at Santa Barbara; Chunlei Ke, Amgen, Inc.



● Themed Session ■ Applied Session ◆ Presenter

- 9:50 a.m. **Position-Based Kernel Smoothing**—◆ Winfried Stute, University of Giessen
- 10:15 a.m. **Floor Discussion**

99 HQ-Sapphire B Monitoring Adaptive Clinical Trials—Invited

Pharmaceutical Research and Manufacturers of America, Biopharmaceutical Section, International Indian Statistical Association
Organizer(s): Zoran Antonijevic, Quintiles, Inc.
Chair(s): Janet Wittes, Statistics Collaborative

- 8:35 a.m. **Monitoring Challenges and Maintaining Integrity of Results in Adaptive Studies**—◆ Paul Gallo, Novartis
- 9:00 a.m. **Emerging Experiences on Adaptive Clinical Trial Data Monitoring**—◆ Sue-Jane Wang, FDA
- 9:25 a.m. **Adaptive Multi-Armed Survival Designs Using a Short-Term Endpoint for Treatment Selection**—◆ Gernot Wassmer, ADDPLAN Inc.
- 9:50 a.m. **Monitoring Adaptive Clinical Trials**—◆ Zoran Antonijevic, Quintiles, Inc.
- 10:15 a.m. **Floor Discussion**

100 CC-Room 26A ■ Noninferiority Clinical Trials: Issues and Examples—Invited

Biopharmaceutical Section, International Indian Statistical Association, Statistics Surveys Online Journal
Organizer(s): Steven Sun, Johnson & Johnson
Chair(s): Yijie Zhou, Merck

- 8:35 a.m. **Missing Data in Noninferiority Trials**—◆ Brian Wiens, Alcon Laboratories; Gerd K. Rosenkranz, Novartis Pharma AG
- 8:55 a.m. **Issues in Assessing Noninferiority: Proper Discount and Margin Selection**—◆ Ping Gao, The Medicines Company
- 9:15 a.m. **On Post Hoc Justification of Noninferiority Margin: A Case Study**—◆ Sudhakar Rao, Janssen Pharmaceuticals R&D; Steven Sun, Johnson & Johnson
- 9:35 a.m. **A Case Study for Selection of Margin and Statistical Analysis Method**—◆ Bo Yang, Merck Research Laboratories
- 9:55 a.m. **Disc:** Hsien-Ming James Hung, FDA
- 10:15 a.m. **Floor Discussion**

101 CC-Room 26B Computer Models and Spatial Statistics for Environmental Science—Invited

ENAR, Section on Statistical Computing, WNAR, International Indian Statistical Association, Statistics Surveys Online Journal, ASA Advisory Committee on Climate Change Policy
Organizer(s): Brian Reich, North Carolina State University
Chair(s): Brian Reich, North Carolina State University

- 8:35 a.m. **Demographic Analysis of Forest Dynamics Using Stochastic Integral Projection Models**—◆ Alan Gelfand, Duke University
- 8:55 a.m. **Space-Time Dynamical Modeling of Aerosol Transport**—◆ Catherine Calder, The Ohio State University; Candace Berrett, Brigham Young University; Tao Shi, The Ohio State University
- 9:15 a.m. **Nonlinear Modeling of Ecosystem Dynamics Using Computer Models**—◆ William Leeds, University of Missouri; Christopher Wikle, University of Missouri
- 9:35 a.m. **Hierarchical Models for Climate Model Predictions**—◆ Bruno Sanso, University of California at Santa Cruz
- 9:55 a.m. **Assessing Uncertainty in Regional Climate Model Experiments**—◆ Stephan Sain, Geophysical Statistics Project
- 10:15 a.m. **Floor Discussion**

102 HQ-Sapphire U ■ ● Real-Life Ethical Dilemmas Encountered in the Practice of Statistics: Reproducibility, Fraud, and Fakery—Invited

Committee on Professional Ethics, Section on Statistical Education, Section on Statistical Consulting, Section for Statistical Programmers and Analysts, International Indian Statistical Association, Statistics Surveys Online Journal, CHANCE
Organizer(s): Shelley Hurwitz, Harvard Medical School/Brigham and Women's Hospital
Chair(s): Shelley Hurwitz, Harvard Medical School/Brigham and Women's Hospital

- 8:35 a.m. **When Does Reproducibility Become an Ethical Issue?**—◆ Keith Alan Baggerly, MD Anderson Cancer Center
- 9:05 a.m. **Statistics, Ethics, and Medicare Fraud**—◆ George W. Cobb, Mount Holyoke College
- 9:35 a.m. **Ethical Dilemmas of an Isolated Statistician**—◆ Donald L. Bentley, Pomona College
- 10:05 a.m. **Floor Discussion**

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

103 CC-Room 28A

■ ● Causal Inference with Longitudinal Data: Challenges and New Solutions—Invited

Social Statistics Section, Section on Risk Analysis, Biopharmaceutical Section, Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Elizabeth Stuart, Johns Hopkins Bloomberg School of Public Health

Chair(s): Elizabeth Stuart, Johns Hopkins Bloomberg School of Public Health

- 8:35 a.m. **Does Marriage Boost Men's Wages? Identification of Treatment Effects in Fixed Effects Regression Models for Panel Data**—◆ Michael E Sobel, Columbia University
- 8:55 a.m. **Heterogeneity in Longitudinal School Intervention Effects: Causal Inference with Latent Trajectory Types**—◆ Booil Jo, Stanford University
- 9:15 a.m. **Prognostic Score-Based Difference-in-Differences Strategy Applied to Interrupted Time Series Data**—◆ Guanglei Hong, The University of Chicago; Bing Yu, University of Toronto; Takako Nomi, Consortium on Chicago School Research
- 9:35 a.m. **Relaxing the Ignorability Assumption Using Future Potential Outcomes**—◆ Wei Yang, University of Pennsylvania; Marshall Joffe, University of Pennsylvania
- 9:55 a.m. Disc: Elizabeth Ogburn, Harvard University
- 10:15 a.m. **Floor Discussion**

104 HQ-Sapphire €

■ ● Predicting for Profit: Data Modeling Competitions on Kaggle.com—Invited

General Methodology, Section on Statistical Computing, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Mark E Glickman, Boston University School of Public Health

Chair(s): Chris Volinsky, AT&T Shannon Laboratory

- 8:35 a.m. **Increasing Innovation Using Data Mining Competitions**—◆ Jeremy Howard, Kaggle
- 8:55 a.m. **Data Analysis Contests: From Good to Better?**—◆ Charles Elkan, University of California at San Diego
- 9:15 a.m. **Using a Crowdsourcing Contest to Find a More Predictive Chess Rating System: The Deloitte/Fide Chess Rating Challenge**—◆ Jeff Sonas, Sonas Consulting
- 9:40 a.m. **Predicting Travel Times for the M4 Highway in Sidney: How We Won Kaggle.com's First \$10,000 Data Mining Challenge**—◆ José Pablo González-Brenes, Carnegie Mellon University
- 10:05 a.m. Disc: Mark E Glickman, Boston University School of Public Health

105 CC-Room 30C

■ ● Recent Advances in Statistical Machine Learning—Invited

Section on Statistical Learning and Data Mining, Section on Statistical Computing, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Yufeng Liu, The University of North Carolina at Chapel Hill

Chair(s): Yufeng Liu, The University of North Carolina at Chapel Hill

- 8:35 a.m. **New Reinforcement Learning Methodology for Personalized Medicine**—◆ Michael Kosorok, The University of North Carolina at Chapel Hill
- 9:00 a.m. **Active Learning for Developing Personalized Treatment**—◆ Kun Deng, University of Michigan; Joelle Pineau, McGill University; Susan Murphy, University of Michigan
- 9:25 a.m. **Time-Varying Signal Detection for Correlated Data**—Lan Xue, Oregon State University; ◆ Annie Qu, University of Illinois at Urbana-Champaign; Colin Wu, National Heart, Lung, and Blood Institute
- 9:50 a.m. **Sparse Low Rank Pursuit for Collaborative Filtering**—◆ Xiaotong Shen, University of Minnesota-Twin Cities; Yunzhang Zhu, University of Minnesota; Changqing Ye, University of Minnesota
- 10:15 a.m. **Floor Discussion**

106 CC-Room 31A

■ ● Advances in Functional Data Analysis—Invited

IMS, Biometrics Section, International Chinese Statistical Association, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Jeng-Min Chiou, Academia Sinica

Chair(s): Jeng-Min Chiou, Academia Sinica

- 8:35 a.m. **Stringing: From High-Dimensional to Functional Data**—◆ Hans-Georg Mueller, University of California at Davis
- 9:05 a.m. **Analyzing Trees of Functional Data**—◆ John Aston, University of Warwick
- 9:35 a.m. **Parameter Estimation for Ordinary Differential Equations: An Alternative View on Penalty**—Yun Li, University of Michigan; Ji Zhu, University of Michigan; ◆ Naisyin Wang, University of Michigan
- 10:05 a.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Invited Panels 8:30 a.m.–10:20 a.m.

107 HQ-Sapphire H High School Changing Curriculum's Impact on Collegiate Introductory Statistics Courses—Invited

Section on Statistical Education

Organizer(s): Kim Gilbert, University of Georgia

Chair(s): Kim Gilbert, University of Georgia

- Panelists:** ◆ Roxy Peck, California Polytechnic State University
 ◆ Christine Franklin, University of Georgia
 ◆ Katherine Halvorsen, Smith College
 ◆ Michael Shaughnessy, Portland State University

10:05 a.m. **Floor Discussion**

108 CC-Room 31B Teaching and Learning Applied Regression: Perspectives from Teachers and Students—Invited

Section on Teaching of Statistics in the Health Sciences, Section on Statistical Education, International Indian Statistical Association

Organizer(s): Felicity Enders, Mayo Clinic

Chair(s): Todd Nick, Arkansas Children's Hospital

- Panelists:** ◆ Felicity Enders, Mayo Clinic
 ◆ Miranda Kroehl, University of Colorado at Denver
 ◆ Rickey Carter, Mayo Clinic
 ◆ John McGready, The Johns Hopkins University

10:05 a.m. **Floor Discussion**

Topic-Contributed Sessions 8:30 a.m.–10:20 a.m.

109 CC-Room 29D Emerging Challenges in Energy Time Series—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Idris Eckley, Lancaster University

Chair(s): Idris Eckley, Lancaster University

8:35 a.m. **Functional Instrumental Regression for Energy Price Forecasting**—◆ Sebastien Van Belleghem, Universite Catholique de Louvain

8:55 a.m. **Change Point Detection for Marine Energy Series**—◆ Rebecca Killick, Lancaster University

9:15 a.m. **Space-Time Wind Speed Forecasting for Improved Power System Dispatch**—◆ Marc Genton, Texas A&M University; Xinxin Zhu, Texas A&M University; Yingzhong Gu, Texas A&M University; Le Xie, Texas A&M University

9:35 a.m. **Nonstationary Approaches for Energy Time Series**—◆ Marina Iuliana Knight, University of Bristol

9:55 a.m. **Locating and Quantifying Gas Emission Rates Using Remotely Obtained Concentration Data**—◆ Philip Jonathan, Shell Projects & Technology; Bill Hirst, Shell Projects & Technology; David Randell, Shell Projects & Technology; Fernando Gonzalez del Cueto, Shell Projects & Technology; Oliver Kosut, MIT Laboratory for Information and Decision Systems

10:15 a.m. **Floor Discussion**

110 CC-Room 25B Identifying Gene X Environment Interactions in GWAS Studies—Topic-Contributed

Biometrics Section, International Chinese Statistical Association, Section on Statistics in Epidemiology, International Indian Statistical Association

Organizer(s): Charles L Kooperberg, Fred Hutchinson Cancer Research Center

Chair(s): Charles L Kooperberg, Fred Hutchinson Cancer Research Center

8:35 a.m. **Complex Interaction Effects and Model Selection Strategies**—◆ Nicholas Schork, The Scripps Research Institute; Ondrej Libiger, The Scripps Research Institute; Jill Waalen, The Scripps Research Institute; Guia Guffanti, Columbia University; Wei Chen, Tulane University; Gerald Berenson, Tulane University; Sathanur Srinivasan, Tulane University

8:55 a.m. **Powerful Cocktail Methods for Detecting Genome-Wide GxE Interaction**—◆ Li Hsu, Fred Hutchinson Cancer Research Center

9:15 a.m. **Simultaneously Testing for Marginal Genetic Association and Gene-Environment Interaction**—◆ Benjamin Logsdon, Fred Hutchinson Cancer Research Center; James Dai, Fred Hutchinson Cancer Research Center; Ying Huang, Fred Hutchinson Cancer Research Center; Li Hsu, Fred Hutchinson Cancer Research Center; Alexander P. Reiner, Fred Hutchinson Cancer Research Center; Ross Prentice, Fred Hutchinson Cancer Research Center; Charles L Kooperberg, Fred Hutchinson Cancer Research Center

9:35 a.m. **Detection of Gene Environment Interaction in High-Volume Genetic Studies**—◆ James Gauderman, University of Southern California; Pingye Zhang, University of Southern California; Juan-Pablo Lewinger, University of Southern California

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:55 a.m. **A Class of General Score Tests for Detecting Genetic Associations Integrating Environmental Exposures**—◆ Summer S Han, National Cancer Institute; Philip S Rosenberg, National Cancer Institute; Nilanjan Chatterjee, National Cancer Institute
- 10:15 a.m. **Floor Discussion**

- 9:55 a.m. **The Agony and the Ecstasy: A Tale of Repository Data Analysts**—◆ Norma Pugh, RTI International; Sylvia Tan, RTI International
- 10:15 a.m. **Floor Discussion**

111 CC-Room 31C ■ **Model-Robust Design: Why Not More Impact?—Topic-Contributed**

Quality and Productivity Section, International Indian Statistical Association, Statistics Surveys Online Journal, Section on Statistics in Defense and National Security
Organizer(s): Byran J Smucker, Miami University
Chair(s): Byran J Smucker, Miami University

- 8:35 a.m. **Minimax Criterion for Response Surface Designs**—◆ Julie Zhou, University of Victoria
- 8:55 a.m. **Layered and Hybrid Designs for Model Robustness**—◆ Greg Piepel, Pacific Northwest National Laboratory
- 9:15 a.m. **Efficient Designs with Minimal Aliasing**—◆ Bradley Allen Jones, SAS Institute
- 9:35 a.m. **A Simple Criterion for Model-Robust Designs**—◆ Steven Gilmour, University of Southampton; Pi-Wen Tsai, National Taiwan Normal University
- 9:55 a.m. **Disc: William Myers, The Procter & Gamble Company**
- 10:15 a.m. **Floor Discussion**

113 CC-Room 23A ■ ● **Dose Selection in Clinical Trials—Topic-Contributed**

Biopharmaceutical Section, International Indian Statistical Association
Organizer(s): Weihua Cao, FDA
Chair(s): Zhi Wen, FDA

- 8:35 a.m. **Simultaneous Inference for Dose Selection with Binary Responses**—◆ Bernhard Klingenberg, Williams College
- 8:55 a.m. **Utility-Based Dose-Finding in Phase I-II Clinical Trials**—◆ Peter Thall, MD Anderson Cancer Center; Hoang Q Nguyen, MD Anderson Cancer Center
- 9:15 a.m. **Characterizing Dose-Response in the Development of Novel Treatments for Multiple Sclerosis**—◆ David I Ohlssen, Novartis
- 9:35 a.m. **Designing Phase 2 Trials Based on Program-Level Criteria**—◆ Nitin Patel, Cytel Inc.; James Bolognese, Cytel Inc.; Christy Chuang-Stein, Pfizer Inc.; David Hewitt, Merck; Arnold Gammaioni, Nuvo Research; Jose Carlos Pinheiro, Johnson & Johnson
- 9:55 a.m. **Disc: Amelia Dale Horne, FDA**
- 10:15 a.m. **Floor Discussion**

112 CC-Room 22 ■ **The World of Statistical Analysis Professionals—Topic-Contributed**

Section for Statistical Programmers and Analysts
Organizer(s): Nancy Wang, Celerion
Chair(s): Nancy Wang, Celerion

- 8:35 a.m. **Statistics in Public Mental Health: Our World Is Not Flat**—◆ Alden Gross, Institute for Aging Research
- 8:55 a.m. **Challenges and Opportunities in Analysis of Medical Registry Data**—◆ Christopher Ake, Kaiser Permanente
- 9:15 a.m. **Working as a Statistician for a Consumer Package Goods Company**—◆ Catherine Knockenahuer, Conagra Foods
- 9:35 a.m. **A Typical Work Day of a Biostatistician in a Medical Device Company**—◆ Frank Yi, Johnson & Johnson

114 CC-Room 30A ■ **New Techniques for High-Dimensional Data—Topic-Contributed**

Section on Statistical Computing, Biometrics Section, Committee on Applied Statisticians, International Chinese Statistical Association, Section on Statistical Learning and Data Mining, International Indian Statistical Association
Organizer(s): Yichao Wu, North Carolina State University
Chair(s): Yichao Wu, North Carolina State University

- 8:35 a.m. **Two-Dimensional Solution Surface for Weighted Support Vector Machines**—◆ Seung Jun Shin, North Carolina State University; Yichao Wu, North Carolina State University; Hao Helen Zhang, North Carolina State University
- 8:55 a.m. **Partially Linear Structure Identification in Generalized Additive Models with NP-Dimensionality**—◆ Pang Du, Virginia Tech; Heng Lian, National University of Singapore; Hua Liang, University of Rochester



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:15 a.m. **Linearly Constrained Lasso with Application in Glioblastoma Data**—◆ Peng Zeng, Auburn University; Yu Zhu, Purdue University; Tianhong He, Twitter
- 9:35 a.m. **Relative Variable Importance and Backward Variable Selection for High-Dimensional Response Data**—◆ Daniel Nettleton, Iowa State University; Long Qu, BioStatSolutions
- 9:55 a.m. **High-Dimensional Nonlinear ODEs for Dynamic Gene Regulatory Network**—◆ Shuang Wu, University of Rochester; Yichao Wu, North Carolina State University; Hongqi Xue, University of Rochester; Hulin Wu, University of Rochester
- 10:15 a.m. **Floor Discussion**

- 8:55 a.m. **Comparing Item Nonresponse Rate in SIPP and SIPP-EHC: Case of Snap Eligibility Measurement**—◆ Jeongsoo Kim, U.S. Census Bureau; Sharon I O'Donnell, U.S. Census Bureau
- 9:15 a.m. **On Weighting of Propensity Models When Analyzing Nonresponse**—◆ Daniell Toth, Bureau of Labor Statistics; John Eltinge, Bureau of Labor Statistics; Polly Phipps, Bureau of Labor Statistics
- 9:35 a.m. **Combining Model-Based and Hot-Deck Imputation to Fill Gaps in Longitudinal Surveys**—◆ Sharon I O'Donnell, U.S. Census Bureau; Yves Thibaudeau, U.S. Census Bureau
- 9:55 a.m. **Analyzing and Adjusting for Nonresponse**—◆ Morgan Earp, Bureau of Labor Statistics; Jaki McCarthy, National Agricultural Statistics Service; Frauke Kreuter, Joint Program in Survey Methodology; Roger Tourangeau, Westat
- 10:15 a.m. **Floor Discussion**

115 CC-Room 27A

■ P. A. W. (L) Prints: A Celebration of the Statistical Career of Peter A. W. Lewis (1932–2011)—Topic-Contributed

Section on Statistics in Defense and National Security, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Patricia A Jacobs, Naval Postgraduate School

Chair(s): Patricia A Jacobs, Naval Postgraduate School

- 8:35 a.m. **Peter Lewis (1932–2011): Point Processes, Time Series, and Plenty Else**—◆ Anthony Lawrance, University of Warwick
- 8:55 a.m. **Peter Lewis' Work on Stochastic Point Processes**—◆ David Brillinger, University of California at Berkeley
- 9:15 a.m. **Peter Lewis and the Computer Revolution**—◆ Werner Stuetzle, University of Washington
- 9:35 a.m. **A Review of Peter Lewis' Contributions to Nonlinear Time-Series Modeling**—◆ Bonnie Ray, IBM T. J. Watson Research Center
- 9:55 a.m. **Memories of Peter Lewis**—◆ Donald Gaver, Naval Postgraduate School
- 10:15 a.m. **Floor Discussion**

117 CC-Room 25C

■ Statistical Issues in Adaptive Clinical Trial Design—Topic-Contributed

Biopharmaceutical Section, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Min Annie Lin, FDA/CBER

Chair(s): Boguang Zhen, FDA/CBER

- 8:35 a.m. **Modeling and Simulation in Adaptive Dose-Finding Studies**—◆ Alun Bedding, GlaxoSmithKline
- 8:55 a.m. **Benefits, Challenges, and Obstacles of Adaptive Clinical Trial Designs**—◆ Shein-Chung Chow, Duke University School of Medicine
- 9:15 a.m. **Regulatory Experience: Adaptive Designs in CBER Submissions**—◆ Min Annie Lin, FDA/CBER
- 9:35 a.m. **Adjusting for Misclassification In Stratified Biomarker Clinical Trials**—◆ Aiyi Liu, National Institute of Child Health and Human Development
- 9:55 a.m. **Disc: Estelle Russek-Cohen, FDA/CBER**
- 10:15 a.m. **Floor Discussion**

116 CC-Room 27B

Analyzing and Adjusting for Nonresponse—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods, Committee on Applied Statisticians, Section for Statistical Programmers and Analysts, Social Statistics Section

Organizer(s): Polly Phipps, Bureau of Labor Statistics

Chair(s): Polly Phipps, Bureau of Labor Statistics

- 8:35 a.m. **Adjusting for Nonresponse in the Occupational Employment Statistics Survey**—◆ Nicholas Horton, Smith College; Daniell Toth, Bureau of Labor Statistics; Polly Phipps, Bureau of Labor Statistics

118 HQ-Sapphire A

■ Modeling Issues in Clinical Trials of Medical Devices—Topic-Contributed

Biopharmaceutical Section

Organizer(s): John Evans, Boston Scientific Corporation

Chair(s): John Evans, Boston Scientific Corporation

- 8:35 a.m. **Random Effect Multi-Stage Transitional Models**—◆ Changhong Song, FDA/CDRH

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 8:55 a.m. **Balance Diagnostics for Baseline Covariates in Nonrandomized Studies Involving Propensity Score**—◆ Nelson Lu, FDA; Weihua Cao, FDA; Rajesh Nair, FDA
- 9:15 a.m. **Reverse Regression in Randomized Clinical Trials with Nonignorable Nonresponse**—◆ Zhiwei Zhang, FDA/CDRH; Kyeongmi Cheon, National Institute of Child Health and Human Development
- 9:35 a.m. **Impact of Various Modeling Options for Using GEE to Analyze Over-Dispersed Longitudinal Count Data**—◆ Scott Miller, FDA
- 9:55 a.m. **Limit of Blank, Limit of Detection, and Limit of Quantitation (Latest Changes in CLSI EP-17)**—◆ Patrick Meyers, Abbott Laboratories
- 10:15 a.m. **Floor Discussion**

119 CC-Room 21

■ ● New Developments in Neuroscience and Neuroepidemiology Statistics—Topic-Contributed

Section on Statistics in Epidemiology, Biopharmaceutical Section, Biometrics Section, International Chinese Statistical Association, International Indian Statistical Association, Statistics Surveys Online Journal
 Organizer(s): Xi Luo, Brown University
 Chair(s): Ming Wang, Emory University

- 8:35 a.m. **Bayesian Nonparametric Analysis of Neuronal Intensity Rates**—◆ Sam Behseta, California State University/CHANCE; Athanasios Kottas, University of California at Santa Cruz; Valerie Poynor, University of California at Santa Cruz; David Moorman, Medical University of South Carolina
- 8:55 a.m. **Generalized Linear Model Estimates for Brain Metabolite Signatures in MRS Data**—◆ Timothy W. Randolph, Fred Hutchinson Cancer Research Center; Jaroslaw Harezlak, Indiana University School of Medicine; Madan Gopal Kundu, Indiana University School of Medicine
- 9:15 a.m. **Statistical Aspects of the Morris-Lecar Model of Neural Activity**—◆ Satish Iyengar, University of Pittsburgh
- 9:35 a.m. **Inference with Interference Between Units in an fMRI Experiment of Motor Inhibition**—◆ Xi Luo, Brown University; Dylan Small, The Wharton School; Chiang-shan Li, Yale University; Paul R Rosenbaum, University of Pennsylvania
- 9:55 a.m. **Conditional Inference for Learning the Network Structure of Cortical Microcircuits**—◆ Matthew Harrison, Brown University
- 10:15 a.m. **Floor Discussion**

120 CC-Room 25A

Biometrics Section Byar Award Session 1—Topic-Contributed

Biometrics Section
 Organizer(s): Timothy D. Johnson, University of Michigan
 Chair(s): Timothy D. Johnson, University of Michigan

- 8:35 a.m. **A Bayesian Hierarchical Framework for Modeling Brain Connectivity of Neuroimaging Data**—◆ Shuo Chen, Emory University; F. DuBois Bowman, Emory University
- 8:55 a.m. **Joint Analysis of SNP and Gene Expression Data in Genome-Wide Association Studies**—◆ Yen-Tsung Huang, Harvard School of Public Health; Xihong Lin, Harvard University; Tyler VanderWeele, Harvard School of Public Health
- 9:15 a.m. **A Marginal Approach to Reduced-Rank Penalized Spline Smoothing with Application to Multilevel Functional Data**—◆ Huaihou Chen, Columbia University; Yuanjia Wang, Columbia University; Myunghee Cho Paik, Columbia University; H. Alex Choi, Columbia University
- 9:35 a.m. **Corrected Confidence Bands for Functional Data Using Principal Components**—◆ Jeff Goldsmith, The Johns Hopkins University; Sonja Greven, Ludwig-Maxilians-Universität München; Ciprian Crainiceanu, The Johns Hopkins University
- 9:55 a.m. **Testing and Estimation of Partial Correlation Networks**—◆ Min Jin Ha; Fred Wright, The University of North Carolina at Chapel Hill
- 10:15 a.m. **Floor Discussion**

121 HQ-Sapphire C

● Advances in Genomics—Topic-Contributed

Section on Bayesian Statistical Science, Biometrics Section, WNAAR, International Indian Statistical Association, Statistics Surveys Online Journal
 Organizer(s): Lynn Kuo, University of Connecticut
 Chair(s): Sungduk Kim, National Institutes of Health

- 8:35 a.m. **Bayesian Coalescent-Based Inference of Population Dynamics from Multiple Loci**—◆ Mandev Gill, University of California at Los Angeles; Beth Shapiro, Penn State University; Philippe Lemey, Katholieke Universiteit Leuven; Andrew Rambaut, University of Edinburgh; Marc A Suchard, University of California at Los Angeles
- 8:55 a.m. **Estimating Marginal Likelihood for Bayesian Phylogenetic Model Selection with Varying Topology**—◆ Rui Wu, University of Connecticut; Paul Lewis, University of Connecticut; Yu Fan, University of Connecticut; Lynn Kuo, University of Connecticut; Ming-Hui Chen, University of Connecticut
- 9:15 a.m. **A Hierarchical Approach to Analyze RNA-Seq Data with Length Bias**—◆ Patrick Harrington, University of Connecticut; Lynn Kuo, University of Connecticut



● Themed Session ■ Applied Session ◆ Presenter

- 9:35 a.m. **Statistical Approach for Large-Scale Proteome Assay**—◆Lisa Chung; Christopher Colangelo, Yale University; Hongyu Zhao, VA Cooperative Studies Program
- 9:55 a.m. **Two-Criterion: A New Bayesian Differentially Expressed Gene Selection Algorithm**—◆Fang Yu, University of Nebraska Medical Center; Ming-Hui Chen, University of Connecticut; Lynn Kuo, University of Connecticut; John S. Davis, University of Nebraska Medical Center
- 10:15 a.m. **Floor Discussion**

- Panelists:**
- ◆ Nancy Kirkendall, Committee on National Statistics
 - ◆ Jack G. Gambino, Statistics Canada
 - ◆ William F. Eddy, Carnegie Mellon University
 - ◆ Eileen O'Brien, U.S. Energy Information Administration
 - ◆ Thomas Leckey, U.S. Energy Information Administration
 - ◆ Michael L. Cohen, National Academy of Sciences
- 10:15 a.m. **Floor Discussion**

122 HQ-Sapphire L

● Topics in Variance Estimation for Complex Surveys—Topic-Contributed

Section on Survey Research Methods, Committee on Applied Statisticians, Section on Government Statistics

Organizer(s): Benjamin M. Reist, U.S. Census Bureau

Chair(s): Stephen Cohen, National Science Foundation

- 8:35 a.m. **Asymptotic Variance Estimation and Comparison of Model-Assisted Regression Estimators in Sample Surveys**—Jun Shao, University of Wisconsin-Madison; ◆Sheng Wang, Mathematica Policy Research
- 8:55 a.m. **Anomalies Under Jackknife Variance Estimation Incorporating Rao-Shao Adjustment in the Medical Expenditure Panel Survey Insurance Component**—◆Matthew Thompson, U.S. Census Bureau; Robert Baskin, Agency for Healthcare Research and Quality
- 9:15 a.m. **Replicate Variance Estimation in a Two-Phase Sample Design Setting: Simulation Study with National Survey of College Graduates Data**—◆Michael White, U.S. Census Bureau; Jean Opsomer, Colorado State University
- 9:35 a.m. **Post-Imputation Calibration Under Rubin's Multiple Imputation Variance Estimator**—◆Benjamin M. Reist, U.S. Census Bureau; Michael D. Larsen, The George Washington University
- 9:55 a.m. **Disc:** Keith Rust, Joint Program in Survey Methodology
- 10:15 a.m. **Floor Discussion**

Topic-Contributed Panels 8:30 a.m.–10:20 a.m.

123 HQ-Sapphire D

■ ● Energy Consumption Surveys: Re-Energizing for an Energy- and Data-Dependent Society—Topic-Contributed

Section on Survey Research Methods, International Indian Statistical Association

Organizer(s): Hiroaki Minato, U.S. Energy Information Administration

Chair(s): Thomas Leckey, U.S. Energy Information Administration

Contributed Sessions 8:30 a.m.–10:20 a.m.

124 CC-Room 33A

Hypothesis Testing in Nonparametric Problems—Contributed

Section on Nonparametric Statistics, Biopharmaceutical Section

Chair(s): Johan Lim, Seoul National University

- 8:35 a.m. **Generalized Likelihood Ratio Tests for Nonparametric Alternatives**—◆Han Yu, Northwest Missouri State University; Kai-Sheng Song, University of North Texas
- 8:50 a.m. **Testing for Superiority of Two Regression Curves with Responses Missing at Random**—◆Xiaoyu Li, Michigan State University
- 9:05 a.m. **A Two-Sample Test for Equality of Means in High Dimension**—◆Karl Gregory, Texas A&M University; Soumen Lahiri, Texas A&M University
- 9:20 a.m. **Nonparametric Tests for Distribution Specification in Multiparameter Local Likelihood Models**—◆Kee-Hoon Kang, Hankuk University of Foreign Studies; Ming-Yen Cheng, National Taiwan University; Liang Peng, Georgia Institute of Technology
- 9:35 a.m. **Nonparametric Methods for Gene Set Enrichment Analysis**—◆Lena Granovsky, IBM; Paul David Feigin, Technion; Ruth Heller, Tel Aviv University
- 9:50 a.m. **A Rank-Based Test for Nonlocation Differences Between Treatment Distributions in a Randomized Complete Block Design**—◆Roy St. Laurent, Northern Arizona University; Philip Turk, West Virginia University
- 10:05 a.m. **A Comparison of Median Testing Methods for Complex Survey Data Using Various Statistical Packages**—Christine Davies, RTI International; ◆Lauren Klein Warren, RTI International; Joshua Warren, The University of North Carolina at Chapel Hill

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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125 CC-Room 32A Reliability—Contributed

Section on Physical and Engineering Sciences, Quality and Productivity Section, Section on Statistics in Defense and National Security
Chair(s): Paul H. Kvam, Georgia Institute of Technology

- 8:35 a.m. **Mean Residual Life Function for the Multiplicative (Additive) Hazard Rate Function**—◆Ramesh Gupta, University of Maine
- 8:50 a.m. **Hazard Rate Function of the Discrete Distributions**—◆Pushpa Gupta, University of Maine
- 9:05 a.m. **Estimation and Inference in Sets of Weibull Samples**—◆John McCool, Penn State Great Valley
- 9:20 a.m. **Comparison Between Constant-Stress Testing and Step-Stress Testing Under Type-I Censoring**—◆David Han, The University of Texas at San Antonio; Tony Ng, Southern Methodist University
- 9:35 a.m. **Reliability Experiments with Random Blocks and Subsampling**—◆Jennifer Kensler, Virginia Tech; Laura Freeman, Institute for Defense Analyses; G. Geoffrey Vining, Virginia Tech
- 9:50 a.m. **Inference for System Lifetime Data with Signatures Available**—◆Hon Keung Tony Ng, Southern Methodist University; N. Balakrishnan, McMaster University; Jorge Navarro, Universidad de Murcia
- 10:05 a.m. **Connections Between Fisher Information in Censored Samples from Folded and Unfolded Distributions**—◆Lira Pi, The Ohio State University; Haikady Nagaraja, The Ohio State University

126 CC-Room 30B Computational Issues in Survival Models, Biology, and Medicine—Contributed

Section on Statistical Computing
Chair(s): Desale Hab, University of Akron

- 8:35 a.m. **Lasso Tree for Cancer Stage Grouping**—◆Yunzhi Lin, University of Wisconsin-Madison; Sijian Wang, University of Wisconsin-Madison; Rick Chappell, University of Wisconsin-Madison
- 8:50 a.m. **Planning Step-Stress Test Plans Under Type-I Censoring for the Log-Location-Scale Case**—◆Chien-Tai Lin, Tamkang University; Cheng-Chieh Chou, Tamkang University; N. Balakrishnan, McMaster University
- 9:05 a.m. **On Modeling of Failure Times Data: A Comparison of Some Well-Known Accelerated Life-Testing Models - Applications to Class-H Insulation Data**—◆Debaraj Sen, Concordia University; Krishna Saha, Central Connecticut State University; Yogendra P. Chaubey, Concordia University; Sanku Dey, St. Anthony's College

- 9:20 a.m. **Optimizing Serial Diagnostic Testing to Reduce Cost**—◆Dat Huynh, University of California at Los Angeles; Ron Brookmeyer, University of California at Los Angeles
- 9:35 a.m. **Computing the Partition Function of a Gibbs Distribution on a Sequence of Phylogenetic Trees**—◆Yujin Chung, University of Wisconsin-Madison; Cécile Ané, University of Wisconsin-Madison
- 9:50 a.m. **Using Simulated Annealing for RNA 3D Structural Comparisons**—◆Ryan Rahrig, Ohio Northern University
- 10:05 a.m. **TesseraMap: Dimensionality Reduction by Tessellation of Linear Subspaces with Application in Protein Structure Determination**—◆Ali Ghodsi

127 CC-Room 29B Applications and Administrative Practices of Statistical Consulting and Collaborations—Contributed

Section on Statistical Consulting, Section on Statistics and the Environment, Section for Statistical Programmers and Analysts
Chair(s): Hung-Wen Yeh, Kansas University Medical Center

- 8:35 a.m. **Classification Accuracy and Cut-Point Selection**—◆Xinhua Liu, Columbia University
- 8:50 a.m. **Statistical Analysis of Environmental Data with Nondetects. A Solution for Practitioners**—◆Breda Munoz, RTI International; Robert Truesdale, RTI International
- 9:05 a.m. **Much Ado About Almost Nothing: How to Deal with Limited Data**—◆Stephen Looney, Georgia Health Sciences University; Courtney E. McCracken, Emory University
- 9:20 a.m. **How Biostatisticians Can Contribute to Nursing Research in the Hospital Setting**—◆Dunlei Cheng, The University of Texas School of Public Health; Yahya Daoud, Baylor Health Care System; Huanying Qin, Baylor Health Care System; Susan Houston, Baylor Health Care System; Jenny Adams, Baylor Heart and Vascular Hospital
- 9:35 a.m. **Statistical Consulting in a State Resource Agency: Experiences Gleaned from a 30+ Year Career**—◆Allen Bingham, Alaska Dept. of Fish and Game
- 9:50 a.m. **Effective Collaboration Between Biostatisticians with Clinicians in Conducting Medical Research**—◆Yahya Daoud, Baylor Health Care System; Monica Anand; Monica Bennett, Baylor Health Care System; Hui Xu, Baylor Health Care System; Derek Blankenship, Baylor Health Care System
- 10:05 a.m. **Using the JMP Statistical Package to Enhance the Statistical Literacy of the U.S. Energy Information Administration's (EIA's) Survey Staff**—◆Carol Blumberg, U.S. Energy Information Administration; Marlana Anderson, U.S. Energy Information Administration; Andrew Hoegh, Virginia Tech; Jennifer Lawhorn, Edwards Lifesciences



● Themed Session ■ Applied Session ◆ Presenter

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128 CC-Room 28B **Assessing Student Attitudes and Student Understanding—Contributed**

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences, Social Statistics Section

Chair(s): Zenaida Florendo Mateo, University of Manitoba

- 8:35 a.m. **Investigating Student Understanding of Histograms: Pre-Test Results**—◆Phyllis Curtiss, Grand Valley State University; John G Gabrosek, Grand Valley State University; Jennifer Kaplan, University of Georgia; John G Gabrosek, Grand Valley State University
- 8:50 a.m. **Assessing Quantitative Reasoning: Evaluate What Students Know**—◆Kimberly Massaro, The University of Texas at San Antonio; Ermine Orta, The University of Texas at San Antonio; Nandini Kannan, The University of Texas at San Antonio
- 9:05 a.m. **A First Look at Retention Following Changes to a Two-Semester Business Statistics Curriculum**—◆Amy Phelps, Duquesne University
- 9:20 a.m. **Exploring Student Attitudes Toward Statistics at the University of Tennessee**—◆Adam Petrie
- 9:35 a.m. **Faculty Teaching Performance Model Development of Student Evaluation**—◆Ayodele Mobolurin, Howard University; Ayodele Mobolurin, Howard University; Ayodele Mobolurin, Howard University
- 9:50 a.m. **Bloom's Taxonomy and the Teaching of Introductory Statistics Classes**—◆Ilhan Izmirli, George Mason University; Susan C. Surina, George Mason University
- 10:05 a.m. **Multiple Intelligences and Learning Statistics**—◆W. Robert Stephenson, Iowa State University

129 CC-Room 30D **Graphical Models—Contributed**

Section on Statistical Learning and Data Mining, Section for Statistical Programmers and Analysts

Chair(s): Sharmodeep Bhattacharyya, University of California at Berkeley

- 8:35 a.m. **Inference on Random Graphs with Classified Edge Attributes**—◆Michael Trosset, Indiana University; William David Brinda, Yale University; Shantanu Jain, Indiana University
- 8:50 a.m. **The Joint Graphical Lasso for Inverse Covariance Estimation Across Multiple Classes**—◆Patrick Danaher, University of Washington; Pei Wang, Fred Hutchinson Cancer Research Center; Daniela Witten, University of Washington

- 9:05 a.m. **Estimating Regulatory Networks from Time Course Gene Expression Data via Adaptive Thresholding**—◆Sumanta Basu, University of Michigan; Ali Shojaie, University of Washington
- 9:20 a.m. **Robust Estimation in Large Gaussian Graphical Model**—◆Peng Tang, Georgia Institute of Technology; Huijing Jiang, IBM T. J. Watson Research Center; Xinwei Deng, Virginia Tech
- 9:35 a.m. **High-Dimensional Covariance Selection for Multiple Graphical Models Under Structured Sparsity**—◆Jing Ma, University of Michigan; George Michailidis, University of Michigan
- 9:50 a.m. **Graph Construction for Modeling Protein 3D Structures: Consequences and Improvements**—◆Amy Wagaman, Amherst College
- 10:05 a.m. **Interaction of Forecast and Response Time Series in Collaborative Inventory Management Setting**—◆Burcu Aydin, Hewlett-Packard Labs; J. Steve Marron, The University of North Carolina at Chapel Hill

130 CC-Room 24C **Advances in Modeling Competing Risks—Contributed**

Biometrics Section, Biopharmaceutical Section, International Chinese Statistical Association, Section on Statistics in Epidemiology

Chair(s): Ying Wan, Janssen Pharmaceuticals R&D

- 8:35 a.m. **Use of a Joint Modeling Approach to Estimate Covariate Effects When Competing Risks Are Present**—◆Bo Fu; Chung-Chou H Chang, University of Pittsburgh
- 8:50 a.m. **Analysis of Potential Time-to-Event Data with Competing Risks**—◆Liang Li, Cleveland Clinic; Bo Hu, Cleveland Clinic; Michael Kattan, Cleveland Clinic
- 9:05 a.m. **A Generalization of the Odd Weibull Distribution for Modeling Cumulative Incidence Functions in Competing Risk Analysis**—◆Kahadawala Cooray, Central Michigan University
- 9:20 a.m. **Long-Term Survival for Competing Risk Data with Masked Causes**—◆Ronny Westerman, University of Marburg
- 9:35 a.m. **Goodness-of-Fit Test for a Proportional Subdistribution Hazards Model**—◆Bingqing Zhou, Yale University/VA CSPCC West Haven; Jason Fine, The University of North Carolina at Chapel Hill; Glen Laird, Bristol-Myers Squibb
- 9:50 a.m. **Joint Modeling Approach for Semicompeting Risks Data with Missing Nonterminal Event Status**—◆Chen Hu; Alex Tsodikov, University of Michigan

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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10:05 a.m. **Regression Modeling of the Cumulative Incidence Function with Missing Causes of Failure Using Pseudo Values**—◆ Margarita Moreno-Betancur, Inserm Centre for Research in Epidemiology and Population Health; Aurelien Latouche, CNAM/ Inserm Centre for Research in Epidemiology and Population Health

131 CC-Room 24B Methods in Gene-Environment Interactions, Epigenetics, and Bioinformatics—Contributed

Biometrics Section, International Chinese Statistical Association, Section on Statistics in Epidemiology

Chair(s): Michael R. Crager, Genomic Health, Inc.

8:35 a.m. **A Distance-Weighted Neighboring Sites Model for Methylation Pattern Inheritance**—◆ Karlene Meyer, Tulane University; Michelle Lacey, Tulane University

8:50 a.m. **A Nonlinear Investigation for Gene-Environment Interaction in Case-Control Association Studies**—◆ Cen Wu, Michigan State University; Yuehua Cui, Michigan State University

9:05 a.m. **Principal Variable-Based Gene Selection for Expression Assay**—◆ Jie Ding, Dana-Farber Cancer Institute; Giovanni Parmigiani, Harvard School of Public Health

9:20 a.m. **Overcome the Small Sample Size Challenge in Differential Gene Expression Analysis Studies**—◆ Yan Huang, University of California at Berkeley

9:35 a.m. **Floor Discussion**

132 CC-Room 24A ■ Analysis of Missing Data—Contributed

Biopharmaceutical Section

Chair(s): Everton Rowe, Accenture

8:35 a.m. **How Many Imputations Are Needed to Stabilize Imputation-Based Study Results?**—◆ Kaifeng Lu, Forest Labs

8:50 a.m. **Multiple Imputation for Cytokine/Metabolite Assay Data with Missing Data and Values Below Detectable Limits of Quantification**—◆ Saijuan Zhang, Merck; Ying Guo, Merck

9:05 a.m. **A Multiple Imputation Approach for Surrogate Markers Evaluation in the Causal Inference Framework**—◆ Xiaopeng Miao, Boston University School of Public Health; Xiaoming Li, Gilead Sciences; Ivan Chan, Merck

9:20 a.m. **Impact of a Very High Proportion of Nonignorable Missing Data on the Validity of Pivotal Clinical Trial Design and Analysis**—◆ Marc De Somer, Alkermes, Inc.; Yangchun Du, Alkermes, Inc.; Asli Memisoglu, Alkermes, Inc.

9:35 a.m. **Response-Adaptive Randomized Clinical Trial with Missing Data**—◆ Zhenjun Ma, University of Virginia; Feifang Hu, University of Virginia

9:50 a.m. **A Likelihood-Based Approach to Responder Analysis When Data Are Grouped**—◆ Daniel Bonzo, Xenoport, Inc.; Erol Ryan Bonzo, University of the Philippines

10:05 a.m. **Floor Discussion**

133 CC-Room 29C ■ ● Volatility and ARCH/GARCH—Contributed

Business and Economic Statistics Section

Chair(s): Ginger Koev, Hewlett-Packard

8:35 a.m. **The Estimation of Leverage Effect with High-Frequency Data**—◆ Dan Wang, The University of Chicago

8:50 a.m. **Weekly Crude Oil Spot Price Forecasting Using Oil Inventories and Stock Market Indexes**—◆ Myung Suk Kim, Sogang University

9:05 a.m. **Exploratory Data Analysis of Stock Returns**—◆ Kimihiro Noguchi, University of California at Davis; Alexander Aue, University of California at Davis; Prabir Burman, University of California at Davis

9:20 a.m. **Is the TAR Model Useful for Analyzing Financial Time Series?**—◆ Fabio H. Nieto, Universidad Nacional de Colombia; Edna Carolina Moreno, Universidad Santo Tomás

9:35 a.m. **GARCH Models Estimation with Missing Observations Using State Space Representation**—◆ Natalia Bahamonde, Pontificia Universidad Católica de Valparaíso; Sebastián Ossandón, Pontificia Universidad Católica de Valparaíso

9:50 a.m. **Constrained Regression for Interval-Valued Data: The Daily Low/High Interval of SP500 Returns**—◆ Wei Lin, University of California at Riverside; Gloria González-Rivera, University of California at Riverside

10:05 a.m. **Regularized Realized Covariance Estimator Under Market Microstructure Noise**—◆ Changgee Chang, The University of Chicago

134 CC-Room 23C ■ Analysis of Dichotomized and Binary Data—Contributed

Biopharmaceutical Section

Chair(s): Davis F Gates, Merck

8:35 a.m. **An Alternative Approach to Immunogenicity Assay Cut-Point Determination**—◆ Jianchun Zhang, MedImmune; Lanju Zhang, MedImmune; Harry Yang, MedImmune

8:50 a.m. **Estimation and Comparison of Diagnostic Accuracy with Epidemiologically Clustered Case-Control Data**—◆ Sungyoung Auh, National Institutes of Health; Jonghyeon Kim, Otsuka Pharmaceutical

9:05 a.m. **One Sensitivity Analysis Approach for Responder Analyses**—◆ Hua Guo, Merck



● Themed Session ■ Applied Session ◆ Presenter

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- 9:20 a.m. **Comparing the Performance of Disease Risk Score Analysis, Propensity Score Analysis, and Multivariate Logistic Regression in a Simulated Data Set for Estimating Odds Ratios (OR)**—◆ In-Lu Amy Liu, Kaiser Permanente; Jiaxiao M Shi, Kaiser Permanente; Wansu Chen, Kaiser Permanente
- 9:35 a.m. **Comparisons of Various Techniques in Propensity Score Estimation Using Simulation**—◆ Jiaxiao M Shi, Kaiser Permanente; Wansu Chen, Kaiser Permanente
- 9:50 a.m. **A Mixed-Effect Logistic Regression Model for Predicting Virologic Response in the Treatment of Hepatitis C**—◆ Weiping Deng, Merck; Kenneth Koury, Merck
- 10:05 a.m. **Bayesian Inference for Noninferiority Test of Matched-Pair Binary Data via Continuous Latent Model**—◆ Yi Qian, Amgen, Inc.; Deukwo Kwon, University of Miami; Jeeseun Jung, National Institute on Alcohol Abuse and Alcoholism; Jun-mo Nam, National Cancer Institute

135 CC-Room 30E Methods on Generalized Multivariate Data—Contributed

IMS, Biopharmaceutical Section

Chair(s): Dehan Kong, North Carolina State University

- 8:35 a.m. **The Multivariate Bernoulli Distribution**—◆ Reza Modarres, The George Washington University
- 8:50 a.m. **On an Application of the Unit Gamma and Weighted Power Function Distributions in the Analysis of Overdispersed Binomial Data**—◆ Makarand Ratnaparkhi, Wright State University
- 9:05 a.m. **Berry-Esseen Bounds for General Nonlinear Statistics, with Applications to Pearson's and Non-Central Student's and Hotelling's**—◆ Iosif Pinelis; Raymond Molzon, Michigan Technological University
- 9:20 a.m. **Generalized Maximum Spacing Estimation for Multivariate Observations**—◆ Kristi Kuljus, Swedish University of Agricultural Sciences; Bo Ranneby, Swedish University of Agricultural Sciences
- 9:35 a.m. **Maximum Spacing Estimation for Dependent Variables**—◆ Bo Ranneby, Swedish University of Agricultural Sciences; Kristi Kuljus, Swedish University of Agricultural Sciences
- 9:50 a.m. **Estimating the Ratio of Multivariate Means**—◆ Chand Chauhan, Indiana University Purdue University Fort Wayne; Yvonne Zubovic, Indiana University Purdue University Fort Wayne
- 10:05 a.m. **Inference for Zero-Inflated and Overdispersed Count-Data Models with Applications**—◆ Santanu Chakraborty, The University of Texas Pan American; Sujay Datta, University of Akron

136 CC-Room 32B Bayesian Modeling in Physical Sciences and Engineering—Contributed

Section on Bayesian Statistical Science, Quality and Productivity Section

Chair(s): Lin Zhang, Texas A&M University

- 8:35 a.m. **Bayesian Emulators in Spatial Inverse Problems**—◆ Anirban Mondal, Quantum Reservoir Impact
- 8:50 a.m. **A Bayesian Nonlinear Regression Model with Application to Wind Turbine Power Curve**—◆ Zhanpan Zhang, GE Global Research; Colin C McCulloch, GE Global Research
- 9:05 a.m. **Bayesian Prototype-Based Clustering for Spatio-Temporal Data**—◆ Angela Schoengendorfer, IBM T. J. Watson Research Center; Huijing Jiang, IBM T. J. Watson Research Center
- 9:20 a.m. **Bayesian Mixture Modeling and Model Misspecification for Astrophysical Populations**—◆ Irina Udaltsova, University of California at Davis; Paul Baines, University of California at Davis
- 9:35 a.m. **Gaussian Process Modeling of Derivative Curves**—◆ Tracy Holsclaw, University of California at Irvine
- 9:50 a.m. **Applied Bayesian Analysis for Reliability Problems**—◆ Ming Li, GE Global Research
- 10:05 a.m. **Analysis of Survival Data with a Cure Fraction Under Generalized Extreme Value Distribution**—◆ Fangfang Liu, Iowa State University

137 CC-Room 28C Population and Health—Contributed

Section on Statistics and the Environment, Biometrics Section, Section on Statistics in Epidemiology

Chair(s): Michael Messner, EPA

- 8:35 a.m. **A Bayesian Multiple Imputation Method for Correlated Measurements Subject to Limits of Detection**—◆ Kai Ding, University of Oklahoma Health Sciences Center; Amy Herring, The University of North Carolina at Chapel Hill; Suzan Carmichael, Stanford University; Andreas Sjodin, National Center for Environmental Health
- 8:50 a.m. **Bayesian Methods for Modeling Time Series of Ultrafine Particle Distributions**—◆ Heidi Fischer, University of California at Los Angeles; Robert E Weiss, University of California at Los Angeles Fielding School of Public Health
- 9:05 a.m. **Spatial-Temporal Modeling of the Critical Windows of Air Pollution Exposure for Preterm Birth**—◆ Joshua Warren, The University of North Carolina at Chapel Hill; Montserrat Fuentes, North Carolina State University; Amy Herring, The University of North Carolina at Chapel Hill; Peter Langlois, Texas Department of State Health Services

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:20 a.m. **Modeling Temporal Gradients in Regionally Aggregated California Asthma Hospitalization Data**—◆ Harrison Quick, University of Minnesota; Sudipto Banerjee, University of Minnesota; Bradley P Carlin, University of Minnesota
- 9:35 a.m. **Spatial Functional Regression for Misaligned Data**—◆ Catherine Tuglus, University of Southern California; Meredith Franklin, University of Southern California
- 9:50 a.m. **A Generalized Poisson-Gamma Model for Spatially Overdispersed Data When Modeling Counts Multivariately**—◆ Thomas Neyens, I-Biostat; Christel Faes, I-Biostat; Geert Molenberghs, I-BioStat/Universiteit Hasselt/Katholieke Universiteit Leuven
- 10:05 a.m. **Analyzing the Long-Term Cellular Effects of an Environmental Toxin Using Short Time Series Microarray Data**—◆ Darlene Olsen, Norwich University; Karen Hinkle, Norwich University

138 CC-Room 28D ■ Weather and Climate Applications—Contributed

Section on Statistics and the Environment
Chair(s): Jenny Brynjarsdottir, SAMSI

- 8:35 a.m. **Changepoint Detection in Daily Precipitation Data**—◆ Michael Robbins, University of Missouri-Columbia; Colin Gallagher, Clemson University; Robert Lund, Clemson University
- 8:50 a.m. **A Rotating Short-Term Wind Speed Forecasting Model**—◆ Xinxin Zhu, Texas A&M University; Marc Genton, Texas A&M University; Yingzhong Gu, Texas A&M University; Le Xie, Texas A&M University
- 9:05 a.m. **A Minimum Quantile Estimator for the Generalized Pareto Distribution**—◆ David Smith, Tennessee Tech University
- 9:20 a.m. **Generalized P-Value Test to Compare Several Population Means for Unequal Variances**—◆ Berna YAZICI, Anadolu University; Ahmet Sezer, Anadolu University; Evren Özkıp, Bursa Police College
- 9:35 a.m. **Improvement of Wind Power Forecasts in Space and Time**—◆ Lisa Bramer, Iowa State University; Petrutza Caragea, Iowa State University; Mark Kaiser, Iowa State University
- 9:50 a.m. **A Bayesian Model and the Threshold-Based Extreme Value Approach**—◆ Xuan Li, The University of North Carolina at Chapel Hill; Richard L Smith, SAMSI/The University of North Carolina
- 10:05 a.m. **Floor Discussion**

139 CC-Room 23B ■ Infectious Diseases Methodology and Applications—Contributed

Section on Statistics in Epidemiology, Committee on Gay and Lesbian Concerns in Statistics
Chair(s): Judith-Anne W. Chapman, Queen's University

- 8:35 a.m. **Estimating HIV Incidence from Changes in HIV Prevalence**—◆ Jacob Konikoff; Ron Brookmeyer, University of California at Los Angeles
- 8:50 a.m. **Estimating Influenza-Associated Deaths and Hospitalizations for the Same U.S. Catchment Areas by Using Negative Binomial Regression Models**—◆ Po-Yung Cheng, Battelle - Contractor for CDC; Hong Zhou, Columbus Technologies and Services, Inc.; Lynnette Brammer, CDC; David Shay, CDC
- 9:05 a.m. **Drawing Inference About Multi-Serotype Infectious Diseases: A State-Space Model to Estimate the Duration of Cross-Protection Between Serotypes of Dengue Virus**—◆ Nicholas G Reich, University of Massachusetts
- 9:20 a.m. **Agent-Based Models for HIV Prevention Programs**—◆ David Scott Boren, University of California at Los Angeles; Ron Brookmeyer, University of California at Los Angeles
- 9:35 a.m. **Reliability-Adjusted Standardized Incidence Ratios Using Bayesian Analysis**—◆ Jonathan R. Edwards, CDC
- 9:50 a.m. **Parametric and Nonparametric Empirical Bayes Techniques Applied to Post-Marketing Vaccine Safety Surveillance**—◆ Brock Stewart, CDC; Michael M McNeil, CDC; Frank DeStefano, CDC
- 10:05 a.m. **Pattern Recognition Methods Used in Immunology Studies**—◆ Hua Fang, University of Massachusetts Medical School; Ann M Moormann, University of Massachusetts Medical School

140 CC-Room 29A ■ Address-Based Telephone RDD and Cell Phone Sampling—Contributed

Section on Survey Research Methods
Chair(s): Brad Edwards, Westat

- 8:35 a.m. **ABS and Cell Phones: Appending Both Cell Phone and Landline Phone Numbers to an Address-Based Sampling Frame**—◆ Joseph McMichael, RTI International; Sue Pedrazzani, RTI International; Gina Kilpatrick, RTI International; Matthew Strobl, RTI International
- 8:50 a.m. **Scope and Coverage of Landline Phone Numbers Appended to Address Frames**—◆ Rachel Harter, RTI International; Joseph McMichael, RTI International
- 9:05 a.m. **Augmented RDD/Mail Sampling: In-Person Recruiting**—◆ William Waldron, Arbitron, Inc.; Kelly Dixon, Arbitron, Inc.



● Themed Session ■ Applied Session ◆ Presenter

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- 9:20 a.m. **Coverage and Nonresponse Relationship in Mixed-Mode Surveys That Use Enhanced ABS Frames—** ◆Ipek Bilgen, NORC; Ned English, NORC
- 9:35 a.m. **Feasibility of a Single-Frame Cell Phone RDD Sampling Design—** ◆Nigel Neely, RTI International; Andy Peytchev, RTI International
- 9:50 a.m. **Optimizing Call Patterns for Landline and Cell Phone Surveys—** ◆Rebecca Reimer, NORC; Robert Montgomery, NORC; Karen Wooten, National Center for Immunization and Respiratory Diseases
- 10:05 a.m. **A Cost-Benefit Analysis for Reducing Call Attempts for the National Immunization Survey—** ◆Robert Montgomery, NORC; Benjamin Skalland, NORC; James A. Singleton, National Center for Immunization and Respiratory Diseases; Meena Khare, National Center for Health Statistics; Abera Wouhib, National Center for Health Statistics

141 **CC-Room 28E**
Tree-Based Methods for Missing Data and Evaluation of Missingness Mechanisms—Contributed

Section on Survey Research Methods, Biopharmaceutical Section
 Chair(s): Minhui Paik, University of Toledo

- 8:35 a.m. **Double Protection for Imputation Using a Tree-Based Methodology—** ◆Darryl Creel, RTI International
- 8:50 a.m. **Judgment Post-Stratification Estimation of Population Proportion with High Missing Data Rate—** ◆Tian Chen, The Ohio State University; Elizabeth Stasny, The Ohio State University; Tao Shi, The Ohio State University
- 9:05 a.m. **Enhanced Tipping-Point Displays—** ◆Victoria Liublinska, Harvard University; Donald B Rubin, Harvard University
- 9:20 a.m. **Alternative Indicators for the Risk of Nonresponse Bias: A Simulation Study—** ◆Raphael Nishimura, University of Michigan; James Wagner, University of Michigan; Michael R. Elliott, University of Michigan
- 9:35 a.m. **MissMech: An R Package for Testing Homoscedasticity, Multivariate Normality, and Missing Completely at Random—** ◆Mortaza Jamshidian, California State University Fullerton; Siavash Jalal, University of California at Los Angeles; Camden Jansen, University of California at Irvine
- 9:50 a.m. **Analysis of Nonresponse Bias in the 2010 Post-Election Survey of Uniformed Service—** ◆David McGrath; Tim Markham, Department of Defense
- 10:05 a.m. **Several Scenarios for Influential Observations and Methods for Their Treatment—** ◆Mary Mulry, U.S. Census Bureau; Broderick E Oliver, U.S. Census Bureau; Stephen Kaputa, U.S. Census Bureau

Invited Sessions 10:30 a.m.–12:20 p.m.

142 **HQ-Sapphire B**
Bayesian Spatial Temporal Modeling of Large Environmental Data Sets—Invited

Section on Bayesian Statistical Science, Section on Statistics and the Environment, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal, ASA Advisory Committee on Climate Change Policy

Organizer(s): Montserrat Fuentes, North Carolina State University
 Chair(s): Montserrat Fuentes, North Carolina State University

- 10:35 a.m. **Bayesian Dynamic Modeling for Large Multivariate Space-Time Data Sets Using Gaussian Predictive Processes—** ◆Andrew O. Finley, Michigan State University; Sudipto Banerjee, University of Minnesota
- 11:05 a.m. **Spatiotemporal Quantile Regression for Detecting Distributional Changes in Environmental Processes—** ◆Brian Reich, North Carolina State University
- 11:35 a.m. **A Generalized Class of Conditionally Autoregressive (CAR) Models—** ◆Veronica J Berrocal, University of Michigan; Alan Gelfand, Duke University
- 12:05 p.m. **Floor Discussion**

143 **CC-Room 26B**
Confronting the Statistical Challenges of Measuring Health Care Provider Performance—Invited

Health Policy Statistics Section, International Indian Statistical Association

Organizer(s): Susan Paddock, RAND Corporation
 Chair(s): Bonnie Ghosh-Dastidar, RAND Corporation

- 10:35 a.m. **How Do Widely Used Statistical Benchmarking Approaches Compare to Optimal Estimation Under Hierarchical Bayesian Modeling?—** ◆Susan Paddock, RAND Corporation
- 11:05 a.m. **Confronting the Statistical Challenges of Measuring Health Care Provider Performance—** ◆Rebecca Hubbard, Group Health Research Institute; Victoria Ding, University of Washington; Carolyn Rutter, Group Health Research Institute
- 11:35 a.m. **Reliability and Misclassification in Physician Cost Profiling—** ◆John Adams, RAND Corporation
- 12:05 p.m. **Floor Discussion**

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

144 HQ-Sapphire L ■ ● Statistics and Regional Climate Models—Invited

Section on Statistics and the Environment, International Indian Statistical Association, Statistics Surveys Online Journal, ASA Advisory Committee on Climate Change Policy, Statistics Without Borders

Organizer(s): Peter Guttorp, University of Washington

Chair(s): Peter Guttorp, University of Washington

10:35 a.m. **Regional Climate: Design and Analysis of Computer Experiments?**—◆ Douglas William Nychka, National Center for Atmospheric Research

11:00 a.m. **Evaluating and Calibrating Dynamically Downscaled Precipitation Using the Doksum Shift Function**—◆ Ida Scheel, University of Oslo; Elisabeth Orskaug, Norwegian Computing Center; Ola Haug, Norwegian Computing Center; Arnaldo Frigessi, University of Oslo; Peter Guttorp, University of Washington

11:25 a.m. **Assessing the Agronomic Impact of Climate Variability and Change Using Regional Climate Models: A Matter of Scale**—◆ Brian Vincent Smoliak, University of Washington; Alison Cullen, University of Washington; Stephen Po-Chedley, University of Washington

11:50 a.m. Disc: Montserrat Fuentes, North Carolina State University

12:10 p.m. **Floor Discussion**

145 HQ-Sapphire U ■ ● Emerging Statistical Methods for Analyzing Complex Real-World Data—Invited

International Chinese Statistical Association, Biopharmaceutical Section, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Lexin Li, North Carolina State University

Chair(s): Lexin Li, North Carolina State University

10:35 a.m. **Reconstructing Visual Experiences from Brain Activity Evoked by Natural Movies**—◆ Bin Yu, University of California at Berkeley; Shinji Nishimoto, University of California at Berkeley; An T. Vu, University of California at Berkeley; Thomas Naselaris, University of California at Berkeley; Yuval Benjamini, University of California at Berkeley; Jack Gallant, University of California at Berkeley

11:00 a.m. **Classification of Images Based on Wavelet-Based Distance Measures**—◆ Chung Chang, National Sun Yat-sen University; Todd Ogden, Columbia University

11:25 a.m. **Estimation of Network Granger Causality Under Group Constraints**—◆ George Michailidis, University of Michigan

11:50 a.m. **Factor Models in Web Applications**—◆ Deepak Agarwal, Yahoo!

12:15 p.m. **Floor Discussion**

146 CC-Room 25C **Beyond the Case-Control Study: Efficient (and Under-Utilized) Studies Designs for Epidemiological Research—Invited**

ENAR, Biopharmaceutical Section

Organizer(s): Jonathan Schildcrout, Vanderbilt University

Chair(s): Jonathan Schildcrout, Vanderbilt University

10:35 a.m. **Design and Analysis of Cancer Biomarker Validation Study with Biased Sampling Schemes**—◆ Xiaofei Wang, Duke University Medical Center

11:00 a.m. **Designs for the Combination of Group- and Individual-Level Data to Evaluate National HIV Treatment Programs in Resource-Limited Settings**—◆ Sebastien Haneuse, Harvard School of Public Health; Elizabeth Smoot, Harvard School of Public Health; Bethany Hedt, Harvard Medical School

11:25 a.m. **Design and Analysis of Efficient (or at Least Useful) Nested Case-Control Studies**—◆ Bryan Langholz, University of Southern California School of Medicine

11:50 a.m. **Beyond the Case-Control Study**—◆ Norman E. Breslow, University of Washington

12:15 p.m. **Floor Discussion**

147 CC-Room 33B **Distributional Inference for Nonparametric Problems—Invited**

Section on Nonparametric Statistics, International Indian Statistical Association

Organizer(s): Jan Hannig, The University of North Carolina at Chapel Hill

Chair(s): Jan Hannig, The University of North Carolina at Chapel Hill

10:35 a.m. **Calibrated Bayes Factors for Model Comparison**—◆ Xinyi Xu, The Ohio State University; Pingbo Lu, The Ohio State University; Steven MacEachern, The Ohio State University; Ruoxi Xu, The Ohio State University

11:00 a.m. **Confidence Distribution, Data Depth, and Combination of Nonparametric Inference**—Dungang Liu, Rutgers University; ◆ Regina Y Liu, Rutgers University; Minge Xie, Rutgers University

11:25 a.m. **Fiducial Inference for Free-Knot Splines**—◆ Derek Lee Sonderegger, Northern Arizona University; Jan Hannig, The University of North Carolina at Chapel Hill

11:50 a.m. Disc: Xiao-Li Meng, Harvard University

12:10 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

148 CC-Room 29D
■ ● Challenges and Opportunities of Remote Statistical Consulting—Invited

Section on Statistical Consulting, International Indian Statistical Association, Committee on Applied Statisticians

Organizer(s): Charles David Kincaid, Experis

Chair(s): Charles David Kincaid, Experis

- 10:35 a.m. **Working and Consulting Remotely: The Future Is Here**—◆Christy Chuang-Stein, Pfizer Inc.
- 11:00 a.m. **Avoiding Misunderstandings and Rework in Remote Consulting**—◆Mary Batchler, Ernst & Young
- 11:25 a.m. **Moving to Hawaii Soon**—◆Jim Rutherford, Chevron
- 11:50 a.m. Disc: George Milliken, Milliken and Associates
- 12:10 p.m. **Floor Discussion**

149 HQ-Sapphire EF
■ ● Statistical Approaches in Personalized Genomic Medicine—Invited

WNAAR, International Chinese Statistical Association, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): William Evan Johnson, Boston University

Chair(s): Jeffrey Leek, The Johns Hopkins University

- 10:35 a.m. **Statistics and Personalized Medicine**—◆Wing Hung Wong, Stanford University
- 10:55 a.m. **Bayesian Modeling of Genetic Data for Risk Prediction**—◆Paola Sebastiani, Boston University
- 11:15 a.m. **Latent Dirichlet Allocation Models to Enable Personalized Genomic Medicine**—John A. Dawson, University of Wisconsin-Madison; ◆Christina Kendzioriski, University of Wisconsin-Madison
- 11:35 a.m. **Latent Variable Models for Assessing Individual Drug Sensitivity and for Predicting Hereditary Disease Risk**—◆William Evan Johnson, Boston University; Stephen Piccolo, University of Utah; Andrea Bild, University of Utah
- 11:55 a.m. **Predicting Patient Outcome by Within-Patient Gene Expression Directions: A Robust and Technology Independent Approach**—Chuen Seng Tan, Princeton University; Keyur H. Desai, Princeton University; ◆John D. Storey, Princeton University
- 12:15 p.m. **Floor Discussion**

150 HQ-Sapphire C
JASA Theory and Methods Invited Session: Estimating False Discovery Proportion Under Arbitrary Dependence—Invited

JASA, Theory and Methods, Biopharmaceutical Section, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Xuming He, University of Michigan; Jun Liu, Harvard University

Chair(s): Xuming He, University of Michigan

- 10:35 a.m. **Estimating False Discovery Proportion Under Arbitrary Dependence**—◆Jianqing Fan, Princeton University; Xu Han, University of Florida; Weijie Gu, Princeton University
- 11:00 a.m. Disc: Peter Hall, University of California at Davis
- 11:25 a.m. Disc: Armin Schwartzman, Harvard University
- 11:50 a.m. Disc: John D. Storey, Princeton University
- 12:15 p.m. **Floor Discussion**

151 HQ-Sapphire MN
Medallion Lecture I—Invited

IMS, International Indian Statistical Association

Organizer(s): Hans-Georg Mueller, University of California at Davis

Chair(s): Bradley Efron, Stanford University

- 10:35 a.m. **Selective Inference**—◆Yoav Benjamini, Tel Aviv University
- 12:05 p.m. **Floor Discussion**

Invited Panels 10:30 a.m.–12:20 p.m.

152 HQ-Sapphire D
■ ● How to Share Research Data: Views from Practitioners—Invited

Committee on Privacy and Confidentiality, Section on Survey Research Methods, International Indian Statistical Association, Statistics Surveys Online Journal, Committee on Professional Ethics, Committee on Scientific Freedom and Human Rights

Organizer(s): Jerome P Reiter, Duke University

Chair(s): Julia Lane, National Science Foundation

- Panelists:** ◆Timothy M Mulcahy, NORC
 ◆Ronan Lyons, Swansea University
 ◆Kathleen Mullan Harris, The University of North Carolina at Chapel Hill
 ◆Victoria Stodden, Columbia University
 ◆Cynthia Dwork, Microsoft Research

12:05 p.m. **Floor Discussion**

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

153 HQ-Sapphire H ■ ● A Showcase of Statistical Activities at Federal Statistical Agencies—Invited

Section on Government Statistics, Section on Survey Research Methods, Social Statistics Section

Organizer(s): Jeri Mulrow, National Science Foundation

Chair(s): Robert M Groves, U.S. Census Bureau

- Panelists: ◆ Emily J Berg, National Agricultural Statistics Service
- ◆ Yanna Antypas, U.S. Energy Information Administration
- ◆ Robin Pentola, National Science Foundation
- ◆ Matthew Graham, U.S. Census Bureau
- ◆ Mark Harris, National Agricultural Statistics Service
- ◆ Jeri Mulrow, National Science Foundation

12:05 p.m. Floor Discussion

Invited Poster Presentations 10:30 a.m.–12:20 p.m.

154 CC-Sails Pavilion Invited Oral Poster Presentations—Invited

IMS, Health Policy Statistics Section, Section on Statistics in Sports, Committee on Scientific Freedom and Human Rights, JSM 2012 Host Local Chapter - San Diego, CHANCE

Chair(s): Kristin Duncan, San Diego State University

JSM 2012 Host Local Chapter - San Diego

- 01: An Exploratory Data Analysis of a Graduate Student (N=1)**—◆ Alden Gross, Institute for Aging Research
- 02: Looking Back at South Africa: Analyzing and Reviewing the 2010 FIFA World Cup**—◆ Roland Deutsch, The University of North Carolina at Greensboro
- 03: How To Beat Kindergartners at Battleship**—◆ Stephen Robinson, Belmont University

IMS

- 04: Powerful Actigraphy Data Through Functional Representation**—◆ Jimin Ding, Washington University in St. Louis; Juergen Symanzik, Utah State University; Abbass Sharif, Utah State University; Jia Wang, Washington University in St. Louis; Stephen Duntley, Washington University in St. Louis; William Shannon, Washington University School of Medicine

Section on Statistics in Sports

- 05: Ranking Women's College Hockey Teams: Ties and Home Ice**—◆ Michael Rutter, Penn State Erie, The Behrend College

- 06: Statistical Sleuthing by Leveraging Human Nature: A Study of Olympic Figure Skating**—◆ Taylor Arnold, Yale University; John W Emerson, Yale University

- 07: Three Points for a Win in Soccer: Is It Fair?**—Marcus Thuresson, Statisticon AB; ◆ Johan Bring, Statisticon AB

Section on Statistical Graphics

- 08: How Good Is Your Eyeballing?**—◆ Heike Hofmann, Iowa State University; David Rockoff, Arizona State University

Health Policy Statistics Section

- 12: Does Banning Hand-Held Cell Phone Use While Driving Reduce Collisions?**—◆ Rebecca E Trempe, Highway Loss Data Institute; Sergey Y Kyrchenko, Highway Loss Data Institute; Matthew J Moore, Highway Loss Data Institute

JSM 2012 Host Local Chapter - San Diego

- 13: The Polyplot**—◆ Edith Seier, East Tennessee State University; Douglas G. Bonett, Iowa State University

Section on Statistics in Sports

- 14: Who Are the Best Drivers on the PGA Tour?**—◆ Erik Heiny, Utah Valley University

JSM 2012 Host Local Chapter - San Diego

- 15: A New Analysis of the Golf Handicap System**—◆ James Lackritz

Section on Statistical Education

- 16: Statistics in the News**—◆ Jean-Francois Plante, HEC Montreal, MQG; Nancy Reid, University of Toronto

Social Statistics Section

- 17: Speaking Stats to Justice: Expert Testimony in a Guatemalan Human Rights Trial Based on Statistical Sampling, Analysis**—◆ Daniel Guzman, Benetech

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

155 CC-Room 30C ■ ● Statistical Learning Methods in Dynamic Treatment Regimes—Topic-Contributed

Section on Statistical Learning and Data Mining, Biopharmaceutical Section, Section on Statistics in Epidemiology, International Indian Statistical Association

Organizer(s): Eric B Laber, North Carolina State University

Chair(s): Eric B Laber, North Carolina State University

- 10:35 a.m. **Inference for Q-Learning Parameters Using an Adaptive M-Out-of-N Bootstrap Scheme**—◆ Bibhas Chakraborty, Columbia University; Eric B Laber, North Carolina State University



● Themed Session ■ Applied Session ◆ Presenter

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- 10:55 a.m. **Outcome-Weighted Learning for Dynamic Treatment Regime Selection**—◆Yingqi Zhao, The University of North Carolina at Chapel Hill; Eric B Laber, North Carolina State University; Donglin Zeng, The University of North Carolina at Chapel Hill; Michael Kosorok, The University of North Carolina at Chapel Hill
- 11:15 a.m. **Machine Learning Techniques for Constructing Tailoring Variables for Sequential Decisionmaking**—◆Daniel Almirall, University of Michigan
- 11:35 a.m. **The Role of Active Learning in Sequential Decisionmaking**—◆Daniel J Lizotte, University of Waterloo
- 11:55 a.m. Disc: James Robins, Harvard University
- 12:15 p.m. **Floor Discussion**

156 CC-Room 28B **Statistical Literacy 2012—Topic-Contributed**

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences, Section for Statistical Programmers and Analysts, Social Statistics Section

Organizer(s): Milo Schield, Augsburg College

Chair(s): Milo Schield, Augsburg College

- 10:35 a.m. **Is Statistical Literacy at Risk with Common Core Standards?**—◆Kathryn Hall,
- 10:55 a.m. **How Economic and Social Statistics Became the Stepchildren of the Profession**—◆Othmar W. Winkler, Georgetown University
- 11:15 a.m. **Teaching Quantitative Reasoning Skills: A Numeracy Infusion Course for Higher Education (NICHE)**—◆Esther Wilder
- 11:35 a.m. **Clinical Numeracy: Getting the Gist of Health Risks**—◆Tanner Caverly, University of Colorado Denver; Daniel D. Matlock, University of Colorado Denver School of Medicine; Allan Prochazka, University of Colorado Denver School of Medicine; Ingrid Binswanger, University of Colorado Denver School of Medicine; Jean Kutner, University of Colorado Denver School of Medicine
- 11:55 a.m. **Lost: Assessing Student Survival Skills in the Statistical Wilderness Using Real Data**—◆Marc Isaacson, Augsburg College
- 12:15 p.m. **Floor Discussion**

157 CC-Room 32A **Beyond D/G/I Optimality: Evaluation of Experimental Designs in Real-World Terms—Topic-Contributed**

Section on Physical and Engineering Sciences, Quality and Productivity Section, Committee on Applied Statisticians, Section for Statistical Programmers and Analysts

Organizer(s): Philip Rocco Scinto, The Lubrizol Corporation

Chair(s): Angela Dean, The Ohio State University/Southampton University

- 10:35 a.m. **Beyond D/G/I Optimality: Evaluation of Experimental Designs in Real-World Terms**—◆Zhen Wang, The Lubrizol Corporation; Robert Wilkinson, The Lubrizol Corporation
- 10:55 a.m. **Experimental Design for Engineering Dimensional Analysis**—◆Christopher Nachtsheim, University of Minnesota-Minneapolis
- 11:15 a.m. **Using Approximate Effect Power to Construct Supersaturated Designs**—◆Byran J Smucker, Miami University; Maria Weese, Miami University (Ohio); David Edwards, Virginia Commonwealth University
- 11:35 a.m. **Practical Assessment of Supersaturated Designs**—◆David Woods, University of Southampton
- 11:55 a.m. Disc: Dennis Lin, Penn State University
- 12:15 p.m. **Floor Discussion**

158 CC-Room 23B **Correlated Logistic Regression with Time-Dependent Covariates—Topic-Contributed**

Biometrics Section, Biopharmaceutical Section

Organizer(s): Trent L Lalonde, University of Northern Colorado

Chair(s): Jorge Quiroz, Merck

- 10:35 a.m. **Comparative Modeling of Correlated Data with Time-Dependent Covariates**—◆Jeffrey R Wilson, Arizona State University
- 10:55 a.m. **Methods for Classifying Time-Dependent Covariates in Binary Data**—◆Jianqiong Yin, Arizona State University
- 11:15 a.m. **Correlated Logistic Regression with Generalized Method of Moments Estimators**—◆Trent L Lalonde, University of Northern Colorado; Jeffrey R Wilson, Arizona State University
- 11:35 a.m. **Simulated Results in Analysis of Binary Data with Time-Dependent Covariates and Applications to Hospital Data**—◆Anh Nguyen
- 11:55 a.m. Disc: Dylan Small, The Wharton School
- 12:15 p.m. **Floor Discussion**

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

159 CC-Room 27A ■ ● Recent Developments in Statistical Methods for Missing Data—Topic-Contributed

Health Policy Statistics Section, Biometrics Section, International Chinese Statistical Association, Section on Statistics in Epidemiology, WINAR, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Qi Long, Emory University

Chair(s): Yan Wang, University of California at Los Angeles Fielding School of Public Health

10:35 a.m. **Multiple Imputation for High-Dimensional Data—**
◆ Yize Zhao, Emory University; Qi Long, Emory University

10:55 a.m. **Binary Variable Multiple Imputation with Multiple Models to Address Missing Data Mechanism Uncertainty: Application to a Smoking Cessation Trial—**
◆ Juned Siddique, Northwestern University; Ofer Harel, University of Connecticut; Catherine Mary Crespi, University of California at Los Angeles; Donald Hedeker, University of Illinois at Chicago

11:15 a.m. **Comparing Regression Coefficients Between Nested Regression Models Subject to Incomplete Data—**
◆ Ofer Harel, University of Connecticut; Jun Yan, University of Connecticut; Chantal Larose, University of Connecticut

11:35 a.m. **Continuing Data Collection for Nonresponse: Benefits and Implications—**
◆ Nanhua Zhang, University of Southern Florida College of Public Health; Henian Chen, University of Southern Florida College of Public Health

11:55 a.m. **Statistical Image Analysis with Missing Data—**
◆ Jian Kang, Emory University

12:15 p.m. **Floor Discussion**

160 CC-Room 29C ■ ● Recent Advances in Multivariate and Multiple Time Series—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Scott Holan, University of Missouri

Chair(s): Katherine Bennett Ensor, Rice University

10:35 a.m. **Multivariate Time Series for Mixed Data Types—**
◆ Ginger Koev, Hewlett-Packard; Katherine Bennett Ensor, Rice University

10:55 a.m. **Forecasting State Unemployment Rates: A Robust Clustering Approach—**
◆ Ruey-Shiong Tsay, The University of Chicago

11:15 a.m. **Fast Methods for High-Dimensional Financial Time Series Modeling—**
◆ Nalini Ravishanker, University of Connecticut; Jeffrey S. Pai, University of Manitoba

11:35 a.m. **Flexible Spectral Models for Multivariate Time Series—**
◆ Scott Holan, University of Missouri; Tucker McElroy, U.S. Census Bureau

11:55 a.m. **A Nonparametric Approach for Multiple Change-Point Analysis of Multivariate Data—**
◆ David Scott Matteson, Cornell University; Nicholas A James, Cornell University

12:15 p.m. **Floor Discussion**

161 CC-Room 22 ■ ● Recent Development in Multiple Testing Issues in Clinical Trials—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Haihong Li, Vertex Pharmaceuticals

Chair(s): Haihong Li, Vertex Pharmaceuticals

10:35 a.m. **Graphical Procedures for Multiple Testing in Families of Primary and Secondary Hypotheses—**
◆ Ekkehard Glimm, Novartis

10:55 a.m. **Testing for Efficacy in Adaptive Clinical Trials with Enrichment—**
◆ Ying He, University of Florida; Samuel S. Wu, University of Florida; Yi-Hsuan Tu, National Cheng Kung University

11:15 a.m. **Testing for Efficacy in Multiple Genetic Subgroups—**
◆ Szu-Yu Tang, The Ohio State University; Jason Hsu, The Ohio State University

11:35 a.m. **An Adaptive Alpha Spending Approach in Group Sequential Trials—**
◆ David Li, Pfizer Inc.

11:55 a.m. **Floor Discussion**

162 CC-Room 29B ■ ● Uncertainty Measures of Small-Area Estimators—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Rebecca C Steorts, Carnegie Mellon University

Chair(s): Malay Ghosh, University of Florida

10:35 a.m. **Bayesian Methods in Poverty Mapping—**
Partha Lahiri, University of Maryland; ◆ Jiraphan Suntornchost, University of Maryland

10:55 a.m. **Generalized Maximum Likelihood Method in Linear Mixed Models with an Application in Small-Area Estimation—**
◆ Huilin Li, New York University; Partha Lahiri, University of Maryland

11:15 a.m. **On Estimation of Mean Squared Errors of Benchmarked Empirical Bayes Estimators—**
◆ Rebecca C Steorts, Carnegie Mellon University; Malay Ghosh, University of Florida

11:35 a.m. **Confidence Interval Estimation of Small-Area Parameters Shrinking Both Means and Variances—**
◆ Tapabrata Maiti, Michigan State University



● Themed Session ■ Applied Session ◆ Presenter

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11:55 a.m. **Small-Area Estimation with Uncertain Random Effects**—◆ Gauri Datta, University of Georgia; Abhyuday Mandal, University of Georgia; Anthony Wanjoya, University of Georgia

12:15 p.m. **Floor Discussion**

163 CC-Room 26A

■ ● **Monitoring the Early Effects of the Affordable Care Act Using National Center for Health Statistics Data—Topic-Contributed**

Health Policy Statistics Section, Section on Survey Research Methods, International Indian Statistical Association, Section on Government Statistics

Organizer(s): Jane F. Gentleman, National Center for Health Statistics
Chair(s): Jennifer Madans, National Center for Health Statistics

10:35 a.m. **Monitoring the Effects of the Affordable Care Act (ACA) Using NCHS Ambulatory and Hospital Care Statistics**—◆ Clarice Brown, CDC

10:55 a.m. **Monitoring Physician Capacity Constraints**—◆ Sandra Decker, National Center for Health Statistics

11:15 a.m. **Using the National Health Interview Survey to Monitor the Early Effects of the Affordable Care Act**—◆ Jane F. Gentleman, National Center for Health Statistics

11:35 a.m. **Monitoring Health Care Access and Utilization Following Implementation of the Affordable Care Act Using the National Health Interview Survey**—◆ Renee M Gindi, National Center for Health Statistics; Robin A Cohen, National Center for Health Statistics; Whitney K Kirzinger, National Center for Health Statistics

11:55 a.m. Disc: Steven Cohen, Agency for Healthcare Research and Quality

12:15 p.m. **Floor Discussion**

164 CC-Room 25B

■ **Methods Advancement in Complex Association Analysis—Topic-Contributed**

Section on Statistics in Epidemiology, Committee on Applied Statisticians, Statistics Surveys Online Journal

Organizer(s): Jung-Ying Tzeng, North Carolina State University
Chair(s): Fang-Chi Hsu, Wake Forest School of Medicine

10:35 a.m. **Resampling-Based Variable Selection Methods for Next-Generation Sequencing Studies**—◆ Michael C Wu, The University of North Carolina at Chapel Hill

10:55 a.m. **Estimation of Effect Size Distribution for Large-Scale Association Studies with Sparse Signals**—◆ Dmitri Zaykin; Chia-Ling Kuo, National Institute of Environmental Health Sciences

11:15 a.m. **Genetic Association Testing with Quantitative Traits in Samples with Pedigree and Population Structure**—◆ Timothy Thornton, University of Washington

11:35 a.m. **Methods Advancement in Complex Association Analysis**—◆ Arnab Maity, North Carolina State University; Patrick F. Sullivan, The University of North Carolina at Chapel Hill; Jung-Ying Tzeng, North Carolina State University

11:55 a.m. **A Fast and Noise-Resilient Approach to Detect Rare-Variant Associations with Deep Sequencing Data for Complex Disorders**—◆ Shuang Wang, Columbia University; Yee Him Cheung, Columbia University; Gao Wang, Baylor College of Medicine; Suzanne Leal, Baylor College of Medicine

12:15 p.m. **Floor Discussion**

165 HQ-Sapphire A

■ ● **Decision Analysis and Bayesian Statistics for Medical Device Studies—Topic-Contributed**

Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Martin Ho, FDA/CDRH

Chair(s): Jason Schroeder, FDA/CDRH

10:35 a.m. **Elicitation of Patient Preference for Risk Tolerance of Weight Reduction Devices in Obese Population**—◆ Martin Ho, FDA/CDRH

10:55 a.m. **Good Practice of Bayesian Submission for Medical Devices**—◆ Xuefeng Li, FDA; Pablo Bonangelino, FDA

11:15 a.m. **A Case Study of a Bayesian Adaptive Cardiology Device Trial Leading to Approval**—◆ Jason Connor, Berry Consultants

11:35 a.m. **Decision Analysis and Bayesian Statistics for Medical Device Studies**—◆ Laura Thompson, FDA/CDRH

11:55 a.m. **Using Quantitative Decision Analysis in the Regulation of Medical Devices**—◆ Telba Irony, FDA

12:15 p.m. **Floor Discussion**

166 CC-Room 28C

■ **Spatial Statistics for Very Large Environmental Data Sets—Topic-Contributed**

Section on Statistics and the Environment, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Matthias Katzfuss, Universität Heidelberg

Chair(s): Ying Sun, SAMSI

10:35 a.m. **Data-Dependent Basis Vectors for Dimension-Reduced Modeling of Two Space-Time Processes**—◆ Jenny Brynjarsdottir, SAMSI; L. Mark Berliner, The Ohio State University

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 10:55 a.m. **Bayesian Nonstationary Spatial Modeling for Very Large Data Sets**—◆Matthias Katzfuss, Universität Heidelberg
- 11:15 a.m. **Model Selection for Very Large Spatial Data Sets**—◆Jonathan Bradley, The Ohio State University; Noel Cressie, The Ohio State University; Tao Shi, The Ohio State University
- 11:35 a.m. **A Hierarchical GLM for Cloud Data Using the Spatial Random Effects Model**—◆Aritra Sengupta, The Ohio State University; Noel Cressie, The Ohio State University
- 11:55 a.m. **Bayesian Nonparametric Methods for Material Identification from Large Remotely Sensed Hyperspectral Space-Time Data Sets**—◆Candace Berrett, Brigham Young University
- 12:15 p.m. **Floor Discussion**

- 11:15 a.m. **Longitudinal Data Analysis Using Conditional Empirical Likelihood**—◆Peisong Han, University of Michigan; Peter Song, University of Michigan; Lu Wang, University of Michigan
- 11:35 a.m. **The Nonparanormal Skeptic**—◆Han Liu, The Johns Hopkins University
- 11:55 a.m. Disc: Joanna Shih, National Cancer Institute
- 12:15 p.m. **Floor Discussion**

167 CC-Room 21 ■ Drug Safety: Regulatory and Statistical Considerations—Topic-Contributed

Biopharmaceutical Section
Organizer(s): Xiao Ding, FDA
Chair(s): Yi Tsong, FDA/CDER

- 10:35 a.m. **Regulatory Issues of Propensity Score Methodology Application to Drug and Device Safety Studies**—◆Lilly Yue, FDA; Mark S Levenson, FDA
- 10:55 a.m. **Time-to-Event Meta-Analysis for Rare Safety Outcomes**—◆Xiao Ding, FDA; Mat Soukup, FDA/CDER; Bradley McEvoy, FDA/CDER
- 11:15 a.m. **Responder Analysis in Human Abuse Potential Studies**—◆Ling Chen, FDA
- 11:35 a.m. **Concentration-QTc Modeling Approach**—◆Joanne Zhang, FDA/CDER
- 11:55 a.m. Disc: Jie Chen, Merck Serono (Beijing) R&D Hub
- 12:15 p.m. **Floor Discussion**

Topic-Contributed Panels 10:30 a.m.–12:20 p.m.

169 CC-Room 31B

● The Will of the People and the Luck of the Draw: Using Statistics to Limit the Risk of Wrong Electoral Outcomes—Topic-Contributed

Section on Risk Analysis, Section on Survey Research Methods, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Philip B Stark, University of California at Berkeley
Chair(s): Mary Batcher, Ernst & Young

- Panelists:** ◆Jennie Bretschneider, California Secretary of State
 ◆Neal Kelley, Orange County Registrar of Voters
 ◆Pamela Smith, Verified Voting Foundation

12:15 p.m. **Floor Discussion**

170 CC-Room 28E

● Challenges of Data Analysis in Transportation—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Jenny R Guarino, U.S. Department of Transportation/RITA

Chair(s): Jenny R Guarino, U.S. Department of Transportation/RITA

- Panelists:** ◆David Banks, Duke University
 ◆Fan Zhang, U.S. Department of Transportation
 ◆Amrut Champaneri, U.S. Department of Transportation
 ◆Cliff Spiegelman, Texas A&M University

12:15 p.m. **Floor Discussion**

168 CC-Room 25A Biometrics Section Byar Award Session 2—Topic-Contributed

Biometrics Section
Organizer(s): Jack Lee, MD Anderson Cancer Center
Chair(s): Jack Lee, MD Anderson Cancer Center

- 10:35 a.m. **Reducing the Sensitivity to Nuisance Parameters in Nonstandard Likelihood**—◆Yang Ning, The Johns Hopkins University
- 10:55 a.m. **Omnibus Risk Assessment via Accelerated Failure Time Kernel Machine Modeling**—◆Jennifer Sinnott, Harvard University; Tianxi Cai, Harvard University



● Themed Session ■ Applied Session ◆ Presenter

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171 CC-Room 31A
■ Academic Promotion Challenges for Statisticians Involved in Interdisciplinary Research—Topic-Contributed

SSC, International Indian Statistical Association

Organizer(s): Wendy Lou, University of Toronto

Chair(s): Wendy Lou, University of Toronto

- Panelists:**
- ◆ Joel A Dubin, University of Waterloo
 - ◆ Terry Hyslop, Thomas Jefferson University
 - ◆ Karen A Kopciuk, University of Calgary
 - ◆ Tulay Koru-Sengul, University of Miami
 - ◆ Rhonda J Rosychuk, University of Alberta
 - ◆ Lehana Thabane, McMaster University

12:15 p.m. **Floor Discussion**

Topic-Contributed Poster Presentations
10:30 a.m.–12:20 p.m.

172 CC-Sails Pavilion
■ ● Topic-Contributed Poster Presentations: Playing Games with a Purpose: A New Approach to Teaching and Learning Statistics—Topic-Contributed

Section on Statistical Education

Organizer(s): Shonda R Kuiper, Grinnell College

Chair(s): Rodney Sturdivant, U.S. Military Academy

Section on Statistical Education

- 09: Playing Games with a Purpose—**◆ Shonda R Kuiper, Grinnell College
- 10: Playing Games with a Purpose: Classroom Labs—**
 ◆ Rodney Sturdivant, U.S. Military Academy; Alex Heidenberg, U.S. Military Academy; Rob Burks, Naval Postgraduate School
- 11: Playing Games with a Purpose: Classroom Testing—**
 ◆ Kevin Cummiskey, U.S. Military Academy; Billy Kaczynski, U.S. Military Academy; John Jackson, U.S. Military Academy

Contributed Sessions 10:30 a.m.–12:20 p.m.

173 CC-Room 33A
Time Series and Change Point Problems—Contributed

Section on Nonparametric Statistics

Chair(s): Ruosha Li, University of Pittsburgh

- 10:35 a.m. **Multivariate Nonparametric Control Charts and Change-Point Detection—**◆ Shojaeddin Chenouri, University of Waterloo
- 10:50 a.m. **Graph-Based Change-Point Detection—**◆ Hao Chen, Stanford University; David Oliver Siegmund, Stanford University; Nancy R. Zhang, The Wharton School

11:05 a.m. **Changepoint Estimation for Continuous Piecewise Linear Models—**◆ Jonathan Duggins, Georgia Southern University; James Blum, The University of North Carolina at Wilmington; Timur Mirzoev, Georgia Southern University

11:20 a.m. **A Modified Kolmogorov-Smirnov Test for Autocorrelated Data: Effective Sample Size Adjustment—**◆ Xiaojin Xu, Harvard University; Joseph Blitzstein, Harvard University

11:35 a.m. **A New Stationarity Test of Time Series in Time Domain—**◆ Lei Jin, McNeese State University; Suojin Wang, Texas A&M University; Haiyan Wang, Kansas State University

11:50 a.m. **Jump Detection in Time Series Nonparametric Regression Models: A Polynomial Spline Approach—**◆ Qiongxia Song, The University of Texas at Dallas; Yang Yujiao, East China Normal University

12:05 p.m. **Asymptotics for P-Value–Based Threshold Estimation in Dose-Response and Regression Settings—**◆ Atul Mallik, University of Michigan; Moulinath Banerjee, University of Michigan; Bodhisattva Sen, Columbia University

174 CC-Room 30B
Big Data: Strategies for Large P, Large N, or Massive Data—Contributed

Section on Statistical Computing, Section on Statistical Education, Committee on Applied Statisticians, Section on Statistical Learning and Data Mining

Chair(s): Peng Zeng, Auburn University

10:35 a.m. **Parallel External Memory Algorithms Applied to Generalized Linear Models—**◆ Lee Edlefsen, Revolution Analytics

10:50 a.m. **Approximate Centroid Inference for Complex Graphical Models—**◆ Hunter Glanz, Boston University; Luis Carvalho, Boston University

Monday

Shop

ASA



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at the San Diego Convention Center
in the Exhibit Hall!



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 11:05 a.m. **Limited-Information Statistics When the Number of Variables Is Large**—◆Mark Reiser, Arizona State University
- 11:20 a.m. **A Simple Distribution-Free Algorithm for Generating Simulated High-Dimensional Correlated Data with an Autoregressive Structure**—◆Andres Azuero, The University of Alabama at Birmingham; Hemant K Tiwari, The University of Alabama at Birmingham; David T Redden, The University of Alabama at Birmingham
- 11:35 a.m. **Variable Selection in Sparse Ultra High-Dimensional Additive Models with Continuous or Discrete Response Variable**—◆Girly Ramirez, Kansas State University; Haiyan Wang, Kansas State University
- 11:50 a.m. **Model-Based Clustering Analysis of Large Climate Simulation Data Sets**—◆Wei-Chen Chen, Oak Ridge National Laboratory; George Ostrouchov, Oak Ridge National Laboratory; David Pugmire, Oak Ridge National Laboratory; Mr Prabhat, Lawrence Berkeley National Laboratory; Michael Wehner, Lawrence Berkeley National Laboratory
- 12:05 p.m. **Computation of Order Statistics for Very Large and Distributed Data**—◆Damir Spisic, IBM SPSS Predictive Analytics; Graham J. Wills, IBM SPSS Predictive Analytics; Fan Li, IBM SPSS Predictive Analytics

- 12:05 p.m. **Visualization of Big Data Sets Using Package Bigvis**—◆Yue Hu, Rice University; Hadley Wickham, Rice University

175 CC-Room 30A Advances in Visual Inference—Contributed

Section on Statistical Graphics, Section on Statistical Education, Section on Statistical Computing

Chair(s): Hadley Wickham, Rice University

- 10:35 a.m. **Power of Visual Statistical Inference in a Non-Normal Scenario**—◆Mahbubul Majumder, Iowa State University; Dianne H Cook, Iowa State University; Heike Hofmann, Iowa State University
- 10:50 a.m. **Where's Waldo: Looking Closely at a Lineup**—◆Niladri Roy Chowdhury, Iowa State University; Dianne H Cook, Iowa State University; Heike Hofmann, Iowa State University; Mahbubul Majumder, Iowa State University; Yifan Zhao, Iowa State University
- 11:05 a.m. **Mind Reading**—◆Yifan Zhao, Iowa State University
- 11:20 a.m. **Graphical Inference and the Hanging Rootogram**—◆James Rigby, Rice University; Jonathan Stewart, Rice University; Hadley Wickham, Rice University
- 11:35 a.m. **Airport Efficiency: Effect of Wind Direction**—◆Lendie Follett, Iowa State University; Heike Hofmann, Iowa State University
- 11:50 a.m. **What Gets Our Attention?**—◆Heike Hofmann, Iowa State University; Hadley Wickham, Rice University; Dianne H Cook, Iowa State University

176 CC-Room 30D Searching for Structure in High-Dimensional Data—Contributed

Section on Statistical Learning and Data Mining, Section on Statistical Computing

Chair(s): Gang Cheng, University of Minnesota-Twin Cities

- 10:35 a.m. **Consistent Bicustering**—◆Cheryl J. Flynn, New York University; Patrick O Perry, NYU Stern
- 10:50 a.m. **Bicustering Based on Sparse Robust Singular Value Decomposition**—◆Lingsong Zhang, Purdue University
- 11:05 a.m. **Bicustering of Linear Patterns in Gene Expression Data**—◆Christine Ho, University of California at Berkeley; Qinghui Gao, Beihang University of Aeronautics and Astronautics; Haiyan Huang, University of California at Berkeley; Jessica Jingyi Li, University of California at Berkeley; Yingmin Jia, Beihang University of Aeronautics and Astronautics
- 11:20 a.m. **Tau Path Test for Subpopulation Dependency: Basics, Extensions, and Examples**—◆Stephen Niklaus Bamattre, The Ohio State University; Joseph Verducci, The Ohio State University
- 11:35 a.m. **Probability of Concordance Monster (PoC-Mon) Devours Discordance on and off the Tau Path**—◆Joseph Verducci, The Ohio State University; Stephen Niklaus Bamattre, The Ohio State University
- 11:50 a.m. **Detecting Novel Bivariate Associations in Large Data Sets**—◆Yakir Reshef; David Reshef, Harvard/MIT Division of Health Science and Technology; Hilary Kiyo Finucane, Weizmann Institute of Science; Sharon Grossman, Harvard/MIT Division of Health Science and Technology; Gilean McVean, Oxford University; Peter Turnbaugh, Harvard University; Eric Lander, Broad Institute of MIT and Harvard; Michael Mitzenmacher, Harvard University; Pardis Sabeti, Harvard University
- 12:05 p.m. **Assessing the Feasibility of Implementing Data Mining for Post-Licensure Vaccine Safety Surveillance Within the Vaccine Safety Datalink**—◆Susan Shortreed, Group Health Research Institute; Jennifer Nelson, Group Health Research Institute; Onchee Yu, Group Health Research Institute; Do Peterson, Group Health Research Institute



● Themed Session ■ Applied Session ◆ Presenter

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177 CC-Room 23C **Statistical Methods in Imaging— Contributed**

Biometrics Section, Committee on Applied Statisticians, International Chinese Statistical Association, Section on Statistics in Imaging
 Chair(s): Linda S. Hynan, The University of Texas Southwestern Medical Center at Dallas

- 10:35 a.m. **Issues with the Estimation of Nonlinear Hemodynamic Response Functions for BOLD fMRI Data**—◆ Xiaowen Hu, Southern Methodist University; Richard Gunst, Southern Methodist University
- 10:50 a.m. **Key Properties of D-Optimal Designs for Event-Related fMRI Experiments with Application to Nonlinear Models**—◆ Darcie Delzell, Wheaton College; Richard Gunst, Southern Methodist University
- 11:05 a.m. **Modeling the Progression of Alzheimer's Disease (AD) Using the Alzheimer's Disease Neuroimaging Initiative (ADNI) Cohort**—◆ Bruno Michel Jedynak, The Johns Hopkins University; Andrew Lang, The Johns Hopkins University; Bo Liu, The Johns Hopkins University; Brian Scott Caffo, The Johns Hopkins University; Jerry Prince, The Johns Hopkins University; Brad Wyman, Pfizer Inc.; Yanwei Zhang, Pfizer Inc.
- 11:20 a.m. **A New Nonparametric, Information-Splitting Image Analysis Technique**—◆ Mark Inlow, Rose-Hulman Institute of Technology; Jing Wan, Indiana University School of Medicine; Sungeun Kim, Indiana University School of Medicine; Kwansik Nho, Indiana University School of Medicine; Shannon Risacher, Indiana University School of Medicine; Andrew Saykin, Indiana University School of Medicine; Li Shen, Indiana University School of Medicine
- 11:35 a.m. **Statistical Image Reconstruction of Two Simultaneously Excited fMRI Slices**—◆ Daniel Rowe, Marquette University
- 11:50 a.m. **Serial Autocorrelations in fMRI: Sources of Bias Within GLM Models**—◆ Ariana Anderson,
- 12:05 p.m. **Estimation Issues in Modeling Stimulus Response from Optical Imaging Data**—◆ Haley Hedlin, University of Massachusetts-Amherst; Michael Lavine, University of Massachusetts-Amherst; Michael Haglund, Duke University Medical Center; Daryl Hochman, Duke University Medical Center

178 CC-Room 24A **Generalized Linear and Mixed Models— Contributed**

Biometrics Section, Biopharmaceutical Section, Section on Statistics and the Environment
 Chair(s): John Ramey, Baylor University

- 10:35 a.m. **Crossed Random Effects Modeling Approaches for Estimating Diagnostic Accuracy from Ordinal Tests When the True Ordinal Disease Status Is Unknown**—◆ Yunlong Xie, National Institutes of Health
- 10:50 a.m. **A Likelihood Model for Dispersion in Longitudinal Count Data**—◆ Stephanie Bruce, U.S. Air Force Academy; Gary K. Grunwald, University of Colorado Denver; Luohua Jiang, University of Colorado Denver; Matthew Strand, National Jewish Health; Nathan Rabinovitch, National Jewish Health
- 11:05 a.m. **A Wald Test for Homogeneity in Zero-Mixture Models for Correlated Count Data**—◆ Wei-Wen Hsu, Michigan State University; David Todem, Michigan State University; Woosung Sohn, Boston University
- 11:20 a.m. **A Robust Linear Mixed Effects Model with Application to Method Comparison Studies**—◆ Pankaj Choudhary, The University of Texas at Dallas; Dishari Sengupta, The University of Texas at Dallas
- 11:35 a.m. **Unweighted General Linear Mixed Model**—◆ Byung Park, Oregon Health and Science University; Motomi Mori, Oregon Health and Science University
- 11:50 a.m. **On Optimized Shrinkage Variable Selection in Generalized Linear Models**—◆ Erin Melcon, University of California at Davis
- 12:05 p.m. **Modeling for Assessment of Environmental Health Data**—◆ Shailendra Banerjee, CDC

179 CC-Room 23A **Advances in Longitudinal Data Analysis— Contributed**

Biopharmaceutical Section
 Chair(s): Junshan Qiu, FDA/CVM

- 10:35 a.m. **A General Solution to Functional Data Modeling and Inference Using R**—◆ Junshui Ma, Merck
- 10:50 a.m. **Evaluation of Overall Treatment Effect in MMRM**—◆ Tao Song, Biogen Idec
- 11:05 a.m. **Consideration in Choosing the Response Vector in Analyzing Longitudinal Clinical Trial Data**—◆ Ziliang Li, Merck; Qing Li, Merck
- 11:20 a.m. **Application of Doubly Repeated Measures Analyses in Drug Trials on Food Intake**—◆ Hongmei Han, Pennington Biomedical Research Center; William D. Johnson, Pennington Biomedical Research Center

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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- 11:35 a.m. **A Note on Multivariate Antedependence Models—**
◆Chulmin Kim, Rochester Institute of Technology;
Dale Zimmerman, University of Iowa
- 11:50 a.m. **Analysis of Recurrent Event Data with Considering
Events Duration—**◆Kuolung Hu, Amgen, Inc.; Qing
Xu, FDA
- 12:05 p.m. **Using Planned Missing Values in Longitudinal
Trials to Relieve Patient Burden and Reduce
Costs—**◆Robert Small, Sanofi Pasteur; Christele
Augar, Sanofi Pasteur; Ayca Ozol-Godfrey, Sanofi
Pasteur; Dominika Wisniewska, Sanofi Pasteur

180 CC-Room 31C Asymptotic Inference and Extreme Value Problems for Correlated Variables— Contributed

IMS

Chair(s): Paul Baines, University of California at Davis

- 10:35 a.m. **Comparison of Imputation Methods for Missing
Values in AR(1) Longitudinal Studies—**◆Michikazu
Nakai, National Cerebral and Cardiovascular Center,
Japan; Yoshihiro Miyamoto, National Cerebral and
Cardiovascular Center, Japan; Kunihiro Nishimura,
National Cerebral and Cardiovascular Center, Japan
- 10:50 a.m. **On Tail Index Estimation Under Long Memory—**
◆Jan Beran, University of Konstanz; Bikramjit Das,
ETH Zurich; Dieter Schell, University of Konstanz
- 11:05 a.m. **A Law of the Single Logarithm for Weighted Sums
of Arrays Applied to Bootstrap Model Selection
in Regression—**◆Christian Léger, Université de
Montréal; Pierre Lafaye de Micheaux, Université de
Montréal
- 11:20 a.m. **Extreme Value Analysis with Nonstationary
Observations—**◆Chen Zhou, De Nederlandsche
Bank; Laurens de Haan, Erasmus University
Rotterdam
- 11:35 a.m. **Asymptotic Inference for Preferential Attachment
Models—**◆Daniel Saxton; Anand N. Vidyashankar,
George Mason University; Huzefa Rangwala, George
Mason University
- 11:50 a.m. **Floor Discussion**

181 CC-Room 32B Bayesian Graphical Models and Networks— Contributed

Section on Bayesian Statistical Science

Chair(s): Kassie Fronczyk, Rice University

- 10:35 a.m. **Bayesian Hierarchical Graph Models for
Phylogeography—**◆Gabriela Cybis, University of
California at Los Angeles; Marc A Suchard, University
of California at Los Angeles; Janet Sinsheimer,
University of California at Los Angeles

- 10:50 a.m. **Bayesian Nonparametric Variable Selection as an
Exploratory Tool for Discovering Differentially
Expressed Genes—**◆Babak Shahbaba, University
of California at Irvine; Wesley Johnson, University of
California at Irvine
- 11:05 a.m. **Joint Modeling with Bayesian Clustering and
Bayesian Networks for Time Course Microarray
Data—**◆Yafeng Zhang, University of California at
Los Angeles; Donatello Telesca, University of California
at Los Angeles Fielding School of Public Health; Steve
Horvath, University of California at Los Angeles
- 11:20 a.m. **Modeling Brain Connectivity Using Multi-Modal
MRI Data—**◆Hakmook Kang, Vanderbilt University;
Hernando Ombao, University of California at Irvine
- 11:35 a.m. **Differential Patterns of Interaction and Gaussian
Graphical Models—**◆Masanao Yajima, University
of California at Los Angeles; Donatello Telesca,
University of California at Los Angeles Fielding School
of Public Health; Yuan Ji, Northshore University
Healthcare System; Peter Mueller, The University of
Texas at Austin
- 11:50 a.m. **A Bayesian Hierarchical Model for Detecting
Group-Level fMRI Brain Activity—**◆Xiao Yang,
University of Iowa
- 12:05 p.m. **Inferring Biological Networks Using the Bayesian
Graphical Lasso with Informative Priors—**
◆Christine Peterson, Rice University; Marina
Vannucci, Rice University

182 CC-Room 28D ■ ● Area-Based Statistics—Contributed

Section on Government Statistics, Section on Survey Research Methods, Social Statistics Section

Chair(s): Steve Paben, Bureau of Labor Statistics

- 10:35 a.m. **Representative Measures of Veteran Health
Factors—**◆Brady Stephens, U.S. Department of
Veterans Affairs; Robert Bossarte, U.S. Department of
Veterans Affairs; Rebecca Piegari, U.S. Department of
Veterans Affairs
- 10:50 a.m. **Housing Affordability for Low-Income Households
in New Jersey, Maryland, and West Virginia:
A Comparative Analysis—**◆George Obsekov,
American College of Radiology; Claudia Hauck,
Rutgers University
- 11:05 a.m. **Statistical Methods Used in Generating U.S. State-
Level Life Tables—**◆Rong Wei, National Center for
Health Statistics
- 11:20 a.m. **Use of Labor Market Indicators in Small-Area
Poverty Models—**◆Wesley Basel, U.S. Census
Bureau; Nora Albert, U.S. Census Bureau
- 11:35 a.m. **Tests for Homogeneity of Multinomial Proportions
for Sparse Data—**◆Martin Klein; Peter Linton, U.S.
Census Bureau; Bimal Sinha, University of Maryland
Baltimore County



● Themed Session ■ Applied Session ◆ Presenter

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- 11:50 a.m. **Analysis of Regional Variation in Poverty Profiles by Age**—◆Glen Reisch, U.S. Census Bureau; Bethany Desalvo, U.S. Census Bureau
- 12:05 p.m. **Geographic Area Effect in the CPI Variance Model**—◆Owen Shoemaker, Bureau of Labor Statistics

- 10:35 a.m. **Network Meta-Analysis with Individual Participant Data**—◆Getachew Dagne, University of South Florida; Hendricks Crager, University of Miami; George Howe, The George Washington University

- 10:50 a.m. **A Group Control Chart for County Statistics in Michigan**—◆Paul Stephenson, Grand Valley State University

- 11:05 a.m. **Simulating the Performance of a Group Control Chart When Monitoring Michigan Geospatial Data**—◆Marco Benedetti

- 11:20 a.m. **A Latent Class Model for Analyzing Impact of Damage Control Resuscitation on Survival and Blood Product Utilization**—◆Mohammad Rahbar, The University of Texas Health Science Center at Houston; Hanwen Huang, The University of Texas Health Science Center; Jing Ning, MD Anderson Cancer Center; Deborah del Junco, The University of Texas Health Science Center at Houston; Erin Fox, The University of Texas Health Science Center at Houston; John Holcomb, The University of Texas Health Science Center at Houston

183 CC-Room 24C Genetic Epidemiology—Contributed

Section on Statistics in Epidemiology

Chair(s): Jaya Satagopan, Memorial Sloan-Kettering Cancer Center

- 10:35 a.m. **Integrating Multiple Glycans and Genetic Data Using Joint Modeling Techniques: An Application in Leiden Longevity Study**—◆Jeanine Houwing, Leiden University; Roula Tsonaka, Leiden University Medical Center; Hae-Won Uh, Leiden University Medical Center; Manfred Wuhrer, Leiden University Medical Center; Eline Slagboom, Leiden University Medical Center
- 10:50 a.m. **Improved Statistical Methods for Allele Frequency Estimation in Sequencing Data**—◆Zuoheng Wang, Yale University; Xiangtao Liu, Yale University; Bao-Zhu Yang, Yale University
- 11:05 a.m. **Two-Stage Extreme Phenotype Sequencing Design for Discovering and Testing Common and Rare Genetic Variants: Efficiency and Power**—◆Guolian Kang, St. Jude Children's Research Hospital; Jinbo Chen, University of Pennsylvania
- 11:20 a.m. **Combining P-Values from Linear and Quadratic Tests for Rare Variants Provides Robust Statistics Across Genetic Models**—◆Lei Sun, University of Toronto; Andriy Derkach, University of Toronto; Jerald F. Lawless, University of Waterloo
- 11:35 a.m. **Statistical Implications of Unobserved Parental Genotypes in Estimating Linkage Disequilibrium**—◆Bevan Emma Huang, CSIRO Mathematics, Informatics, and Statistics/Food Futures National Research Flagship; Colin Cavanagh, CSIRO Plant Industry/Food Futures National Research Flagship
- 11:50 a.m. **Predicting HLA Allele from Genotype Data**—◆Yongtao Guan
- 12:05 p.m. **Using the Population Attributable Fraction to Measure Heritability in Dichotomous Twin Data**—◆Leroy R Thacker, Virginia Commonwealth University; Viswanathan Ramakrishnan, Medical University of South Carolina

- 11:35 a.m. **Graphing and Modeling Kappa for Dependent Nominal Agreement Data with Application to Dental Caries**—Nancy Fan Cheng, University of California at San Francisco; William Santo, University of California at San Francisco; ◆Stuart Gansky, University of California at San Francisco School of Dentistry

- 11:50 a.m. **Cluster Effects on Multilevel Latent Class Analysis**—◆Leila D Amorim, UFBA; Rosemeire L Fiaccone, UFBA

- 12:05 p.m. **Estimating the Probability of IQ Impairment from Blood Phenylalanine for Phenylketonuria Patients: A Meta-Analysis**—◆Christopher Fonnesebeck, Vanderbilt University; Melissa L McPheeters, Institute for Medicine and Public Health; Shanthi Krishnaswami, Institute for Medicine and Public Health; Mary Louise Lindgren, Vanderbilt University Medical Center; Tyler Reimschisel, Vanderbilt University Medical Center

184 CC-Room 24B ■ Meta-Analysis, Latent Class Analysis, Interrater Agreement, and Control Charts in Epidemiology—Contributed

Section on Statistics in Epidemiology

Chair(s): Lijun Zhang, Emory University

185 CC-Room 29A ■ Incentives, Response Rates, and Response Options in Surveys—Contributed

Section on Survey Research Methods

Chair(s): Barbara Lepidus Carlson, Mathematica Policy Research

- 10:35 a.m. **The Effect of Prepaid Cash Incentives on Satisficing Behaviors in a Telephone Survey**—◆Rebecca Medway, University of Maryland

- 10:50 a.m. **Household Early Bird Incentives: Leveraging Family Influence to Improve Household Response Rates**—◆Felicia LeClere, NORC; Shelly Plummer, NORC; Jennifer Vanicek, NORC; Amaya Ashley, NORC; Kari Carris, NORC

- 11:05 a.m. **Improving Response Rates in Military Surveys**—◆Eric Falk, Defense Manpower Data Center; Phil Masui, Defense Manpower Data Center

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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- 11:20 a.m. **Modeling Response Rates for Telephone Surveys—**
◆N. Ganesh, NORC; Santanu Pramanik, NORC
- 11:35 a.m. **Impact of Different and Reduced Incentive
Amounts on Longitudinal Survey Response Rates
and Overall Cost—**◆Yan Wang, American Institutes
for Research
- 11:50 a.m. **Bayesian Analysis of Randomized Response
Models—**◆Joon Jin Song, University of Arkansas;
Jong-Min Kim, University of Minnesota-Morris
- 12:05 p.m. **Post-Stratification Based on the Choice of Use of
a Quantitative Randomization Device—**◆Oluseun
Odumade, M Squared Group; Raghunath Arnab,
University of Botswana; Sarjinder Singh, Texas A&M
University at Kingsville

- 10:35 a.m. **Using an Experimental Evaluation of Charter
Schools to Test Whether Nonexperimental
Comparison Group Methods Can Replicate
Experimental Impact Estimates—**◆Natalya
Verbitsky-Savitz, Mathematica Policy Research;
Kenneth Fortson, Mathematica Policy Research;
Emma Kopa, Mathematica Policy Research; Philip
Gleason, Mathematica Policy Research
- 10:50 a.m. **What Do Panel Studies Tell Us About a Deterrent
Effect of Capital Punishment? A Critique of the
Literature—**◆Amelia Haviland, Carnegie Mellon
University; Aaron Chalfin, University of California at
Berkeley; Steven Raphael, University of California at
Berkeley
- 11:05 a.m. **Semiparametric Double-Robust Estimation for
Continuous Treatment Effects: A Case Study of the
Effects of Area Deprivation on Child Pedestrian
Road Casualties—**◆Daniel Graham, Imperial College
London; Emma McCoy, Imperial College London;
David Stephens, McGill University

186 CC-Room 28A **Advances in Missing Data Methods— Contributed**

Social Statistics Section, Section on Survey Research Methods, Bio-pharmaceutical Section

Chair(s): Stephanie Shipp, Institute for Defense Analyses

- 10:35 a.m. **Causal Inference with Longitudinal Outcomes and
Nonignorable Drop-Out—**◆Maria Josefsson, Umeå
University; Xavier Luna de Luna, Umeå University;
Lars Luna Nyberg, Umeå University
- 10:50 a.m. **Missing Value Imputation for Predictive Models on
Large and Distributed Data Sources—**◆Jing Shyr,
IBM; Sier Han, IBM; Jane Chu, IBM
- 11:05 a.m. **Exploring Missing Data Substitutions for Binomial
Response Student Test Data—**◆Christopher
Gonwa-Reeves
- 11:20 a.m. **Hosmer-Lemeshow Goodness-of-Fit Test for
Multiply Imputed Data—**◆Danielle Sullivan;
Rebecca Andridge, The Ohio State University
- 11:35 a.m. **Model-Based Cluster Analysis of Incomplete
Continuous Data with Intermittent Measurement
Errors—**◆Juwon Song, Korea University/University
of California at Los Angeles
- 11:50 a.m. **Bias of the MLE Without Use of Missing Data
Mechanisms for NMAR Missingness: Effects
of Auxiliary Variables—**◆Yutaka Kano, Osaka
University
- 12:05 p.m. **Floor Discussion**

- 11:20 a.m. **The Health and Economic Impact of Obesity in the
U.S. and Globally—**◆Mohammad Quasem, Howard
University; Akmmaksudul Alam
- 11:35 a.m. **General Multiple Mediation Analysis with
Application to Explore the Racial Disparity in
Breast Cancer Survival—**◆Ying Fan, Louisiana State
University Health Sciences Center; Qingzhao Yu,
Louisiana State University Health Sciences Center;
Xiao Cheng Wu, Louisiana State University Health
Sciences Center
- 11:50 a.m. **Floor Discussion**

187 CC-Room 27B **Applications of Causal Inference Methods to the Social and Health Sciences—Contributed**

Social Statistics Section, Section on Statistics in Epidemiology

Chair(s): Joseph Lucke, SUNY at Buffalo

188 CC-Room 30E **Estimation, Testing, and Diagnostics— Contributed**

General Methodology

Chair(s): Rajagopalan Srinivasan, Cognizant Technology Solutions

- 10:35 a.m. **Asymptotic Relative Efficiency and Exact Variance
Stabilizing Transformation for the Generalized
Gaussian Distribution—**◆Kai-Sheng Song,
University of North Texas
- 10:50 a.m. **A Diagnostic of Influential Cases in Generalized
Linear Mixed Models—**◆Junfeng Shang, Bowling
Green State University
- 11:05 a.m. **Generalized Inferences for the General Half-
Normal Distribution—**◆Sumith Gunasekera,
University of Tennessee-Chattanooga
- 11:20 a.m. **Maximum Likelihood Skew-Normal Factor
Analysis—**◆Beverly Gaucher
- 11:35 a.m. **Tests for Homogeneity of Ordered Co-Gaussian
Modes—**◆Xiao Zhang, University of Rochester;
Michael Paul McDermott, University of Rochester;
Govind Mudholkar, University of Rochester



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 11:50 a.m. **Residual Analysis in Structural Equation Modeling: A Simulation Study to Compare the Properties of Residuals Under Alternative Estimation Methods**—
◆ Laura A Hildreth, Iowa State University; Ulrike Genschel, Iowa State University; Frederick Lorenz, Iowa State University
- 12:05 p.m. **Distributions for Three-Dimensional Orientations**—◆ Melissa Bingham, University of Wisconsin-La Crosse; Dan Nordman, Iowa State University; Stephen Vardeman, Iowa State University

Contributed Poster Presentations 10:30 a.m.–12:20 p.m.

189 CC-Sails Pavilion Contributed Oral Poster Presentations: General Methodology — Contributed Poster Presentations

General Methodology

Chair(s): Kristin Duncan, San Diego State University

- 18: Quasi-Likelihood Estimation on Fiegarch Processes: A Simulation Study** —◆ Silvia Lopes, Federal University of Rio Grande do Sul; Taiane Prass, Federal University of Rio Grande do Sul
- 19: Modeling Local Labor Market Conditions and Students' Postsecondary Schooling Decisions** —◆ Caroline Swiger, Clemson University

190 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Risk Analysis — Contributed

Section on Risk Analysis

Chair(s): Kristin Duncan, San Diego State University

- 20: Model Evaluation, Discrepancy Function Estimation, and Social Choice Theory** —◆ Andrew Neath, SIU Edwardsville; Joseph Cavanaugh, University of Iowa; Adam Weyhaupt, SIU Edwardsville
- 21: Assessing the Effect of an Unobserved Covariate in Regression Analysis** —◆ Yeo Jung Park, University of Michigan; Kerby Shedden, University of Michigan
- 22: An Application of Geographic Default Monitoring System to Consumer Loan Portfolios** —◆ Yevhen Yankovskyy, ATB Financial
- 23: Development of an Absolute Risk Model for Breast Cancer Subtypes** —◆ Paige Maas; Mitchell H Gail, National Cancer Institute; Nilanjan Chatterjee, National Cancer Institute

191 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Statistical Consulting — Contributed

Section on Statistical Consulting

Chair(s): Kristin Duncan, San Diego State University

- 24: The Estimation and Likelihood Ratio Test for Non-Separable Covariance Matrices** — ◆ Ranye Sun, Texas A&M University; Mohsen Pourahmadi, Texas A&M University
- 25: Visual and Statistical Model Comparisons Case Studies** — ◆ Andy Mauromoustakos, University of Arkansas; Irina Berdnik, University of Arkansas
- 26: Electricity Records Correction** — ◆ Yalan Hu
- 27: Inference After Model Selection in Linear Mixed Effect Models** — ◆ Adam Sima
- 28: Multi-Objective Decision Analysis: Managing Trade-Offs and Uncertainty** — ◆ Clinton Brownley
- 29: Using the Tukey-Kramer Omnibus Test in the Hayter-Fisher Procedure** — ◆ Scott Richter, The University of North Carolina at Greensboro; Melinda McCann, Oklahoma State University
- 30: Kaplan-Meier Method in Tumor Doubling Time Estimation** — ◆ Yufeng Li, The University of Alabama at Birmingham; Choo Hyung Lee, The University of Alabama at Birmingham; Donald Buchsbaum, The University of Alabama at Birmingham
- 31: Statistical Analysis of the Relationship Between Dupuytren's Contracture and Psoriasis** — ◆ Monica Anand; Yahya Daoud, Baylor Health Care System
- 32: Can Service-Oriented Architecture Improve Data Quality?** — ◆ Nasser Fard, Northeastern University; Jean Hosseini, Intelekt, Management and Technology
- 33: Ethics and Gender Effect on Intimacy Attitudes Toward Wheelchair Users** —◆ Xiaohui Wang, The University of Texas Pan American; Irmo Marini, The University of Texas Pan American

192 C-Sails Pavilion Contributed Oral Poster Presentations: Section on Statistical Consulting — Contributed

Section on Statistical Consulting

Chair(s): Christopher Swearingen, University of Arkansas for Medical Sciences

- 34: Should We Avoid Random Effects Model When Covariates Correlate with Group Effects?** — ◆ Ta Liu, Battelle Memorial Institute
- 35: Intersubject Variability in Pharmacokinetics and Subject Characteristics in Phase I Studies** — ◆ Peng Chai, Celerion; Chun Feng, Celerion; Xiaopeng Li, Celerion

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Longtime Member Reception

BY INVITATION ONLY

Monday, July 30

6:30 p.m. – 7:30 p.m.

Hilton San Diego Bayfront Hotel
Indigo CG

If you joined the ASA 35 or more years ago, the American Statistical Association would like to thank you for your longtime support.

Please join us for a reception in your honor.

Special thanks to the ASA Membership Retention and Recruitment Committee and StataCorp LP for their sponsorship



- 36: **SimRare: A Program to Generate and Analyze Sequence-Based Data for Association Studies of Quantitative and Qualitative Traits** — ◆ Biao Li, Rice University
- 37: **The Performance of the Linear Logistic Test Model and the 2-PI Constrained Model When the Q-Matrix Is Misspecified: A Simulation Study** — ◆ George MacDonald, University of South Florida; Jeffrey Kromrey, University of South Florida; Sarah VanIngen, University of South Florida
- 38: **Using Metric-Based Performance Feedback to Predict Client Satisfaction: A Hospital Case** — ◆ Liequn Jin; Wendy Li, Stanford University/Walt Disney
- 39: **Simulation and Model Calibration with Sensitivity Analysis for Threat Detection in Brain** — ◆ Sumona Mondal, Clarkson University; Keegan Lowenstein, Clarkson University; Brian Leventhal, Clarkson University; Kylie Drouin, Clarkson University; Robert Dowman, Clarkson University; Katie Fowler, Clarkson University

193 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Statistical Education — Contributed Poster Presentations

Section on Statistical Education

Chair(s): Kristin Duncan, San Diego State University

- 40: **Making Buses Reliable** — ◆ Jeffrey Flint
- 41: **Tennis Balls Four Ways: An Activity on Accuracy and Precision** — ◆ Debra Hydorn, University of Mary Washington; Kathryn Loesser Casey, University of Mary Washington
- 42: **Nonspecialist Graduate Students' Experience of Statistics Courses: From Students' Voices** — ◆ Monica Dabos, University of California at Santa Barbara
- 43: **Effects of Using the Tablet PC as a Teaching Method on Student Learning Outcomes in a Statistics Course** — ◆ Wei Wei, Metropolitan State University; Zhi Qiao, University of Minnesota-Rochester
- 44: **Best Practices of Online Teaching and Research-Case Study** — ◆ Chandra Aleong, Delaware State University; John Aleong, University of Vermont
- 45: **Development and Validation of an Instrument to Assess College Students' Inferential Reasoning in Statistics** — ◆ Jiyeon Park, University of Minnesota; Bob del Mas, University of Minnesota
- 46: **Teaching Statistics Within a Developing Country** — ◆ Mark Griffin, Australian Development Agency for Statistics and Information Systems
- 47: **Variation Exploration Lab in Manufacturing Setting** — ◆ Diane Evans, Rose-Hulman Institute of Technology
- 48: **A Fallacy in Student Attitude Research: The Impact of the First Class** — ◆ Michael Posner, Villanova University
- 49: **Using Low-Tech Chat to Foster High-Quality Interactions in an Online Statistics Course** — ◆ Naomi Schmidt, New Mexico State University
- 50: **Student Self-Evaluation of Learning with Other Assessment Tools, Part II** — ◆ Julia Norton, California State University East Bay; Zach Espe Dietz, Consultant; John D Lovell, California State University East Bay; John Alva Norton, California State University East Bay
- 51: **Optimal Item Selection in Multidimensional Adaptive Testing** — ◆ Haskell Sie, Penn State University; James L Rosenberger, Penn State University
- 52: **Is Computer-Graded Homework an Effective Tool in Introductory Statistics** — ◆ Lynn Eudey, California State University East Bay; Julia Norton, California State University East Bay
- 53: **Developing a Second Course in Statistics for Students in the Social Sciences** — ◆ Sharon J Lane-Getaz, St. Olaf College



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 54: Introduction to Parallel Processing in R for Beginning Statistical Programmers** —◆Eric Suess, California State University East Bay
- 55: Building a 'Course Community' in a Digital Age for Teaching Undergraduate Probability** —◆Ginger Rowell, Middle Tennessee State University; Kyle Seigrist, The University of Alabama at Huntsville
- 56: Testing the Effectiveness of Personal Glossaries for Building Vocabulary and Conceptual Understanding in Introductory Statistics** — ◆Amy Froelich, Iowa State University; Wilmina Siegfried, Iowa State University
- 57: Preparing Students for a Data-Rich World** —◆Kyle Barriger, Castilleja School
- 58: The Undergraduate Statistics Program of the Future** — ◆April Kerby, Winona State University; Brant Deppa, Winona State University; Tisha Lynn Hooks, Winona State University; Chris Malone, Winona State University
- 59: Midwest Undergraduate Data Analytics Competition** —◆Brant Deppa, Winona State University; Tisha Lynn Hooks, Winona State University; April Kerby, Winona State University; Chris Malone, Winona State University
- 60: Feeling Confident? Validating a Tool for Assessing Statistical Self-Efficacy in the Undergraduate Student Population** — ◆Ian Mouzon, Iowa State University; Ulrike Genschel, Iowa State University; Alicia L. Carriquiry, Iowa State University; Monica Degnan, Iowa State University; John Riddles, Iowa State University; Elgin Johnston, Iowa State University; Wolfgang Kliemann, Iowa State University; Kenneth Koehler, Iowa State University; Hien Nguyen, Iowa State University

- 64: Multilevel Generalized Linear Mixed Model: Importance of Adjusting for Correlated Outcomes** — ◆Kaitlyn Fernandez, Rho, Inc.
- 65: The Effect of 'Freebies' on Winning in Baseball** — ◆Daniel Mundfrom, Eastern Kentucky University; Michelle Smith, Eastern Kentucky University
- 66: May the Best Team Win?** — ◆John Rasp, Stetson University
- 67: A Tennis Ladder Simulation for Modeling Social Versus Aggressive Competitive Behavior** —◆Kellie Keeling, University of Denver; Scott Toney, University of Denver; Thomas Obremski, University of Denver
- 68: Applications of Quantile Regression in Cricket** — ◆Ananda Manage, Sam Houston State University
- 69: A Modification of OPS: Widely Used to Measure a Baseball Batter's Performance** — ◆Chulmin Kim, Rochester Institute of Technology
- 70: Statistical Modeling and Ranking of the English Premier Soccer League** —◆Alfred Akinsete, Marshall University; Caila Blanton, Georgia College and State University
- 71: Predicting Goal Scoring in Hockey** —◆ Brian Macdonald, U.S. Military Academy; Rodney Sturdivant, U.S. Military Academy; Craig Lennon, U.S. Military Academy
- 72: Using Median Polish to Investigate the Change of Elite Swimmers' Performance 2006–2010** — ◆Hao Guo, Indiana University; Karen Kafadar, Indiana University; Joel Stager, Indiana University
- 73: Transition Probabilities and Randomness in the English Premier Soccer League** — ◆Alfred Akinsete, Marshall University; Alfred Akinsete, Marshall University

194 CC-Sails Pavilion
Contributed Oral Poster Presentations: Section on Statistics in Marketing — Contributed

Section on Statistics in Marketing
 Chair(s): Kristin Duncan, San Diego State University

- 61: Visualization Methods for the Analysis of Time Series of Television Audiences: A Case Study** —◆Mario Andres Morales, Simulmedia Inc./Stanford University; Krishna Balasubramanian, Simulmedia Inc.; Jack Smith, Simulmedia Inc.; Jeffrey Storan, Simulmedia Inc.; Yuliya Torosjan, Simulmedia Inc.

195 CC-Sails Pavilion
Contributed Oral Poster Presentations: Section on Statistics in Sports — Contributed

Section on Statistics in Sports
 Chair(s): Kristin Duncan, San Diego State University

- 62: AccuScore: Don't Bet on It** —◆Jay Schaffer, University of Northern Colorado
- 63: NHL Goalie Performance Versus Age** —◆Michael Schuckers, St. Lawrence University

196 CC-Sails Pavilion
Contributed Oral Poster Presentations: Section on Teaching of Statistics in the Health Sciences—Contributed

Section on Teaching of Statistics in the Health Sciences
 Chair(s): Kristin Duncan, San Diego State University
 Section on Teaching of Statistics in the Health Sciences

- 74: Use of Nonlinear Random Effects Modeling in Outcomes with Ceiling and Floor Effects**—◆Christopher Pretz, Craig Hospital; Scott Kreider, Craig Hospital
- 75: Current and Future Health Care Professionals' Attitudes Toward and Knowledge of Statistics: How Confidence Influences Learning**—◆Heibatollah Baghi, George Mason University; Melanie L. Kornides, Harvard School of Public Health

Monday



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

204 CC-Ballroom D
Section on Statistical Education P.M.
Roundtable Discussion (fee event)

Section on Statistical Education

Organizer(s): Amy Wagaman, Amherst College

ML22 'Big Data' in the Introductory Applied Statistics Course?—◆ John D. McKenzie, Babson College

ML23 Concepts of Center, Variability, and Distribution in the Classroom—◆ Georgette Nicolaidis, Syracuse University

ML24 The Importance of Using Case Studies/Projects in a Second Statistics Course—◆ Shonda R Kuiper, Grinnell College

205 CC-Ballroom D
Section on Statistical Graphics P.M.
Roundtable Discussion (fee event)

Section on Statistical Graphics, Section on Statistical Computing

Organizer(s): Kary Myers, Los Alamos National Laboratory

ML25 What Makes Good Graphics?—◆ Antony Unwin, Universität Augsburg

206 CC-Ballroom D
Section on Statistics and the Environment P.M.
Roundtable Discussion (fee event)

Section on Statistics and the Environment

Organizer(s): Veronica J Berrocal, University of Michigan

ML26 Spatial Thinking for Environmental Processes—◆ Alan Gelfand, Duke University

207 CC-Ballroom D
Section on Statistics in Epidemiology P.M.
Roundtable Discussion (fee event)

Section on Statistics in Epidemiology

Organizer(s): Jing Cheng, University of California at San Francisco School of Dentistry

ML27 Dynamic Treatment Regime Development—◆ Susan Murphy, University of Michigan

ML28 Challenges and Opportunities in Next-Generation Genetic Epidemiologic Studies—◆ Nilanjan Chatterjee, National Cancer Institute

208 CC-Ballroom D
Social Statistics Section P.M. Roundtable Discussion (fee event)

Social Statistics Section, Committee on Gay and Lesbian Concerns in Statistics

Organizer(s): Deborah H Griffin, U.S. Census Bureau

ML29 Update on the Census Bureau's Survey Planning Database—◆ Nancy Bates

Special Presentation 2:00 p.m.–3:50 p.m.

209 HQ-Sapphire MN
Late-Breaking Session: The Role of Statisticians in Health Care Reform—Other

ASA, ENAR, IMS, SSC, WLNAR, International Chinese Statistical Association, International Indian Statistical Association

Organizer(s): John Adams, RAND Corporation

Chair(s): Steven Cohen, Agency for Healthcare Research and Quality

2:05 p.m. **Measuring Performance**—◆ Marc Elliott, RAND Corporation

2:30 p.m. **Measuring Cost**—◆ Arlene S. Ash, University of Massachusetts Medical School

2:55 p.m. **Developing the Evidence Base**—◆ John Adams, RAND Corporation

3:20 p.m. Disc: Thomas R. Belin, University of California at Los Angeles

3:40 p.m. **Floor Discussion**

Invited Sessions 2:00 p.m.–3:50 p.m.

210 HQ-Sapphire C
Statistical Challenges and Innovative Solutions for Correlated Data—Invited

Biometrics Section, Biopharmaceutical Section, International Chinese Statistical Association, Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Annie Qu, University of Illinois at Urbana-Champaign

Chair(s): Annie Qu, University of Illinois at Urbana-Champaign

2:05 p.m. **Longitudinal Data with Informative Visit Times**—◆ Charles Elliott McCulloch, University of California at San Francisco; John M Neuhaus, University of California at San Francisco

2:30 p.m. **Modeling the Dependence Structure for Correlated Survival Data with Covariate**—◆ Bin Nan, University of Michigan; Tianle Hu, Eli Lilly and Company; Xihong Lin, Harvard University; James Robins, Harvard University

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 2:55 p.m. **Sparse Single Index Mixed Model for Longitudinal Data**—◆Sijian Wang, University of Wisconsin-Madison; Peter Song, University of Michigan; Ji Zhu, University of Michigan
- 3:20 p.m. **Weighted Composite Likelihood Approach to the Analysis of Spatial Data**—◆Tatiana Apanasovich, Thomas Jefferson University; Yongtao Guan, University of Miami School of Business
- 3:45 p.m. **Floor Discussion**

- 2:30 p.m. **Quantifying Spatial Spillovers Using Simulated Maximum Likelihood Spatial Probit Model Estimates**—◆James Paul LeSage, Texas State University; Ronald Kelley Pace, Louisiana State University; Shuang Zhu, Louisiana State University
- 2:55 p.m. **Change of Support in Dynamical Spatio-Temporal Models**—◆Christopher Wikle, University of Missouri
- 3:20 p.m. Disc: Noel Cressie, The Ohio State University
- 3:40 p.m. **Floor Discussion**

211 CC-Room 22 ■ ● **Advances in Causal Inference with Complex Data—Invited**

Section on Statistics in Epidemiology, WNAR, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Sherri Rose, Johns Hopkins Bloomberg School of Public Health

Chair(s): Tyler VanderWeele, Harvard School of Public Health

- 2:05 p.m. **Novel Methods for Estimating Causal Effects Under an Additive Hazards Model**—◆Eric Tchetgen, Harvard School of Public Health; Stijn Vansteelandt, Ghent University
- 2:30 p.m. **Targeted Data Adaptive Estimation of the Causal Dose Response Curve**—◆Ivan Diaz, University of California at Berkeley; Mark van der Laan, University of California at Berkeley School of Public Health
- 2:55 p.m. **Constructing Confidence Sets for the Optimal Dynamic Regime**—◆Sherri Rose, Johns Hopkins Bloomberg School of Public Health; Tuo Zhao, The Johns Hopkins University; Julieta Molina, Universidad Torcuato di Tella; Andrea Rotnitzky, Di Tella University/Harvard School of Public Health; Han Liu, The Johns Hopkins University; Michael Rosenblum, Johns Hopkins Bloomberg School of Public Health
- 3:20 p.m. **Causal Models Associated with Acyclic Directed Mixed Graphs**—◆Thomas Richardson, University of Washington; James Robins, Harvard University; Ilya Shpitser, Harvard School of Public Health; Robin J. Evans, Cambridge University
- 3:45 p.m. **Floor Discussion**

213 HQ-Sapphire A ● **Poverty Mapping with Complex Survey Data—Invited**

Section on Survey Research Methods, International Indian Statistical Association, Social Statistics Section, Section on Government Statistics, Statistics Without Borders

Organizer(s): Sam Hawala, U.S. Census Bureau

Chair(s): Graham Kalton, Westat

- 2:05 p.m. **Estimation of Complex Small-Area Parameters with Application to Poverty Indicators**—◆J.N.K. Rao, Carleton University
- 2:30 p.m. **A Hierarchical Bayes Estimation of Poverty Rates**—◆Sam Hawala, U.S. Census Bureau; Partha Lahiri, University of Maryland
- 2:55 p.m. **Semi-parametric Small Area Estimation Based Prediction Methods to Track Poverty: Validation and Applications**—◆Peter Frederik Lanjouw, World Bank
- 3:20 p.m. Disc: William Bell, U.S. Census Bureau
- 3:40 p.m. **Floor Discussion**

214 HQ-Sapphire U ■ **Recent Advances and Unresolved Challenges in Statistical Genetics—Invited**

International Indian Statistical Association, WNAR, Statistics Surveys Online Journal

Organizer(s): Ranjan Maitra, Iowa State University

Chair(s): Karin S Dorman, Iowa State University

- 2:05 p.m. **Resolving Complex Traits via Coancestry in Pedigrees and Populations**—◆Elizabeth Alison Thompson, University of Washington
- 2:50 p.m. **Genomics, High-Dimension Optimization, and GPUs**—◆Kenneth Lange, University of California at Los Angeles
- 3:35 p.m. **Floor Discussion**

212 HQ-Sapphire E ● **Spatial Socio-Demographics—Invited**

Business and Economic Statistics Section, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Noel Cressie, The Ohio State University

Chair(s): Scott Holan, University of Missouri

- 2:05 p.m. **Spatial Econometrics in an Age of CyberGIScience**—◆Luc Anselin, Arizona State University; Sergio Rey, Arizona State University



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

215 CC-Room 30E **■ Statistical Issues in Children's Studies—Invited**

Caucus for Women in Statistics, Section on Survey Research Methods, International Indian Statistical Association, Statistics Surveys Online Journal, Social Statistics Section, Section on Government Statistics
 Organizer(s): Jennifer D Parker, National Center for Health Statistics
 Chair(s): Jennifer D Parker, National Center for Health Statistics

- 2:05 p.m. **Inference from Multilevel Versus Single-Level Methods with Complex Survey Data: An Example Using the National Youth Risk Behavior Survey—**◆Emily Olsen, CDC; Shannon L. Michael, CDC; Sherry Everett Jones, CDC
- 2:25 p.m. **The Challenge of Using Data from Multiple Informants: An Illustration Using a Longitudinal Study of Children with Attention-Deficit/Hyperactivity Disorder (ADHD)—**◆Melissa Danielson, CDC; Susanna Visser, CDC; Steven Cuffe, University of Florida College of Medicine
- 2:45 p.m. **A Model-Based Method for Estimating Serious Emotional Disturbance Using a Mental Health Screener from Household Interview Data Combined with Clinical Interviews—**◆Jeremy Aldworth, RTI International; Catherine M. Simile, National Center for Health Statistics; Heather Ringeisen, RTI International; Karen Morgan, RTI International; Lisa Colpe, National Institute of Mental Health; Joseph Gfroerer, SAMHSA
- 3:05 p.m. **Sample Design Issues in the National Children's Study—**◆David L Hubble, Westat; Ruth A Brenner, Eunice Kennedy Shriver National Institute of Child Health and Human Development
- 3:25 p.m. Disc: Mari Palta, University of Wisconsin-Madison
- 3:45 p.m. **Floor Discussion**

216 CC-Room 28E **■ ● Geovisualization—Invited**

Section on Statistical Graphics, Section on Statistical Computing, International Indian Statistical Association, Statistics Surveys Online Journal
 Organizer(s): Juergen Symanzik, Utah State University
 Chair(s): Juergen Symanzik, Utah State University

- 2:05 p.m. **Identifying and Visualizing Spatiotemporal Clusters on Map Tiles—**◆Markus Loecher, Berlin School of Economics and Law
- 2:30 p.m. **R, Lattice, and RgoogleMaps: A Practical Framework for the Development of New Geovisualizations—**◆Karl Ropkins, University of Leeds; David C. Carslaw, King's College London; Said Munir, University of Leeds; Haibo Chen, University of Leeds
- 2:55 p.m. **Using GoogleMaps and GoogleEarth to Create and Use Map and Satellite Image Base Layers for Geospatial Field Data—**◆Richard C Reeves, FoxGrove Solutions

- 3:20 p.m. **Visualization of Space-Time Dynamics in Criminal Activity—**◆Sergio Rey, Arizona State University; Xun Li, GeoDa Center for Geospatial Analysis and Computation School of Geographical Sciences and U; Luc Anselin, Arizona State University

3:45 p.m. **Floor Discussion**

217 CC-Room 30D **■ ● Nonparametric Measurement Error Problems—Invited**

Section on Nonparametric Statistics, Quality and Productivity Section, International Indian Statistical Association
 Organizer(s): Aurore Delaigle, University of Melbourne
 Chair(s): Peter Hall, University of Melbourne

- 2:05 p.m. **Measurement Error and Variable Selection in Nonparameteric Models—**◆Leonard Stefanski, North Carolina State University; Yichao Wu, North Carolina State University; Kyle White, North Carolina State University
- 2:30 p.m. **Calibration for Ultra High-Dimensional Measurement Error Models with Application to Diffusion Tensor Imaging Tractography Data—**◆Ciprian Crainiceanu, The Johns Hopkins University
- 2:55 p.m. **Nonparametric Regression with Group Testing Data—**◆Aurore Delaigle, University of Melbourne; Peter Hall, University of Melbourne; Alexander Meister, University of Rostock
- 3:20 p.m. **Deconvolution and Classification—**◆Raymond Carroll, Texas A&M University; Aurore Delaigle, University of Melbourne; Peter Hall, University of Melbourne
- 3:45 p.m. **Floor Discussion**

218 CC-Room 25C **Applications of Nonparametric Methods for Complicated Data Structures—Invited**

WINAR, Section on Survey Research Methods
 Organizer(s): Jean Opsomer, Colorado State University
 Chair(s): Jean Opsomer, Colorado State University

- 2:05 p.m. **A Semiparametric Approach to Dimension Reduction—**◆Yanyuan Ma, Texas A&M University; Liping Zhu, Shanghai University of Finance and Economics
- 2:30 p.m. **Uncertainty Analysis for Computationally Expensive Models with Multiple Outputs—**◆David Ruppert, Cornell University; Christine Ann Shoemaker, Cornell University; Yilun Wang, Cornell University; Nikolay Bliznyuk, University of Florida; Yingxing Li, Xiamen University

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 2:55 p.m. **Nonparametric Tests for the Frailty Distribution in Proportional Hazards Models with Shared Frailty**—◆Gerda Claeskens, K. U. Leuven
- 3:20 p.m. **Using Nonparametric Regression to Derive Predictors in Analytic Inference from Complex Surveys**—◆Jay Breidt, Colorado State University; Jean Opsomer, Colorado State University; Wade Herndon, Colorado State University
- 3:45 p.m. **Floor Discussion**

- 3:05 p.m. **Mixed Additive Models for Function-on-Function Regression**—◆Fabian Scheipl, Ludwig-Maxilians-Universität München; Sonja Greven, Ludwig-Maxilians-Universität München; Ana-Maria Staicu, North Carolina State University
- 3:25 p.m. **Function-on-Scalar Regression with the Refund Package**—◆Philip Reiss, New York University; Lei Huang, The Johns Hopkins University
- 3:45 p.m. **Floor Discussion**

219 CC-Room 28D

■ ● Computation with Functional Data—Invited

Section on Statistical Computing, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Ciprian Crainiceanu, The Johns Hopkins University
Chair(s): Jaroslaw Harezlak, Indiana University School of Medicine

- 2:05 p.m. **Generalized Additive Models for Functional Data**—◆Manuel Febrero-Bande, University of Santiago de Compostela; Wenceslao Gonzalez-Manteiga, University of Santiago de Compostela
- 2:25 p.m. **Fast Joint Functional Regression Modeling via Variational Bayes**—◆Jeff Goldsmith, The Johns Hopkins University; Matt Wand, University of Technology; Ciprian Crainiceanu, The Johns Hopkins University
- 2:45 p.m. **Functional Data Analysis with PACE Package**—◆Kehui Chen, University of California at Davis

220 HQ-Sapphire B

■ ● Statistics: The Secret Weapon of Successful Web Giants—Invited

Section on Statistics in Marketing, Section on Statistical Computing, International Indian Statistical Association

Organizer(s): Marianna Dizik, Google
Chair(s): Tim Hesterberg, Google

- 2:05 p.m. **Estimating True Impact of Google Search Ads**—◆Deepak Kumar, Google; David Chan, Google
- 2:30 p.m. **Automated Impact Analysis Tool**—◆Choongsoon Bae, Google; Adam Ghobarah, Google; Jim Koehler, Google
- 2:55 p.m. **Detecting Bad Behavior in Web Advertising Networks**—◆Alex Zolotovitski, Microsoft Corporation
- 3:20 p.m. **Bayesian Variable Selection for Nowcasting Economic Time Series**—◆Hal R Varian, Google
- 3:45 p.m. **Floor Discussion**

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221 HQ-Sapphire L

● Ten Have Memorial Session—Invited

Memorial, Statistics in Mental Health Research, Biometrics Section, Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Daniel F. Heitjan, University of Pennsylvania
Chair(s): Daniel F. Heitjan, University of Pennsylvania

- 2:05 p.m. **Tom Ten Have: The Early Years**—◆Mark P. Becker, Georgia State University
- 2:30 p.m. **Tom Ten Have's Contributions to Mental Health Statistics**—◆Eva Petkova, NYU School of Medicine
- 2:55 p.m. **The Contributions of Tom Ten Have to Causal Inference**—◆Marshall Joffe, University of Pennsylvania; Dylan Small, The Wharton School
- 3:20 p.m. **Celebrating the Life of Tom Ten Have**—◆J. Richard Landis, University of Pennsylvania
- 3:45 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Topic-Contributed Sessions

2:00 p.m.–3:50 p.m.

222 CC-Room 30A

■ ● Statistics in the Arts—Topic-Contributed

IMS, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Jan Beran, University of Konstanz

Chair(s): Jan Beran, University of Konstanz

- 2:05 p.m. **Rhythmic Brushstrokes Distinguish Van Gogh from His Contemporaries: Findings via Automated Brushstroke Extraction**—◆ Jia Li, National Science Foundation; Lei Yao, Penn State University; Ella Hendriks, Van Gogh Museum; James Z. Wang, Penn State University
- 2:25 p.m. **Statistics in the Arts**—◆ Christopher Raphael, Indiana University
- 2:45 p.m. **Adaptive Techniques for Visual Stylometry**—◆ Daniel N. Rockmore, Dartmouth College; James M. Hughes, Dartmouth College
- 3:05 p.m. **Hidden Markov Trees and Fisher Information Distance for Artist Identification and Dating in Impressionist Paintings**—◆ Shannon Hughes, University of Colorado at Boulder
- 3:25 p.m. **Perception and Performance of Music Studied with Time Series Analysis and Information Theory: Loudness and Affect**—◆ Roger Dean, MARCS Institute
- 3:45 p.m. **Floor Discussion**

223 CC-Room 25B

■ ● Neurodegenerative Diseases in Our Aging Population: Novel Approaches to Clinical Trial Design—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Pilar Lim, Janssen Pharmaceuticals R&D

Chair(s): Allan Sampson, University of Pittsburgh

- 2:05 p.m. **Assessing the Impact of Missing Data Before Database Lock in Alzheimer's Disease Studies**—◆ Jianing Di, Janssen Alzheimer Immunotherapy R&D, LLC
- 2:25 p.m. **Lessons Learned from a Delayed Start Trial Review Experience**—◆ Tristan Massie, FDA
- 2:45 p.m. **Design Considerations for Secondary Prevention Trials in Alzheimer's Disease**—◆ Ronald Thomas, ADCS Data Core
- 3:05 p.m. **A Doubly Randomized Delayed-Start Design for Clinical Trials in Early Intervention of Neurodegenerative Diseases**—◆ Qing Liu

- 3:25 p.m. **Disc: Michael Krams, Janssen Pharmaceuticals R&D**
- 3:45 p.m. **Floor Discussion**

224 CC-Room 28C

Statistical and Computational Challenges in Metagenomic Analysis of Next-Generation Sequencing Data—Topic-Contributed

Section on Statistical Computing, WNAR

Organizer(s): Xinping Cui, University of California at Riverside

Chair(s): Xinping Cui, University of California at Riverside

- 2:05 p.m. **Alignment-Free Genome and Metagenome Comparison Using K-Tuples**—◆ Fengzhu Sun, University of Southern California
- 2:25 p.m. **Normalization and Differential Expression in RNA-Seq**—◆ Sandrine Dudoit, University of California at Berkeley
- 2:45 p.m. **Taxonomic Assignment of Metagenomic Sequencing Reads**—◆ Hongmei Jiang, Northwestern University; Lingling An, University of Arizona
- 3:05 p.m. **Quantifying Taxonomic and Functional Diversity of Metagenomes from Next-Generation Sequencing Data**—◆ Katherine Pollard, Gladstone Institutes, UCSF; Thomas J. Sharpton, Gladstone Institutes, UCSF; Rebecca Truty, Gladstone Institutes, UCSF; Joshua Ladau, Gladstone Institutes, UCSF; Samantha Riesenfeld, Gladstone Institutes, UCSF; Guillaume Jospin, University of California at Davis; Steven Kembel, University of Oregon; Morgan Langille, University of California at Davis; James O'Dwyer, Santa Fe Institute; Dongying Wu, University of California at Davis; Jessica Green, University of Oregon; Jonathan Eisen, University of California at Davis
- 3:25 p.m. **Efficient Separation of Metagenomic Short Reads Into Genomes via Multistage Clustering**—◆ Olga Tanaseichuk, University of California at Riverside; Tao Jiang, University of California at Riverside
- 3:45 p.m. **Floor Discussion**

225 CC-Room 28B

■ Astrostatistics—Topic-Contributed

Section on Statistical Learning and Data Mining, International Indian Statistical Association

Organizer(s): David A. van Dyk, Imperial College London

Chair(s): David A. van Dyk, Imperial College London

- 2:05 p.m. **Robust Event Detection for Massive Time-Series Surveys**—◆ Alexander Blocker, Harvard University

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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- 2:25 p.m. **Joint Spectral-Temporal Analysis of High-Energy Astronomical Sources**—◆ Thomas Lee, University of California at Davis; Vinay Kashyap, Harvard University; David A. van Dyk, Imperial College London; Raymond K. W. Wong, University of California at Davis
- 2:45 p.m. **Quantifying the Sensitivity of the Bayes Factor on the Choice of Prior Distribution in High-Energy Astrophysical Analysis**—◆ Shandong Min, University of California at Irvine
- 3:05 p.m. **Improved Statistical Inference via Nonlinear Data Transformation**—◆ Ann Lee, Carnegie Mellon University
- 3:25 p.m. **Bayesian Estimation of LogN-LogS with Nonignorable Missing Data**—◆ Paul Baines, University of California at Davis; Irina Udaltsova, University of California at Davis
- 3:45 p.m. **Floor Discussion**

- 2:25 p.m. **Functional Linear Mixed-Effects Model for Actigraphy Data**—◆ William Shannon, Washington University School of Medicine; Jimin Ding, Washington University in St. Louis; Hong Xian, Washington University School of Medicine; Tao Li, Washington University School of Medicine; Carlos Gonzales, Washington University School of Medicine; Elena Deych, Washington University School of Medicine
- 2:45 p.m. **Longitudinal Scalar-on-Image Regression**—◆ Lei Huang, The Johns Hopkins University; Jeff Goldsmith, The Johns Hopkins University; Philip Reiss, New York University; Ciprian Crainiceanu, The Johns Hopkins University
- 3:05 p.m. **Principal Component Analysis for Multilevel and Multivariate Functional Data**—◆ Chongzhi Di, Fred Hutchinson Cancer Research Center; Ciprian Crainiceanu, The Johns Hopkins University
- 3:25 p.m. **Multilevel Functional Clustering Analysis**—◆ Nicoleta Serban, Georgia Institute of Technology; Huijing Jiang, IBM T. J. Watson Research Center
- 3:45 p.m. **Floor Discussion**

226 CC- Room 33B

■ ● Statistics at the Frontiers of Neuroimaging—Topic-Contributed

Statistics in Mental Health Research, WNFAR, International Indian Statistical Association, Section on Statistics in Imaging

Organizer(s): Hernando Ombao, University of California at Irvine

Chair(s): Mark Fiecas, University of California at San Diego

- 2:05 p.m. **Quantifying the Uncertainty of Activation Periods in fMRI Data via Changepoint Analysis**—◆ Christopher Nam, University of Warwick; John Aston, University of Warwick; Adam Johansen, University of Warwick
- 2:25 p.m. **Developing fMRI-Based Biomarkers for Pain**—◆ Martin Lindquist, Columbia University
- 2:45 p.m. **Spatio-Temporal Models for Multi-Scale Multi-Modal Data**—◆ Hernando Ombao, University of California at Irvine
- 3:05 p.m. **Floor Discussion**

228 CC-Room 29C

■ ● Implementing Bayesian Methods in Drug Development—Topic-Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section, Biometrics Section

Organizer(s): Fanni Natanegara, Eli Lilly and Company

Chair(s): Fanni Natanegara, Eli Lilly and Company

- 2:05 p.m. **Use of Bayesian Methods to Assess Probability of Achieving Critical Success Factors (CSFs) in Clinical Trials**—◆ Cory Heilmann, Eli Lilly and Company
- 2:25 p.m. **Bayesian Implementations in Drug Development: Why Progress Is Slow**—◆ Beat Neuenschwander, Novartis Pharma
- 2:45 p.m. **Implementing Bayesian Methods in Biological Product Development: Regulatory Perspective and Experience**—◆ Boguang Zhen, FDA/CBER
- 3:05 p.m. Disc: John W. Seaman, Baylor University
- 3:25 p.m. Disc: Heinz Schmidli, Novartis Pharma AG
- 3:45 p.m. **Floor Discussion**

227 CC-Room 26A

■ ● Clustered Functional Data Analysis—Topic-Contributed

Biometrics Section, International Chinese Statistical Association, Section on Statistical Learning and Data Mining, International Indian Statistical Association

Organizer(s): Jimin Ding, Washington University in St. Louis

Chair(s): Jimin Ding, Washington University in St. Louis

- 2:05 p.m. **Graphical Representation of Clustered Functional Actigraphy Data**—◆ Abbass Sharif, Utah State University; Juergen Symanzik, Utah State University



● Themed Session ■ Applied Session ◆ Presenter

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229 CC-Room 33A

● ● Beyond Binary Networks: Models and Processes on Relational Data Systems with Valued Edges—Topic-Contributed

Health Policy Statistics Section, Section for Statistical Programmers and Analysts, Section on Statistics in Epidemiology

Organizer(s): Andrew C Thomas, Carnegie Mellon University

Chair(s): Tyler McCormick, University of Washington

2:05 p.m. **Modeling Latent Tie Strength in Social Networks Using Interaction Count Data**—◆ Mauricio Sadinle, Carnegie Mellon University

2:25 p.m. **Estimation of Hard-to-Reach Populations at Risk for HIV Infection in Concentrated Epidemics Using Network Scale-Up and Other Methods**—Tyler McCormick, University of Washington; ◆ James W Harmon, University of Washington; Adrian Raftery, University of Washington

2:45 p.m. **Exponential-Family Random Graph Models for Rank-Order Relational Data**—◆ Pavel Krivitsky, Penn State University; Carter T. Butts, University of California at Irvine

3:05 p.m. **Modeling Unipartite Physician Network**—◆ Sudeshna Paul, Harvard Medical School; James O'Malley, Harvard Medical School

3:25 p.m. **Floor Discussion**

230 CC-Room 32A

● ● Recent Advances in Methods for Modeling Multiple Health Outcomes and Multiple Exposures—Topic-Contributed

Section on Statistics and the Environment, International Indian Statistical Association

Organizer(s): Kiros Berhane, University of Southern California

Chair(s): Meredith Franklin, University of Southern California

2:05 p.m. **Model Choice for Spatial Prediction of Multiple Air Pollution Exposures**—◆ Adam A Szpiro, University of Washington; Christopher J Paciorek, University of California at Berkeley

2:25 p.m. **Integrated Models for Health Outcomes, Air Pollutants, and Biomarkers**—◆ Sandrah Eckel, University of Southern California; Kiros Berhane, University of Southern California; Duncan C Thomas, University of Southern California

2:45 p.m. **Dynamic Latent Trait Models with Mixed Hidden Markov Structure for Mixed Longitudinal Outcomes**—◆ Yue Zhang, University of Southern California; Kiros Berhane, University of Southern California

3:05 p.m. **Bias and Variance Corrections for Spatially Varying Measurement Error**—◆ Stacey Alexeeff, Harvard School of Public Health; Brent Coull, Harvard School of Public Health; Raymond Carroll, Texas A&M University

3:25 p.m. **Disc:** Lianne Sheppard, University of Washington

3:45 p.m. **Floor Discussion**

231 CC-Room 25A

● Applications of Adaptive Designs in Clinical Trials—Topic-Contributed

Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Xin Zhao, Merck

Chair(s): Xin Zhao, Merck

2:05 p.m. **Bayesian Adaptive Phase II Trial with a Nonmonotonic Dose-Response Curve**—◆ Yuyan Duan; Robert Noble, GlaxoSmithKline

2:25 p.m. **Applications of Adaptive Designs in Clinical Trials**—◆ Henry S Hsu, FDA/CBER; Min Annie Lin, FDA/CBER

2:45 p.m. **Adapting from Phase III to Phase II at an Interim Analysis**—◆ Keaven Anderson, Merck; Xiaoyun (Nicole) Li, Merck

3:05 p.m. **Case Studies of Adaptive Design in Vaccine Clinical Trials**—◆ Xiaoming Li, Gilead Sciences

3:25 p.m. **Floor Discussion**

232 CC-Room 30C

Section on Nonparametric Statistics Student Paper Competition Winners—Topic-Contributed

Section on Nonparametric Statistics

Organizer(s): Fang Yao, University of Toronto

Chair(s): Fang Yao, University of Toronto

2:05 p.m. **Quantile Regression for Time-Varying Coefficient Longitudinal Model**—◆ Seonjin Kim, Penn State University; Zhibiao Zhao, Penn State University

2:20 p.m. **Comparative Study of Joint Empirical Likelihood Confidence Regions for the Evaluation of Continuous-Scale Diagnostic Tests in the Presence of Verification Bias**—◆ Binhuan Wang, Georgia State University; Gengsheng Qin, Georgia State University

2:35 p.m. **Smoothed Jackknife Empirical Likelihood Inference for ROC Curves with Missing Data**—◆ Hanfang Yang, Georgia State University; Yichuan Zhao, Georgia State University

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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2:50 p.m. **Nonparametric Bayesian Nonhomogeneous Hidden Markov Models**—◆Abhra Sarkar, Texas A&M University; Anindya Bhadra, Texas A&M University; Bani K Mallick, Texas A&M University

3:05 p.m. **Variable Selection for Nonparametric Quantile Regression via Smoothing Spline ANOVA**—◆Chen-Yen Lin, North Carolina State University; Hao Helen Zhang, North Carolina State University; Howard Bondell, North Carolina State University; Hui Zou, University of Minnesota

3:20 p.m. **Two-Sample Inference for Temporally Dependent Functional Data**—◆Xianyang Zhang, University of Illinois at Urbana-Champaign; Xiaofeng Shao, University of Illinois at Urbana-Champaign

3:45 p.m. **Floor Discussion**

233 CC-Room 32B Section on Health Policy Statistics Student Paper Competition Winners—Topic-Contributed

Health Policy Statistics Section

Organizer(s): Ofer Harel, University of Connecticut

Chair(s): Ofer Harel, University of Connecticut

2:05 p.m. **Comparing Cumulative Incidence Functions Between Nonrandomized Groups**—◆Ludi Fan, University of Michigan; Douglas E Schaubel, University of Michigan

2:25 p.m. **More Efficient Estimators for Case-Cohort Studies**—◆So Young Kim, The University of North Carolina at Chapel Hill; Jianwen Cai, The University of North Carolina at Chapel Hill; Wenbin Lu, North Carolina State University

2:45 p.m. **Hierarchical Bayesian Methods for Combining Efficacy and Safety in Multiple Treatment Comparisons**—◆Hwanhee Hong, University of Minnesota; Haitao Chu, University of Minnesota; Bradley P Carlin, University of Minnesota

3:05 p.m. **Causal Mediation Analysis in Multi-Level Intervention and Multi-Component Mediator Case**—◆Cheng Zheng, University of Washington; Xiao-Hua (Andrew) Zhou, University of Washington

3:25 p.m. **Assessing the Privacy of Randomized Vector-Valued Queries to a Database Using the Area Under the Receiver-Operating Characteristic Curve**—◆Gregory J. Matthews, University of Massachusetts; Ofer Harel, University of Connecticut

3:45 p.m. **Floor Discussion**

234 CC-Room 31A ● Data-Driven Transportation Statistics—Topic-Contributed

Section on Government Statistics, International Indian Statistical Association, Social Statistics Section, Section on Physical and Engineering Sciences, Section on Risk Analysis

Organizer(s): Promod Chandhok, Bureau of Transportation Statistics

Chair(s): K.P. Srinath, Abt Associates

2:05 p.m. **Decision Tree Induction of Driver's Behavior at a Yellow Light**—◆Linda Boyle, University of Washington; Amanda Raven, University of Washington

2:25 p.m. **Multi-State Travel Time Reliability Models with Skewed Component Distributions**—◆Feng Guo, Virginia Tech; Qing Li, Virginia Tech; Hesham Rakha, Virginia Tech

2:45 p.m. **Empirical Bayes Application in Highway Safety Research**—◆Roya Amjadi, Federal Highway Administration; Kim Eccles, VHB

3:05 p.m. Disc: Michael P. Cohen, American Institutes for Research

3:25 p.m. Disc: Promod Chandhok, Bureau of Transportation Statistics

3:45 p.m. **Floor Discussion**

Topic-Contributed Panels 2:00 p.m.—3:50 p.m.

235 CC-Room 31B Look Who's Talking—Topic-Contributed

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences, International Indian Statistical Association

Organizer(s): Robert H Carver, Stonehill College

Chair(s): Robert H Carver, Stonehill College

Panelists: ◆Lisa Dierker, Wesleyan University
 ◆Elizabeth Jennings, Texas A&M University
 ◆Sandra Stinnett, Duke University
 ◆Amy Nowacki, Cleveland Clinic

3:45 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

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● The Human Side of Statistical Engineering—Topic-Contributed

Section on Statistical Consulting

Organizer(s): Doug Zahn, Zahn and Associates

Chair(s): Ronald D. Snee, Snee Associates

- Panelists:** ◆ Doug Zahn, Zahn and Associates
 ◆ Erin Tanenbaum, NORC
 ◆ Christine Anderson-Cook, Los Alamos National Laboratory

3:45 p.m. **Floor Discussion**

237 HQ-Sapphire H

40 Years and Counting: CNSTAT's Role in Government and Social Statistics—Topic-Contributed

Social Statistics Section, Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Juanita Tamayo Lott, Tamayo Lott Associates

Chair(s): Juanita Tamayo Lott, Tamayo Lott Associates

- Panelists:** ◆ Constance F Citro, Committee on National Statistics
 ◆ Robert Bell, AT&T
 ◆ Alan Zaslavsky, Harvard Medical School
 ◆ Hermann Habermann, National Academy of Sciences (retired/consultant)
 ◆ Katherine Wallman, Office of Management and Budget

3:45 p.m. **Floor Discussion**

Contributed Sessions 2:00 p.m.–3:50 p.m.

238 CC-Room 30B

Semiparametric Modeling—Contributed

Section on Nonparametric Statistics, Biometrics Section

Chair(s): Jing Qian, University of Massachusetts-Amherst

2:05 p.m. **Semiparametric Estimation of Target Locations—**
 ◆ Nirupam Chakrabarty, University of Michigan;
 Moulinath Banerjee, University of Michigan; George
 Michailidis, University of Michigan

2:20 p.m. **Generalized Locally Efficient Semiparametric
 Estimators for Functional Measurement Error
 Models—**◆ Yuhang Xu, University of Georgia

2:35 p.m. **Semiparametric Estimation of the Center of an
 Unknown Symmetric Population Under Selection
 Bias—**◆ Mi Jeong Kim, Texas A&M University; Marc
 Genton, Texas A&M University; Yanyuan Ma, Texas
 A&M University

2:50 p.m. **Robust Difference-Based Estimation in
 Semiparametric Partially Linear Models—**
 ◆ Asuman Turkmen, The Ohio State University; Guln
 Tabakan, Aksaray University

3:05 p.m. **A Semiparametric Model Based on Partial Spline
 for Detecting Changes in Tumor Blood Flow—**
 ◆ Sung Won Han, University of Pennsylvania;
 Theresa Busch, University of Pennsylvania; Mary Putt,
 University of Pennsylvania

3:20 p.m. **Semiparametric Additive Regression and
 Goodness-of-Fit—**◆ Ursula U. Müller, Texas A&M
 University

3:35 p.m. **Floor Discussion**

239 CC-Room 29A

Advances in Statistical Process Control—Contributed

Quality and Productivity Section

Chair(s): Theresa Utlaut, Intel Corporation

2:05 p.m. **Exploring the Relationship Between Your Ability to
 Detect Production Process Shifts and Measurement
 System and Process Settings—**◆ Laura Lancaster,
 SAS Institute; Christopher Gotwalt, SAS Institute

2:20 p.m. **GLR Charts for Monitoring Multiple Proportions—**
 ◆ Jaeheon Lee, Chung-Ang University; Ning Wang,
 Virginia Tech; Yiming Peng, Virginia Tech; Lei Sun,
 Virginia Tech; Marion R. Reynolds, Jr., Virginia Tech

2:35 p.m. **Conditional Confidence Intervals of the Process
 Capability Index Cpk—**◆ Chien-Pai Han, The
 University of Texas; Jianchun Zhang, The University
 of Texas at Arlington

2:50 p.m. **Monitoring Goodness of Fit for Functional
 Profiles—**◆ Wei Wang, Penn State University; Dennis
 Lin, Penn State University

3:05 p.m. **A Robust Latent Cusum Chart for Monitoring
 Business Customer Attrition—**◆ Jingjing Yan, The
 Ohio State University; Steven MacEachern, The Ohio
 State University; Chunjie Wu, Shanghai University of
 Finance and Economics

3:20 p.m. **Spatial Control Charts for the Mean—**◆ Scott
 Grimshaw, Brigham Young University; Natalie J.
 Blades, Brigham Young University

3:35 p.m. **An Affine Invariant Spatial Ranked-Sign MEWMA
 Control Chart—**◆ Jamil Zeinab, University of
 Northern Colorado

Monday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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240 CC-Room 27A Section on Statistics and Marketing - 3— Contributed

Section on Statistics in Marketing

Chair(s): Michael Trusov, University of Maryland

- 2:05 p.m. **Incremental Response Modeling Using One-Class SVM**—◆ Ruiwen Zhang, SAS Institute
- 2:20 p.m. **Hierarchical Bayesian Classifier for High-Dimensional Online Behavior Data Applied to Consumer Segment Prediction and Behavior Insights**—◆ Amit Phansalkar, Compete Inc.
- 2:35 p.m. **A Competing Risk and Bayesian Learning Model of Retail Out-of-Stocks**—◆ Jason Duan, The University of Texas at Austin; Frenkel ter Hofstede, The University of Texas at Austin
- 2:50 p.m. **Bringing Heterogeneity Into Customer Equity Calculations**—◆ Bruce Hardie, London Business School; Peter Fader, The Wharton School; Yuzhou Liu, Leonard N. Stern School of Business
- 3:05 p.m. **Capturing Heterogeneity in Engagement on a Social eCommerce Platform**—◆ Lynd Bacon, Loma Buena Associates; Peter Lenk, University of Michigan; Danielle Murray, Shutterfly Inc.; Jean Durall, Shutterfly Inc.
- 3:20 p.m. **The Use of Inverse Regression, Topic Models, and Sentiment Engines to Tone and Categorize Comments**—◆ Kurt Pflughoeft, Maritz; Felix Flory, evolve24; Carrie Lu, evolve24
- 3:35 p.m. **Inferring Ad Influence Under Segmentation Bias**—◆ Jaimyoung Kwon, AOL Advertising; Ram Akella, University of California at Santa Cruz; Joel Barajas, University of California at Santa Cruz; Aaron Flores, AOL Advertising; Victor Andrei, AOL Advertising; Marius Holtan, AOL Advertising

241 CC-Room 24C ■ High-Dimensional Regression in GWAS and Genetics/Genomics Studies—Contributed

Biometrics Section, Section on Statistics in Epidemiology, Section on Statistical Learning and Data Mining

Chair(s): Janet Sinsheimer, University of California at Los Angeles

- 2:05 p.m. **A Perturbation Method for Prediction Accuracy with Regularized Regression**—◆ Jessica Minnier, Harvard University; Tianxi Cai, Harvard University
- 2:20 p.m. **Variable Selection with Prior Information for Generalized Linear Models via the pLasso Method**—◆ Yuan Jiang, Oregon State University; Yunxiao He, Yale University; Heping Zhang, Yale University

- 2:35 p.m. **Nonlinear Sufficient Dimension Reduction for Association Testing of Complex Traits**—◆ Hongjie Zhu, Duke University; Lexin Li, North Carolina State University; Hua Zhou, North Carolina State University
- 2:50 p.m. **Higher Criticism for Detecting Sparse and Weak Genetic Effects**—◆ Zheyang Wu, WPI
- 3:05 p.m. **A Strategy to Reduce Batch Effect in High-Throughput Experiments with Optimized Experimental Design**—◆ Li Yan, Roswell Park Cancer Institute; Song Liu, Roswell Park Cancer Institute; Changxing Ma, SUNY at Buffalo
- 3:20 p.m. **Floor Discussion**

242 CC-Room 24B ■ Large-Scale Hypothesis Testing in Genetics and Genomics—Contributed

Biometrics Section

Chair(s): Yan Ma, Cornell University

- 2:05 p.m. **Integrating Prior Knowledge in Multiple Testing Under Dependence with Applications to Detecting Differential DNA Methylation**—◆ Pei Fen Kuan, The University of North Carolina at Chapel Hill
- 2:20 p.m. **Bootstrap Testing and Inference for Recurrent DNA Copy Number Aberrations**—◆ Vonn Walter, The University of North Carolina at Chapel Hill; Fred Wright, The University of North Carolina at Chapel Hill; Andrew B Nobel, The University of North Carolina at Chapel Hill; Matthew D. Wilkerson, The University of North Carolina at Chapel Hill; David Neil Hayes, The University of North Carolina at Chapel Hill
- 2:35 p.m. **Gene Set Testing to Characterize Multivariately Differentially Expressed Genes**—◆ John Stevens, Utah State University
- 2:50 p.m. **OSRR: Efficiently Leveraging Transcriptional Databases for Improved Analysis of Differential Expression**—◆ Jonathan Gelfond, The University of Texas Health Science Center at San Antonio; Mayetri Gupta, Boston University; Joseph Ibrahim, The University of North Carolina at Chapel Hill; Ming-Hui Chen, University of Connecticut
- 3:05 p.m. **Assumption Weighting for Incorporating Heterogeneity Into Meta-Analysis of Genomic Data**—◆ Yihan Li, Penn State University; Debashis Ghosh, Penn State University
- 3:20 p.m. **A Stochastic Segmentation Model for Categorical and Continuous Features of Microarray Data on DNaseI Hypersensitive Sites**—◆ Yifan Mo, SUNY at Stony Brook; Haipeng Xing, SUNY at Stony Brook
- 3:35 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

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243 CC-Room 24A Methods for Longitudinal Data Analysis— Contributed

Biometrics Section, Biopharmaceutical Section, Section on Statistics in Epidemiology

Chair(s): Paula K. Roberson, University of Arkansas for Medical Sciences

- 2:05 p.m. **Bias-Corrected GEE Estimation for Longitudinal Data**—◆Sudhir Paul, University of Windsor; Xuemao Zhang, Lakehead University
- 2:20 p.m. **Posterior Predictive Model Assessment for Incomplete Longitudinal Data**—◆Arkendu Chatterjee, University of Florida; Michael Daniels, University of Florida
- 2:35 p.m. **Regression Analysis of Longitudinal Data with Irregular and Informative Observation Times**—◆Yong Chen, The University of Texas School of Public Health; Jing Ning, MD Anderson Cancer Center; Chunyan Cai, MD Anderson Cancer Center
- 2:50 p.m. **Joint Modeling of Longitudinal Health Predictors and Cross-Sectional Health Outcomes via Mean and Variance Trajectories**—◆Bei Jiang, University of Michigan; Michael R. Elliott, University of Michigan; Mary D. Sammel, University of Pennsylvania; Naisyin Wang, University of Michigan
- 3:05 p.m. **Multistage Random Effects Model for Disease Progression in Longitudinal Aging Studies**—◆Kumar Rajan; Denis Evans, Rush University Medical Center
- 3:20 p.m. **Analysis of Longitudinal Counts from a Population with Two Latent Classes**—◆Huijing Wang, Simon Fraser University; X. Joan Hu, Simon Fraser University
- 3:35 p.m. **A Framework for the Joint Modeling of Longitudinal Diagnostic Outcome Data and Latent Infection Status**—◆Geoffrey Jones, Massey University; Wesley Johnson, University of California at Irvine; Daan Vink, Massey University; Nigel French, Massey University

244 CC-Room 23C ■ Missing or Incomplete Data—Contributed

Biopharmaceutical Section

Chair(s): Lei Xu, Eli Lilly and Company

- 2:05 p.m. **A Hybrid Model Incorporating Reasons for Dropout: A Simulation Study**—◆Jingjing Chen; Fang Liu, Octagon Research Solutions; Jeff Davidson, Octagon Research Solutions
- 2:20 p.m. **Bias with Differential Dropout: What Matters and What Doesn't**—◆Melanie Bell, University of Sydney
- 2:35 p.m. **On the Practical Application of MMRM to Clinical Trial Data**—◆Scott Andersen, Eli Lilly and Company; Brian Millen, Eli Lilly and Company

- 2:50 p.m. **Compare MI-GEE and SIMEX-GEE for Correlated Binary Data with MAR Missingness**—◆Yu-yi Hsu, Iowa State University; Yongming Qu, Eli Lilly and Company; Alicia L. Carriquiry, Iowa State University
- 3:05 p.m. **A Bayesian Item Response Model for Nonignorable Missing Data in Parkinson Disease Patients**—◆Sheng Luo, The University of Texas at Houston; Xiao Su, The University of Texas at Houston; Bo He, The University of Texas at Houston; Barbara Tilley, The University of Texas at Houston
- 3:20 p.m. **Use of Novel Sequential Multiple Imputation Analysis for Extrapolation of Missing Data Points as Part of In Vivo Tumor Growth Assays**—◆Xiaoli Hou, Merck; George N. Naumov, Merck Research Laboratories
- 3:35 p.m. **Re-Examination of MMRM and ANCOVA.LOCF in an Acute Schizophrenia Trial**—◆Yangchun Du, Alkermes, Inc.; Asli Memisoglu, Alkermes, Inc.; Marc L de Somer, Alkermes, Inc.

245 CC-Room 23B ■ Planning and Analysis of Noninferiority Studies—Contributed

Biopharmaceutical Section

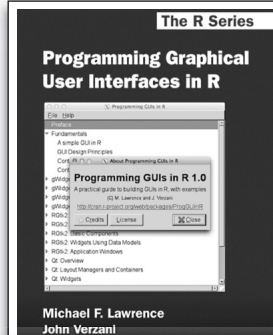
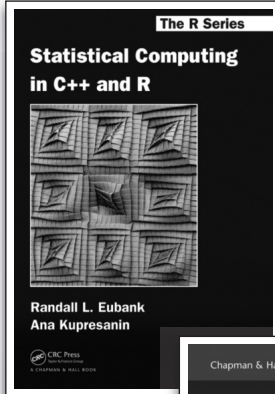
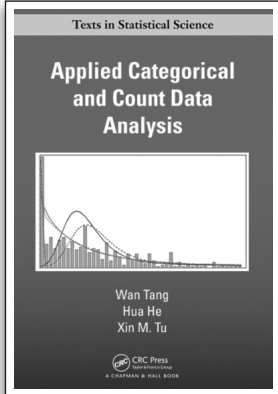
Chair(s): Mary Almas, Pfizer Inc.

- 2:05 p.m. **Sample Size Consideration in Noninferiority Designs**—◆Chengxing Lu, Novartis; Xing Sun, Merck
- 2:20 p.m. **The Stochastic Curtailment of Long-Term Clinical Trials for Noninferiority Case vs. Superiority Case and Its Visualization**—◆Shaoyi Li, Celgene Corporation
- 2:35 p.m. **Estimating the Effect Size of Approved Drugs for the Treatment of Bacterial Conjunctivitis Studies**—◆Yan Wang, FDA/CDER/OTS/OB; Yunfan Deng, FDA/CDER/OTS/OB; Daphne Lin, FDA; Jennifer Harris, FDA/CDER/OND/OAP/DTOP
- 2:50 p.m. **A Simple Approach in Determining Sample Size and Power for Assessing Noninferiority of a Test Treatment When There Is a Placebo**—◆Jerry Weaver, Novartis
- 3:05 p.m. **Something New and Something Old in Noninferiority Trials**—◆George Y.H. Chi, Janssen Pharmaceuticals R&D
- 3:20 p.m. **Comparisons of Noninferiority Methods When the Control Group Rate Is Low (= 10%)**—◆Alison Pedley, Merck; Joseph Massaro, Boston University; Robert W. Tipping, Merck
- 3:35 p.m. **The Issue of Multiplicity in Noninferiority Studies**—◆Chunlei Ke, Amgen, Inc.; Beiyang Ding, Amgen, Inc.; Qi Jiang, Amgen, Inc.; Steven Michael Snapinn, Amgen, Inc.

Monday

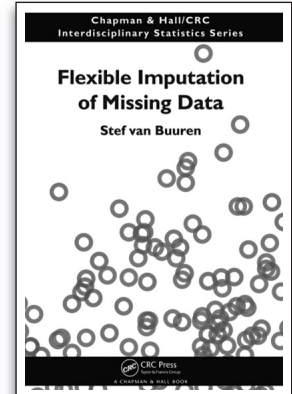
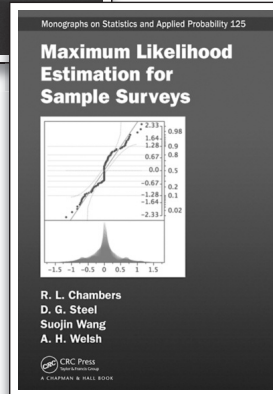
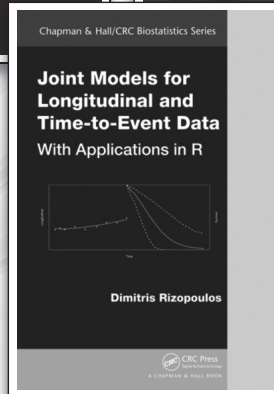
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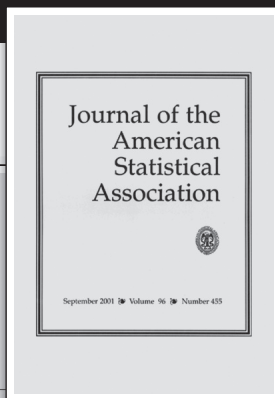
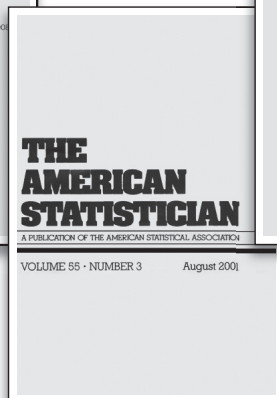
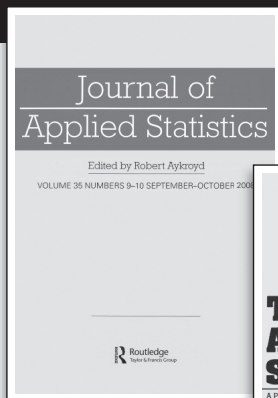
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● Themed Session ■ Applied Session ◆ Presenter

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246 CC-Room 23A **■ PK and QTc Analysis—Contributed**

Biopharmaceutical Section

Chair(s): Jaya Natarajan, Janssen Pharmaceuticals R&D

- 2:05 p.m. **Minimum-Chi-Square-Estimation of Pharmacokinetic Parameters**—◆Karl-Ernst Biebler, Ernst-Moritz-Arndt University
- 2:20 p.m. **Non-Ignorable Missingness and the Calculation of Terminal Phase Half-Life**—◆Shu Zhang, Eisai, Inc.
- 2:35 p.m. **Dose Proportionality Assessment Under Differing Alternating Panel Designs**—◆Deborah Panebianco, Merck; Akira Wakana, MSD KK
- 2:50 p.m. **A New Approach to Evaluate the Drug Effect on the QTc Interval in Thorough QT/QTc Study**—◆Shui He
- 3:05 p.m. **Inappropriate Covariance Structure May Lead to Smaller Spurious Variance Estimation of Drug Effect in TQT Crossover Study**—◆Li Fan, Merck; Xiaodong Li, Merck
- 3:20 p.m. **An Investigation of Effect of Baseline Definition in Parallel Nested Crossover Studies**—◆Hui Zhi, GlaxoSmithKline; Gary Koch, The University of North Carolina at Chapel Hill
- 3:35 p.m. **Floor Discussion**

247 CC-Room 26B **■ ● Forecasting—Contributed**

Business and Economic Statistics Section

Chair(s): Bonnie Ray, IBM T. J. Watson Research Center

- 2:05 p.m. **Forecast Optimality Tests in the Presence of Instabilities**—◆Barbara Rossi, Duke University; Tatevik Sekhposyan, Bank of Canada
- 2:20 p.m. **Measuring the Effect of Financial Stress**—◆Michael Owyang, Federal Reserve Bank of St. Louis; Ana Beatriz Galvao, Queen Mary College, University of London
- 2:35 p.m. **Challenges with Forecasting Ratios in Hierarchies**—◆Bruce Elsheimer, SAS Institute; Michael J Leonard, SAS Institute; Michele Trovero, SAS Institute; Peter Dillman, SAS Institute
- 2:50 p.m. **What Unemployment Data Can Tell Us About House Prices: Stabilizing Strong but Unstable Connection**—◆Vladimir Ladyzhets, Lincoln Financial Group
- 3:05 p.m. **Aggregating and Evaluating Analyst Forecasts Using Percentage and Relative Error**—◆Victor Jose, Georgetown University
- 3:20 p.m. **Applications of HMMs to Financial Data: A Data-Motivated Approach**—◆Tessa Childers-Day, University of California at Berkeley; Lisa Goldberg, MSCI
- 3:35 p.m. **Tests of Specification and Distributional Change for Predictive Densities**—◆Tatevik Sekhposyan, Bank of Canada; Barbara Rossi, Duke University

248 CC-Room 21 **Advances in Methods for High-Dimensional Biological Data—Contributed**

ENAR, Biometrics Section, WNAAR

Chair(s): Andrew Jaffe, The Lieber Institute

- 2:05 p.m. **Estimating False Discovery Rate for High-Dimensional Discrete Data**—◆Naomi Altman, Penn State University
- 2:20 p.m. **qMSAT: A Powerful Test for Multiple Rare Variants Association Studies That Incorporates Sequencing Qualities**—◆Z. John Daye, University of Pennsylvania; Hongzhe Li, University of Pennsylvania; Zhi Wei, New Jersey Institute of Technology
- 2:35 p.m. **dPeak: A Statistical Framework for Identifying Closely Spaced Protein-DNA Interaction Events Using ChIP-Seq Data**—◆Dongjun Chung, University of Wisconsin-Madison; Sunduz Keles, University of Wisconsin-Madison
- 2:50 p.m. **Kernel Machine-Based Testing for Gene-Gene Interactions in Genetic Association Studies**—◆Jennifer Clark; Michael C Wu, The University of North Carolina at Chapel Hill; Arnab Maity, North Carolina State University
- 3:05 p.m. **Resample Methods for Testing Genomic Region Significance**—◆David Swanson, Harvard University; Christoph Lange, Harvard School of Public Health
- 3:20 p.m. **A Distribution Theory for Predictive Correlation Coefficient in High-Dimensional Models and Its Implications for Genome-Wide Association**—◆Ju-Hyun Park, National Cancer Institute; Nilanjan Chatterjee, National Cancer Institute
- 3:35 p.m. **Normalization of Metabolomics Data**—◆Matthew Mitchell, Metabolon Inc.

249 CC-Room 29D **Selection and Classification for High-Dimensional Data—Contributed**

IMS, Section on Statistical Learning and Data Mining

Chair(s): Alexander Aue, University of California at Davis

- 2:05 p.m. **Classification Based on a Permanent Process with Cyclic Approximation**—◆Jie Yang, University of Illinois at Chicago; Klaus Miescke, University of Illinois at Chicago; Peter McCullagh, The University of Chicago
- 2:20 p.m. **Estimating Sparse Precision Matrices from Data with Missing Values**—◆Mladen Kolar, Carnegie Mellon University; Eric P. Xing, Carnegie Mellon University
- 2:35 p.m. **Sparse Mean Estimation in High-Dimensional Data**—◆Shota Katayama, Osaka University

Monday



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GENERAL PROGRAM SCHEDULE

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251 CC-Room 31C ■ Ecology and Vegetation Monitoring— Contributed

Section on Statistics and the Environment

Chair(s): Mark Greenwood, Montana State University

- 2:05 p.m. **In-Season Probabilistic Crop Yield Forecasting: Integrating Agro-Climatic, Remote Sensing, and Phenology Data**—◆ Nathaniel Newlands, Agriculture and Agri-Food Canada; David Sebastian Zamar, Agri-Environmental Services Branch, Agriculture and Agri-Food Canada
- 2:20 p.m. **Applying Multiple Testing Procedures to Detect Changes in East-African Vegetation Data**—◆ Nicolle Clements, Temple University; Sanat Sarkar, Temple University; Zhigen Zhao, Temple University
- 2:35 p.m. **Functional Factor Analysis for Periodic Remote Sensing Data**—◆ Chong Liu, Surajit Ray, Boston University; Giles Hooker, Cornell University; Mark Friedl, Boston University
- 2:50 p.m. **Dimensionality in National Scale Forest Inventories**—◆ Francis Roesch, USDA Forest Service
- 3:05 p.m. **Semiparametric Proportional Hazards Model with Spatially Correlated Random Effects, with an Application to the Survival of Loblolly Pine**—◆ Jie Li, Virginia Tech; Yili Hong, Virginia Tech; Ram Thapa, Virginia Tech; Harold E. Burkhart, Virginia Tech
- 3:20 p.m. **When Should a Tree Be Harvested?**—◆ Anders Muszta, Swedish University of Agricultural Sciences
- 3:35 p.m. **Random Fields and Statistical Models for Circuits**—◆ Ephraim Hanks, California State University; Mevin Hooten, Colorado State University

252 CC-Room 28A ■ Retention, Attrition, and Respondent Burden—Contributed

Section on Survey Research Methods

Chair(s): Shelton Jones, RTI International

- 2:05 p.m. **Predictors of Retention and Re-Engagement in the Health and Retirement Study**—◆ Mary Beth Ofstedal, University of Michigan; Mick Couper, University of Michigan; Kuang-Tsung Chen, University of Michigan
- 2:20 p.m. **Dynamics of Web Panel Attrition Across Cohorts, 2008–2010: A GfK-Knowledge Networks Case Study**—◆ Curtiss Cobb, GfK CRNA; Charles DiSogra, GfK CRNA; Erlina Hendarwan, GfK CRNA; Kristine Janus, GfK CRNA
- 2:35 p.m. **Measuring Attrition in Long-Term Longitudinal Surveys**—◆ Aref Dajani, U.S. Census Bureau; Toni Warner, U.S. Census Bureau; Toni Warner, U.S. Census Bureau

- 2:50 p.m. **Assessment Through Simulation of Respondent-Driven Sampling Estimates When Used in Telephone Survey Sampling**—◆ Jenny Yang, Carolina Survey Research Laboratory; Donglin Zeng, The University of North Carolina at Chapel Hill; Robert Agans, Carolina Survey Research Laboratory
- 3:05 p.m. **An Exploration of the Application of PLS Path Modeling Approach to Creating a Summary Index of Respondent Burden**—◆ Scott Fricker, Bureau of Labor Statistics; Lucilla Tan, Bureau of Labor Statistics; Craig Kreisler, Bureau of Labor Statistics
- 3:20 p.m. **Panel Conditioning: Changes in True Values vs. Changes in Self-Report**—◆ Ting Yan; Stephanie Eckman, Institute for Employment Research; Frauke Kreuter, Joint Program in Survey Methodology
- 3:35 p.m. **Methods for Responsive Split Questionnaire Panel Surveys**—◆ Jeffrey Gonzalez, Bureau of Labor Statistics

Contributed Poster Presentations 2:00 p.m.–3:50 p.m.

253 CC-Sails Pavilion Contributed Oral Poster Presentations: Biometrics — Contributed

Biometrics Section

Chair(s): William Hadjuk, San Diego State University

- 01: Inference on Bivariate Survival Data with Interval Sampling Through Kendall's Tau: Testing and Association Measure** — ◆ Hong Zhu, The Ohio State University; Mei-Cheng Wang, The Johns Hopkins University
- 02: Predicting the Lethal Phenotype of the Knockout Mouse by Integrating Comprehensive Genomic Data** —◆ Robyn Ball; Yuan Yuan, Baylor College of Medicine; Yanxun Xu, Rice University/MD Anderson Cancer Center; Jianfeng Xu, Alliance Data; Han Liang, MD Anderson Cancer Center
- 03: Interpreting Parameter Estimates That Distinguish Multilevel Effects in Oral Health Research** — ◆ David M Thompson, University of Oklahoma Health Sciences Center; Julie A Stoner, University of Oklahoma; Jeffrey B Payne, University of Nebraska
- 04: Quantile Regression for Responses Repeatedly Measured with Error** — ◆ Pedro Alejo Torres, North Carolina State University; Daowen Zhang, North Carolina State University; Huixia Judy Wang, North Carolina State University
- 05: Bivariate Marker Measurements and ROC Analysis** — ◆ Shanshan Li, The Johns Hopkins University; Mei-Cheng Wang, The Johns Hopkins University
- 06: Simulation Studies on the Analysis of Interval-Censored Survival Data with Differential Assessment Times** — ◆ Isao Yokota, University of Tokyo; Yutaka Matsuyama, University of Tokyo; Yasuo Ohashi, University of Tokyo



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- 07: Comparison of Several Confidence Intervals for Median Residual Lifetime with Left-Truncated and Right-Censored Data** — ◆ Tsung-Hsien Tsai, National Cheng Kung University; Yunchan Chi, National Cheng Kung University; Yi-Hsuan Tu, National Cheng Kung University; Wen-Yan Tsai, Columbia University
- 08: Empirical Likelihood Confidence Interval of a Difference in Upper Percentiles Between Two Groups** — ◆ Jihneeh Yu, SUNY at Buffalo; Albert Vexler, SUNY at Buffalo; Alan D Hutson, SUNY at Buffalo
- 09: Statistical Inference for the Treatment Effect in Functional AFT Model with Longitudinal Trajectories of Time-Varying Covariate** — ◆ Jincheng Shen, University of Michigan; Lu Wang, University of Michigan; Jeremy Michael George Taylor, University of Michigan
- 10: Internal Pilots for Cluster-Randomized Trials** — ◆ Ashutosh Ranjan, The University of Alabama at Birmingham; Leslie A McClure, The University of Alabama at Birmingham; Christopher S Coffey, University of Iowa
- 11: How Are Mouse Models Correlated to Human Cancers?** — ◆ Lianbo Yu, The Ohio State University; David Jarjoura, The Ohio State University
- 12: Integration of MicroRNA and mRNA by Weighted Gene Co-Expression Network Analysis** — ◆ Eileen Liao; David Elashoff, University of California at Los Angeles; Steve Horvath, University of California at Los Angeles
- 13: A Joint Latent Class Model of Survival and Longitudinal Data** — ◆ Yue Liu, University of Virginia; Lei Liu, Northwestern University; Jianhui Zhou, University of Virginia
- 14: Effect of Compliance Interaction in Factorial Design on Standard Noncompliance Methods** — ◆ Peter D Merrill, The University of Alabama at Birmingham; Leslie A McClure, The University of Alabama at Birmingham
- 15: siRNAs Mimic miRNAs to Rise Off-Target Effects in High-Throughput RNAi Screenings** — ◆ Rui Zhong, The University of Texas Southwestern Medical Center; Andy Xiao, The University of Texas Southwestern Medical Center; Michael White, The University of Texas Southwestern Medical Center; Yang Xie, The University of Texas Southwestern Medical Center
- 16: A Mallows Mixture Model for Event Sequences: Application to Partially Ranked Data** — ◆ Laurel Beckett, University of California at Davis; Erik Gregory, University of California at Davis
- 17: Accounting for Below Detection Limit Values in the Analysis of Metabolomic Data** — ◆ Philip Dixon, Iowa State University
- 18: Similarity Measurement of Array-Based Comparative Genomic Hybridization Data in Evaluation of Whole Genome Amplified DNA** — ◆ Ching-Wei Chang
- 19: A Comparison of Methods for Association Mapping of Nominal Responses with Rare Variants** — ◆ Janae Nicholson, Oklahoma State University; Lan Zhu, Oklahoma State University
- 20: Slope Estimation for Informatively Right-Censored Longitudinal Data Assuming a Nonconstant Survival Model for the Censoring Process: Application to Renal Transplant Patients** — ◆ Miran Jaffa, American University of Beirut; Ayad A. Jaffa, American University of Beirut
- 21: Survival-Supervised Latent Dirichlet Allocation Models for Genomic Cancer Research** — ◆ John A. Dawson, University of Wisconsin-Madison; Christina Kendzierski, University of Wisconsin-Madison
- 22: A Discriminant Function for Renal Inflammatory Activity Associated with Lupus Nephritis** — ◆ Alice Hinton, The Ohio State University; Haikady Nagaraja, The Ohio State University; Brad Rovin, The Ohio State University
- 23: Model Checking for Marginal Hazards Regression Model from Case-Cohort Studies with Multiple Disease Outcomes** — ◆ Sangwook Kang, University of Connecticut
- 24: Model-Based Stastical Approach for Paired-End ChIP-Seq** — ◆ Sangsoon Woo, Fred Hutchinson Cancer Research Center; Xuekui Zhang, The Johns Hopkins University; Raphael Gottardo, Fred Hutchinson Cancer Research Center
- 25: Using Genomic Data to Better Characterize Adverse Event Risk** — ◆ Robert Makowsky, FDA; Kirk Yancy Williams, FDA; Samir Lababidi, FDA
- 26: Testing the Equality of the Efficiencies of Two Correlated Outcome Measures in Clinical Trials** — ◆ Youngju Pak, University of Missouri-Columbia; John Hewett, University of Missouri-Columbia; Marian Minor, University of Missouri-Columbia; Nilotpal Sanyal, University of Missouri-Columbia
- 27: Modified Linear Discriminant Analysis** — ◆ Jin Hyun Nam; Donguk Kim, Sungkyunkwan University
- 28: A Method for Missing Data Problems in Epidemiologic Studies with Historical Exposure** — ◆ Xinbo Zhang, Oregon Health and Science University; Bryan Langholz, University of Southern California School of Medicine; Myles Cockburn, University of Southern California
- 29: Preprocessing of Analytical Profiles in the Presence of Nonrandom Missing Values in Mass Spectrometry Data** — ◆ Kyoungmi Kim, University of California at Davis; Uyenthao Nguyen, University of California at Davis; Sandra L Taylor, University of California at Davis
- 30: Hypothesis Testing with Small Sample Size Without Restricting Covariance Structure** — ◆ David Jarjoura, The Ohio State University; Xueliang Pan, The Ohio State University; Xiaobai Li, The Ohio State University
- 31: Multivariate Accelerated Failure Time Model with Generalized Estimating Equations** — ◆ Steven Chiou, University of Connecticut
- 32: A Powerful Multivariate Model for Multiple-Trait Genome-Wide Association Mapping** — ◆ Hung-Chih Ku, Oklahoma State University; Lan Zhu, Oklahoma State University
- 33: Logistic Regression Versus Discriminant Analysis: Empirical Simulations Investigating Prediction Performance in Biometrical Data** — ◆ Robert G. Downer, Grand Valley State University

Monday



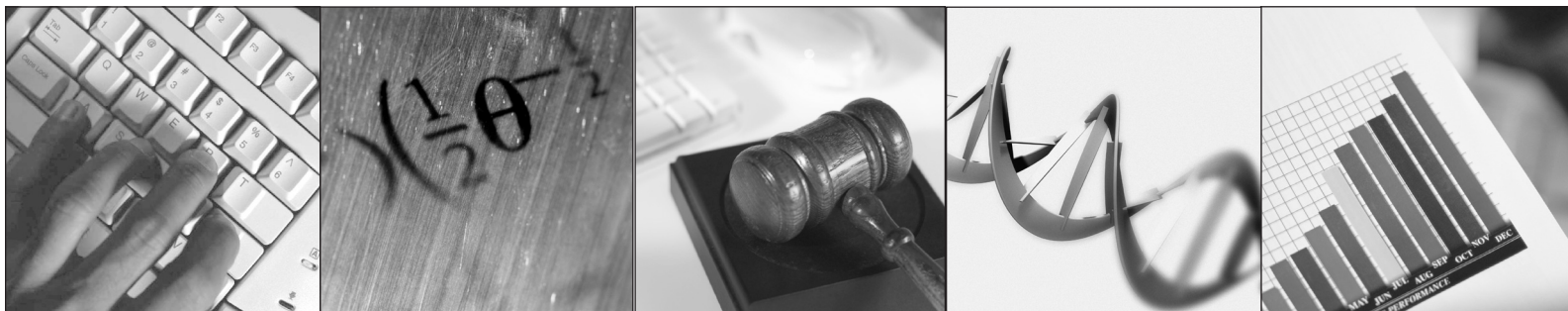
GENERAL PROGRAM SCHEDULE

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- 34: Pearsonian Estimation and Inference for a Model-Based Measure of Agreement** — ◆ Jie Gao, University of South Carolina; Donald George Edwards, University of South Carolina; Andrew Wood, University of Nottingham; Jayaram Sethuraman, Florida State University
- 35: Evaluation of Landmark-Based Face Recognition Using Bidimensional and Tridimensional Regression** — ◆ Kendra Schmid, University of Nebraska Medical Center
- 36: Multistage Sequence/Array Design** — ◆ Thomas J Hoffmann, University of California at San Francisco; John Witte, University of California at San Francisco
- 37: Transition of Abstinence and Relapse in Smokers Enrolled in a Randomized Trial** — ◆ Hung-Wen Yeh, Kansas University Medical Center; Edward F. Ellerbeck, University of Kansas Medical Center; Jonathan D. Mahnken, University of Kansas Medical Center
- 38: A Sequential Combined P-Value Test for Multiple Hypothesis Testing in Genomic Studies** — ◆ Shunpu Zhang, University of Nebraska; Huann-Sheng Chen, National Cancer Institute; Ruth Pfeiffer, National Cancer Institute
- 39: Planning the Sample Size of a Cluster Randomized Trial When the Primary Endpoint Is a Time to Event** — ◆ Antje Jahn-Eimermacher, University Medical Center, Mainz; Jim Robinson, University of Wisconsin-Madison; Andrew Quanbeck, University of Wisconsin-Madison; Dennis McCarty, Oregon Health and Science University
- 40: A Simulation Study to Compare Two Classes of Models for Analyzing Clustered Data with Informative Cluster Size** — ◆ Ana Maria Iosif, University of California at Davis
- 41: A Simple Pseudo-Maximum Likelihood Estimate for the Binormal ROC Curve** — ◆ Huining Kang, University of New Mexico; Edward J. Bedrick, University of New Mexico
- 42: Estimating Vaccine Efficacy Using Survival Analysis and a Validation Set for Outcomes** — ◆ Yanjun Chen, University of Washington; Yang Yang, University of Florida; Eben Kenah, University of Florida; M. Elizabeth Halloran, Fred Hutchinson Cancer Research Center
- 43: Statistical Methods for DNA Methylation Next-Generation Sequencing Data** — ◆ Gayla Olbricht, Missouri University of Science and Technology
- 44: Similarity-Based Marker-Set Association Tests for Gene-Environment Effects in Case-Control Studies** — ◆ Guolin Zhao, North Carolina State University; Daowen Zhang, North Carolina State University; Jung-Ying Tzeng, North Carolina State University
- 45: A Piece-Wise Exponential Model to Obtain Inverse Probability Censoring Weights (IPCW)** — ◆ Jie (Rena) Sun, University of Michigan; Douglas E Schaubel, University of Michigan; John Kalbfleisch, University of Michigan
- 46: An Application for Validating Cox Proportional Hazards Models** — ◆ Tristan Grogan, University of California at Los Angeles; David Elashoff, University of California at Los Angeles
- 47: Nonparametric Bootstrap Confidence Intervals for Variance Components in One-Way Random Effects Models** — ◆ Brent Burch, Northern Arizona University
- 48: Correcting Hypertension Prevalence Estimates for Terminal Digit Preference in Blood Pressure Readings** — ◆ Hao Wang, The Johns Hopkins University; Leslie A McClure, The University of Alabama at Birmingham; Ronald Prineas, Wake Forest School of Medicine; George Howard, The University of Alabama at Birmingham; Virginia J. Howard, The University of Alabama at Birmingham; Daniel F. Heitjan, University of Pennsylvania
- 49: An Extended GEE Model with Latent Variables for Brain fMRI Connectivity** — ◆ Lijun Zhang, Emory University; Ming Wang, Emory University; F. DuBois Bowman, Emory University
- 50: Measurement Error Models for Procrustes Shape Analysis** — ◆ Jiejun Du, University of South Carolina; Ian Dryden, University of South Carolina; Xianzheng Huang, University of South Carolina
- 51: Quantile Regression for Recurrent Gap Time Data** — ◆ Xianghua Luo, University of Minnesota; Chiung-Yu Huang, National Institute of Allergy and Infectious Diseases; Lan Wang, University of Minnesota
- 52: Chi-Square Test for Competing Risks Data** — ◆ Qing Yang, University of California at Los Angeles; Gang Li, University of California at Los Angeles
- 53: Time Dependence of Gene-Expression Signatures to Predict Breast Cancer Recurrence** — ◆ Kit Fun Lau, VitaPath Genetics
- 54: Forward Longitudinal Data Analysis with Application in Clinical Trials** — ◆ Haobo Ren, Regeneron Pharmaceuticals, Inc.; Qian Ren, University of Minnesota; Richard Wu, Regeneron Pharmaceuticals, Inc.; Yuhwen Soo, Regeneron Pharmaceuticals, Inc.
- 55: Regularized Multidimensional Functional Regression via Haar Wavelets with Application to PET Imaging** — ◆ Xuejing Wang, University of Michigan; Bin Nan, University of Michigan; Ji Zhu, University of Michigan
- 56: Robust Estimation Method for Finite Mixture of Poisson Mixed-Effect Models** — ◆ Kelvin Yau, City University of Hong Kong; Liming Xiang, Nanyang Technological University; Andy Lee, Curtin University
- 57: Investigating the General Guidelines for Modeling Extra-Dispersed Proportion Data Based on Some Competing Discrete Models** — ◆ Krishna Saha, Central Connecticut State University
- 58: Model-Free Prediction of Survival Probability with High-Dimensional Covariates** — ◆ Yuan Geng, North Carolina State University; Wenbin Lu, North Carolina State University; Hao Helen Zhang, North Carolina State University
- 59: Statistical Methods for Flow Cytometry Cross Sample Comparison** — ◆ Mengya Liu, Southern Methodist University

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- 60: Gaussian Variational Approximation for Overdispersed Generalized Linear Mixed Models** — ◆ Aklilu Habteab Ghebretinsae, I-Biostat; Geert Molenberghs, I-BioStat/Universiteit Hasselt/Katholieke Universiteit Leuven; Christel Faes, I-Biostat
- 61: Multiple Comparison Procedures for Voxelwise Genomewide Association Studies** — ◆ Wen-Yu Hua, Penn State University; Debashis Ghosh, Penn State University
- 62: The Hosmer-Lemeshow Goodness-of-Fit Test: Does the Grouping Really Matter?** — ◆ Hillary Rivera, University of Arkansas for Medical Sciences; Keith Williams, University of Arkansas for Medical Sciences; Zoran Bursac, University of Arkansas for Medical Sciences; Dave Hosmer, University of Massachusetts
- 63: Bayesian System Network Modeling of Multiple Sparse Replicates** — ◆ James Lawrence Norris, Wake Forest University; David John, Wake Forest University; Kristopher Patton, Wake Forest University

- 70: A Two-Step Composite Likelihood Approach with Data Fusion for Max-Stable Processes in Spatial Extremes Modeling**—◆ Hongwei Shang, University of Connecticut; Jun Yan, University of Connecticut; Xuebin Zhang, Environment Canada
- 71: Analysis of Driftwood Samples from Alaskan Villages**—◆ Jessica Chapman, St. Lawrence University
- 72: Developing Models of Large-River Fish Population Response to Global Climate Change Incorporating Downscaling and Predictive Uncertainty**—◆ Mark Wildhaber, U.S. Geological Survey; Christopher Wikle, University of Missouri; Christopher J Anderson, Iowa State University; Kristie J Franz, Iowa State University; Edward H Moran, U.S. Geological Survey; Rima Dey, University of Missouri-Columbia
- 73: A Lagrange Interpolation for Spatial Process**—◆ Cheng Liu, Purdue University; Hao Zhang, Purdue University
- 74: Statistical Analysis of Daily Relationships Among Temperature, Wind Speed, Humidity, Insolation, Downward Long Wave Radiation, and Rainfall in the Tao/Triton Data**—◆ Matthew Marler
- 75: Spatially Modeling Occupancy for Detection Data Collected Using Alternating Survey Methods**—◆ Katherine St. Clair, Carleton College; Jun Young Park, Carleton College; Brian Gray, U.S. Geological Survey
- 76: Global Spatial Modeling**—◆ John Aleong, University of Vermont
- 77: Nonstationary Modeling Through Dimension Expansion**—◆ Luke Bornn, University of British Columbia; Gavin Shaddick, University of Bath; Jim Zidek, University of British Columbia
- 78: Bivariate Quantile Regression**—◆ Luke Smith, North Carolina State University; Montserrat Fuentes, North Carolina State University; Brian Reich, North Carolina State University

254 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Statistics and the Environment— Contributed

Section on Statistics and the Environment

Chair(s): William Hadjuk, San Diego State University

Section on Statistics and the Environment

- 64: A Stabilized and Versatile Spatial Prediction Method**—◆ Chun-Shu Chen, National Changhua University of Education
- 65: Bayesian Estimates of Shrubs Species Diversity in Arid Rangelands Under Two Grazing Management Systems in Northern Syria**—◆ Murari Singh, ICARDA; Abdoul Aziz Niane, ICARDA; Paul Struik, Wageningen University
- 66: Redistribution of Escherichia Coli in Intact Soil Macro-Aggregates Using Multivariate Analysis**—◆ Wei Wang, Vanderbilt University; Alexandra Kravchenko, Michigan State University; Timothy Johnson, Michigan State University; Sangeetha Srinivasan, Michigan State University; Alvin Smucker, Michigan State University; Mark Rivers, Argonne National Lab
- 67: Simulation Models for Ambient Water Quality Criteria for Dissolved Oxygen**—◆ Koji Kanefuji, The Institute of Statistical Mathematics; Ryo Akaishi, The Institute of Statistical Mathematics; Kosei Iwase, Yokohama College of Pharmacy; Mitsumasa Okada, The Open University of Japan
- 68: Cluster Analysis of Elemental Composition of Personal, Indoor, and Outdoor PM2.5 Mass Concentrations**—◆ Jenny Chen, University of Cincinnati; Marepalli Rao, University of Cincinnati; Patrick H. Ryan, Cincinnati Children's Hospital Medical Center
- 69: Random Forests vs. Markov Random Fields for Land-Cover Classification**—◆ Jason Stover, Georgia College

Invited Sessions 4:00 p.m.–5:50 p.m.

255 CC-Ballroom 20AB ASA President's Invited Address—Invited

ASA, ENAR, IMS, SSC, International Indian Statistical Association, International Chinese Statistical Association, UNAR

Chair(s): Robert N. Rodriguez, SAS Institute

4:05 p.m. Alan Krueger, White House Council of Economic Advisors



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

9:00 a.m.–5:30 p.m. CC-Sails Pavilion
American Statistical Association Booth #401

9:00 a.m.–5:30 p.m. CC-Sails Pavilion
ASA Marketplace

12:00 p.m.–1:30 p.m. HQ-Sapphire 400
***Journal of Agricultural, Biological, and Environmental Statistics* Editorial Board Meeting**
Chair(s): Montserrat Fuentes, North Carolina State University

12:30 p.m.–1:30 p.m. CC-Room 30E
Informal Meeting on ASA Accreditation
Chair(s): Iain M. Johnstone, Stanford University

12:30 p.m.–2:00 p.m. HQ-Sapphire 412
Deming Committee Luncheon
Chair(s): Pam Craven, ASA; A Blanton Godfrey, North Carolina State University

12:30 p.m.–2:00 p.m. HQ-Aqua 309
JCGS Management Committee Meeting
Chair(s): Roy Welsch, MIT

12:30 p.m.–2:00 p.m. HQ-Sapphire 402
***Biostatistics Journal* Editorial Board Meeting**
Organizer(s): Anastasios Tsiatis, North Carolina State University

12:30 p.m.–2:00 p.m. HQ-Sapphire Boardroom
JQAS Editorial Panel Meeting
Organizer(s): Jim Albert, Bowling Green State University

12:30 p.m.–2:00 p.m. HQ-Aqua 300
JASA Editorial Board Associate Editors Lunch
Chair(s): Hal Stern, University of California at Irvine

12:30 p.m.–2:00 p.m. HQ-Aqua Boardroom
AOS Editors Luncheon
Chair(s): Elyse Gustafson, IMS

12:30 p.m.–2:30 p.m. HQ-Aqua 308
***The American Statistician* Editors Lunch**
Chair(s): Ronald Christensen, University of New Mexico

12:30 p.m.–4:30 p.m. HQ-Aqua 310
RAB/RECOM Luncheon Meeting
Organizer(s): Dan Heitjan, ENAR; Karen Bandeen-Roche, ENAR

2:00 p.m.–3:30 p.m. HQ-Aqua 305
Council of Chapters Traveling Course Committee Meeting
Chair(s): Anwar Hossain, Eli Lilly and Company

3:00 p.m.–4:00 p.m. HQ-Cobalt 500
'Big Data' Work Force Issues
Organizer(s): Lance Waller, National Cancer Institute; Michelle Dunn, National Cancer Institute; Nandini Kannan, National Science Foundation

4:00 p.m.–5:30 p.m. CC-Room 27A
Section on Statistical Learning and Data Mining Business Meeting
Chair(s): David Banks, Duke University

4:00 p.m.–5:30 p.m. HQ-Aqua 309
Caucus for Women in Statistics Business Meeting and Social
Organizer(s): J Lynn Palmer, MD Anderson Cancer Center

4:00 p.m.–5:30 p.m. CC-Room 33C
Biometrics Editorial Board Meeting
Organizer(s): Marie Davidian, North Carolina State University

4:00 p.m.–5:30 p.m. CC-Room 23A
DIA Bayesian Scientific Working Group
Organizer(s): Karen Price, Eli Lilly and Company

4:00 p.m.–5:30 p.m. HQ-Aqua Foyer West
Committee on Applied Statisticians Social Mixer
Chair(s): Jennifer Gauvin, GlaxoSmithKline

4:00 p.m.–6:00 p.m. HQ-Aqua 300
Council of Chapters Officer Appreciation Reception and Workshop
Chair(s): Dan Kasprzyk, NORC

4:30 p.m.–6:00 p.m. HQ-Aqua 307
Statistics in Mental Health Research Interest Group Business Meeting and Mixer
Chair(s): Naihua Duan, Columbia University

4:30 p.m.–6:00 p.m. HQ-Aqua 308
Statistics Without Borders Business Meeting
Chair(s): Gary M. Shapiro, Statistics Without Borders

4:30 p.m.–6:00 p.m. HQ-Sapphire Boardroom
Centers for AIDS Research Statisticians Annual Meeting
Organizer(s): Susan Ellenberg, University of Pennsylvania

4:30 p.m.–6:30 p.m. HQ-Sapphire MN
Section for Statistical Programmers and Analysts Business Meeting
Chair(s): Colin Chen, Wells Fargo

5:30 p.m.–6:30 p.m. CC-Room 21
2014 JSM Program Committee Orientation Meeting
Chair(s): Jean Opsomer, Colorado State University



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

5:30 p.m.–7:00 p.m. HQ-Aqua 305
Section on Government Statistics Business Meeting
 Chair(s): Brian Harris-Kojetin, U.S. Office of Management and Budget

6:00 p.m.–7:30 p.m. HQ-Sapphire Green Room
Rice University Department of Statistics Reception
 Organizer(s): Katherine Bennett Ensor, Rice University

5:30 p.m.–7:00 p.m. HQ-Sapphire EF
IMS Member Social
 Organizer(s): Elyse Gustafson, IMS

6:00 p.m.–7:30 p.m. HQ-Sapphire L
Joint Sections on Statistics in Defense and Risk Analysis Reception
 Chair(s): Alexandra Kapatou, American University

5:30 p.m.–7:00 p.m. HQ-Sapphire 402
Section on Statistics in Epidemiology Young Investigator Awards Ceremony
 Chair(s): Melissa Begg, Columbia University

6:00 p.m.–7:30 p.m. HQ-Sapphire Foyer South
ASA Committee on Minorities Business Meeting and Networking Reception
 Chair(s): Brian Millen, Eli Lilly and Company

5:30 p.m.–7:00 p.m. HQ-Sapphire 400
Committee on Gay and Lesbian Concerns in Statistics Business Meeting and Social
 Chair(s): Lillian Lin, CDC

6:00 p.m.–8:00 p.m. HQ-Sapphire 412
University of Wisconsin-Madison Welcome Reception
 Organizer(s): Brian Yandell, University of Wisconsin-Madison

5:30 p.m.–7:30 p.m. HQ-Sapphire B
Joint Q&P/SPES Business Meeting and Mixer
 Chair(s): Angela Dean, The Ohio State University/Southampton University

6:00 p.m.–8:30 p.m. HQ-Aqua 310
Columbia University, Department of Statistics and Biostatistics Joint Reception
 Organizer(s): David Madigan, Columbia University

5:30 p.m.–7:30 p.m. HQ-Sapphire JJ
Section on Statistical Consulting Business Meeting
 Chair(s): Ralph O'Brien, Case Western Reserve University

6:00 p.m.–9:00 p.m. HQ-Sapphire C
North Carolina State University Reception for Department and Friends
 Organizer(s): Montserrat Fuentes, North Carolina State University

5:30 p.m.–7:30 p.m. HQ-Sapphire H
Section on Bayesian Statistical Science Business Meeting and Reception/Mixer
 Chair(s): Robert E Weiss, University of California at Los Angeles Fielding School of Public Health

7:00 p.m.–8:00 p.m. HQ-Aqua Terrace Foyer
HSPH Reception in Honor of Dr. Marvin Zelen

5:30 p.m.–7:30 p.m. HQ-Sapphire A
Biopharmaceutical Section Business Meeting
 Chair(s): Steve Guylas, Optum, Inc.

9:30 p.m.–12:00 a.m. CC-Ballroom D
JSM Dance Party and Lounge, Sponsored by IBM

6:00 p.m.–7:00 p.m. HQ-Aqua Boardroom
STAT-HAWKERS Model-Assisted Statistics and Applications
 Organizer(s): Sarjinder Singh, Texas A&M University at Kingsville

Technology Theaters

11:00 a.m.–11:45 a.m. CC-Sails Pavilion Tech1
Ask the Experts
 IBM

6:00 p.m.–7:00 p.m. HQ-Sapphire 411
Section on Nonparametric Statistics Reception and Business Meeting
 Chair(s): Raymond Carroll, Texas A&M University

12:00 p.m.–12:45 p.m. CC-Sails Pavilion Tech1
Introduction to Simulation Modeling (Monte-Carlo Simulation)
 IBM

6:00 p.m.–7:30 p.m. HQ-Aqua 304
Taylor & Francis Author/Editor Appreciation Reception
 Organizer(s): Joanna Knight, CRC Press/Taylor & Francis Group

1:00 p.m.–1:45 p.m. CC-Sails Pavilion Tech2
Getting the Most Out of R with Rstudio
 Rstudio

6:00 p.m.–7:30 p.m. HQ-Sapphire D
University of Michigan Biostatistics/Statistics Alumni Reception
 Organizer(s): Trivellore Raghunathan, University of Michigan

1:00 p.m.–1:45 p.m. CC-Sails Pavilion Tech3
How to Deal with Missing Data: SOLAS for Missing Data Analysis
 Stat Solutions

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

3:00 p.m.–3:45 p.m. CC-Sails Pavilion Tech1

IBM SPSS Programmability

IBM

3:00 p.m.–3:45 p.m. CC-Sails Pavilion Tech2

Mastering Statistics, Making a Difference

Hawkes Learning Systems

4:00 p.m.–4:45 p.m. CC-Sails Pavilion Tech3

ADDPLAN PE: Innovative Software for Population

Enrichment Designs in Adaptive Clinical Trials

Aptiv Solutions

4:00 p.m.–4:45 p.m. CC-Sails Pavilion Tech1

New Features Added in the Recent Versions of SPSS

Statistics

IBM

Continuing Education (Fee Events)

CE_19C

Design and Analysis of Biomarker Studies for Risk Prediction

8:00 a.m.–12:00 p.m. HQ-Indigo €

ASA, Biometrics Section

Instructor(s): Tianxi Cai, Harvard University; Yingye Zheng, Fred Hutchinson Cancer Research Center

CE_20C

Bayesian Clinical Trials

8:30 a.m.–5:00 p.m. HQ-Indigo BF

ASA, Section on Bayesian Statistical Science

Instructor(s): Scott Berry, Berry Consultants; Kert Viele, Berry Consultants

CE_21C

An Introduction to Statistical Learning

8:30 a.m.–5:00 p.m. HQ-Indigo A

ASA, Section on Statistical Learning and Data Mining

Instructor(s): Gareth James, University of Southern California; Yufeng Liu, The University of North Carolina at Chapel Hill

CE_22C

Generalized Additive Models and Their Extensions: The Penalized Regression Spline Approach

8:30 a.m.–5:00 p.m. HQ-Indigo 206

ASA, Section on Physical and Engineering Sciences

Instructor(s): Simon Wood, University of Bath

CE_23C

Design and Analysis of Noninferiority Trials

8:30 a.m.–5:00 p.m. HQ-Indigo 204

ASA, Biopharmaceutical Section

Instructor(s): Brian Wiens, Alcon Laboratories

CE_24C

Principles and Applications of Multivariate Analysis

8:30 a.m.–5:00 p.m. HQ-Indigo 202A

ASA

Instructor(s): Peter Bajorski, Rochester Institute of Technology

CE_25C

Analysis of Overdispersed Data Using SAS

8:30 a.m.–5:00 p.m. HQ-Indigo 202B

ASA

Instructor(s): Jorge Morel, The Procter & Gamble Company; Nagaraj K. Neerchal, University of Maryland Baltimore County

CE_26C

Simulation and Sampling of Data

1:00 p.m.–5:00 p.m. HQ-Indigo €

ASA, Section for Statistical Programmers and Analysts

Instructor(s): Rick Wicklin, SAS Institute

A.M. Roundtables 7:00 a.m.–8:15 a.m.

256

CC-Ballroom D

Biopharmaceutical Section A.M. Roundtable Discussion (fee event)

Biopharmaceutical Section

Organizer(s): Estelle Russek-Cohen, FDA/CBER

TL01 Careers as a Statistician in FDA/Pharmaceutical Industry—◆ Jingjing Ye, FDA

TL02 Reproducible Research—◆ Estelle Russek-Cohen, FDA/CBER

TL03 Statistical Issues in Designing Noninferiority Studies with an Emphasis on Veterinary Medical Issues—◆ Anna Nevius, FDA/CVM

257

CC-Ballroom D

Section on Statistical Programmers and Analysts A.M. Roundtable Discussion (fee event)

Section for Statistical Programmers and Analysts

Organizer(s): Nancy Petersen, Department of Veterans Affairs

TL04 One-Button Builds: From Data to Analysis to Reports—◆ Megan Price, Benetech

258

CC-Ballroom D

Section on Health Policy Statistics A.M. Roundtable Discussion (fee event)

Health Policy Statistics Section

Organizer(s): Ofer Harel, University of Connecticut

TL29 Methods for Analyzing Patient-Reported Outcomes—◆ Kelly Zou, Pfizer Inc.



● Themed Session ■ Applied Session ◆ Presenter

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259 CC-Ballroom D
Section on Quality and Productivity A.M. Roundtable Discussion (fee event)

Quality and Productivity Section

Organizer(s): Willis Jensen, W.L. Gore and Associates

TL05 Common Misconceptions in Response Surface Modeling—◆ Thomas Bzik, Air Products and Chemicals

260 CC-Ballroom D
Section on Statistical Consulting A.M. Roundtable Discussion (fee event)

Section on Statistical Consulting

Organizer(s): Nancy Hu, University of Utah

TL06 Displaying the Result and Recognizing Consulting Effort in Analyzing High-Dimensional Temporal and Spatial Correlated Data Set—◆ Hyun Kim, University of California at Los Angeles

261 CC-Ballroom D
Section on Statistical Education A.M. Roundtable Discussion (fee event)

Section on Statistical Education

TL07 Statistics Education for Graduate Nursing Students—◆ Matt Hayat, Rutgers University

TL08 Using Screencasting to Enhance Student Learning of Statistics—◆ Brenda Gunderson, University of Michigan

262 CC-Ballroom D
Section on Statistics in Epidemiology A.M. Roundtable Discussion (fee event)

Section on Statistics in Epidemiology

Organizer(s): Jing Cheng, University of California at San Francisco School of Dentistry

TL09 Gerontologic Biostatistics: Merging Aging Research and Analytic Methods—◆ Alden Gross, Institute of Aging Research; Heather Allore, Yale University

263 CC-Ballroom D
Section on Teaching of Statistics in the Health Sciences A.M. Roundtable Discussion (fee event)

Section on Teaching of Statistics in the Health Sciences

Organizer(s): Felicity Enders, Mayo Clinic

TL10 Observational Studies and Epidemiological Thinking: Interpreting Health Studies Based on Observational Data—◆ Jareen Meinzen-Derr, Cincinnati Children's Hospital Medical Center

Special Presentation 8:30 a.m.–10:20 a.m.

264 HQ-Sapphire MN
Introductory Overview Lecture: Sparsity in Modern High-Dimensional Statistics—Other

ASA, ENAR, IMS, International Chinese Statistical Association, International Indian Statistical Association, SSC, WUNAR

Organizer(s): Yoonkyung Lee, The Ohio State University

Chair(s): Yoonkyung Lee, The Ohio State University

8:35 a.m. **Sparsity in Modern High-Dimensional Statistics—◆ David Donoho, Stanford University**

10:00 a.m. **Floor Discussion**

Invited Sessions 8:30 a.m.–10:20 a.m.

265 CC-Room 25A
Visualizing and Interacting with Data Over the Web—Invited

Section on Statistical Graphics, Biopharmaceutical Section, Section on Statistical Education, Section for Statistical Programmers and Analysts, Section on Statistical Computing

Organizer(s): Michael J Kane, Yale Center for Analytical Sciences

Chair(s): Michael J Kane, Yale Center for Analytical Sciences

8:35 a.m. **Interactive Web-Based Visualization with R and Websockets—◆ Bryan Wayne Lewis, Kent State University**

9:05 a.m. **Enhancing Web Pages with R in the Browser—◆ Gabriel Michael Becker, University of California at Davis; Duncan Temple Lang, University of California at Davis**

9:35 a.m. **Statistical Graphics in Clojurescript—◆ Kevin Lynagh, Keming Labs**

10:05 a.m. **Floor Discussion**

266 HQ-Sapphire IJ
Innovative Statistical Methods and Applications—Invited

International Indian Statistical Association, Biopharmaceutical Section, Statistics Surveys Online Journal

Organizer(s): Devan Mehrotra, Merck Research Laboratories

Chair(s): Devan Mehrotra, Merck Research Laboratories

8:35 a.m. **Innovative Statistical Methods and Applications—◆ Bradley Efron, Stanford University**

Tuesday



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

271 HQ-Sapphire D **■ Approaches for Predicting a Species' Geographic Distribution Based on Presence-Only Records and Background Data—Invited**

Section on Statistics and the Environment, International Indian Statistical Association

Organizer(s): Robert Dorazio, U.S. Geological Survey

Chair(s): Robert Dorazio, U.S. Geological Survey

- 8:35 a.m. **An Analysis of Approaches to Presence-Only Data**—◆ Trevor Hastie, Stanford University; Will Fithian, Stanford University
- 9:00 a.m. **Predicting the Geographic Distribution of a Species from Presence-Only Data Subject to Detection Errors**—◆ Robert Dorazio, U.S. Geological Survey
- 9:25 a.m. **Unifying Presence-Only Analysis Methods in Ecology**—◆ David Iain Warton, University of New South Wales; Ian Walton Renner, University of New South Wales
- 9:50 a.m. Disc: John Fieberg, Minnesota Department of Natural Resources
- 10:10 a.m. **Floor Discussion**

272 HQ-Sapphire H **■ ● Do Psychotropic Drugs Cause Suicide? Propensity Score—Matching Strategies—Invited**

Section on Statistics in Epidemiology, Section on Risk Analysis, International Indian Statistical Association, Social Statistics Section, Statistics in Mental Health Research

Organizer(s): Sue M Marcus, Columbia University

Chair(s): Sue M Marcus, Columbia University

- 8:35 a.m. **JSM Invited Session: Andy Leon Memorial**—Andrew Leon; ◆ Donald Hedeker, University of Illinois at Chicago
- 9:00 a.m. **Causal Link Between Antiepileptic Drugs and Suicide Attempts: A Propensity Score Matching Analysis in Patients with Bipolar Disorder**—◆ Bo Lu, The Ohio State University
- 9:25 a.m. **Caution Should Be Used in Applying Propensity Scores Estimated in a Full Cohort to Adjust for Confounding in Subgroup Analyses**—◆ Sue M Marcus, Columbia University; Robert D Gibbons, The University of Chicago
- 9:50 a.m. Disc: Naihua Duan, Columbia University
- 10:10 a.m. **Floor Discussion**

273 CC- Room 33B **Resampling and Related Methods in Time Series and Econometrics—Invited**

Business and Economic Statistics Section, SSC, Section on Statistical Computing, International Indian Statistical Association, Section on Government Statistics

Organizer(s): Xiaofeng Shao, University of Illinois at Urbana-Champaign

Chair(s): Yinxiao Huang, University of Illinois at Urbana-Champaign

- 8:35 a.m. **Subsampling Inference for the Autocovariances of Heavy-Tailed Long-Memory Time Series**—◆ Tucker McElroy, U.S. Census Bureau
- 9:05 a.m. **Bootstrapping Factor-Augmented Regression Models**—◆ Silvia Goncalves, Universite de Montreal; Perron Benoit, Universite de Montreal
- 9:35 a.m. **A New Version of Blockwise Empirical Likelihood for Time Series**—Soumen Lahiri, Texas A&M University; ◆ Dan Nordman, Iowa State University
- 10:05 a.m. **Floor Discussion**

274 HQ-Sapphire A **● Blackwell Memorial Session—Invited**

Memorial

Organizer(s): Steven MacEachern, The Ohio State University

Chair(s): Steven MacEachern, The Ohio State University

- 8:35 a.m. **Blackwell's Contributions to Probability Theory**—◆ Erhan Cinlar, Princeton University; Jim Pitman, University of California at Berkeley
- 9:00 a.m. **The Impact of Blackwell's Work on Queueing Theory**—◆ William A. Massey, Princeton University
- 9:25 a.m. **Blackwell's Work on Games and Measure**—◆ Richard Lockhart, Simon Fraser University
- 9:50 a.m. **The Relationship Between Reliable Feedback Communication and Nonlinear Filter Stability**—◆ Todd Coleman, University of California at San Diego
- 10:15 a.m. **Floor Discussion**

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Topic-Contributed Sessions 8:30 a.m.–10:20 a.m.

275 CC-Room 29A

■ ● Statistical Methods in Specific Disease States—Topic-Contributed

Biometrics Section, Biopharmaceutical Section, Section on Statistics in Epidemiology

Organizer(s): Vatsala V Karwe, Novo Nordisk Inc.

Chair(s): Vatsala V Karwe, Novo Nordisk Inc.

- 8:35 a.m. **Evaluation of Sample Size for Noninferiority Survival Clinical Trials in Endocrine Therapies—** ◆Naum M. Khutoryansky, Novo Nordisk Inc.
- 8:55 a.m. **Statistical Methods for Comparing Prostate Cancer Treatment Options Using the Seer-Medicare Cohort—**◆Dirk Moore, University of Medicine and Dentistry of New Jersey School of Public Health; Yong Lin, University of Medicine and Dentistry of New Jersey; Weichung Joe Shih, University of Medicine and Dentistry of New Jersey
- 9:15 a.m. **Confounding of Post-Study Treatment in Survival Analysis—**◆Yanping Wang; Min Zhang, University of Michigan
- 9:35 a.m. Disc: Soumi Lahiri, GlaxoSmithKline
- 9:55 a.m. Disc: Anwar Hossain, Eli Lilly and Company
- 10:15 a.m. **Floor Discussion**

276 CC-Room 25C

■ Generalized Inference and Fiducial Inference: Methodological Developments and Applications—Topic-Contributed

General Methodology, International Indian Statistical Association

Organizer(s): Thomas Mathew, University of Maryland Baltimore County

Chair(s): Thomas Mathew, University of Maryland Baltimore County

- 8:35 a.m. **Gene Sequence Analysis Using Multinomial Model and Generalized Fiducial Inference—**◆Wen Jenny Shi, The University of North Carolina at Chapel Hill; Corbin D. Jones, The University of North Carolina at Chapel Hill; Jan Hannig, The University of North Carolina at Chapel Hill
- 8:55 a.m. **Generalized Point Estimation with Application to Mixed Models—**◆Samaradasa Weerahandi, Pfizer Inc.
- 9:15 a.m. **Some Applications of Generalized Inference Approach—**◆Lili Tian, SUNY at Buffalo
- 9:35 a.m. **Fiducial Inference for Some Discrete Distributions—**◆Kalimuthu Krishnamoorthy, University of Louisiana at Lafayette

9:55 a.m. Disc: Xiao-Hua (Andrew) Zhou, University of Washington

10:15 a.m. **Floor Discussion**

277 CC-Room 29B

● The Efficient Analysis of Existing Genetic and Genomic Data—Topic-Contributed

Biometrics Section, Section on Statistics in Epidemiology, International Indian Statistical Association

Organizer(s): William C.L. Stewart, Columbia University

Chair(s): Shuang Wang, Columbia University

- 8:35 a.m. **Kernel Approaches for Detecting Interaction Effects in Complex Human Traits—**◆Michael Epstein, Emory University
- 8:55 a.m. **Identifying Carriers of CNVs from the Genotype Intensities of Related Individuals—**◆William C.L. Stewart, Columbia University
- 9:15 a.m. **An Integrative Genomics Approach for Identifying Methylation-Mediated eQTLs—**◆Karen Conneely
- 9:35 a.m. **A Broad Class of Efficient Tests of Association That Combine Family-Based and Case-Control Tests of Association—**◆Jane Cerise, Columbia University; William C.L. Stewart, Columbia University
- 9:55 a.m. **Obtaining Accurate P-Values from SNP-Based Linkage Scans—**◆Ryan Subaran, Columbia University; William C.L. Stewart, Columbia University
- 10:15 a.m. **Floor Discussion**

278 CC-Room 28D

■ Multiplicity Issues Using Adaptive Design in Clinical Trials—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Xuedong Chi, Millennium: The Takeda Oncology Company

Chair(s): Michael Pickard, Millennium: The Takeda Oncology Company

- 8:35 a.m. **Testing Efficacy for Multiple Endpoints in Clinical Trials That Allow Sample Size Adaptation—**◆Yi Liu, Millennium: The Takeda Oncology Company; Mingxiu Hu, Millennium Pharmaceuticals, Inc.
- 8:55 a.m. **Adaptive Methods Exploiting Connections Between Permutation Tests and Parametric Procedures—**◆Michael Proschan, National Institutes of Health
- 9:15 a.m. **Weighted Adaptive Closed Tests for Clinical Trials Testing Complex Multiple Hypotheses—**◆Florian Klingmueller, Medical University of Vienna; Martin Posch, European Medicines Agency; Franz Koenig,
- 9:35 a.m. Disc: Mingxiu Hu, Millennium Pharmaceuticals, Inc.



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

9:55 a.m. Disc: Mark Chang, AMAG Pharmaceuticals, Inc.
10:15 a.m. **Floor Discussion**

279 CC-Room 30C ■ ● Optimal Designs for Nonlinear Regression Models with Applications—Topic-Contributed

IMS, Quality and Productivity Section

Organizer(s): Holger Dette, Ruhr-Universität Bochum

Chair(s): Holger Dette, Ruhr-Universität Bochum

8:35 a.m. **Experimental Designs for Functional MRI with Compound Stimulus**—◆Ming-Hung Kao, Arizona State University

8:55 a.m. **Dose-Finding Studies with an Active Control**—◆Katrin Kettelhake, Ruhr-Universität Bochum; Holger Dette, Ruhr-Universität Bochum

9:15 a.m. **Optimal Allocation to Treatment Groups Under Variance Heterogeneity**—◆Hans Nyquist, Stockholm University; Ellinor Fackle-Fornius, Stockholm University

9:35 a.m. **Metaheuristic Algorithms for Finding Optimal Experimental Designs**—◆Weng-Kee Wong, University of California at Los Angeles Fielding School of Public Health; Ray-Bing Chen, National Cheng Kung University; Weichung Wang Wang, National Taiwan University; Chien-Chih Huang, National Taiwan University

9:55 a.m. **Multiplicative Algorithms: Why Do They Converge, and How to Make Them Faster**—◆Yaming Yu, University of California at Irvine

10:15 a.m. **Floor Discussion**

280 CC-Room 30B Ranked Set Sampling—Topic-Contributed

Section on Nonparametric Statistics, Section on Survey Research Methods

Organizer(s): Sherry Wang, Southern Methodist University

Chair(s): Kaushik Ghosh, University of Nevada, Las Vegas

8:35 a.m. **Bootstrap Confidence Bands for the CDF Using Ranked-Set Sampling**—◆Jesse Frey, Villanova University

8:55 a.m. **Isotonic Mean Estimator for the Judgement-Post Stratified Samples**—◆Johan Lim, Seoul National University; Soohyun Ahn, Seoul National University; Sherry Wang, Southern Methodist University; Min Chen, The University of Texas Southwestern Medical Center at Dallas

9:15 a.m. **Optimal Allocation for the Mean of the Paired Ranked Set Samples**—◆Tao Li, Peking University

9:35 a.m. **Ranked Set Sampling and Its Applications in Educational Statistics**—◆Holly Stovall; Lynn Stokes, Southern Methodist University; Sherry Wang, Southern Methodist University

9:55 a.m. **The Discarded Information of Ranked-Set Sampling and Judgment Post-Stratification**—◆Anthony Sgambellone, University of Akron; Omer Ozturk, The Ohio State University; Elizabeth Stasny, The Ohio State University

10:15 a.m. **Floor Discussion**

281 CC-Room 29C ■ ● Statistical Issues in Evaluation of Therapeutic Devices and Diagnostics—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Weihua Cao, FDA

Chair(s): Weihua Cao, FDA

8:35 a.m. **Development of Fast, Slim, and Accurate Amplicon Variant Detection Algorithm for Next-Generation Sequencing**—◆Wei-Min Liu, Roche Molecular Systems, Inc.; Yan Li, Roche Molecular Systems, Inc.

8:55 a.m. **Comparison of Confidence Intervals and Operating Characteristics for Generalized Models of Standardized Incidence Rates**—◆John Evans, Boston Scientific Corporation; Sarah Chiodi, Boston Scientific Corporation; Wen Ding, Boston Scientific Corporation; Vivek Pradhan, Boston Scientific Corporation

9:15 a.m. **Using Local Likelihood Density Estimation for Bias Correction at and Near a Boundary in the Context of Diagnostic Test Evaluation**—◆Norberto Pantoja, FDA; Mary E Thompson, University of Waterloo

9:35 a.m. **Sample Size Calculation and Data Analysis Given Endpoint Choice in Studies of Continuous Glucose Monitors**—◆Chava Zibman, FDA

9:55 a.m. Disc: Samir Lababidi, FDA

10:15 a.m. **Floor Discussion**

282 CC-Room 21 ■ ● Challenges of Continuing a Longitudinal Study After a Long Hiatus: The Project Talent Example—Topic-Contributed

Social Statistics Section, Section on Survey Research Methods, Biopharmaceutical Section, Section on Statistics in Epidemiology

Organizer(s): Michael P. Cohen, American Institutes for Research

Chair(s): Susan J. Lapham, American Institutes for Research

8:35 a.m. **Overview of Project Talent**—Leslie Scott, American Institutes for Research; ◆Jizhi Zhang, American Institutes for Research; Sandy Eyster, American Institutes for Research

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 8:55 a.m. **Determinates of Tracking Success After an Extended Hiatus: Results from the Project Talent Pilot Test**—◆ Celeste Stone, American Institutes for Research; Jenny Bandyk, University of Michigan Survey Research Center
- 9:15 a.m. **Methods for Linking Administrative Records When Unique Identifiers Are Not Available: Using Project Talent and the Death Master File**—Christopher Plotts, American Institutes for Research; ◆ Amber Noel, American Institutes for Research; Ashley Kaiser, American Institutes for Research; Shaun Posey, American Institutes for Research; Samantha Neiman, American Institutes for Research
- 9:35 a.m. **Examining the Effects of Differential Coverage of Four Mortality Record Sources**—◆ Sandy Eyster, American Institutes for Research; Celeste Stone, American Institutes for Research; Susan J. Lapham, American Institutes for Research
- 9:55 a.m. Disc: John Mcardle, University of Southern California
- 10:15 a.m. **Floor Discussion**

283 CC-Room 31A

■ ● Recent Advances in the Analysis of Medical Cost Data—Topic-Contributed

Health Policy Statistics Section, Section on Government Statistics

Organizer(s): Lei Liu, Northwestern University

Chair(s): John Kalbfleisch, University of Michigan

- 8:35 a.m. **A Flexible Model for the Mean and Variance Functions, with Application to Medical Cost Data**—◆ Lei Liu, Northwestern University; Jinsong Chen, Northwestern University; Daowen Zhang, North Carolina State University; Tina Shih, The University of Chicago
- 8:55 a.m. **Average Cost-Effectiveness Ratio with Censored Data**—◆ Heejung Bang, University of California at Davis; Hongwei Zhao, Texas A&M University
- 9:15 a.m. **Fitting Heavy-Tailed Distributions to Health Care Utilization by Parametric and Bayesian Methods**—◆ Joseph C Gardiner, Michigan State University; Zhehui Luo, Michigan State University; Xiaoqin Tang, Geisinger Health System; RV Ramamoorthi, Michigan State University
- 9:35 a.m. **Use of Budget Impact Model to Understand the Source of Variations in the Growth of Medical Costs**—◆ Tina Shih, The University of Chicago
- 9:55 a.m. **Estimating Mean Cost Using Auxiliary Covariates**—◆ Wenqin Pan, Duke University; Donglin Zeng, The University of North Carolina at Chapel Hill
- 10:15 a.m. **Floor Discussion**

284 CC-Room 30E

■ ● Randomization Inference and Causal Effects with Groups and Networks—Topic-Contributed

Social Statistics Section, Section on Statistics in Epidemiology, International Indian Statistical Association

Organizer(s): Cyrus Samii, New York University

Chair(s): Cyrus Samii, New York University

- 8:35 a.m. **Reasoning About Interference Between Units**—◆ Jake Bowers, University of Illinois at Urbana-Champaign; Mark M Fredrickson, University of Illinois at Urbana-Champaign
- 8:55 a.m. **Estimating Causal Effects Under General Interference and Clustering**—◆ Peter M. Aronow, Yale University; Cyrus Samii, New York University; Joel Middleton, New York University
- 9:15 a.m. **A Powerful and Robust Test Statistic for Randomization Inference in Group-Randomized Trials with Matched Pairs of Groups**—◆ Kai Zhang, University of Pennsylvania; Mikhail Traskin, Amazon.com; Dylan Small, The Wharton School
- 9:35 a.m. **Identification of Causal Effects in the Presence of Interference**—◆ Elizabeth Ogburn, Harvard University; Tyler VanderWeele, Harvard School of Public Health
- 9:55 a.m. Disc: Ben Hansen, University of Michigan
- 10:15 a.m. **Floor Discussion**

285 CC-Room 24B

■ ● Student Paper Winners 2012—Topic-Contributed

Section on Statistical Learning and Data Mining

Organizer(s): Hernando Ombao, University of California at Irvine

Chair(s): Hernando Ombao, University of California at Irvine

- 8:35 a.m. **Predicting Simulation Parameters of Biological Systems Using a Gaussian Process Model**—◆ Xiangxin Zhu, University of California at Irvine; Max Welling, University of California at Irvine; John Lowengrub, University of California at Irvine
- 8:55 a.m. **Multiple Response Regression for Gaussian Mixture Models with Known Labels**—◆ Wonyul Lee, The University of North Carolina at Chapel Hill; Yufeng Liu, The University of North Carolina at Chapel Hill; Wei Sun, The University of North Carolina at Chapel Hill; David Neil Hayes, The University of North Carolina at Chapel Hill; Ying Du, The University of North Carolina at Chapel Hill
- 9:15 a.m. **Testing for White Noise Against Locally Stationary Alternatives**—◆ Georg Matthias Goerg, Carnegie Mellon University



● Themed Session ■ Applied Session ◆ Presenter

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- 9:35 a.m. **Maximum Likelihood Estimation Over Directed Acyclic Gaussian Graphs**—◆ Yiping Yuan, University of Minnesota
- 9:55 p.m. Disc: Hernando Ombao, University of California at Irvine
- 10:15 a.m. **Floor Discussion**

286 CC-Room 24C Evaluating CPS ASEC Data Quality—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Edward J Welniak, U.S. Census Bureau
Chair(s): Edward J Welniak, U.S. Census Bureau

- 8:35 a.m. **Methods of Modeling Tax Units to Estimate Tax Credits**—◆ Bruce Webster, U.S. Census Bureau
- 8:55 a.m. **Evaluating the Construct of a Canberra Household Income Definition Using CPS ASEC**—◆ Jessica Semega, U.S. Census Bureau
- 9:15 a.m. **CPS Nonresponse and the Measurement of Poverty**—◆ Charles Hokayem, U.S. Census Bureau; James P Ziliak, University of Kentucky; Christopher R Bollinger, University of Kentucky
- 9:35 a.m. **An Evaluation of Retirement Income in the CPS Using Form 1099-R Microdata**—◆ Charles Bee, U.S. Census Bureau
- 9:55 a.m. **What About the Survey Non-Matches?**—◆ Joan Lee Turek, U.S. Department of Health and Human Services; Kendall Swenson, U.S. Department of Health and Human Services; Fritz Scheuren, NORC; Daniel Lee, NORC
- 10:15 a.m. **Floor Discussion**

287 CC-Room 29D Statistical Engineering at the Boeing Company—Topic-Contributed

Section on Statistics in Defense and National Security, Quality and Productivity Section

Organizer(s): Dan K Fitzsimmons, Boeing
Chair(s): Christopher M. Gast, The Boeing Company

- 8:35 a.m. **Flowing Expectations for the Minimum Probability of Conformance Between Engineering and Operations**—◆ Dan K Fitzsimmons, Boeing
- 8:55 a.m. **Statistical Engineering at the Boeing Company**—◆ Gurbachan Chadha
- 9:15 a.m. **Data Review of Electronic Components: Detecting Problems Prior to Installation**—◆ Anduin Touw, The Boeing Company
- 9:35 a.m. Disc: David M Braga, Boeing

- 9:55 a.m. Disc: Ellen S Salvatore, Boeing
- 10:15 a.m. **Floor Discussion**

288 CC-Room 33A Census Coverage Measurement—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Gia F. Donnalley, U.S. Census Bureau
Chair(s): Samantha Barron, U.S. Census Bureau

- 8:35 a.m. **Results of the 2010 Census Coverage Measurement Field and Matching Operations**—◆ Patricia Sanchez, U.S. Census Bureau; Anne M Wakim, U.S. Census Bureau
- 8:55 a.m. **Once and Only Once: Searching Near and Far for Person Duplications in the 2010 Census**—◆ Aaron Cantu, U.S. Census Bureau; Susanne L. Johnson, U.S. Census Bureau
- 9:15 a.m. **Household Contact and Probing to Collect a Complete Address List and Household Roster in the Census Coverage Measurement Program**—◆ Graciela Contreras, U.S. Census Bureau; Lora Rosenberger, U.S. Census Bureau
- 9:35 a.m. **Recall Bias on Reporting a Move and Move Date**—◆ Travis Pape, U.S. Census Bureau; Kyra M Linse, U.S. Census Bureau; Lora Rosenberger, U.S. Census Bureau; Graciela Contreras, U.S. Census Bureau
- 9:55 a.m. Disc: Lynn Stokes, Southern Methodist University
- 10:15 a.m. **Floor Discussion**

289 HQ-Sapphire E6 SBSS Student Paper Competition Winners—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Marina Vannucci, Rice University
Chair(s): Peter Thall, MD Anderson Cancer Center

- 8:35 a.m. **Semiparametric Bayesian Survival Analysis Using Models with Log-Linear Median**—◆ Jianchang Lin, Millennium: The Takeda Oncology Company; Debajyoti Sinha, Florida State University; Stuart Lipsitz, Harvard Medical School; Adriano Polpo, Federal University of Sao Carlos
- 8:55 a.m. **The Generalized Multiset Sampler: Theory and Its Application**—◆ Hang J Kim, The Ohio State University; Steven MacEachern, The Ohio State University
- 9:15 a.m. **Bayesian Closed Surface Fitting Through Tensor Products**—◆ Debdeep Pati, Duke University; David Dunson, Duke University

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:35 a.m. **A Stochastic Evolutionary Model for Protein Structure Alignment and Phylogeny**—◆ Christopher Challis, Duke University; Scott Schmidler, Duke University
- 9:55 a.m. **Bayesian Hierarchical Structured Variable Selection Methods with Application to MIP Studies in Breast Cancer**—◆ Lin Zhang, Texas A&M University; Veera Baladandayuthapani; Bani K Mallick, Texas A&M University; Ganiraju C Manyam, MD Anderson Cancer Center; Patricia A Thompson, University of Arizona; Melissa L Bondy, Baylor University; Kim-Anh Do, MD Anderson Cancer Center
- 10:15 a.m. **Floor Discussion**

- 9:20 a.m. **Inferences of Generalized Extreme Value Distribution Based on Record Values**—◆ Mohammad Ahsanullah, Rider University
- 9:35 a.m. **Using a Degradation Model to Assess Lifetime of a Pipeline**—◆ Shiyao Liu, Iowa State University; William Q. Meeker, Iowa State University
- 9:50 a.m. **Confidence Interval for Functions of the Parameters in a Linear Mixed Model**—◆ Jia Liu, Iowa State University; William Q. Meeker, Iowa State University; Dan Nordman, Iowa State University
- 10:05 a.m. **Partition-Based Priors and Multiple Event Censoring: An Analysis of Rosen's Fibrous Composite Experiment**—◆ John Grego, University of South Carolina

Topic-Contributed Panels 8:30 a.m.–10:20 a.m.

290 CC-Room 23A Catch 'Em While They're Young: Statistics as a First-Year Seminar—Topic-Contributed

Section on Statistical Education, International Indian Statistical Association, Committee on Gay and Lesbian Concerns in Statistics

Organizer(s): Jackie Miller, The Ohio State University

Chair(s): Jackie Miller, The Ohio State University

- Panelists:** ◆ Michele DiPietro, Kennesaw State University
 ◆ Johanna S Hardin, Pomona College
 ◆ Russell V Lenth, University of Iowa
 ◆ Brenda Gunderson, University of Michigan

10:15 a.m. **Floor Discussion**

292 CC-Room 28C ■ ● Risk Management: Classical or Bayesian—Contributed

Section on Risk Analysis, Quality and Productivity Section

Chair(s): Zhiwei Zhu, Scor Global Life Americas

- 8:35 a.m. **Envelope Estimator of Multivariate Means**—◆ Zhihua Su, University of Minnesota; Dennis Cook, University of Minnesota
- 8:50 a.m. **A Game-Theoretic Approach to Risk Management**—◆ Timothy Hall, PQI Consulting
- 9:05 a.m. **On the Aggregation of Event Probabilities**—◆ Stephen Hora, University of Southern California
- 9:20 a.m. **Threshold Parameter Estimator Comparisons Based on Natural Data**—◆ Michael Tarter, University of California at Berkeley
- 9:35 a.m. **A Bayesian's View of Profiling at Security Checkpoint**—◆ Jun Lu, American University; Mary Gray, American University
- 9:50 a.m. **Semiparametric Bayesian Joint Modeling of a Binary and Continuous Outcome with Applications in Toxicological Risk Assessment**—◆ Beom Seuk Hwang, The Ohio State University; Michael Lindsey Pennell, The Ohio State University College of Public Health
- 10:05 a.m. **Nonparametric Bayesian Methods for Benchmark Dose Estimation**—◆ Anindya Roy, University of Maryland Baltimore County; Nilabja Guha, University of Maryland Baltimore County; Leonid Kopylev, EPA; Maria Spassova, EPA/NCEA; John Fox, EPA/NCEA; Paul White, EPA/NCEA

Contributed Sessions 8:30 a.m.–10:20 a.m.

291 CC-Room 30A Methods of Reliability and Life Testing—Contributed

Quality and Productivity Section, Biopharmaceutical Section, Section on Statistics in Defense and National Security

Chair(s): Don McCormack, SAS Institute

- 8:35 a.m. **Determine Drug's Expiration Date: Some Interesting Findings**—◆ Peng Liu, SAS Institute; Michael T Crotty, SAS Institute; Liansheng Zhu, Novartis
- 8:50 a.m. **Methods for Estimating Parameters of Weibull Distribution**—◆ Nasser Fard, Northeastern University; Xuan Haung, Northeastern University
- 9:05 a.m. **Use of Tolerance Limits for Life Prediction**—◆ Alix Robertson, Sandia National Laboratories; Rene Bierbaum, Sandia National Laboratories



● Themed Session ■ Applied Session ◆ Presenter

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293 CC-Room 31B

■ ● Designing New Courses, Assessing Curriculum, and Assessing Interventions—Contributed

Section on Statistical Education

Chair(s): Chris Malone, Winona State University

- 8:35 a.m. **The Role of Academic Committees and Collective Decisionmaking in Improving the Teaching and Place of Statistics in Business Schools**—◆ Bodapati Gandhi, University of Puerto Rico Business School
- 8:50 a.m. **Teaching a CATALST Course for Pre-Service Elementary Teachers**—◆ Erin Blankenship, University of Nebraska; Jennifer L Green, University of Nebraska
- 9:05 a.m. **Building an Inclusive Classroom: Pedagogy and Curriculum**—◆ Cindy Van Es, Cornell University
- 9:20 a.m. **Restructuring an Elementary Statistics Course for the General Education Audience**—◆ Yvonne Zubovic, Indiana University Purdue University Fort Wayne; Chand Chauhan, Indiana University Purdue University Fort Wayne
- 9:35 a.m. **Our Findings from Using Randomization-Based-Methods Curricula**—◆ Soma Roy, California Polytechnic State University; Beth Chance, California Polytechnic State University; Karen McGaughey, California Polytechnic State University; Allan Rossman, California Polytechnic State University
- 9:50 a.m. **A Statistically Designed Educational Research Study**—◆ Carolyn Bradshaw Morgan, Hampton University; Anne Pierce, Hampton University; Spencer Baker, Hampton University; Arun Verma, Hampton University; Morris Morgan, Hampton University; Vitali Khaikine, Hampton University
- 10:05 a.m. **Engaging Students in Large Section Statistics Classes**—◆ Lawrence Fulton; Lana Ivanitskaya, Central Michigan University; Dmitry Erefeev, Central Michigan University

294 CC-Room 28B

Recent Developments in the Analysis of Categorical Data—Contributed

Biometrics Section

Chair(s): Tao Duan, Bristol-Myers Squibb

- 8:35 a.m. **Hypothesis Testing and Power Analysis for Longitudinal Microbiome Experiments**—◆ Patricio Salvatore La Rosa, Washington University in St. Louis School of Medicine; Elena Deych, Washington University School of Medicine; Berkley Shands, Washington University in St. Louis School of Medicine; Yanjiao Zhou, Washington University in St. Louis School of Medicine; Erica Sodergren, Washington University in St. Louis School of Medicine; George Weinstock, Washington University in St. Louis School of Medicine; William Shannon, Washington University School of Medicine

- 8:50 a.m. **A Potential Outcomes, and Typically More Powerful, Approach Than ‘Cochran-Mantel-Haenszel’ and Related Methods**—◆ Cassandra Wolos Pattanayak, Harvard University; Donald B Rubin, Harvard University; Elizabeth Zell, CDC
- 9:05 a.m. **Causal Effect Estimation Using Instrumental Variables with Count Exposure and Dichotomous Outcome**—◆ Qing Liu, Temple University; Dylan Small, The Wharton School
- 9:20 a.m. **The Implications of Software Choice for Handling Missing Data in the Presence of Interaction Effects Involving at Least One Categorical Variable**—◆ Aya A Mitani, Stanford University; Allison W Kurian, Stanford University; Amar K Das, Stanford University; Manisha Desai, Stanford University
- 9:35 a.m. **Application of Zeros Hurdle or Zero-Inflated Models in Populations with Excess at-Risk Zeros: A Case of Nodal Involvement in Breast Cancer**—◆ Alok Dwivedi, University of Cincinnati; Rakesh Shukla, University of Cincinnati; MB Rao, University of Cincinnati; Sada Nand Dwivedi, All India Institute of Medical Sciences; SVS Deo, All India Institute of Medical Sciences
- 9:50 a.m. **New Methods for Assessing Observer Agreement**—◆ Michael Haber, Emory University; Yi Pan, CDC; Jingjing Gao, Emory University; Lijun Zhang, Emory University; Zhaohui Qin, Emory University
- 10:05 a.m. **Measurement Error Case Series Models with Application to Infection-Cardiovascular Risk in Older Patients on Dialysis**—◆ Danh Nguyen, University of California at Davis; Sandra Mohammed, University of California at Davis; Damla Senturk, University of California at Los Angeles; Lorien Dalrymple, University of California at Davis School of Medicine

295 CC-Room 24A

Statistical Learning—Contributed

Section on Statistical Learning and Data Mining

Chair(s): Shandong Min, University of California at Irvine

- 8:35 a.m. **Estimation and Forecast Combination Under Robust T-Loss**—◆ Gang Cheng, University of Minnesota-Twin Cities
- 8:50 a.m. **Weighted Logistic Regression Modeling for Semi-Supervised Classification**—◆ Shuichi Kawano, Osaka Prefecture University
- 9:05 a.m. **Demystifying Feature Mapping via Kernels**—◆ Zhiyu Liang, The Ohio State University; Yoonkyung Lee, The Ohio State University
- 9:20 a.m. **Extensions to Random Forests for High-Dimensional Genetic Data**—◆ Stacey J Winham, Mayo Clinic; Robert R Freimuth, Mayo Clinic; Joanna M Biernacka, Mayo Clinic
- 9:35 a.m. **Interaction Detection with TreeNet Boosted Tree Ensembles for Predictive Modeling**—◆ Dan Steinberg, Salford Systems

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:50 a.m. **On the Relationship Between Non-Negative Matrix Factorization and Generalized Linear Modeling**—
◆ Karthik Devarajan, Fox Chase Cancer Center;
Vincent Chi Kwan Cheung, Massachusetts Institute of Technology
- 10:05 a.m. **An Efficient Initialization of the K-Means Algorithm**—◆ Igor Melnykov, Colorado State University Pueblo; Volodymyr Melnykov, North Dakota State University

296 CC-Room 28A Methods in High-Dimensional Regression— Contributed

Biometrics Section, Section on Statistical Learning and Data Mining
Chair(s): Daniel Rowe, Marquette University

- 8:35 a.m. **Hypothesis Testing in High-Dimensional Sparse Regression**—◆ Rajarshi Mukherjee
- 8:50 a.m. **Multiple Imputation for High-Dimensional Mixed Incomplete Data Using a Factor Model**—◆ Ren He, University of California at Los Angeles Fielding School of Public Health; Thomas R. Belin, University of California at Los Angeles
- 9:05 a.m. **Incorporating Auxiliary Information for Improved Prediction in High-Dimensional Data Sets: An Ensemble of Shrinkage Approaches**—◆ Philip S Boonstra, University of Michigan; Bhramar Mukherjee, University of Michigan; Jeremy Michael George Taylor, University of Michigan
- 9:20 a.m. **Fused Estimators of the Central Subspace in Sufficient Dimension Reduction**—◆ Xin Zhang, University of Minnesota-Twin Cities; Dennis Cook, University of Minnesota
- 9:35 a.m. **Multivariate Tests for High-Dimensional Data**—
◆ Guoqing Diao, George Mason University; Bret Hanlon, University of Wisconsin-Madison; Anand N. Vidyashankar, George Mason University
- 9:50 a.m. **High-Dimensional Universal Dependence Variable Selection**—◆ Heseng Peng, Amazon.com; Tianwei Yu, Emory University; Yun Bai, Philadelphia College of Osteopathic Medicine
- 10:05 a.m. **Adaptive Nuclear-Norm Penalization in Multivariate Regression**—◆ Kun Chen, Kansas State University; Hongbo Dong, University of Wisconsin-Madison; Kung-Sik Chan, University of Iowa

297 CC-Room 27B General Methodological Advances— Contributed

Biometrics Section
Chair(s): Jagadish Gogate, Symbiance, Inc.

- 8:35 a.m. **The Epsilon Skew Gamma Distribution**—◆ Hassan Elsalloukh, University of Arkansas at Little Rock; Ebtisam Abdulah, University of Arkansas at Little Rock

- 8:50 a.m. **A Databased Measure for Statistical Inference**—
◆ Walid Nuri
- 9:05 a.m. **Estimating Parameters of an Ode Model: Data Augmentation to Overcome Small Sample Problem**—◆ Arun Kumar, Indian Institute of Management, Indore; Hongqi Xue, University of Rochester; Hulin Wu, University of Rochester
- 9:20 a.m. **Statistical Inference for a Measure for Two Binomial Variates**—◆ Hokwon Anthony Cho, University of Nevada, Las Vegas
- 9:35 a.m. **Measures of Dependence for Nonlinear Association and the Hypothetical Tests**—◆ Jungwon Mun; Jee Young Moon, University of Wisconsin-Madison
- 9:50 a.m. **Estimating Infinite-Dimensional Parameters via Pointwise Estimation**—◆ Marco Carone, University of California at Berkeley; Mark van der Laan, University of California at Berkeley School of Public Health
- 10:05 a.m. **Sequential Change-Point Analysis of Markov Chains with Application in Early Detection of Epidemics**—◆ Xian Yu, University of Arkansas at Little Rock; Michael Baron, The University of Texas at Dallas; Pankaj Choudhary, The University of Texas at Dallas

298 CC-Room 27A Advances in Bayesian Clinical Trial Design— Contributed

Biopharmaceutical Section, International Chinese Statistical Association
Chair(s): Scott Miller, FDA

- 8:35 a.m. **A Bayesian Adaptive Randomization Design Using Placebo and Active Control**—Yili Pritchett, Abbott Laboratories; ◆ Qi Tang, Abbott Laboratories; Kristine Broglio, Berry Consultants; Weining Robieson, Abbott Laboratories; Scott Berry, Berry Consultants
- 8:50 a.m. **A Spline-Based Hierarchical Model for Estimating Blood Glucose Profiles from CGM Data**—◆ Hui Zheng, Harvard Medical School; David A Schoenfeld, Harvard Medical School
- 9:05 a.m. **Bayesian Adaptive Phase II Screening Design for Combination Trials**—◆ Chunyan Cai, MD Anderson Cancer Center; Ying Yuan, MD Anderson Cancer Center; Valen E Johnson, MD Anderson Cancer Center
- 9:20 a.m. **On Bayesian Design and Analysis for Trials with Multiple Primary Endpoints**—◆ Kimberly Crimin, Novartis; Robb J Muirhead
- 9:35 a.m. **Bayesian Analysis of Crossover Studies of Rare Diseases with Early-Escape**—◆ Lili Ding, Cincinnati Children's Hospital Medical Center; Yongchao Liu, University of Cincinnati; Bin Huang, Cincinnati Children's Hospital Medical Center



● Themed Session ■ Applied Session ◆ Presenter

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- 9:50 a.m. ■ **A Hybrid Bayesian/Frequentist Two-Stage Randomized Phase II Design**—◆ Dawn Peters, Oregon Health and Science University
- 10:05 a.m. ■ **A Bayesian Response-Based Adaptive Randomization Design for Phase II Trials of Targeted Therapy**—◆ Yiyi Chen, Oregon Health and Science University; Zunqiu Chen, Oregon Health and Science University; Motomi Mori, Oregon Health and Science University; Byung Park, Oregon Health and Science University; Jeffrey W Tyner, Oregon Health and Science University; Marc M Loriaux, Oregon Health and Science University; Tibor Kovacs, Oregon Health and Science University; Brian J Druker, Oregon Health and Science University

299 CC-Room 26A

■ **Meta-Analysis and Other Innovative Comparison—Contributed**

Biopharmaceutical Section

Chair(s): Alison Pedley, Merck

- 8:35 a.m. ■ **Meta-Analysis of Rare Adverse Events in Randomized Controlled Clinical Trials: A Case Study**—◆ Eunhee Hwang, Pfizer Inc.; Suna Barlas, Pfizer Inc.; Lingfeng Yang, Pfizer Inc.
- 8:50 a.m. ■ **Inclusion of Zero-Event Trials in Meta-Analyses**—◆ Tianyue Zhou, Sanofi
- 9:05 a.m. ■ **Comparison of Meta-Analysis Methods for Clinical Trials with Rare Events: A Case Study**—◆ Li Wei, Bristol-Myers Squibb; Lisa Ying, Bristol-Myers Squibb; David Henry, Bristol-Myers Squibb
- 9:20 a.m. ■ **Regional Treatment Effects in Studies of Cardiorenal Drugs: A Summary of Recent Clinical Trials**—◆ Steve Bai, FDA
- 9:35 a.m. ■ **A Statistical Methodology for Adjustment of Stroke Event Rates for CHADS2 Score for Indirect Comparison Across Trials**—◆ Vijay Chauhan, Alpha Stats Inc.
- 9:50 a.m. ■ **A Comparison of Interval Estimation Methods for the Concordance Correlation Coefficient**—◆ Dai Feng, Merck; Richard Baumgartner, Merck; Vladimir Svetnik, Merck
- 10:05 a.m. ■ **Tree-Structured Reliability Analysis for Magnetic Resonance Imaging (MRI) Data**—◆ Ruji Yao; Hanzhe Zheng, Merck Research Laboratories

300 CC-Room 28E

■ **Analysis of Biomarker Data—Contributed**

Biopharmaceutical Section, Biometrics Section, Section on Statistics in Epidemiology

Chair(s): Aloka Chakravarty, FDA/CDER

- 8:35 a.m. ■ **Standardized Statistical Framework for Comparison of Biomarkers**—◆ Danielle J Harvey, University of California at Davis; Clifford Jack Jr, Mayo Clinic; Norbert Schuff, University of California at San Francisco; Michael Weiner, University of California at San Francisco; Laurel Beckett, University of California at Davis
- 8:50 a.m. ■ **Development of Threshold-Based Prognostic and Predictive Biomarker Signatures for Personalized Medicine Strategy**—◆ Arunava Chakravarty, Abbott Laboratories; Viswanath Devanarayan, Abbott Laboratories; Gong Chen, Abbott Laboratories
- 9:05 a.m. ■ **Strategies for Identifying Predictive Biomarkers in Clinical Trials Using Variable Importance**—◆ Ilya Lipkovich, Quintiles, Inc.; Alex Dmitrienko, Quintiles, Inc.
- 9:20 a.m. ■ **Leveraging Early Biomarker Data to Assess Futility in an Oncology Test-of-Concept Study**—◆ Robin Mogg, Merck Research Laboratories; Devan Mehrotra, Merck Research Laboratories
- 9:35 a.m. ■ **Biomarker Assay Data: How Well Quantified Is the Limit of Quantification?**—◆ Ying Guo, Merck
- 9:50 a.m. ■ **A Phase II Design with Direct Assignment Option in Stage II for Initial Marker Validation**—◆ Ming-Wen An, Vassar College; Sumithra J. Mandrekar, Mayo Clinic; Daniel J. Sargent, Mayo Clinic
- 10:05 a.m. ■ **Statistical Methodology for Generalized Linear Models with Censored Covariates**—◆ Paul Bernhardt, North Carolina State University; Huixia Judy Wang, North Carolina State University; Daowen Zhang, North Carolina State University

301 CC-Room 31C

■ **Estimation and Computational Methods for Random Effects Models—Contributed**

IMS, Biometrics Section

Chair(s): Jin-Hong Park, College of Charleston

- 8:35 a.m. ■ **Regularized Empirical Bayes Estimation of Normal Means**—◆ Wenhua Jiang
- 8:50 a.m. ■ **What Is REML?**—◆ Christopher Gotwalt, SAS Institute
- 9:05 a.m. ■ **A Normal Hierarchical Model for Random Intervals**—◆ Yan Sun, Utah State University; Dan Ralescu, University of Cincinnati

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:20 a.m. **Efficient Estimation of Link Function Parameters in a Robust Bayesian Binary Regression Model**—◆ Vivekananda Roy, Iowa State University
- 9:35 a.m. **Penalized Maximum Likelihood Methods in Process Estimation**—◆ Zsolt Talata, University of Kansas
- 9:50 a.m. **New Algorithms for Markov Chain Monte Carlo Maximum Likelihood for Exponential Random Graph Models**—◆ Charles Geyer, University of Minnesota; Saisuke Okabayashi, Savvysherpa, Inc.
- 10:05 a.m. **Boundedness of the Likelihood Function in Linear Structural Equation Models**—◆ Christopher Fox, The University of Chicago; Andreas Käufel, University of Augsburg; Mathias Drton, The University of Chicago; Guillaume Pouliot, The University of Chicago

302 CC-Room 32A **Bayesian Variable Selection—Contributed**

Section on Bayesian Statistical Science, Section on Statistical Learning and Data Mining

Chair(s): Babak Shahbaba, University of California at Irvine

- 8:35 a.m. **An Approach to Variable Selection Employing Dirichlet Lasso**—◆ Marc Sobel, Temple University; Kiranmoy Das, Temple University; Zhigen Zhao, Temple University
- 8:50 a.m. **Robust Bayesian Variable Selection with Sub-Harmonic Priors**—◆ Yuzo Maruyama
- 9:05 a.m. **On Multiplicity Adjustment in Bayesian Variable Selection**—◆ Dandan Li, University of Cincinnati; Siva Sivaganesan, University of Cincinnati
- 9:20 a.m. **Bayesian Regression for Semicontinuous Data with Variable Selection**—◆ Jinsu Park, KAIST
- 9:35 a.m. **Bayes Variable Selection in Semiparametric Linear Models**—◆ Suprateek Kundu, The University of North Carolina at Chapel Hill; David Dunson, Duke University
- 9:50 a.m. **Bayesian Adaptive Calibration and Variable Selection in Linear Models with Mismeasured Covariates**—◆ Hongmei Zhang, University of South Carolina; Xianzheng Huang, University of South Carolina; Jianjun Gan, GlaxoSmithKline; Wilfried Karmaus, University of South Carolina; Tara Sabo-Attwood, University of Florida
- 10:05 a.m. **Estimation and Variable Selection in Partially Linear Wavelet Models via Gibbs Sampling**—◆ Norbert Remenyi, Georgia Institute of Technology

303 CC-Room 23B **Space-Time Modeling 1—Contributed**

Section on Statistics and the Environment

Chair(s): Christopher J Paciorek, University of California at Berkeley

- 8:35 a.m. **Nonparametric Inference in Small Data Sets of Spatially Indexed Curves with Application to Ionospheric Trend Determination**—◆ Sasha Gromenko, Utah State University; Piotr Stefan Kokoszka, Colorado State University
- 8:50 a.m. **A Multivariate Spatial Modeling Approach Using Semiparametric Covariance Functions**—◆ Yong Wang, Eastern Kentucky University; Hao Zhang, Purdue University
- 9:05 a.m. **Informative Estimation and Selection of Time-Varying Correlation Structure for Spatial Data**—◆ Xueying Zheng, The University of Hong Kong; Annie Qu, University of Illinois at Urbana-Champaign
- 9:20 a.m. **Modeling Low-Rank Spatially Varying Cross-Covariances Using Predictive Processes with Application to Soil Nutrient Data**—◆ Rajarshi Guhaniyogi; Rajarshi Guhaniyogi; Andrew O. Finley, Michigan State University; Sudipto Banerjee, University of Minnesota; RICH KOBE, Michigan State University
- 9:35 a.m. **Nonparametric Estimation of the Probability Density Functions for Irregularly Observed Spatial Data**—◆ Zudi Lu, University of Adelaide
- 9:50 a.m. **Bivariate Spatio-Temporal Modeling for the Hydrological Cycle of the Central United States**—◆ Jonathan Hobbs, Iowa State University
- 10:05 a.m. **Floor Discussion**

304 CC-Room 26B **Causal Inference—Contributed**

Section on Statistics in Epidemiology, Biometrics Section

Chair(s): Brisa N. Sanchez, University of Michigan School of Public Health

- 8:35 a.m. **Estimating Causal Effects of Air Quality Regulations Using Principal Stratification for Spatially Correlated Multivariate Intermediate Outcomes**—◆ Corwin Zigler
- 8:50 a.m. **Causal Estimations for the Semiparametric Transformation Models with Prevalent Sampling**—◆ Yu-Jen Cheng, National Tsing Hua University
- 9:05 a.m. **A Mendelian Randomization Approach to Assessing a Causal Relation Between Malaria and Stunting in Children**—◆ Hyunseung Kang, The Wharton School



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:20 a.m. **Effect of the 2010 Chilean Great Earthquake on Post-Traumatic Stress: An Analysis Using Multivariate Matching and Sensitivity Analysis—** ◆ Jose Zubizarreta, The Wharton School; Magdalena Cerdá, Columbia University; Paul R Rosenbaum, University of Pennsylvania
- 9:35 a.m. **An Unidentifiability Issue in G-Estimation and Suggestions to Fix It—** ◆ Yang Jiang, The Wharton School
- 9:50 a.m. **Bayesian Instrumental Variable Analysis with Missing Data of the Effect of Caesarean Section on Mortality Among Very Premature Infants—** ◆ Fan Yang; Dylan Small, The Wharton School; Edward I. George, University of Pennsylvania; Scott A Lorch, University of Pennsylvania
- 10:05 a.m. **Floor Discussion**

305 CC-Room 32B Small-Area Estimation: Benchmarking and Hierarchical Models—Contributed

Section on Survey Research Methods
Chair(s): Sahar Zangeneh, University of Michigan

- 8:35 a.m. **Benchmarking Small-Area Estimates—** ◆ William Bell, U.S. Census Bureau; Gauri Datta, University of Georgia; Malay Ghosh, University of Florida
- 8:50 a.m. **Benchmarking Small-Area Estimates: A Minimum Discrimination Information Approach and Other New Perspectives—** ◆ Andrew Vesper, Harvard University; Ryan Janicki, U.S. Census Bureau
- 9:05 a.m. **A Hierarchical Mixture Model for Small-Area Estimation—** ◆ Adrijo Chakraborty, University of Georgia; Gauri Datta, University of Georgia; Abhyuday Mandal, University of Georgia
- 9:20 a.m. **A Bayesian Zero-One Inflated Beta Model for Small-Area Shrinkage Estimation—** ◆ Jerzy Wiecek, U.S. Census Bureau; Ciara Nugent, U.S. Census Bureau; Sam Hawala, U.S. Census Bureau
- 9:35 a.m. **The Use of Sampling Weights in Bayesian Hierarchical Models for Small-Area Estimation—** ◆ Cici Bauer, University of Washington; Thomas Lumley, University of Auckland; Jon Wakefield, University of Washington
- 9:50 a.m. **Small-Area Estimation in the Presence of Measurement Error Using Corrected Scores Approach—** ◆ Trijya Singh, Le Moyne College
- 10:05 a.m. **An Improvement for Empirical Best Linear Unbiased Predictor in Using Adjusted Likelihood Method for Small-Area Inference—** ◆ Masayo Yoshimori, Osaka University; Partha Lahiri, University of Maryland

306 CC-Room 22 Teaching Statistics in Health Sciences—Contributed

Section on Teaching of Statistics in the Health Sciences, Section on Statistical Education, WUNAR
Chair(s): Amy Nowacki, Cleveland Clinic

- 8:35 a.m. **Considerations on the Bayesian Dosing Window Escalation—** ◆ Xue Lin, FDA; Boguang Zhen, FDA/CBER
- 8:50 a.m. **Teaching Clinical Applications of the Bayes' Theorem in a QBIC Statistics Course—** ◆ Ramon Gomez, Florida International University
- 9:05 a.m. **Interesting Examples of the Capture-Recapture Sampling Method from Biology, Public Health, and Epidemiology—** ◆ Harry Norton, Carolinas Medical Center; George W Divine, Henry Ford Hospital
- 9:20 a.m. **Incorporating Principles and Methods of Evidence-Based Practice Into Statistical Teaching—** ◆ Deborah V. Dawson, University of Iowa; David R. Drake, University of Iowa
- 9:35 a.m. **Selecting Topics for an Introductory Biostatistics Course—** ◆ T. Ceesay, Merck
- 9:50 a.m. **Bringing Real-World Problems and Expectations to the Classroom Through Consulting—** ◆ Heather Bush, University of Kentucky; Arne C Bathke, University of Kentucky; Candace J Brancato, University of Kentucky; Arnold J Stromberg, University of Kentucky; Constance L Wood, University of Kentucky
- 10:05 a.m. **Gimme All Your Data: Keeping Collaborations with Nonstatisticians from Becoming a Stick-Up - A Public Health Perspective—** ◆ Alicia Chancellor Hansen, Statistical Consultant

Invited Sessions 10:30 a.m.–12:20 p.m.

307 CC-Room 29D JCGS Highlights: Computational Innovations for Analyzing Massive Data Sets—Invited

JCGS-Journal of Computational and Graphical Statistics, Section on Statistical Computing, Section on Statistical Learning and Data Mining, International Indian Statistical Association
Organizer(s): Richard A. Levine, San Diego State University/JCGS
Chair(s): Richard A. Levine, San Diego State University/JCGS

- 10:35 a.m. **Functional Robust Support Vector Machines for Sparse and Irregular Longitudinal Data—** ◆ Yichao Wu, North Carolina State University; Yufeng Liu, The University of North Carolina at Chapel Hill

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 11:05 a.m. **Multilevel Functional Principal Component Analysis for High-Dimensional Data**—◆ Vadim Zippunikov, Johns Hopkins Bloomberg School of Public Health; Brian Scott Caffo, The Johns Hopkins University; Ciprian Crainiceanu, The Johns Hopkins University
- 11:35 a.m. **Developing Systems for Real-Time Streaming Analysis**—◆ Sarah Michalak, Los Alamos National Laboratory
- 12:05 p.m. **Floor Discussion**

- 10:55 a.m. **Integrating Diverse Types of Genomics Data for Disease Risk Prediction**—◆ Hongyu Zhao, VA Cooperative Studies Program; Cong Li, Yale University; Ning Sun, Yale University
- 11:15 a.m. **Family-Based Designs for Finding Genes in Large-Scale Sequencing Studies**—◆ Nan Laird, Harvard University
- 11:35 a.m. **Variable Selection in Meta-Analysis of High-Dimensional Genetic Data**—◆ Danyu Lin, The University of North Carolina at Chapel Hill
- 11:55 a.m. **Known and Unknown Confounding in Genetic Studies**—◆ Eleazar Eskin, University of California at Los Angeles
- 12:15 p.m. **Floor Discussion**

308 HQ-Sapphire A ■ ● **Combining Information in Comparative Effectiveness Research—Invited**

Health Policy Statistics Section, Section on Risk Analysis, Biopharmaceutical Section, Section on Statistics in Epidemiology, International Indian Statistical Association

Organizer(s): Kelly Zou, Pfizer Inc.

Chair(s): Kelly Zou, Pfizer Inc.

- 10:35 a.m. **Utilizing External Theory and Historical Data to Make Estimates of Comparative Effects More Justified**—◆ James O'Malley, Harvard Medical School; Jaeun Choi, Harvard Medical School; Mary Beth Landrum, Harvard Medical School; Bruce E Landon, Harvard Medical School
- 11:00 a.m. **Bayesian Methods for Multivariate Meta-Analysis of Treatment Networks with Incomplete Data**—◆ Christopher Schmid, Tufts University School of Medicine; Thomas Trikalinos, Tufts Medical Center
- 11:25 a.m. **Interpretation of Medical Evidence**—◆ Ingram Olkin, Stanford University
- 11:50 a.m. **Exact Meta-Analysis Approach for the Common Odds Ratio of 2 x 2 Tables with Rare Events**—◆ Minge Xie, Rutgers University; Dungang Liu, Rutgers University; Regina Y Liu, Rutgers University
- 12:15 p.m. **Floor Discussion**

310 CC-Room 31C ■ ● **Methods for Statistical Network Analysis: Beyond the Standard Paradigm—Invited**

General Methodology, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Eric D Kolaczyk, Boston University

Chair(s): Eric D Kolaczyk, Boston University

- 10:35 a.m. **Graphlets: A Semiparametric Method for Exploring Structure and Interference in Large Social and Information Networks**—◆ Edoardo M Airoidi, Harvard University
- 11:00 a.m. **Dependence Modeling for Multiway Networks**—◆ Peter David Hoff, University of Washington
- 11:25 a.m. **Modeling Continuous-Time Network Data**—◆ Patrick O Perry, NYU Stern; Patrick J Wolfe, Harvard University
- 11:50 a.m. **Multi-Attribute Networks and the Impact of Partial Information on Inference and Characterization**—◆ Natallia V Katenka, Boston University
- 12:15 p.m. **Floor Discussion**

309 HQ-Sapphire C ● **Methodological Challenges in High-Dimensional Genetic Data—Invited**

UNAR, ENAR, Biometrics Section, International Chinese Statistical Association, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Iuliana Ionita-Laza, Columbia University

Chair(s): Iuliana Ionita-Laza, Columbia University

- 10:35 a.m. **Detecting Common and Rare Variants for General Traits: Gene-Trait Similarity Regression for Gene-Level Analysis**—◆ Jung-Ying Tzeng, North Carolina State University; Daowen Zhang, North Carolina State University; Wenbin Lu, North Carolina State University

311 HQ-Sapphire B ● **Missing Data and Causal Inference—Invited**

Social Statistics Section, Biopharmaceutical Section, Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Baojiang Chen, University of Nebraska Medical Center

Chair(s): Grace Yi, University of Waterloo

- 10:35 a.m. **Identification of Causal Effects in the Presence of Nonignorable Missing Outcome Values**—◆ Fabrizia Mealli, University of Florence; Alessandra Mattei, University of Florence; Barbara Pacini, University of Pisa



● Themed Session ■ Applied Session ◆ Presenter

- 11:00 a.m. **Semiparametric and Nonparametric Models for Estimation of Causal Effects by Principal Stratification with Outcomes Truncated by Death**—◆Xiao-Hua (Andrew) Zhou, University of Washington
- 11:25 a.m. **Treatment Discontinuation and Missing Data in Clinical Trials: Identifiability and Ignorability Issues**—◆Roderick Little, University of Michigan/ U.S. Census Bureau
- 11:50 a.m. **Causal Inference from the Missing Data Perspective**—◆Donald B Rubin, Harvard University
- 12:15 p.m. **Floor Discussion**

- 11:00 a.m. **An Overview of the Current Use of Uncertainty Statements in Court and ASA Efforts to Help Reform Forensic Science**—◆Cliff Spiegelman, Texas A&M University
- 11:25 a.m. **Quantifying the Weight of Evidence from Forensic Fingerprint Comparisons**—◆Cedric Neumann, Penn State University; Mina Yoo, Penn State University
- 11:50 a.m. **Adventures in Forensic DNA: Cold Hits, Familial Searches, and Mixtures**—◆Sandy Zabell, Northwestern University
- 12:15 p.m. **Floor Discussion**

312 CC-Room 32A **■ ● New Bayesian Methods with Application to Econometrics—Invited**

Council of Chapters, Business and Economic Statistics Section, International Indian Statistical Association
 Organizer(s): Hao Wang, University of South Carolina
 Chair(s): Hao Wang, University of South Carolina

- 10:35 a.m. **Identification, Learning, and Less Informative Priors in Endogenous Variable Models**—◆Justin L Tobias, Purdue University; Josh Chan, Australian National University
- 11:00 a.m. **Bayesian Regression with Nonparametric Heteroskedasticity**—◆Andriy Norets, Princeton University
- 11:25 a.m. **On Some Properties of Markov Chain Monte Carlo Simulation Methods Based on the Particle Filter**—◆Robert Jacob Kohn, University of New South Wales; Michael Pitt, University of Warwick; Paolo Giordani, Sveriges Riksbank
- 11:50 a.m. **Reparameterizations for Bayesian Econometrics**—◆P. Richard Hahn, The University of Chicago Booth School of Business
- 12:15 p.m. **Floor Discussion**

313 CC-Room 30E **■ ● Current Topics in Statistics and Forensic Science—Invited**

Committee of Representatives to AAAS, Statistics Surveys Online Journal
 Organizer(s): Cliff Spiegelman, Texas A&M University
 Chair(s): Nell Sedransk, National Institute of Statistical Sciences

- 10:35 a.m. **Incorporating Uncertainty Into Likelihood Ratios for DNA Evidence**—◆Bruce S. Weir, University of Washington; John S. Buckleton, Environmental and Scientific Research; James M. Curran, University of Auckland

314 HQ-Sapphire MN **Medallion Lecture II—Invited**

IMS, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Hans-Georg Mueller, University of California at Davis
 Chair(s): Kenneth Lange, University of California at Los Angeles

- 10:35 a.m. **Sparse and Low-Rank Models in Statistics: Theory and Applications**—◆Emmanuel Jean Candes, Stanford University
- 12:05 p.m. **Floor Discussion**

Invited Panels 10:30 a.m.–12:20 p.m.

315 HQ-Sapphire D **■ ● Multiplicity Issues in Confirmatory Clinical Trials for Drug Development—Invited**

Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Sue-Jane Wang, FDA

Chair(s): Sue-Jane Wang, FDA

- Panelists:**
- ◆ Robert O'Neill, FDA
 - ◆ Mohammad Huque, FDA
 - ◆ Hsien-Ming James Hung, FDA
 - ◆ Gary Koch, The University of North Carolina at Chapel Hill
 - ◆ Ralph D'Agostino, Boston University
 - ◆ Jason Hsu, The Ohio State University
 - ◆ Alex Dmitrienko, Quintiles, Inc.
 - ◆ Frank Bretz, Novartis
 - ◆ Walter Offen, Eli Lilly and Company
 - ◆ Willi Maurer, Novartis

- 12:05 p.m. **Floor Discussion**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

316 CC-Room 31B ■ Making the Transition to Online Teaching—Invited

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences, International Indian Statistical Association

Organizer(s): Michelle Gaddy Everson, University of Minnesota

Chair(s): Michelle Gaddy Everson, University of Minnesota

- Panelists:**
- ◆ Kay Endriss, Winston-Salem/Forsyth County Schools
 - ◆ Camille Fairbourn, Utah State University
 - ◆ Herle McGowan, North Carolina State University
 - ◆ Jamie Mills, The University of Alabama
 - ◆ Jamis Perrett, Texas A&M University

12:05 p.m. **Floor Discussion**

317 HQ-Sapphire H ■ ● Multi-Level Data Methods to Detect and Adjust for Nonresponse Bias in Sample Surveys—Invited

Section on Survey Research Methods, International Indian Statistical Association

Organizer(s): Tom W Smith, NORC

Chair(s): Joe Sakshaug, German Institute for Employment Research (IAB)

- Panelists:**
- ◆ Paul P Biemer, RTI International/The University of North Carolina at Chapel Hill
 - ◆ Frauke Kreuter, Joint Program in Survey Methodology
 - ◆ Tom W Smith, NORC
 - ◆ James Wagner, University of Michigan

12:05 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.—12:20 p.m.

318 CC-Room 29A ■ ● Utilizing Modeling Approach for Patient Enrollment Predication for Clinical Trials—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Weili He, Merck

Chair(s): Lei Pang, Merck

10:35 a.m. **Utilizing Modeling Approach for Patient Enrollment Predication for Clinical Trials—◆ Weili He, Merck**

10:55 a.m. **A Systematic Review of Models to Predict Recruitment to Multicenter Clinical Trials—◆ Andrew Cook, University of Southampton**

11:15 a.m. **Accrual Modeling and Prediction in Clinical Trials—◆ Xiaoxi Zhang, Pfizer Inc.; Qi Long, Emory University**

11:35 a.m. **Forecasting Enrollment in Clinical Trials When Site-Level Accrual Rates Vary with Time—◆ Yanniss Jemiai, Cytel Inc.; Nitin Patel, Cytel Inc.; Suresh Ankolekar, Maastricht School of Management; Pralay Senchaudhuri, Cytel Inc.**

11:55 a.m. **Disc: Jerald Schindler, Merck**

12:15 p.m. **Floor Discussion**

319 CC-Room 28E ■ ● Type I Error Control and Results Interpretation with Under-Running or Over-Running Clinical Trials—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Jing Xu, Millennium Pharmaceuticals, Inc.

Chair(s): Mingxiu Hu, Millennium Pharmaceuticals, Inc.

10:35 a.m. **A Case Study of Under-Running—◆ Hua Liu, Millennium Pharmaceuticals, Inc.; Hongliang Shi, Millennium Pharmaceuticals, Inc.; Jing Xu, Millennium Pharmaceuticals, Inc.**

10:55 a.m. **Statistical Issues in Over-Running or Under-Running Clinical Trials—Jing Xu, Millennium Pharmaceuticals, Inc.; ◆ Bin Zhang, Millennium Pharmaceuticals, Inc.**

11:15 a.m. **Data-Driven Interim Analysis in Clinical Trials—◆ Kuang-Kuo Lan, Johnson & Johnson**

11:35 a.m. **Repeated Confidence Bands for Under-Running or Over-Running Clinical Trials—◆ Lihui Zhao, Northwestern University; X. Joan Hu, Simon Fraser University; Steve Lagakos, Harvard University**

11:55 a.m. **Disc: Gordon Lan**

12:15 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

320 CC-Room 28D

■ Frontiers of Statistical Applications of Order-Restricted Methods—Topic-Contributed

Biometrics Section, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Allan Sampson, University of Pittsburgh

Chair(s): Allan Sampson, University of Pittsburgh

- 10:35 a.m. **The Linear Stochastic Order and Directed Inference for Multivariate Ordered Distributions with Applications**—◆ Ori Davidov, University of Haifa; Shyamal Peddada, National Institute of Environmental Health Sciences
- 10:55 a.m. **Extending Multiple Contrast Tests to the General Linear Model to Evaluate Dose-Response Relationships**—◆ Michael Paul McDermott, University of Rochester; Jason Leonard Morrissette, University of Rochester
- 11:15 a.m. **Multivariate Convex Regression**—◆ Lauren Hannah, Duke University; David Dunson, Duke University
- 11:35 a.m. **Identification of a Core Set of Signature Cell Cycle Genes Whose Relative Order of Time-to-Peak Expression Is Conserved Across Species**—◆ Shyamal Peddada, National Institute of Environmental Health Sciences; Miguel Fernandez, University of Valladolid; Cristina Rueda, University of Valladolid
- 11:55 a.m. **Estimation and Inference Concerning Ordered Means in Analysis of Covariance Models with Interactions**—◆ Jason Leonard Morrissette, University of Rochester; Michael Paul McDermott, University of Rochester
- 12:15 p.m. **Floor Discussion**

321 HQ-Sapphire II

■ ● Bayesian Joint Modeling of Patient-Reported Outcomes and Survival Information—Topic-Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section, WNAR, International Indian Statistical Association

Organizer(s): Bradley P Carlin, University of Minnesota

Chair(s): Bradley P Carlin, University of Minnesota

- 10:35 a.m. **Learning and Information in Bayesian Joint Models for Longitudinal and Survival Data**—◆ Laura A. Hatfield, Harvard Medical School; James Hodges, University of Minnesota; Bradley P Carlin, University of Minnesota

- 10:55 a.m. **Comparative Assessment of Joint Versus Conventional Modeling of Longitudinal and Survival Endpoints: A Reanalysis of P3 Oncology Data**—◆ Mark Boye, The University of North Carolina at Chapel Hill; Ming-Hui Chen, University of Connecticut; Ping Wang, Eli Lilly and Company; Wei Shen, Eli Lilly and Company; Danjie Zhang, University of Connecticut
- 11:15 a.m. **Joint Modeling of Longitudinal and Survival Data with Missing and Left-Censored Time-Varying Covariates**—◆ Ryan May, The EMMES Corporation
- 11:35 a.m. **A Bayesian Joint Model for DAS28 Scores and Time-to-Dropout Data**—◆ Violeta Hennessey, Amgen, Inc.
- 11:55 a.m. **Disc: A. Lawrence Gould, Merck**
- 12:15 p.m. **Floor Discussion**

322 CC-Room 30B

● Recent Developments on Variable Selection—Topic-Contributed

Section on Statistical Computing, Biometrics Section, Committee on Applied Statisticians, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Xingye Qiao, Binghamton University

Chair(s): Xingye Qiao, Binghamton University

- 10:35 a.m. **Simultaneous Variable Selection and Estimation in Semiparametric Modeling of Longitudinal/Clustered Data**—◆ Shujie Ma, University of California at Riverside; Qiongxia Song, The University of Texas at Dallas; Lily Wang, The University of Georgia
- 10:55 a.m. **Confidence Set for Variable Selection**—◆ Yuhong Yang, University of Minnesota
- 11:15 a.m. **Likelihood Adaptive Modified Penalties and the Properties**—◆ Yang Feng, Columbia University; Tengfei Li, Fudan University; Zhiliang Ying, Columbia University
- 11:35 a.m. **Global and Local Functional Sparsity in Nonparametric Regression**—◆ Haonan Wang, Colorado State University; Yan Tu, Colorado State University; Bo Kai, College of Charleston
- 11:55 a.m. **A General Asymptotic Framework for Consistency of PCA and Sparse PCA**—◆ Dan Shen, The University of North Carolina at Chapel Hill; Haipeng Shen, The University of North Carolina at Chapel Hill; J. Steve Marron, The University of North Carolina at Chapel Hill
- 12:15 p.m. **Floor Discussion**

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

323 CC-Room 32B

■ ● Exploring Heterogeneity in a Population: The Mixture Model Approach—Topic-Contributed

SSC, Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Pengfei Li, University of Waterloo

Chair(s): Pengfei Li, University of Waterloo

10:35 a.m. **Composite Likelihood Approach for the Analysis of Exchange Rates**—◆ Peiming Wang, Auckland University of Technology; Jiahua Chen, SSC

10:55 a.m. **Inference for the Bilaterally Contaminated Normal Model with Nuisance Parameter**—◆ Richard Charnigo, University of Kentucky; Qian Fan, University of Kentucky; Douglas Bittel, Children's Mercy Hospital; Hongying Dai, Children's Mercy Hospital

11:15 a.m. **Mixture Models and Likelihood Ratio Test for Genetic Case-Control Association Studies**—◆ Yongzhao Shao, New York University; Meng Qian, New York University

11:35 a.m. **A Penalized Quasi-Likelihood Approach for Estimating the Number of States in a Hidden Markov Model**—◆ Annaliza McGillivray, McGill University; Abbas Khalili, McGill University

11:55 a.m. **Inference on the Order of a Normal Mixture**—◆ Yuejiao Fu, York University; Jiahua Chen, SSC; Pengfei Li, University of Waterloo

12:15 p.m. **Floor Discussion**

324 CC-Room 29C

■ ● Recent Developments in Causal Inference with Longitudinal Data—Topic-Contributed

Section on Statistics in Epidemiology, Biopharmaceutical Section, Biometrics Section, International Indian Statistical Association

Organizer(s): Jessica Gerald Young, Harvard School of Public Health

Chair(s): Jessica Gerald Young, Harvard School of Public Health

10:35 a.m. **'Loss-to-Follow-Up' in Observational Clinical Cohorts: Longitudinal Effect Estimation in the Presence of Informative Monitoring and Non-Monotone Missingness**—◆ Maya Petersen, University of California at Berkeley School of Public Health

10:55 a.m. **Partially Hidden Markov Model for Time-Varying Principal Stratification in HIV Prevention Trials**—◆ James Dai, Fred Hutchinson Cancer Research Center; Peter B Gilbert, University of Washington/Fred Hutchinson Cancer Research Center; Ben Masse, Fred Hutchinson Cancer Research Center

11:15 a.m. **On Bayesian Estimation of Marginal Structural Models**—◆ Olli Saarela, McGill University; Erica Moodie, McGill University; David Stephens, McGill University

11:35 a.m. **Data-Adaptive Estimation of IPW Weights for Causal Effect Estimation in Large Longitudinal Data Sets**—◆ Susan Gruber, Harvard School of Public Health; Miguel Hernán, Harvard School of Public Health

11:55 a.m. **A Causal Effect Model with Stochastic Monotonicity Assumption for Clinical Trials with Incomplete Longitudinal Outcome**—◆ Chenguang Wang; Michael Daniels, University of Florida; Daniel Scharfstein, The Johns Hopkins University

12:15 p.m. **Floor Discussion**

325 HQ-Sapphire L

■ ● Regulatory Review Issues for Medical Devices and Diagnostics—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Jianxiong Chu, FDA/CDRH

Chair(s): Jianxiong Chu, FDA/CDRH

10:35 a.m. **Validation of Prognostic Biomarker in a Regulatory Submission: A Science-Based Approach**—◆ Rong Tang, FDA; Gene Pennello, FDA

10:55 a.m. **Quality Review Checklist for Diagnostic IDE Submissions**—◆ R. Lakshmi Vishnuvajjala, FDA/CDRH

11:15 a.m. **Regulatory Issues Associated with Prognostic Biomarker Evaluation**—◆ Kyunghye Song, FDA/CDRH

11:35 a.m. **Subgroup Gender Analysis in Medical Device Trials**—◆ Songtao Jiang, Boston Scientific Corporation; Peter Lam, Boston Scientific Corporation; Hong Wang, Boston Scientific Corporation; Milan Seth, Boston Scientific Corporation

11:55 a.m. **Quality Review Checklist of Investigational Device Exemption (IDE) Submissions for Therapeutic and Aesthetic Medical Devices**—◆ Greg Campbell, FDA; Lilly Yue, FDA

12:15 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

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326 CC-Room 29B **■ Stochastic Models for Longitudinal and Time-to-Event Data—Topic-Contributed**

Biometrics Section, Biopharmaceutical Section, Section on Statistics in Epidemiology

Organizer(s): Michael Lindsey Pennell, The Ohio State University College of Public Health

Chair(s): Xin He, University of Maryland

- 10:35 a.m. **Ornstein-Uhlenbeck Random Effects Threshold Regression for Survival Data from Heterogeneous Populations**—Roger Erich, The Ohio State University; ◆Michael Lindsey Pennell, The Ohio State University College of Public Health
- 10:55 a.m. **A Semiparametric Threshold Regression Analysis with Flexible Covariate Effects**—Xin He, University of Maryland; ◆Ran Ji, University of Maryland; Mei-Ling Ting Lee, University of Maryland
- 11:15 a.m. **Distinguishing Between Short-Term Dependence and Trend in Bayesian Hierarchical Models of Response Time Data**—◆Trisha Van Zandt, The Ohio State University; Peter F Craigmile, The Ohio State University; Mario Peruggia, The Ohio State University
- 11:35 a.m. **Stochastic Volatility Regression for Functional Data Dynamics**—◆Bin Zhu, Duke University; David Dunson, Duke University
- 11:55 a.m. Disc: Dennis Pearl, The Ohio State University
- 12:15 p.m. **Floor Discussion**

327 CC-Room 33A **● New Developments in Methods for Locally Stationary Processes—Topic-Contributed**

Business and Economic Statistics Section

Organizer(s): Matthew Nunes, Lancaster University

Chair(s): Hernando Ombao, University of California at Irvine

- 10:35 a.m. **Inference for Local Autocorrelation Process in Locally Stationary Models**—◆Zhibiao Zhao, Penn State University
- 10:55 a.m. **Adaptive Sampling of Discrete Time Locally Stationary Processes**—◆Matthew Nunes, Lancaster University; Idris Eckley, Lancaster University
- 11:15 a.m. **Alias Detection and Spectral Estimation Within Locally Stationary Random Fields**—◆Idris Eckley, Lancaster University; Aimée Gott, Lancaster University
- 11:35 a.m. **Tree-Structured Wavelet Thresholding for Estimation of Evolutionary Spectra**—◆Rainer Von Sachs

- 11:55 a.m. **Semiparametric Dynamic Factor Models for Nonstationary Time Series**—◆Michael Eichler, Maastricht University; Giovanni Motta, Maastricht University

12:15 p.m. **Floor Discussion**

328 HQ-Sapphire 6F **■ ● Stat-Us Update from Facebook—Topic-Contributed**

Section on Statistical Learning and Data Mining, Section on Statistical Computing, International Indian Statistical Association

Organizer(s): Hyunyoung Choi, Facebook

Chair(s): Hyunyoung Choi, Facebook

- 10:35 a.m. **Bootstrapping and Bagging Data with Multi-Way Dependencies**—◆Dean Eckles, Facebook; Art B Owen, Stanford University
- 10:55 a.m. **Recent Advances in Graph-Based Deduplication**—◆Eric Sun, Facebook
- 11:15 a.m. **The Perils of Polling**—◆Mike Develin, Facebook
- 11:35 a.m. **Like My Status: Memology 2011**—◆Jonathan Chang, Facebook
- 11:55 a.m. **Measuring Advertising Return on Investment**—◆Sean Bruich, Facebook; Fred Leach, Facebook
- 12:15 p.m. **Floor Discussion**

329 CC-Room 21 **■ Analyzing Extremes in Environmental Studies—Topic-Contributed**

Section on Statistics and the Environment, International Indian Statistical Association, ASA Advisory Committee on Climate Change Policy

Organizer(s): Daniel Cooley, Colorado State University

Chair(s): Brian Reich, North Carolina State University

- 10:35 a.m. **Threshold Approach in the Analysis of Spatial Extremes**—◆Soyoung Jeon, The University of North Carolina at Chapel Hill
- 10:55 a.m. **Statistical Modeling of Extreme Value Behavior in North American Tree-Ring Density Series**—◆Elizabeth Mannshardt, North Carolina State University; Peter F Craigmile, The Ohio State University; Martin P. Tingley, Harvard University
- 11:15 a.m. **A Hierarchical Bayesian Extreme Value Theory Approach to Modeling Heat Waves**—◆Benjamin Shaby, University of California at Berkeley
- 11:35 a.m. **An Investigation of the Pineapple Express Phenomenon via Bivariate Extreme Value Theory**—◆Grant Brian Weller, Colorado State University; Daniel Cooley, Colorado State University; Stephan Sain, Geophysical Statistics Project



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 11:55 a.m. **Future Rainfall Projections Using Downscaled Regional Climate Models**—◆Robert Erhardt,
- 12:15 p.m. **Floor Discussion**

330 CC-Room 23C Stochastic Inverse Problems and Model Validation—Topic-Contributed

Section on Nonparametric Statistics, International Indian Statistical Association

Organizer(s): Jan Hannig, The University of North Carolina at Chapel Hill

Chair(s): Don Estep, Colorado State University

- 10:35 a.m. **Inverse Structural Inference in Statistics**—◆Jan Hannig, The University of North Carolina at Chapel Hill
- 10:55 a.m. **Inverse Function-Based Methodology for Inverse Sensitivity Analysis**—◆Jessi Cisewski, The University of North Carolina at Chapel Hill; Jan Hannig, The University of North Carolina at Chapel Hill; Don Estep, Colorado State University; Troy Butler, The University of Texas at Austin
- 11:15 a.m. **On Data Splitting for Model Validation**—◆Serge Prudhomme, The University of Texas at Austin; Rebecca Morrison, The University of Texas at Austin; Corey Bryant, The University of Texas at Austin; Gabriel Terejanu, The University of Texas at Austin; Kenji Miki, The University of Texas at Austin
- 11:35 a.m. **A Nonintrusive Technique for Inverse Sensitivity Analysis**—◆Simon Tavenner, Colorado State University; Don Estep, Colorado State University; Troy Butler, The University of Texas at Austin
- 11:55 a.m. **Predictive Performance Model Validation Methods with Uncertainty Quantification**—◆Edward Boone, Virginia Commonwealth University
- 12:15 p.m. **Floor Discussion**

331 CC-Room 25A ■ American Community Survey (ACS) Sample Design and Statistical Issues—Topic-Contributed

Section on Survey Research Methods, Social Statistics Section, Section on Government Statistics

Organizer(s): Alfredo Navarro, U.S. Census Bureau; Steven Hefter, U.S. Census Bureau

Chair(s): Michael A Beaghen, U.S. Census Bureau

- 10:35 a.m. **Pilot Study on Combining Direct Estimates of Income and Poverty from the American Community Survey with Predictions from a Model**—◆Richard Griffin, U.S. Census Bureau

- 10:55 a.m. **Application of a Small-Area Model for a Voting Rights Act Tabulation**—◆Patrick Joyce, U.S. Census Bureau; Donald Malec, National Center for Health Statistics; Roderick Little, University of Michigan/U.S. Census Bureau; Aaron Gilary, U.S. Census Bureau
- 11:15 a.m. **Developing Replicate Weight-Based Methods to Account for Imputation Variance in a Mass Imputation Application**—◆Mark E Asiala, U.S. Census Bureau; Edward C Castro, U.S. Census Bureau
- 11:35 a.m. **Understanding the Causes of the Differences Between the 2010 American Community Survey and the 2010 Decennial Census Vacancy Rates**—◆Steven Hefter, U.S. Census Bureau; Omolola Anderson, Federal Housing Finance Agency
- 11:55 a.m. **Results of Monitoring the American Community Survey Using Statistical Process Control Methodologies**—◆Jessica Schwan, U.S. Census Bureau; Steven P. Hefter, U.S. Census Bureau
- 12:15 p.m. **Floor Discussion**

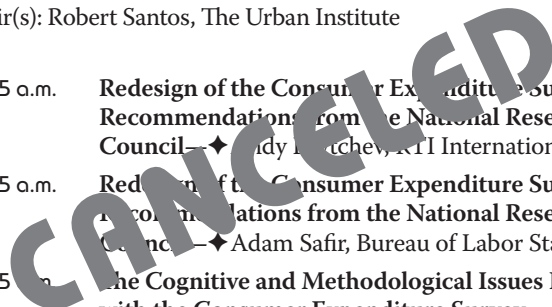
332 CC-Room 22 ● Redesign of the Consumer Expenditure Survey: Recommendations from the National Research Council—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods, Social Statistics Section

Organizer(s): Carol House, Committee on National Sciences

Chair(s): Robert Santos, The Urban Institute

- 10:35 a.m. **Redesign of the Consumer Expenditure Survey: Recommendations from the National Research Council**—◆Andy Luchez, RTI International
- 10:55 a.m. **Redesign of the Consumer Expenditure Survey: Recommendations from the National Research Council**—◆Adam Safir, Bureau of Labor Statistics
- 11:15 a.m. **The Cognitive and Methodological Issues Found with the Consumer Expenditure Survey**—◆Don Dillman, Washington State University
- 11:35 a.m. **Redesign of the Consumer Expenditure Survey: Recommendations from the National Research Council**—◆Carol House, Committee on National Sciences
- 11:55 a.m. **Floor Discussion**





● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Topic-Contributed Panels 10:30 a.m.–12:20 p.m.

333 CC-Room 23A

■ Transportation Statistics Interest Group Panel—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Peg Young, BTS/RITA/U.S. Department of Transportation

Chair(s): Li Leung, U.S. Department of Transportation

- Panelists:** ◆ Joy Sharp, Bureau of Transportation Statistics
 ◆ Kenneth Steve, U.S. Department of Transportation
 ◆ Steve Smith, U.S. Department of Transportation
 ◆ Elaine Murakami, Federal Highway Administration

12:15 p.m. **Floor Discussion**

334 CC-Room 31A

■ ● Big Data: Research and Training Challenges—Topic-Contributed

International Indian Statistical Association, Section on Statistical Education, Section on Statistical Learning and Data Mining, Statistics Surveys Online Journal

Organizer(s): Nandini Kannan, The University of Texas at San Antonio

Chair(s): David Banks, Duke University

- Panelists:** ◆ Brian Weaver, Los Alamos National Laboratory
 ◆ Nandini Kannan, The University of Texas at San Antonio
 ◆ Emmanuel Yashchin, IBM
 ◆ Deborah A. Nolan, University of California at Berkeley
 ◆ Richard De Veaux, Williams College
 ◆ James L. Rosenberger, Penn State University

12:15 p.m. **Floor Discussion**

Contributed Sessions 10:30 a.m.–12:20 p.m.

335 CC-Room 24A

Image Processing and Functional Data Analysis—Contributed

Section on Nonparametric Statistics, Biometrics Section, Section on Statistical Learning and Data Mining, Section on Statistics in Imaging

Chair(s): Jesse Frey, Villanova University

- 10:35 a.m. **Nonparametric Functional Data Analysis in a Time-Series Setting**—◆ Kathryn Prewitt, Arizona State University

- 10:50 a.m. **Dependence Measures for Functional Observations**—◆ Juan Romo, Universidad Carlos III de Madrid; Rosa E. Lillo, Universidad Carlos III de Madrid; Dalia Valencia, Universidad Carlos III de Madrid

- 11:05 a.m. **Using Principal Component Functions to Model Spatially Dependent Functional Data**—◆ Daniel Fortin; Zhengyuan Zhu, Iowa State University; Petrutza Caragea, Iowa State University

- 11:20 a.m. **High-Dimensional Longitudinal Functional Principal Component Analysis for RAVENS Images**—◆ Seonjoo Lee, Henry Jackson Foundation; Brian Scott Caffo, The Johns Hopkins University; Ciprian Crainiceanu, The Johns Hopkins University; Vadim Zipunnikov, Johns Hopkins Bloomberg School of Public Health; Dzung L. Pham, The Henry M. Jackson Foundation

- 11:35 a.m. **Optimal Dimension Reduction and Hypothesis Testing for Populations of Images**—◆ Maximillian Chen, Cornell University; Martin Wells, Cornell University

- 11:50 a.m. **Nonparametric Independent Component Analysis for Colored Sources with Application to Functional Magnetic Resonance Imaging**—◆ Young Truong, The University of North Carolina at Chapel Hill; Seonjoo Lee, NIH; Haipeng Shen, The University of North Carolina at Chapel Hill

- 12:05 p.m. **Adaptive Spatial Shrinkage Estimation of Diffusion Tensor Imaging with DWI Data**—◆ Tao Yu, National University of Singapore

336 CC-Room 30C Computational Techniques for Mixtures—Contributed

Section on Statistical Computing

Chair(s): Sujit Kumar Ghosh, North Carolina State University

- 10:35 a.m. **Semiparametric Unimodal Density Estimation Using Bernstein Polynomials**—◆ Bradley Turnbull, North Carolina State University; Sujit Kumar Ghosh, North Carolina State University

- 10:50 a.m. **Mathematical Programming Techniques for Improving Ensemble Models**—◆ J. Brian Gray, The University of Alabama; Jie Xu, The University of Alabama

- 11:05 a.m. **Fitting ROC Curves When the Non-Disease Sample Is Contaminated**—◆ Shiju Zhang, St. Cloud State University

- 11:20 a.m. **Empirical Evaluation of Paired Differences for Small Sample Sizes**—◆ Jonathan D. Mahnken, University of Kansas Medical Center

- 11:35 a.m. **Bivariate Normal Distribution: A New SOCR Applet**—◆ Scott Kamino, University of California at Los Angeles; Ivo D. Dinov, SOCR Resource; Nicolas Christou, University of California at Los Angeles

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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- 11:50 a.m. **An Approximate Fisher Scoring Algorithm for Finite Mixtures of Multinomials**—◆ Andrew M. Raim, University of Maryland Baltimore County; Minglei Liu, Medtronic; Nagaraj K. Neerchal, University of Maryland Baltimore County; Jorge Morel, The Procter & Gamble Company
- 12:05 p.m. **Floor Discussion**

- 11:35 a.m. **Learning with Multiple Experts: Sparsity and Model Selection**—◆ Rafael Izbicki, Carnegie Mellon University; Rafael Bassi Stern, Carnegie Mellon University
- 11:50 a.m. **Sparse Forward Selection for Support Vector Classification**—◆ Subhashis Ghoshal, North Carolina State University; Hao Helen Zhang, North Carolina State University; Wookyeon Hwang, LG Electronics
- 12:05 p.m. **One-Way Analysis of Proportions for Misclassified Binomial Data**—◆ Dewi Gabriela Rahardja, FDA; Yan Zhao, Oklahoma University Health Sciences Center

337 CC-Room 30A Interactive and Web Graphics—Contributed

Section on Statistical Graphics, Section on Statistical Computing
Chair(s): Heike Hofmann, Iowa State University

- 10:35 a.m. **Interactive Web Graphs with Fewer Exclusions**—◆ James Fiedler
- 10:50 a.m. **Cranvastime: Interactive Longitudinal and Temporal Data Plots**—◆ Xiaoyue Cheng, Iowa State University; Dianne H Cook, Iowa State University; Heike Hofmann, Iowa State University
- 11:05 a.m. **Cranvas: A New Package for Interactive Statistical Graphics in R**—◆ Yihui Xie, Iowa State University
- 11:20 a.m. **Adapting Statistical Software to the Apple iPad**—◆ Neil Polhemus
- 11:35 a.m. **Visualizing Historical Agricultural Data via the Web**—◆ Irwin Anolik, USDA/National Agricultural Statistics Service
- 11:50 a.m. **Do Smashes Win Matches?**—◆ Sarah Budrus; Dianne H Cook, Iowa State University
- 12:05 p.m. **Exploratory Analysis of Large-Scale Spatial-Temporal Data**—◆ Dongyu Lin, AT&T Labs; Ganesh K. Subramaniam, AT&T Labs; Colin R. Goodall, AT&T Labs; Simon Urbanek, AT&T Labs - Research

339 CC-Room 23B Statistical Models Applied to Defense and National Security Issues—Contributed

Section on Statistics in Defense and National Security
Organizer(s): Michael L. Cohen, National Academy of Sciences
Chair(s): Ron Fricker, Naval Postgraduate School

- 10:35 a.m. **New Statistical Measures for Network Security**—◆ Soumyo Moitra, Carnegie Mellon University
- 10:50 a.m. **A Sequential Procedure for Aggregation of Expert Judgment Forecasts**—◆ John Irvine, Draper Laboratory; Srinivasamurthy R. Prakash, Draper Laboratory; John Regan, Draper Laboratory; Drazen Prelec, MIT
- 11:05 a.m. **Evaluation of a Resilience Training Program: Modeling Targeted Mediator and Health-Related Outcomes**—◆ Weimin Zhang, Samueli Institute; Salvatore Libretto, Samueli Institute; Dawn Wallerstedt, Samueli Institute; Joan Walter, Samueli Institute
- 11:20 a.m. **Cell Tower Partition and Estimation**—◆ Yi Fang Chen, AT&T; S. Tom Au, AT&T Labs
- 11:35 a.m. **A New Physics-Based Method to Detect Weak Nuclear Signals via Spectral Decomposition**—◆ Jinzheng Li, University of Iowa; Kung-Sik Chan, University of Iowa; William Eichinger, University of Iowa; Erwei Bai, University of Iowa
- 11:50 a.m. **Treatment Heterogeneity and Individual Qualitative Interaction**—◆ Robert Poulson, U.S. Air Force
- 12:05 p.m. **Floor Discussion**

338 CC-Room 30D Classification—Contributed

Section on Statistical Learning and Data Mining, Biometrics Section
Chair(s): Karthik Devarajan, Fox Chase Cancer Center

- 10:35 a.m. **Local Classification of the Chemical Data**—◆ Petro Borysov
- 10:50 a.m. **Supervised Classification Using Sparse Fisher's LDA**—◆ Irina Gaynanova, Cornell University
- 11:05 a.m. **Text Classification and Big Data**—◆ David Afshartous, Vanderbilt University; George Michailidis, University of Michigan
- 11:20 a.m. **Visualization of Biomarkers for Multiple-Class Disease When Data Is of High Dimensions and Subject to Severe Collinearity: A Latent Structure Approach**—◆ Su Qian, SUNY at Buffalo; Chris Andrews, SUNY at Buffalo



● Themed Session ■ Applied Session ◆ Presenter

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340 CC-Room 28C Semiparametric Modeling 2—Contributed

Biometrics Section, International Chinese Statistical Association

Chair(s): Hokwon Anthony Cho, University of Nevada, Las Vegas

- 10:35 a.m. **Information Borrowing Methods for Covariate-Adjusted ROC Curve**—◆ Zhong Guan, Jing Qin, National Institute of Allergy and Infectious Diseases; Biao Zhang, University of Toledo
- 10:50 a.m. **Semiparametric Analysis of Short-Term and Long-Term Odds Ratios with Survival Data**—◆ Mengdie Yuan, George Mason University; Guoqing Diao, George Mason University
- 11:05 a.m. **Combining Random Forest with Targeted Maximum Likelihood Estimation for Variable Importance Analysis**—◆ Hui Wang, Stanford University; Mark van der Laan, University of California at Berkeley School of Public Health
- 11:20 a.m. **Two-Stage Multivariate Outcome-Dependent Sampling Design and Statistical Inferences**—◆ Tsui-shan Lu, National Taiwan Normal University; Haibo Zhou, The University of North Carolina at Chapel Hill
- 11:35 a.m. **Semiparametric Mixture Approach in Case-Control Studies with Measurement Error in Covariates for General Models**—◆ Jihyun Song, Washington University in St. Louis; Malay Ghosh, University of Florida
- 11:50 a.m. **Semiparametric Methods for Regression Under Two-Phase Sampling**—Gustavo Amorim, University of Auckland; Alastair John Scott, University of Auckland; ◆ Christopher Wild, University of Auckland
- 12:05 p.m. **Robust and Semiparametric Efficient Targeted Estimator for the Natural Direct Effect in a Survival Setting with Time-Dependent Mediator**—◆ Wenjing Zheng, University of California at Berkeley; Mark van der Laan, University of California at Berkeley School of Public Health

341 CC-Room 28B Analysis of Biomarkers—Contributed

Biometrics Section, Biopharmaceutical Section

Chair(s): Ji-Hyun Lee, Moffitt Cancer Center

- 10:35 a.m. **Using Multiple Biomarkers as a Bridge to Examine the Efficacy of Cancer Lifestyle Intervention Trials**—◆ Hongying Li, University of California at San Diego; Loki Natarajan, University of California at San Diego
- 10:50 a.m. **A Bayesian Approach of Testing for Serial Homogeneity in the Correlation of Longitudinally Measured Biomarkers**—◆ Su Chen, University of Michigan; Timothy D. Johnson, University of Michigan; Thomas M Braun, University of Michigan

- 11:05 a.m. **Identifying Combinations of Biomarkers for Treatment Selection**—◆ Chaeryon Kang, Fred Hutchinson Cancer Research Center; Holly E Janes, Fred Hutchinson Cancer Research Center
- 11:20 a.m. **System Variability Study of Multiplexed Immunofluorescence Using Cell Line Microarrays**—◆ Colin C McCulloch, GE Global Research; Mike Lazare, GE Global Research; Sireesha Kaanumalle, GE Global Research; Natalia Jun, GE Healthcare; Rodney Beck, GE Healthcare; Kevin Kenny, GE Global Research; Dave Henderson, GE Global Research; Alex Corwin, GE Global Research; Denise Hollman, GE Healthcare
- 11:35 a.m. **Incorporate Biological Information into a Hierarchical Model for Bayesian Variable Selection in Biomarker Identification**—◆ Xiaowei Yang, University of California at Davis; Bin Peng, University of California at Davis
- 11:50 p.m. **Bias in Estimation and Inference in Assessing the Incremental Value of New Biomarkers**—◆ Zheyu Wang, University of Washington; Kathleen F Kerr, University of Washington
- 12:05 p.m. **Floor Discussion**

342 CC-Room 28A ■ Planning and Analysis of Phase I/II Clinical Trials—Contributed

Biopharmaceutical Section

Chair(s): Grace Liu, Johnson & Johnson

- 10:35 a.m. **A Time-to-Event Generalized Continual Reassessment Method for Two-Agent Phase I Trials**—◆ Nan Jia, University of Michigan; Thomas M Braun, University of Michigan
- 10:50 a.m. **Posterior Probability of Adverse Events (AE) Categories for Phase I Studies**—◆ Kyoungwha Bae, Alcon Laboratories; John W. Seaman III, Alcon Laboratories; Mark VonTress, Alcon Laboratories
- 11:05 a.m. **Optimal Dose finding for Phase I Cancer Clinical Trials**—◆ Shanhong Guan, Sanofi
- 11:20 a.m. **Continual Reassessment Method: A Unified Approach**—◆ Keying Ye, The University of Texas at San Antonio; Xiaobin Yang, Analytic Focus, LLC; Ying Ji, The University of Texas at San Antonio
- 11:35 a.m. **Flexible Link Continual Reassessment Methods for Trivariate Binary Outcome Phase I/II Trials**—◆ Wei Zhong, University of Minnesota; Bradley P Carlin, University of Minnesota; Joseph S Koopmeiners, University of Minnesota
- 11:50 a.m. **Power Calculations Conditioned on a Given Effect Size: Can We Do Better?**—◆ Peter Hu, Bristol-Myers Squibb; Ih Chang, Bristol-Myers Squibb
- 12:05 p.m. **Floor Discussion**

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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343 CC-Room 27B ■ Selected Analysis and Bioequivalence— Contributed

Biopharmaceutical Section

Chair(s): Jin Xu, Merck

- 10:35 a.m. **Optimizing Bioequivalence Trial Sample Size—**
◆ Bret Musser, Merck; Junghoon Lee, Merck; Larson
Patrick, Merck
- 10:50 a.m. **Designs for Bayesian Adaptive Bioequivalence
Trials—**◆ Cheng Zheng, Novartis; Jixian Wang,
Novartis
- 11:05 a.m. **Group Sequential Method for PK Bioequivalence
Crossover Studies—**◆ Huaixiang Li, FDA/OTS/
CDER/OB/DBG; Stella Grosser, FDA/CDER
- 11:20 a.m. **On the Asymmetrical Margins Approach to
Biosimilarity Clinical Trials with Efficacy
Endpoints—**◆ Yulan Li, Novartis; Qing Liu, Johnson
& Johnson
- 11:35 a.m. **Operating Characteristics in Assessing Agreement
Between Two Instruments of Quantitative
Measurement—**◆ Jeng Mah, Beckman Coulter
- 11:50 a.m. **A Statistical Approach to Determining the
Minimum Bead Number for Luminex Bead-Based
Assays—**◆ Yuan (Sally) Zhang, Boehringer Ingelheim
Pharmaceuticals, Inc.; Xiaoyu Jiang, Boehringer
Ingelheim Pharmaceuticals, Inc.; Shuguang Huang,
Precision Therapeutics, Inc.
- 12:05 p.m. **Floor Discussion**

344 CC-Room 33B ● Nonparametrics, Mixtures, and Functional Data—Contributed

Business and Economic Statistics Section

Chair(s): William Leeds, University of Missouri

- 10:35 a.m. **Finite Mixtures of Archimedean Copulas—**◆ Renate
Meyer, University of Auckland; Goeran Kauermann,
Ludwig-Maxilians-Universität München
- 10:50 a.m. **Time-Varying Beta and the Value Premium:
Evidence from the Varying-Coefficient Single-Index
Model—**◆ Chaojiang Wu, University of Cincinnati;
Hui Guo, University of Cincinnati; Yan Yu, University
of Cincinnati
- 11:05 a.m. **Adaptive Nonparametric Regression for
Marketplace Response Detection—**◆ Junqing Wu,
Microsoft Corporation; Yuedong Wang, University
of California at Santa Barbara; Wendy Meiring,
University of California at Santa Barbara
- 11:20 a.m. **Nonparametric Estimation of Risk Neutral
Distribution Implied by Options—**◆ Kam Hamidieh,
California State University Fullerton

- 11:35 a.m. **Functional Coefficient Autoregressive Models for
Nonlinear Time Series—**◆ Alireza Tahai, Mississippi
State University
- 11:50 a.m. **Modeling and Forecasting the Daily Load Curves
for Electricity—**◆ Jonathan Hosking, IBM Research;
Soumyadip Ghosh, IBM Research; Ramesh Natarajan,
IBM Research
- 12:05 p.m. **Functional Prediction of Intraday Cumulative
Returns—**◆ Xi Zhang, Utah State University; Piotr
Stefan Kokoszka, Colorado State University

345 CC-Room 24B On Smoothing, Dimension Reduction, and Functional Data—Contributed

IMS, Biometrics Section, Section on Statistical Learning and Data Mining

Chair(s): Kehui Chen, University of California at Davis

- 10:35 a.m. **Exact Distribution of the Nonlinear Least Squares
Estimator—**◆ Eugene Demidenko, Dartmouth
Medical School
- 10:50 a.m. **Estimation in Functional Linear Quantile
Regression—**◆ Kengo Kato, Hiroshima University
- 11:05 a.m. **On the Density Functions of Integrals of Gaussian
Random Fields—**◆ Gongjun Xu, Columbia
University; Jingchen Liu, Columbia University
- 11:20 a.m. **Structured Dimension Reduction—**◆ Bo Zhang,
North Carolina State University; Lexin Li, North
Carolina State University
- 11:35 a.m. **A General Theory of Nonlinear Sufficient
Dimension Reduction: Formulation and
Estimation—**◆ Kuang-Yao Lee, Penn State
University; Bing Li, Penn State University; Francesca
Chiaromonte, Penn State University
- 11:50 a.m. **On Nonparametric Curve Estimation with Spatial
Data—**◆ Sucharita Ghosh, Swiss Federal Research
Institute WSL
- 12:05 p.m. **Multiple-Index Approach to Multiple
Autoregressive Time Series Model—**◆ Jin-Hong
Park, College of Charleston

346 CC-Room 25B CDISC Data Submission and SAS-Related Applications—Contributed

Section for Statistical Programmers and Analysts, Biopharmaceutical Section, Section on Government Statistics

Chair(s): Aleksandra Stein, University of Nebraska

- 10:35 a.m. **Introducing Your CDISC SDTM and ADaM Data
with a Reviewer's Guide: A Practical Overview—**
◆ Steven R Kirby, ViroPharma Inc.



● Themed Session ■ Applied Session ◆ Presenter

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- 10:50 a.m. **Metadata and Adam**—◆Kevin Lee, Cytel Inc.
- 11:05 a.m. **Application of Mitigated Fraction in a Vaccine Study Using SAS**—◆Mathew Anthony Rosales,
- 11:20 a.m. **Two in One: A SAS Macro That Creates Tables and Graphs for Survival Analysis and Combines Results Together**—◆Jian Hua Huang, Celgene Corporation
- 11:35 a.m. **The Design, Development, and Implementation of a Web-Based Control Data Tracking and Analysis System for Immunoassays Using Java Servlet Framework and Batch-Oriented SAS Processing**—◆How Tsao, Pfizer Inc.; John Sims, Pfizer Inc.; Andrew McKeen, Pfizer Inc.; Vivek Balakrishna, Pfizer Inc.; Khushroo Shroff, Pfizer Inc.
- 11:50 a.m. **Floor Discussion**

347 CC-Room 24C Bayesian Modeling of Large-Scale Data— Contributed

Section on Bayesian Statistical Science, Section on Statistical Learning and Data Mining

Chair(s): Joon Jin Song, University of Arkansas

- 10:35 a.m. **A Bayesian Nonparametric Method for Differential Expression Analysis of RNA-Seq Data**—◆Yiyi Wang
- 10:50 a.m. **Bayesian De Novo Characterization of Alternative Splicing Using High-Throughput Sequencing**—◆David Rossell, IRB Barcelona; Camille Stephan Otto-Attolini, IRB Barcelona; Manuel Kroiss, LMU Munich/TU Munich; Almond Stöcker, LMU Munich
- 11:05 a.m. **Bayesian Hierarchical Models with Spatial Mixture Priors in Genome-Wide Association Studies**—◆Jie Shen, University of California at Irvine; Hal Stern, University of California at Irvine
- 11:20 a.m. **Bayesian Approach to Protein Lysate Array Quantification**—◆Ji-Yeon Yang, MD Anderson Cancer Center; Xuming He, University of Michigan; Feng Liang, University of Illinois at Urbana-Champaign
- 11:35 a.m. **A Bayesian Model-Averaging Approach for Observational High-Throughput Data**—◆Xi Kathy Zhou, Weill Cornell Medical College; Fei Liu, IBM T. J. Watson Research Center; Andrew J Dannenberg, Weill Cornell Medical College
- 11:50 a.m. **A Latent Eigen Probit Model with Link Uncertainty for Prediction of Protein-Protein Interactions**—◆Xiaoyu Jiang, Boehringer Ingelheim Pharmaceuticals, Inc.; Eric D Kolaczyk, Boston University
- 12:05 p.m. **Bayes Multiple Decision Functions in Classification**—◆Wensong Wu, Florida International University; Edsel Aldea Pena, University of South Carolina

348 CC-Room 27A ■ Spatial Statistics in Epidemiology— Contributed

Section on Statistics in Epidemiology

Chair(s): Ronny Westerman, University of Marburg

- 10:35 a.m. **Bayesian Hierarchical Spatial Modeling: An Application in Modeling the Prevalence of Brucellosis Among Elk in Yellowstone Ecosystem**—◆Pritam Gupta, University of Wyoming; Timothy Robinson, University of Wyoming; Richard Anderson-Sprecher, University of Wyoming
- 10:50 a.m. **A Transformation Class for Spatio-Temporal Survival Data with a Cure Fraction**—◆Sandra Hurtado Rúa, Weill Cornell Medical College; Dipak K Dey, University of Connecticut
- 11:05 a.m. **Spatial Analysis of Cardiovascular Data: A Simulation Study**—◆Samantha Seals, The University of Alabama at Birmingham; Charles Katholi, The University of Alabama at Birmingham; Inmaculada Aban, The University of Alabama at Birmingham
- 11:20 a.m. **A New Test for Spatial Autocorrelation with an Application to Mortality in Swedish Municipalities**—◆Henrik Holmberg, Umeå University; Erling Haggstom Lundevaller, Umeå University
- 11:35 a.m. **Mapping the Spatial Distribution of a Disease-Transmitting Insect in the Presence of Surveillance Error and Missing Data**—◆Andrew Hong
- 11:50 a.m. **A Bayesian Spatial Change-Point Model for Functional Clustering**—◆Zhen Zhang, Michigan State University; Sarat C Dass, Michigan State University; Chae Young Lim, Michigan State University; Tapabrata Maiti, Michigan State University
- 12:05 p.m. **Floor Discussion**

349 CC-Room 25C ■ ● Health, Hospital, and Patient Surveys— Contributed

Section on Survey Research Methods

Chair(s): Jason Gilikin, Spectrum Health Hospital Group

- 10:35 a.m. **Results from the Survey of Health Insurance and Program Participation**—◆Joanna Turner, University of Minnesota, SHADAC; Brett Fried, University of Minnesota, SHADAC; Joanne Pascale, U.S. Census Bureau; Michel Boudreaux, University of Minnesota; Kathleen Call, University of Minnesota

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 10:50 a.m. **Redesign of the National Ambulatory Medical Care Survey to Support State Estimates**—◆ Esther Hing, National Center for Health Statistics; Iris Shimizu, National Center for Health Statistics
- 11:05 a.m. **The Intersection of Nonresponse and Measurement Error in the National Health Interview Survey**—◆ James Dahlhamer, National Center for Health Statistics
- 11:20 a.m. **Impacts of Question Format on Prevalence Estimates, Item Nonresponse, and Response Times: A Split-Ballot Experiment of Disability Questions on the National Health Interview Survey**—◆ Julie Dawson Weeks, National Center for Health Statistics; James Dahlhamer, National Center for Health Statistics
- 11:35 a.m. **Coverage Implications of Targeted Lists for Rare Populations**—◆ Ned English, NORC; Ipek Bilgen, NORC
- 11:50 a.m. **Haplotype-Based Statistical Inference for Population-Based Case-Control Studies with Complex Sample Designs**—◆ Daoying Lin, The University of Texas at Arlington; Yan Li, The University of Texas at Arlington
- 12:05 p.m. **Aggregate-Level PUF as a New Alternative to the Traditional Unit-Level PUF for Improving Analytic Utility and Data Confidentiality**—Avinash Singh, NORC; ◆ Joshua M Borton, NORC

- 11:35 a.m. **Weak Identifiability in Latent Class Analysis**—◆ Marcus Berzofsky, RTI International; Paul P Biemer, RTI International/The University of North Carolina at Chapel Hill
- 11:50 a.m. **Estimating Record Linkage Error Rates Without Training Data**—◆ William Winkler
- 12:05 p.m. **Pre-Sampling Model-Based Inference IV**—◆ Stephen Woodruff, Specified Designs

350 CC-Room 26A ■ ● Administrative Data, Record Linkage, and Latent Class Models—Contributed

Section on Survey Research Methods

Chair(s): Maxine Denniston, CDC

- 10:35 a.m. **Quality/Quantity Assessment of Patient Registries Versus Questionnaire Self-Reports**—◆ Shelton Jones, RTI International; Timothy P Johnson, University of Illinois at Chicago; Steven B Clauser, National Cancer Institute; Joseph McMichael, RTI International; Katherine Treiman, RTI International; Connie L Hobbs, RTI International
- 10:50 a.m. **Comparing Injury Data from Administrative and Survey Sources: Methodological Issues**—◆ Nicole Nestoriak, Bureau of Labor Statistics; Brooks Pierce, Bureau of Labor Statistics
- 11:05 a.m. **Evaluation of Risk Factors in Population-Based Incidence of Clostridium Difficile Infection Across Multiple U.S. Geographic Locations**—◆ Yi Mu, CDC
- 11:20 a.m. **Combining Cluster Sampling and Link-Tracing Sampling: Estimating the Size of a Hidden Population in the Presence of Heterogeneous Link-Probabilities Modeled by a Latent-Class Model**—◆ Martin Felix-Medina, Autonomous University of Sinaloa; Jesus Armando Dominguez-Molina, Autonomous University of Sinaloa

351 CC-Room 26B ■ Topics in Genomics, Genetics, and Molecular Evolution—Contributed

UNAR, Biometrics Section

Chair(s): Danh Nguyen, University of California at Davis

- 10:35 a.m. **Ggbio: An R Implementation for Extending the Grammar of Graphics for Genomic Data**—◆ Tengfei Yin, Iowa State University; Dianne H Cook, Iowa State University; Michael Lawrence, Genentech
- 10:50 a.m. **Inferential Tests for the Intersection of Independent Gene Lists**—◆ Loki Natarajan, University of California at San Diego; Karen Messer, University of California at San Diego; Minya Pu, University of California at San Diego
- 11:05 a.m. **Supervised Predictive Gene Signatures Selection for Cancer Treatment with Survival Endpoint**—◆ Keyue Ding, Queen's University
- 11:20 a.m. **A Two-Stage Approach to Genetic Risk Prediction in Primary Care**—◆ Philamer Atienza, University of North Texas Health Science Center; Swati Biswas, University of North Texas Health Science Center; Jonathan Chipman, Dana-Farber Cancer Institute; Christopher Amos, MD Anderson Cancer Center; Kevin S. Hughes, Harvard Medical School/Massachusetts General Hospital; Banu K. Arun, MD Anderson Cancer Center; Giovanni Parmigiani, Harvard School of Public Health
- 11:35 a.m. **Imputing Missing Genotypes in Transmission Disequilibrium Test with One Sibling**—◆ Gulhan Bourget, California State University Fullerton
- 11:50 a.m. **Identifying the Rooted Species Tree from Probabilities of Splits Under the Multispecies Coalescent**—◆ James Degnan; Elizabeth S Allman, University of Alaska Fairbanks; John A Rhodes, University of Alaska Fairbanks
- 12:05 p.m. **Phylogenetic Likelihood Equations: What Do They Mean and Why Should We Care?**—◆ Vladimir N Minin, University of Washington



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Contributed Poster Presentations 10:30 a.m.–12:20 p.m.

**352 CC-Sails Pavilion
Contributed Oral Poster Presentations:
Section on Bayesian Statistics — Contributed**

Section on Bayesian Statistical Science

Chair(s): Chii-Dean Lin, San Diego State University


- 01: A New Bayesian Lasso** — ◆ Himel Mallick, The University of Alabama at Birmingham; Nengjun Yi, The University of Alabama at Birmingham
- 02: Adaptive Bayesian Multivariate Density Estimation with Dirichlet Mixtures** — ◆ Weining Shen, North Carolina State University
- 03: Bayesian Nonparametric Estimation of Demographic Histories: A Phylodynamic Approach** — ◆ Julia Palacios, University of Washington; Vladimir N Minin, University of Washington
- 04: Multiple Feller Operators and Mixture Priors for the Spectral Density Function of a Random Field** — ◆ Xiang Zhang

- 05: A Positive Trait Item Response Model** — ◆ Joseph Lucke, SUNY at Buffalo
- 06: A Prior for Partial Autocorrelation Selection** — ◆ Jeremy Gaskins, University of Florida; Michael Daniels, University of Florida
- 07: Improving the Decisionmaking Process in Lead Compound Identification Using Bayesian Statistics** — ◆ Jo Wick, University of Kansas Medical Center
- 08: Analyzing Spatial Directional Data Using Projected Normal Processes** — ◆ Fangpo Wang, Duke University; Alan Gelfand, Duke University
- 09: laseq: Integrating Multiple ChIP-Seq Data Sets for Detecting Allele-Specific Binding** — ◆ Yingying Wei, The Johns Hopkins University; Xia Li, Beijing Institute of Genomics; Hongkai Ji, The Johns Hopkins University
- 10: Bayesian Variable Selection as a Complete Graph Model** — ◆ Zaili Fang, Virginia Tech; Inyoung Kim, Virginia Tech
- 11: Parallel Particle Learning for Bayesian Asset Price Prediction** — ◆ Kenichiro McAlinn, Keio University; Teruo Nakatsuma, Keio University; Hiroaki Katsura, Keio University

Tuesday

**JSM Dance Party
and Lounge**

**Tuesday, July 31
9:30 p.m. – Midnight
San Diego Convention Center
Ballroom 20D**



A special thanks to IBM for its support of this event



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 12: **Bayesian Online Ranking Using W-Stein's Identity** — ◆ Chiu-Hsing Weng, National Chengchi University
- 13: **Flexible Predictive Process Spatial Factor Models for Misaligned Data Sets** — ◆ Qian Ren, University of Minnesota; Sudipto Banerjee, University of Minnesota
- 14: **A Novel Nonparametric Prior Based on Transformed Bernstein Polynomial** — ◆ Yuhui Chen; Timothy Hanson, University of South Carolina
- 15: **Validation of Surrogate Endpoints by Bayesian Equivalence Testing** — ◆ Mathangi Gopalakrishnan, University of Maryland Baltimore County
- 16: **Multilevel Modeling of Follow-Up Studies with Missing Data** — ◆ Monica Bennett, Baylor Health Care System; James Stamey, Baylor University; John W. Seaman, Baylor University
- 17: **A Bayesian Approach to Understanding the Probability of Zero Rainfall** — ◆ James Travis, University of Maryland Baltimore County; Anindya Roy, University of Maryland Baltimore County
- 18: **Hierarchical Bayesian Models of Change-Point Problem Using Bayes Factor** — ◆ Younshik Chung, Pusan National University; Seongho Song, University of Cincinnati; Myoungjin Jung, Pusan National University
- 19: **Infinite Tensor Factorization Priors** — ◆ Anjishnu Banerjee; David Dunson, Duke University
- 20: **Construction of Joint Distributions in Bayes Nets from Cartesian Products of Conditional Distributions** — ◆ Joe Brown
- 21: **Bayesian Estimation of the Expected Time of First Arrival Past a Truncated Time T: The Case of NHPP with Power Law Intensity** — ◆ Mostafa Aminazdeh, Towson University
- 22: **Bayesian Semiparametric Methods to Test Shapes of Regression Functions** — ◆ Yifang Li, North Carolina State University; Sujit Kumar Ghosh, North Carolina State University
- 23: **A Comparison of Power in Normal Theory Approximation to Bayesian MCMC Procedures** — ◆ Jiang Yuan, Baylor University; John W. Seaman, Baylor University; James Stamey, Baylor University
- 24: **A Bayesian Model for Election Forecasting: A Case Study of Voting Intentions of Students of University of Lagos** — ◆ Ray Okonkwo Okafor, University of Lagos; Rotimi Kayode Ogundeji, University of Lagos
- 25: **Nonparametric Bayesian Modeling of Non-Gaussian Time Series with Conditional Heteroskedasticity** — ◆ Zhiguang Xu, The Ohio State University; Steven MacEachern, The Ohio State University; Xinyi Xu, The Ohio State University
- 26: **Small-Area Estimates of Diagnosed Diabetes, Obesity, and Physical Inactivity Prevalence in Puerto Rico, by Municipio, 2009** — ◆ Elizabeth K Ely, CDC; Theodore J Thompson, CDC; Ed F Tierney, CDC; Roberta H Hilsdon, CDC

- 27: **Comparison of Credible Sets and Confidence Intervals for a Bivariate Discrete and Continuous Model** — ◆ Ross Bray, Baylor University; John W. Seaman, Baylor University; James Stamey, Baylor University

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CC-Sails Pavilion

Contributed Oral Poster Presentations: Section on Nonparametric Statistics — Contributed

Section on Nonparametric Statistics

Chair(s): Chii-Dean Lin, San Diego State University

- 28: **A Permutation Test for Unit Root in an Autoregressive Model** — ◆ Lanh Tran, Indiana University; Jiexiang Li, College of Charleston
- 29: **Robust and Traditional Inference Procedures for Analysis of Covariance Under Heterogeneous Slopes** — ◆ Kuanwong Watcharotone, University of Michigan; Joseph W McKean, Western Michigan University; Bradley E Huitema, Western Michigan University
- 30: **Cox Model Selection Based on Information Criterion** — ◆ Yu-Mei Chang, Tunghai University
- 31: **Model Testing in Partially Linear Models** — ◆ Lynn Waterhouse, Penn State University; Michael G. Akritas, Penn State University
- 32: **An Improved Estimation for Mixed Effect Model with Application to Health Care Expenditure** — ◆ Lingjun He, San Diego State University; Jianwei Chen, San Diego State University
- 33: **Measuring Similarity Between Responses to Repeated Questions** — ◆ Madhuri Mulekar, University of South Alabama; C Scott Brown, University of South Alabama
- 34: **Spline-Backfitted Kernel Estimation for Functional-Coefficient Autoregressive Models** — ◆ Joshua Patrick, Baylor University; Jane Harvill, Baylor University
- 35: **Nonparametric Methods to Detect Within-Individual Changes in Discounting** — ◆ Coedy Hadden; Reid Landes, University of Arkansas for Medical Sciences
- 36: **Generalized Linear Varying Coefficient Model with Data Missing at Random** — ◆ Jianwei Chen, San Diego State University; Qian Xu, San Diego State University
- 37: **A Functional Approach to Modeling Time-Dependent Covariates in the Intensive Care Unit** — ◆ Jonathan Gellar; Parichoy Pal Choudhury, Johns Hopkins Bloomberg School of Public Health; Yenny Webb-Vargas, Johns Hopkins Bloomberg School of Public Health; Ciprian Crainiceanu, The Johns Hopkins University
- 38: **Efficient Estimation of Aalen's Nonparametric Additive Survival Model** — ◆ Katrina Tomanelli, University of Windsor; Abdulkadir Hussein, University of Windsor; Severien Nkurunziza, University of Windsor



● Themed Session ■ Applied Session ◆ Presenter

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354 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Statistical Computing — Contributed

Section on Statistical Computing

Chair(s): Chii-Dean Lin, San Diego State University

- 39: **Statistical Analysis of Weather Data** —◆Morteza Marzjarani, Saginaw Valley State University; Greg McNish, Saginaw Valley State University
- 40: **Asymptotic Expansions for the Pivots Using Log-Likelihood Derivatives with an Application in Item Response Theory** —◆Haruhiko Ogasawara, Otaru University of Commerce
- 41: **The tvtools Package for R** —◆David Shilane
- 42: **Modified Large Sample Inference for the Ratio of Two Poisson Means and for Estimating Weighted Average of Poisson Means** —◆Jie Peng, St. Ambrose University; Kalimuthu Krishnamoorthy, University of Louisiana at Lafayette
- 43: **Visualization for Multivariate Copula Density Function** —◆Yoonsung Jung, Prairie View A&M University; Daeyoung Kim, University of Massachusetts-Amherst; Jong-Min Kim, University of Minnesota-Morris
- 44: **Monte Carlo Methods for Jump-Diffusion Processes** —◆Anton Kliewer, Texas Tech University
- 45: **An MCEM Algorithm for Positive or Negative Correlated Survival Data Under Various Frailty Distributions: Application to Compensating Victims of Discriminations** —◆Wenjing Xu; Qing Pan, The George Washington University; Joseph Gastwirth, The George Washington University
- 46: **Monte Carlo Maximum Likelihood Circle Fitting Using Circular Density Functions** —◆Ulric Lund, California Polytechnic State University
- 47: **An Analysis of Beer Styles** —◆Ivan Ramler, St. Lawrence University
- 48: **R and Hadoop: A Streaming Job** —◆A. Santos, Return Path; Nathan McIntyre, Return Path
- 49: **Inferences in Simulation-Based Likelihood Using Importance Sampling** —◆Fassil Nebebe, Concordia University
- 50: **Comparison of Population Means for Skewed Data with Unequal Variance** —◆Evren Özkıp, Bursa Police College; Berna Yazici, Anadolu University; Betul Kan, Anadolu University; Ahmet Sezer, Anadolu University
- 51: **Using Kullback-Leibler Divergence to Estimate the Regularized Discriminant Function** —◆John Beeson
- 52: **Maximum Likelihood Estimation of the Distributional Parameters of the Magnitude and Phase in Magnetic Resonance Spectroscopy Signals** —◆Pia Lothgren, Swedish University of Agricultural Sciences
- 53: **Using the Bootstrap for Estimating the Sample Size in Statistical Experiments** —◆Maher Qumsiyeh, University of Dayton
- 54: **A Universal Statistics Server, with Biopharmaceutical and Energy Applications** —◆Stephen Kaluzny, TIBCO Software Inc.; Lou Bajuk, TIBCO Software Inc.

- 55: **A Nonmetric Embedding Approach to Testing for Matched Pairs** —◆Brent Castle, Indiana University; Michael Trosset, Indiana University; Carey E Priebe, The Johns Hopkins University

355 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Statistical Graphics — Contributed

Section on Statistical Graphics, Section on Statistical Computing

Chair(s): Chii-Dean Lin, San Diego State University

- 56: **Complexity of Families of Multigraphs** —◆Termeh Shafie, Stockholm University; Ove Frank, Stockholm University
- 57: **Dynamic Graphics for Exploring and Understanding Multiple Regression Diagnostics** —◆Mervyn Marasinghe, Iowa State University; Yihui Xie, Iowa State University
- 58: **The Evolution of R: Growth of the R-Help Mailing List Archives Over Time** —◆Richard Kwock, University of California at Los Angeles; Robert E Weiss, University of California at Los Angeles Fielding School of Public Health
- 59: **An Exponential Family of Probability Distributions for Dynamic Directed Graphs and Some Asymptotic Properties of the Maximum Likelihood Estimators in These Models** —◆Subhomoy Ghosh, Iowa State University; Arka P. Ghosh, Iowa State University
- 60: **Using a Geographic Information System to Visualize Thalassaemia Registry Patient Distributions in the U.S., 2005–2010** —◆Qing Zhang, CDC/DBD; Hua Lu, CDC; Sean Trimble, CDC; James B. Holt, CDC; Alexis Thompson, Children's Memorial Hospital; Patricia Giardina, Weill Medical College; Alan Cohen, Children's Hospital of Philadelphia; Thomas Coates, Children's Hospital of Los Angeles; Elliott Vichinsky, Children's Hospital of Oakland; Ellis Neufeld, Children's Hospital of Boston; Jeanne Boudreaux, Children's Hospital of Atlanta; Althea M. Grant, CDC

356 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Statistical Learning and Data Mining— Contributed

Section on Statistical Learning and Data Mining

Chair(s): Chii-Dean Lin, San Diego State University

Section on Statistical Learning and Data Mining

- 61: **The RSpec Package: Raman Spectra Pre-Processing and Classification in R**—◆Qi Wang, Iowa State University; Dianne H Cook, Iowa State University; Chenxu Yu, Iowa State University
- 62: **Sparse Biclustering of Transposable Data Using the Matrix Normal Distribution**—◆Kean Ming Tan, University of Washington; Daniela Witten, University of Washington
- 63: **Algorithm for Constructing Model Selection Criteria in Sparse Regression Modeling**—◆Ibuki Hoshina, Chuo University; Sadanori Konishi, Chuo University
- 64: **Sparse Bayesian Regression Modeling via the Relevance Vector Machine**—◆Kazuki Matsuda; Sadanori Konishi, Chuo University

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 65: Classification of Gastrointestinal Bleeding Data Using a Web-Based Tool and Smartphone Application—◆**Adrienne Chu, Suffolk County Community College
- 66: Finding Important Genes—◆**Chamont Wang, College of New Jersey; Jana Gevertz, The College of New Jersey; Sudhir Nayak, The College of New Jersey; Chaur-Chin Chen, National Tsing Hua University; Leonardo Auslender, TD Bank
- 67: Nonparametric Covariance Estimation for Functional Data with Shrinkage Toward Stationary Models—◆**Taylor Blake, The Ohio State University
- 68: Predictive Modeling for Preventable Hospital Readmissions: A Data Mining Approach—◆**Jingjing Gao, Emory University; Xia Lin, Emory University; Andrew Post, Emory University; Sharath Cholleti, Emory University; Joel Saltz, Emory University
- 69: Batch Sequencing Methods for Computer Experiments—◆**Aaron Quan
- 70: A Review of Classification Methods That Could Be Used to Identify a Subset of Patients in a Clinical Study—◆**Alexander Cambon, University of Louisville; Shesh N. Rai, University of Louisville
- 71: Peak Locating for Functional Data—◆**Lu Wang; Dennis Dean Cox, Rice University

- 72: Random Graphs with Latent Spatial Structure—◆**Emily Casleton, Iowa State University; Mark Kaiser, Iowa State University; Dan Nordman, Iowa State University
- 73: Finding Biomarkers of Breast Cancer Using Different Shrinkage Methods—◆**Jianghong Deng; Claudia Fredolini, George Mason University; Santosh Goud, George Mason University; ◆Alessandra Luchini, George Mason University; Davide Tamburro, George Mason University; Weidong Zhou, George Mason University; Lance Liotta Liotta, George Mason University; Emanuel F. Petricoin, George Mason University
- 74: Stability Selection in Dimension Reduction—◆**Wenbo Wu
- 75: Comparison Between Maximum Likelihood Estimation and Maximum Pseudo-Likelihood Estimation for Exponential Random Graph Models—◆**Xiaolin Yang, Carnegie Mellon University; Alessandro Rinaldo, Carnegie Mellon University; Stephen Fienberg, Carnegie Mellon University
- 76: Robust Feature Screening and Selection for Ultrahigh Dimensional Heteroscedastic Single-Index Models—◆**Wei Zhong, Penn State University; Runze Li, Penn State University; Liping Zhu, Shanghai University of Finance and Economics

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● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Speaker with Lunch 12:30 p.m.–1:50 p.m.

357 CC-Room 33C

Economic Outlook Speaker Luncheon (fee event)—Speaker with Lunch

Business and Economic Statistics Section

Organizer(s): Alan Montgomery, Carnegie Mellon University

TL11 Forecasting When You Suspect 'This Time Is Different': A Typical Day in the Life of a Macroeconomic Forecaster—
◆ Edward Leamer, University of California at Los Angeles

P.M. Roundtables 12:30 p.m.–1:50 p.m.

358 CC-Ballroom D

Biopharmaceutical Section P.M. Roundtable Discussion (fee event)

Biopharmaceutical Section

Organizer(s): Estelle Russek-Cohen, FDA/CBER

TL12 Developing Standards for Analysis Files: An Update—
◆ Stephen Wilson, FDA/CDER/OB/DBIII

TL13 Overview of Subgroup Approaches Designed for Personalized Care—◆ Ann Lazar, University of California at San Francisco; Wai-ki Yip, Harvard School of Public Health; Marco Bonetti, Bocconi University; Bernard F Cole, University of Vermont; Xin Victoria Wang, Harvard School of Public Health/Dana-Farber Cancer Institute; Richard D Gelber, Harvard School of Public Health/Dana-Farber Cancer Institute

359 CC-Ballroom D

Committee on Professional Ethics P.M. Roundtable Discussion (fee event)

Committee on Professional Ethics

Organizer(s): Shelley Hurwitz, Harvard Medical School/Brigham and Women's Hospital

TL14 Should Statisticians Patent New Statistical Methods or Study Designs?—◆ David A Schoenfeld, Harvard Medical School

360 CC-Ballroom D

Section on Bayesian Statistics P.M. Roundtable Discussion (fee event)

Section on Bayesian Statistical Science

Organizer(s): Peter Thall, MD Anderson Cancer Center

TL15 Bayesian Methods in the Pharmaceutical Industry—
◆ Vladimir Dragalin, Aptiv Solutions

361 CC-Ballroom D

Section on Government Statistics P.M. Roundtable Discussion (fee event)

Section on Government Statistics

Organizer(s): Eric Rancourt, Statistics Canada

TL16 Model-Based Estimation: When Is It Good Enough for Production?—◆ Wendy Barboza, USDA/National Agricultural Statistics Service

362 CC-Ballroom D

Section on Health Policy Statistics P.M. Roundtable Discussion (fee event)

Health Policy Statistics Section, Friends of Australasia

Organizer(s): Ofer Harel, University of Connecticut

TL17 Do You Want to Visit Australasia?—◆ Grace Chiu, CSIRO-SMIS; Steven Miller, University of Waikato

363 CC-Ballroom D

Section on Physical and Engineering Sciences P.M. Roundtable Discussion (fee event)

Section on Physical and Engineering Sciences

Organizer(s): Stephanie Pickle DeHart, DuPont

TL18 When Should One Be a Bayesian?—◆ Francisco J. Samaniego, University of California at Davis

364 CC-Ballroom D

Section on Quality and Productivity P.M. Roundtable Discussion (fee event)

Quality and Productivity Section

Organizer(s): Willis Jensen, W.L. Gore and Associates

TL19 Choosing Between a Career in Clinical and Industrial Statistics—◆ Todd Coffey

365 CC-Ballroom D

Section on Statistical Computing P.M. Roundtable Discussion (fee event)

Section on Statistical Computing

Organizer(s): John W Emerson, Yale University

TL20 The RExcel Interface Between R and Excel for Industrial and/or Teaching Applications—◆ Richard Heiberger, Temple University

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

366 CC-Ballroom D Section on Statistical Consulting P.M. Roundtable Discussion (fee event)

Section on Statistical Consulting

Organizer(s): Nancy Hu, University of Utah

TL21 Minding the Gap—◆ Barbara Hanusa, VA Pittsburgh Healthcare System

TL22 Home Experiments: A Way to Answer Real Questions and Build Professional Skills—◆ Brenda Wilson Gillespie, University of Michigan

367 CC-Ballroom D Section on Statistical Education P.M. Roundtable Discussion (fee event)

Section on Statistical Education

Organizer(s): Amy Wagaman, Amherst College

TL23 Growing the Field of Statistics Education Research—◆ Jennifer Kaplan, University of Georgia

TL24 Bayesian Statistics for Undergraduate Students—◆ Jessica Chapman, St. Lawrence University

368 CC-Ballroom D Section on Survey Research Methods P.M. Roundtable Discussion (fee event)

Section on Survey Research Methods

Organizer(s): Frauke Kreuter, Joint Program in Survey Methodology

TL25 Total Survey Error in Practice—◆ Lars Lyberg, Stockholm University

369 CC-Ballroom D Section on Teaching of Statistics in the Health Sciences P.M. Roundtable Discussion (fee event)

Section on Teaching of Statistics in the Health Sciences

Organizer(s): Felicity Enders, Mayo Clinic

TL26 Jumping to Statistical Conclusions? The Antidote Is Pre-Analysis Data Preparation—◆ Brenda Osuna, University of Southern California

370 CC-Ballroom D Social Statistics Section P.M. Roundtable Discussion (fee event)

Social Statistics Section

Organizer(s): Deborah H Griffin, U.S. Census Bureau

TL27 Measuring Trust in Official Statistics—◆ Jennifer Childs, U.S. Census Bureau

371 CC-Ballroom D Section on Bayesian Statistics P.M. Roundtable Discussion (fee event)

Section on Bayesian Statistical Science, Section on Statistics and the Environment

Organizer(s): Peter Thall, MD Anderson Cancer Center

TL28 Bayesian Methods in Genetic and Environmental Epidemiology—◆ Bhramar Mukherjee, University of Michigan

Invited Sessions 2:00 p.m.–3:50 p.m.

372 HQ-Sapphire C ■ ● Statistical Methods for High-Dimensional Complex-Structured Object Data—Invited

Biometrics Section, Committee on Applied Statisticians, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Veera Baladandayuthapani,

Chair(s): Michele Guindani, MD Anderson Cancer Center

2:05 p.m. Identifying Spatial Differences in Multiple Sclerosis Subtypes via a Log Gaussian Cox Process—Jian Kang, Emory University; ◆ Timothy D. Johnson, University of Michigan; Thomas E. Nichols, University of Warwick

2:30 p.m. Bayesian Nonparametric Models for Structured Functional and Object Data with Application to Genomic Studies—Jeffrey S Morris, MD Anderson Cancer Center; ◆ Veera Baladandayuthapani,

2:55 p.m. Bayesian Models for Large-Scale Data That Integrate Biological Information—◆ Marina Vannucci, Rice University

3:20 p.m. Feature Extraction vs. Flexible Modeling: Automated Modeling of Complex, Irregular Object Data—◆ Jeffrey S Morris, MD Anderson Cancer Center

3:45 p.m. Floor Discussion

373 CC-Room 28A ■ ● Graphical Models: Current Developments and Future Directions—Invited

Section on Bayesian Statistical Science, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Adrian Dobra, University of Washington

Chair(s): Adrian Dobra, University of Washington

2:05 p.m. Sparse Covariance Estimation in Heterogeneous Samples—◆ Abel Rodriguez, University of California at Santa Cruz; Adrian Dobra, University of Washington; Alex Lenkoski, University Heidelberg

2:35 p.m. Bayesian Testing of Associations and Interactions with Multivariate Categorical Data—◆ David Dunson, Duke University; Anirban Bhattacharya, Duke University



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 3:05 p.m. **Bayes Factors and the Geometry of Discrete Loglinear Models**—◆Helene M Massam, York University; Gerard Letac, Universite Paul Sabatier
- 3:35 p.m. **Floor Discussion**

374 HQ-Sapphire U **■ ● Sensitivity, Heterogeneity, and Uncertainty in CER Effect Size Estimates—Invited**

Section on Risk Analysis, Biopharmaceutical Section
 Organizer(s): Robert L. Obenchain, FASA, Risk Benefit Statistics LLC
 Chair(s): S. Stanley Young, National Institute of Statistical Sciences

- 2:05 p.m. **Activities of the DIA-CER Scientific Working Group**—◆Matthew David Rotelli, Eli Lilly and Company
- 2:30 p.m. **Nonparametric Preprocessing, Systematic Sensitivity, and Minimum Uncertainty**—◆Robert L. Obenchain, FASA, Risk Benefit Statistics LLC
- 2:55 p.m. **Sensitivity to Design Choices When Deriving Variables from Electronic Health Records**—◆Robert Alan Greevy, Vanderbilt University; Mary Margaret Huizinga, The Johns Hopkins University School of Medicine; Christianne L Roumie, Vanderbilt University; Carlos G Grijalva, Vanderbilt University; Harvey Murff, Vanderbilt University; Xulei Liu, Vanderbilt University; Marie R Griffin, Vanderbilt University
- 3:20 p.m. Disc: Michael S. Lauer, MD, National Institutes of Health
- 3:40 p.m. **Floor Discussion**

375 HQ-Sapphire H **■ ● New Frontier for Semiparametric Approaches—Invited**

ENAR, Biometrics Section, Section on Survey Research Methods, International Chinese Statistical Association, International Indian Statistical Association, Statistics Surveys Online Journal
 Organizer(s): Naisyin Wang, University of Michigan
 Chair(s): Nae-Yuh Wang, The Johns Hopkins University

- 2:05 p.m. **Semiparametric Functional Linear Model with High-Dimensional Covariates**—◆Fang Yao, University of Toronto; Hao Helen Zhang, North Carolina State University; Dehan Kong, North Carolina State University
- 2:30 p.m. **Functional Principal Component Analysis of Spatial-Temporal Point Processes with Applications in Disease Surveillance**—◆Yehua Li, University of Georgia
- 2:55 p.m. **Two-Phase Studies of Gene-Environment Interaction**—◆Bhramar Mukherjee, University of Michigan; Jaeil Ahn, MD Anderson Cancer Center
- 3:20 p.m. **Automatic Structure Selection in Semiparametric Models**—◆Hao Helen Zhang, University of Arizona; Guang Cheng, Purdue University; Yufeng Liu, The University of North Carolina at Chapel Hill
- 3:45 p.m. **Floor Discussion**

376 HQ-Sapphire L **■ ● Statistical Engineering Case Studies in Industry and Government—Invited**

Quality and Productivity Section, International Indian Statistical Association, Statistics Surveys Online Journal, Section on Statistics in Defense and National Security

Organizer(s): Christine Anderson-Cook, Los Alamos National Laboratory
 Chair(s): Christine Anderson-Cook, Los Alamos National Laboratory

- 2:05 p.m. **Statistical Engineering Case Studies in Aerospace Research and Development**—◆Peter Parker, National Aeronautics and Space Administration
- 2:30 p.m. **Setting Appropriate Fill Weight Targets: A Statistical Engineering Case Study**—◆William A. Brenneman, The Procter & Gamble Company; Michael D. Joner, The Procter & Gamble Company
- 2:55 p.m. **Improving Aircraft Engine Design: The Design for Variation (DFV) Process**—◆Grant L. Reinman, Pratt & Whitney
- 3:20 p.m. Disc: Ronald D. Snee, Snee Associates
- 3:40 p.m. **Floor Discussion**

377 CC-Room 29A **■ ● Astrostatistics—Invited**

Section on Physical and Engineering Sciences, Quality and Productivity Section, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): David Ruppert, Cornell University
 Chair(s): David Ruppert, Cornell University

- 2:05 p.m. **Combining Computer Models for Stellar Evolution: From Sun-Like Stars to White Dwarf Cinders**—◆David A. van Dyk, Imperial College London; Nathan Stein, Harvard University; Ted von Hippel, Embry-Riddle Aeronautical University; Steven DeGennaro, The University of Texas at Austin; Elizabeth J Jefferys, Space Telescope Science Institute; William H Jefferys, The University of Texas at Austin/The University of Vermont
- 2:30 p.m. **Directional Coincidence Assessment in Astronomy with Bayesian Multilevel Models**—◆Thomas J. Lored, Cornell University; David F. Chernoff, Cornell University; David Ruppert, Cornell University; Kunlaya Soiaporn, Cornell University; Ira Wasserman, Cornell University
- 2:55 p.m. **Constructing Exponential Family Approximations to Cosmological Models**—◆Chad Michael Schafer, Carnegie Mellon University
- 3:20 p.m. **Simulation-Aided Inference in Cosmology**—◆Dave Higdon, Los Alamos National Laboratory; Earl Lawrence, Los Alamos National Laboratory
- 3:45 p.m. **Floor Discussion**

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

378 CC-Room 22 ■ ● Spatially Dependent Functional Data—Invited

Technometrics, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Hugh Chipman, Acadia University

Chair(s): Hugh Chipman, Acadia University

- 2:05 p.m. **Clustering Random Curves Under Spatial Interdependence with Application to Service Accessibility**—Huijing Jiang, IBM T. J. Watson Research Center; ◆ Nicoleta Serban, Georgia Institute of Technology
- 2:45 p.m. Disc: Gareth James, University of Southern California
- 2:55 p.m. Disc: Charmaine Dean, University of Western Ontario
- 3:05 p.m. Disc: Bo Li, Purdue University
- 3:15 p.m. Disc: Jiaping Wang, The University of North Carolina at Chapel Hill
- 3:25 p.m. Disc: Ciprian Crainiceanu, The Johns Hopkins University
- 3:35 p.m. **Floor Discussion**

379 HQ-Sapphire A ■ ● Sampling Theory and Practice: Celebrating J.N.K. Rao's 75th Birthday—Invited

SSC, Section on Survey Research Methods, International Indian Statistical Association

Organizer(s): Changbao Wu, University of Waterloo; Jaekwang Kim, Iowa State University

Chair(s): Changbao Wu, University of Waterloo

- 2:05 p.m. **Sampling Theory and Practice: Celebrating J.N.K. Rao's 75th Birthday**—◆ Wayne A. Fuller, Iowa State University; Jaekwang Kim, Iowa State University
- 2:30 p.m. **The Rescaling Bootstrap and Extensions**—◆ Sharon Lohr, Arizona State University
- 2:55 p.m. **Lumber Quality Assessment via Semiparametric Density Ratio Model**—◆ Jiahua Chen, SSC
- 3:20 p.m. **Extensions of Rao-Scott Tests: Pseudo Likelihood-Ratio Tests for Survey Data**—◆ Alastair John Scott, University of Auckland; Thomas Lumley, University of Auckland
- 3:45 p.m. **Floor Discussion**

380 CC-Room 21 ■ ● Non-Independent Data: Models and Applications—Invited

Asociacion Mexicana de Estadistica, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Graciela González-Farías, CIMAT

Chair(s): Rogelio Ramos, CIMAT

- 2:05 p.m. **Consistent and Efficient Inference for (Possibly Noninvertible) Linear Models**—◆ Ignacio N. Lobato, Instituto Tecnológico Autónomo de México
- 2:30 p.m. **Toward Uncertainty Quantification and Inference in the Stochastic SIR Epidemic Model**—◆ Jose Andres Christen, CIMAT
- 2:55 p.m. **Geometric Weights, Priors, and Their Applications**—◆ Ramsés H Mena, Universidad Nacional Autónoma de México
- 3:20 p.m. **Bayesian Analysis of Functional Proteomics Profiles**—◆ Luis Enrique Nieto-Barajas, Instituto Tecnológico Autónomo de México
- 3:45 p.m. **Floor Discussion**

381 HQ-Sapphire MN ■ ● The Best of the Annals of Applied Statistics—Invited

IMS, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Karen Kafadar, Indiana University; Bradley Efron, Stanford University

Chair(s): Karen Kafadar, Indiana University

- 2:05 p.m. **Detecting Mutations in Mixed Sample Sequencing Data Using Empirical Bayes**—◆ Omkar Muralidharan, Stanford University; John Bell, Stanford University; Georges Natsoulis, Iconix Pharmaceuticals; Nancy Zhang, Stanford University
- 2:35 p.m. **Efficient Regularized Isotonic Regression with Application to Gene-Gene Interaction Search**—◆ Saharon Rosset, Tel Aviv University; Ronny Luss, INRIA; Moni Shahar, Tel Aviv University
- 3:05 p.m. **Self-Exciting Hurdle Models for Terrorist Activity**—◆ Michael Porter, GeoEye Analytics; Gentry White, University of Queensland
- 3:35 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Invited Panel 2:00 p.m.–3:50 p.m.

382 HQ-Sapphire D **How Do You Know When You Are Ready to Fly Solo?—Invited**

Section on Statistical Consulting, International Indian Statistical Association

Organizer(s): Jonathan D. Mahnken, University of Kansas Medical Center

Chair(s): Jonathan D. Mahnken, University of Kansas Medical Center

- Panelists:** ◆ Kerry B. Hafner, PRA International
 ◆ Janet Myhre, Mathematical Analysis Research Corporation
 ◆ Murray Clayton, University of Wisconsin-Madison
 ◆ Matthew S. Mayo, University of Kansas Medical Center

3:35 p.m. **Floor Discussion**

Topic-Contributed Sessions 2:00 p.m.–3:50 p.m.

383 CC-Room 24C **Variable Selection and Dimension Reduction in High-Dimensional Data—Topic-Contributed**

Biometrics Section, Biopharmaceutical Section, Section on Statistical Learning and Data Mining, International Indian Statistical Association

Organizer(s): Abdus Sattar, Case Western Reserve University

Chair(s): Dariusz Dziuda, Central Connecticut State University

- 2:05 p.m. **Refining Genetically Inferred Relationships Using Treelet Covariance Smoothing**—◆ Ann Lee, Carnegie Mellon University
- 2:25 p.m. **Unified Method for Uncovering Subgroups and Identifying Markers with Differential Associations Across Subgroups**—◆ Mahlet Tadesse, Georgetown University; Emanuele Mazzola, Dana-Farber Cancer Institute; Giovanni Parmigiani, Harvard School of Public Health
- 2:45 p.m. **PFC Models with a Heterogeneous Error Structure**—◆ Kofi Placid Adragani, University of Maryland Baltimore County
- 3:05 p.m. **Bayesian Hierarchical Models for Data Integration in Genomics**—◆ Francesco Stingo, MD Anderson Cancer Center
- 3:25 p.m. **Using Informative Set of Genes for Biomarker Discovery Based on Gene Expression Microarray Data**—◆ Abdus Sattar, Case Western Reserve University; Dariusz Dziuda, Central Connecticut State University
- 3:45 p.m. **Floor Discussion**

384 HQ-Sapphire EF **The Search for Missing Data: The Impact of the National Academies of Science Report—Topic-Contributed**

Biopharmaceutical Section

Organizer(s): Dionne L Price, FDA

Chair(s): Daphne Lin, FDA

- 2:25 p.m. **Two Intent-to-Treat Principles**—◆ Thomas Permutt, FDA
- 2:45 p.m. **Statistician and Clinician: Crosstalk on Missing Data**—◆ Janet Wittes, Statistics Collaborative
- 3:05 p.m. **'It (the Clinical Study Team) Was Missing Data. And It Was Not Happy. So It Set off in Search of Its Missing Data.'**—◆ Jesse Cedarbaum, Cytokinetics, Inc.
- 3:25 p.m. **Disc:** Joseph Hogan, Brown University
- 3:45 p.m. **Floor Discussion**

385 CC-Room 29B **Dynamic Factor and Volatility Modeling of Multivariate Economic and Financial Time Series—Topic-Contributed**

Business and Economic Statistics Section

Organizer(s): Peter Zadrozny, Bureau of Labor Statistics

Chair(s): Peter Zadrozny, Bureau of Labor Statistics

- 2:05 p.m. **One-Sided Representations of Generalized Dynamic Factor Models**—◆ Marco Lippi, Università di Roma "La Sapienza"; Mario Forni, Università degli Studi di Modena e Reggio Emilia; Marc Hallin, ECARES; Paolo Zaffaroni, Imperial College London
- 2:25 p.m. **Reduced-Rank Time-Series Models**—◆ Victor Solo, University of New South Wales
- 2:45 p.m. **Generalized Linear Dynamic Factor Models: The Single and the Mixed Frequency Case**—◆ Manfred Deistler, Vienna University of Technology; Brian D.O. Anderson, Australian National University; Elisabeth Felsenstein, Vienna University of Technology; Alexander Filler, Uniq; Bernd Funovits, University of Vienna; Mohsen Zamani, Australian National University
- 3:05 p.m. **Cholesky Factorization Method for VARMA Modeling of Residual Volatilities of Single- and Mixed-Frequency Data**—Peter Zadrozny, Bureau of Labor Statistics; ◆ Klaus Wohlrabe, Ifo Institut; Stefan Mittnik, Ludwig-Maxilians-Universität München
- 3:25 p.m. **Multivariate Stochastic Volatility Models Based on Non-Gaussian Ornstein-Uhlenbeck Processes: A Quasi-Likelihood Approach**—◆ Arvid Raknerud; Øivind Skare, University of Oslo
- 3:45 p.m. **Floor Discussion**

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

386 HQ-Sapphire B ■ ● Simulations to Aid Novel Clinical Trial Designs and Analyses—Topic-Contributed

Committee on Applied Statisticians, Biopharmaceutical Section, Section for Statistical Programmers and Analysts, International Indian Statistical Association

Organizer(s): Amarjot Kaur, Merck Research Laboratories

Chair(s): Amarjot Kaur, Merck Research Laboratories

- 2:05 p.m. **Efficient Analyses of Phase II Dose-Range Trials to Optimize Phase III Trial Design**—◆Devan Mehrotra, Merck Research Laboratories; Robin Mogg, Merck Research Laboratories; Jianchang Lin, Millennium: The Takeda Oncology Company
- 2:25 p.m. **Simulations in Forecasting Recruitment, Drug Supply, Event Occurrence, and Efficiency of Drug Development**—◆James Bolognese, Cytel Inc.; Nitin Patel, Cytel Inc.
- 2:45 p.m. **Using Simulation to Aid in the Development of a Phase II Bayesian Adaptive Design**—◆Elizabeth Krachey, GlaxoSmithKline; Jennifer Gauvin, GlaxoSmithKline; Theresa C. Ashton, GlaxoSmithKline; Ohad Amit, GlaxoSmithKline
- 3:05 p.m. **An Example of Simulation-Based Calculations of the Probability of Technical Success**—◆Neal Thomas, Pfizer Inc.
- 3:25 p.m. **Floor Discussion**

387 CC-Room 26A Statistical Issues in Oncology Clinical Trials: Progression-Free Survival and Overall Survival—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Ying Wan, Janssen Pharmaceuticals R&D

Chair(s): Thian Kheoh, Janssen Pharmaceuticals R&D

- 2:05 p.m. **Advanced Application of PFS to Accelerated Oncology Drug Development**—◆Cong Chen, Merck; Zhiping Sun, Merck
- 2:25 p.m. **PFS, OS, and Multi-State Counting Processes**—◆Xiaolong Luo, Celgene Corporation; Guang Chen, Celgene Corporation; Zhinuan Yu, Celgene Corporation; Soo Peter Ouyang, Celgene Corporation
- 2:45 p.m. **Multiple Primary Endpoints in Oncology Trials**—◆Ai Li, Amgen, Inc.; Bin Yao, Amgen, Inc.
- 3:05 p.m. **A Model for the Joint Estimation of Interval-Censored Progression Time and Survival**—◆Dianne M Finkelstein, Massachusetts General Hospital/Harvard University; David A Schoenfeld, Harvard Medical School
- 3:25 p.m. **Evolution of the HR from PFS to OS: A Simulation Study**—◆William Bushnell
- 3:45 p.m. **Floor Discussion**

388 CC-Room 31C Using Randomization and Simulation to Teach Inference—Topic-Contributed

Section on Statistical Education

Organizer(s): Sharon J Lane-Getaz, St. Olaf College

Chair(s): Sharon J Lane-Getaz, St. Olaf College

- 2:05 p.m. **Experiences with a New Textbook Emphasizing Randomization/Simulation: Results from Early Implementation**—◆Nathan Tintle, Dordt College
- 2:25 p.m. **Introducing Inference with Simulation Methods: Implementation at Duke University**—◆Kari Lock Morgan, Duke University
- 2:45 p.m. **Using StatCrunch to Teach Statistics Using Resampling Techniques**—◆Webster West, Texas A&M University
- 3:05 p.m. **Finding an Appropriate Balance Between Simulation-Based and Traditional Methods in the Teaching of Statistical Inference**—◆Chris Malone, Winona State University; Tisha Lynn Hooks, Winona State University
- 3:25 p.m. **Disc:** Beth Chance, California Polytechnic State University
- 3:45 p.m. **Floor Discussion**

389 CC-Room 32B ● Practical Planning for a Statistical Programmer's Career in the Pharmaceutical Industry—Topic-Contributed

Section for Statistical Programmers and Analysts, Biopharmaceutical Section

Organizer(s): Mario Widel, Roche Molecular Systems, Inc.

Chair(s): Steven R Kirby, ViroPharma Inc.

- 2:05 p.m. **Building a Future in the Pharmaceutical Industry: Choosing the Right Career Track and Landing Your First Job**—◆Katrina Canonizado, Celerion; Aleksandra Stein, University of Nebraska
- 2:25 p.m. **So You Want to Be a Successful Statistical Programmer? The Importance of People Skills**—◆Carey Smoak, Roche Molecular Systems, Inc.
- 2:45 p.m. **The Value of an Advanced Degree in Statistics as a Clinical Statistical Programmer**—◆Mark Matthews, PharmaNet/i3
- 3:05 p.m. **Broad Career Paths and Critical Skill Sets: Exploring Fulfilling Pharmaceutical Industry Careers Related to the Statistical Analysis of Data**—◆Nancy Wang, Celerion
- 3:25 p.m. **Disc:** Natalie Hall, Eli Lilly and Company
- 3:45 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

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390 CC-Room 25C **● Clinical Trials: Some Recent Development on the Design and Statistical Analysis—Topic-Contributed**

Biopharmaceutical Section, International Indian Statistical Association
 Organizer(s): Yujun Wu, Sanofi
 Chair(s): Shailaja Suryawanshi, Merck

- 2:05 p.m. **Maximizing the Role of Survival Post-Progression in Predicting Probability of Technical Success for Oncology Confirmatory Trials—◆Ke Zhang, Pfizer Inc.**
- 2:25 p.m. **Adaptive and Repeated Cumulative Meta-Analyses for Safety Signal Detection—◆Hui Quan, Sanofi; Yingqiu Ma, Sanofi; Yan Zheng, Sanofi; Meehyung Cho, Sanofi**
- 2:45 p.m. **Application of Bayesian Probability of Success (POS) in Design of Vaccine Clinical Trials—◆Guanghan Liu, Merck Research Laboratories**
- 3:05 p.m. **Extension of Cure Rate Model When Cure Is Partially Known—◆Yu Wu, K&L Consulting Services, Inc.; Yong Lin, University of Medicine and Dentistry of New Jersey; Shou-En Lu, University of Medicine and Dentistry of New Jersey; Weichung Joe Shih, University of Medicine and Dentistry of New Jersey**
- 3:25 p.m. **Statistical Considerations on Randomization Strategy, Drug Supply Strategy, and Other Trial Operational Factors—◆Xiaohong Huang, Sanofi Aventis; Lixia Jiao, Sanofi Aventis; Lynn Wei, Sanofi; Hui Quan, Sanofi**
- 3:45 p.m. **Floor Discussion**

391 CC-Room 26B **● Prediction and Inference in Large-Scale Social Networks—Topic-Contributed**

ENAR, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Social Statistics Section
 Organizer(s): Tyler McCormick, University of Washington
 Chair(s): Adrian Dobra, University of Washington

- 2:05 p.m. **Link Prediction for Partially Observed Networks—◆Yunpeng Zhao, University of Michigan; Liza Levina, University of Michigan; Ji Zhu, University of Michigan**
- 2:25 p.m. **On a Class of Shrinkage Priors for Covariance Matrix Estimation—◆Natesh Pillai, Harvard University; Hao Wang, University of South Carolina**

- 2:45 p.m. **The OECD Network of Foreign Direct Investment—◆Anton Westveld, University of Arizona; Nathan M. Jensen, Washington University in St. Louis; Andrew D. Martin, Washington University in St. Louis**
- 3:05 p.m. **Role Analysis in Networks Using a Mixture of Exponential Random Graph Models—◆Thomas Brendan Murphy, University College Dublin; Michael Salter-Townshend, University College Dublin**
- 3:25 p.m. **Augmenting Sampling with Link Prediction in Social Networks—◆Tyler McCormick, University of Washington; Ali Shojaie, University of Washington**
- 3:45 p.m. **Floor Discussion**

392 CC-Room 24A **● Methods for Improving Causal Analysis in Observational Studies—Topic-Contributed**

Section on Statistics in Epidemiology, Section on Survey Research Methods, International Indian Statistical Association
 Organizer(s): Mike Baiocchi, Stanford University
 Chair(s): Dylan Small, The Wharton School

- 2:05 p.m. **Making Instrumental Variables Look More Like Experimental Design—◆Mike Baiocchi, Stanford University; Dylan Small, The Wharton School; Daniel Polsky, University of Pennsylvania**
- 2:25 p.m. **Calibrated Sensitivity Analysis for the Instrumental Variables Method for Observational Studies—◆Yenchih Hsu, University of Pennsylvania; Scott A Lorch, University of Pennsylvania; Dylan Small, The Wharton School**
- 2:45 p.m. **Mediation Analysis on General Outcomes with Application to Dental Studies—◆Jing Cheng, University of California at San Francisco School of Dentistry; John Featherstone, University of California at San Francisco School of Dentistry; Stuart Gansky, University of California at San Francisco School of Dentistry**
- 3:05 p.m. **Making Public Performance Reporting Meaningful and Useful: Large Observational Studies of the Role of Electronic Health Records in Chronic Disease Care—◆Thomas Love, Case Western Reserve University**
- 3:25 p.m. **Response Surface Matching for Survey Nonresponse—◆Frank Yoon, Mathematica Policy Research**
- 3:45 p.m. **Floor Discussion**

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

393 CC-Room 24B ■ Assessing Bias in Clinical Trials of Medical Devices—Topic-Contributed

Biopharmaceutical Section, International Indian Statistical Association
Organizer(s): Peter Lam, Boston Scientific Corporation
Chair(s): Peter Lam, Boston Scientific Corporation

- 2:05 p.m. **Enhanced Placebo Effect or Other Nontreatment-Specific Effects in Therapeutic Device Studies—**
◆ Jianxiong Chu, FDA/CDRH
- 2:25 p.m. **Assessing Bias in Clinical Trials of Medical Devices—**◆ Alvin Van Orden, FDA/CDRH
- 2:45 p.m. **Impact of Model Violations on Parameter Estimation in Linear Mixed Models—**◆ Chul Ahn, FDA/CDRH
- 3:05 p.m. Disc: Roseann White, Abbott Pharmaceuticals
- 3:25 p.m. **Floor Discussion**

394 CC-Room 31B ■ Command Responsibility: Building Cases of Policy from Patterns of Individual Events in International Human Rights Cases and Domestic Class Action Suits—Topic-Contributed

Social Statistics Section, Section on Survey Research Methods, International Indian Statistical Association, Committee on Scientific Freedom and Human Rights, Statistics Without Borders

Organizer(s): Megan Price, Benetech
Chair(s): Megan Price, Benetech

- 2:05 p.m. **Justice by the Numbers: Rwandan Prison Survey—**
◆ Mary Gray, American University
- 2:25 p.m. **The Need for Sound Statistical Analysis of Issues Pertaining to Class Certification: The Problematic Studies Submitted in *Dukes v. Walmart*—**◆ Joseph Gastwirth, The George Washington University; Weiwen Miao, Haverford College; Efstathia Bura, The George Washington University
- 2:45 p.m. **Effective Command or Minor Aberrations: Statistical Analyses of Police Administrative Data Systems in Human Rights Cases from Chad and Guatemala—**◆ Romesh Silva, University of California at Berkeley
- 3:05 p.m. Disc: Patrick Ball, Benetech
- 3:25 p.m. Disc: Cindy Cohn, Electronic Frontier Foundation
- 3:45 p.m. **Floor Discussion**

395 CC-Room 30E ● Labor Estimates by Firm Size—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods, Business and Economic Statistics Section
Organizer(s): Nathan Clausen, Bureau of Labor Statistics
Chair(s): Ed Robison, Bureau of Labor Statistics

- 2:05 p.m. **Estimates by Firm Size Using the CES Survey—**
◆ Nathan Clausen, Bureau of Labor Statistics; Chris Manning, Bureau of Labor Statistics
- 2:25 p.m. **Analytical Highlights of CES Firm Size Employment Data—**◆ John Mullins, Bureau of Labor Statistics
- 2:45 p.m. **Development of JOLTS Firm Size Estimation Procedures—**◆ Darrell Greene, Bureau of Labor Statistics; Shail Butani, Bureau of Labor Statistics; Mark Crankshaw, Bureau of Labor Statistics; Vinod Kapani, Bureau of Labor Statistics
- 3:05 p.m. **Analysis of JOLTS Research Estimates by Size of Firm—**◆ Katherine Klemmer, Bureau of Labor Statistics
- 3:25 p.m. **Choosing Size Classes for Industry Employment Estimates by Firm-Size Class—**◆ Jeffrey Groen, Bureau of Labor Statistics; Lowell Mason, Bureau of Labor Statistics
- 3:45 p.m. **Floor Discussion**

396 CC-Room 30A Results from the 2010 Census Experimental Program—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Jennifer W. Reichert, U.S. Census Bureau
Chair(s): Jennifer Tancreto, U.S. Census Bureau

- 2:05 p.m. **Results from the 2010 Census Experimental Program—**◆ Samantha Barron, U.S. Census Bureau
- 2:25 p.m. **2010 Alternative Questionnaire Experiment Race and Hispanic Origin—**◆ Elizabeth Compton, U.S. Census Bureau; Michael Bentley, U.S. Census Bureau
- 2:45 p.m. **Paid Media and the 2010 Census Communications Campaign: An Experiment to Assess Increased Spending—**◆ Nancy Bates; Kristin McCue, U.S. Census Bureau; Mike Lotti, Accretive Insights
- 3:05 p.m. **The 2010 Census Alternative Questionnaire Experiment: Replication of the 2000 Census Questionnaire—**◆ Courtney Reiser, U.S. Census Bureau



● Themed Session ■ Applied Session ◆ Presenter

3:25 p.m. **2010 Census Nonresponse Follow-Up Contact Strategy**—◆Gianna Dusch, U.S. Census Bureau; Elizabeth Compton, U.S. Census Bureau; Michael Bentley, U.S. Census Bureau

3:45 p.m. **Floor Discussion**

397 CC-Room 30B

■ Analysis and Weighting of Health Survey Data Involving Record Linkage—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Jennifer D Parker, National Center for Health Statistics

Chair(s): Lisa Mirel, National Center for Health Statistics

2:05 p.m. **Linking Medical Expenditure Panel Survey Data to the National Health Interview Survey: Weighting and Estimation Considerations**—◆Sadeq Chowdhury, Agency for Healthcare Research and Quality; Lap-Ming Wun, Agency for Healthcare Research and Quality; Steve Machlin, Agency for Healthcare Research and Quality

2:25 p.m. **The Utility of the Integrated Design of the Medical Expenditure Panel Survey to Inform Mortality-Related Studies**—◆Steven Cohen, Agency for Healthcare Research and Quality

2:45 p.m. **Dealing with 'Incompletely Linked' Data in Linked Survey/Administrative Databases: An Empirical Comparison of Alternative Methods**—◆Dean Judson, National Center for Health Statistics; Jennifer D Parker, National Center for Health Statistics

3:05 p.m. **Nonresponse Adjustment Methodology for NHIS-Medicare-Linked Data**—◆Michael D. Larsen, The George Washington University; Michelle Roozeboom, Buccaneer - a General Dynamics Company; Kathy Schneider, Buccaneer - a General Dynamics Company

3:25 p.m. **Multiple Imputation Of Linked Data: A Case Study**—◆Guangyu Zhang, National Center for Health Statistics; Jennifer D Parker, National Center for Health Statistics; Nathaniel Schenker, National Center for Health Statistics

3:45 p.m. **Floor Discussion**

398 CC-Room 29D

Travel Award Presentation—Topic-Contributed

Section on Statistics in Marketing, International Indian Statistical Association

Organizer(s): Michael Trusov, University of Maryland

Chair(s): Michael Trusov, University of Maryland

2:05 p.m. **An MCMC Approach to Estimating Demand for Differentiated Durable Products Using Aggregate Data**—◆Yutec Sun, University of Toronto; Masakazu Ishihara, New York University

2:20 p.m. **The Value of Receiving Network Updates: A Quasi-Experiment on a Social Networking Site**—◆Yotam Shmargad, Northwestern University

2:35 p.m. **Are My Data Outdated? A Bayesian Cross-Cohort Change-point Model for Customer-Base Analysis**—◆Arun Gopalakrishnan; Eric Bradlow, The Wharton School; Peter Fader, The Wharton School

2:50 p.m. **Model-Based Segmentation Featuring Simultaneous Segment-Level Variable Selection**—◆Sunghoon Kim, Penn State University; Duncan Fong, Penn State University; Wayne S. DeSarbo, Penn State University

3:05 p.m. **Hidden Markov Model and Reversible Jump Algorithm for the Analysis of Areas of Interest from Eye-Tracking Data**—◆JIN YAN, University of Maryland; Michel Wedel, University of Maryland; Paul J. Smith, University of Maryland

3:20 p.m. **Utility of Dependence: Uncertainty Reduction and Departure from Independence**—◆Nima Y Jalali, University of Wisconsin-Milwaukee; Ehsan Soofi, University of Wisconsin-Milwaukee; Nader Ebrahimi, Northern Illinois University

3:35 p.m. **Floor Discussion**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Contributed Sessions 2:00 p.m.–3:50 p.m.

399 CC-Room 28C

Multivariate Problems—Contributed

Section on Nonparametric Statistics

Chair(s): Edward Boone, Virginia Commonwealth University

- 2:05 p.m. **On Asymptotics of Depth-Based Generalized Multivariate Quantile Processes**—◆Jin Wang, Northern Arizona University
- 2:20 p.m. **A New Rank-Based Test for Bivariate Location Problem Using Slopes of Vectors**—◆Sunil Mathur, University of Memphis; Sunil Mathur, University of Memphis
- 2:35 p.m. **A Class of Uniform Tests for Goodness-of-Fit of the Multivariate L_P -Norm Spherical Distributions and the L_P -Norm Symmetric Distributions**—◆Jiajuan Liang
- 2:50 p.m. **A Nonparametric Test for Two-Sample Location Problem Using Rank-Based Method**—◆Jamyne Curry
- 3:05 p.m. **How to Use R for a Fully Nonparametric Comparison of Multivariate Samples**—◆Amanda Ellis, University of Kentucky; Woody Burchett, University of Kentucky; Arne C Bathke, University of Kentucky; Solomon W. Harrar, University of Montana
- 3:20 p.m. **A Nonparametric Test of Missing Completely at Random for Incomplete Multivariate Data**—◆Yao Yu, University of California at Riverside; Jun Li, University of California at Riverside
- 3:35 p.m. **Multivariate Nonparametric Ranking and Selection**—◆Jeremy Entner, Syracuse University; Pinyuen Chen, Syracuse University

400 CC-Room 28D

Designed Experiments—Contributed

Section on Physical and Engineering Sciences, Quality and Productivity Section

Chair(s): Heng Su, Georgia Institute of Technology

- 2:05 p.m. **Minimum Size Survival Analysis Sampling Plans for Comparing Multiple Treatment Groups to a Single Control Group**—◆Daniel Jeske, University of California at Riverside; James Flegal, University of California at Riverside; Stephen Spindler, University of California at Riverside
- 2:20 p.m. **Designs With a New Optimality Property to Identify a Class of Models**—Subir Ghosh, University of California at Riverside; ◆Analisa Flores, University of California at Riverside

- 2:35 p.m. **Uniform Fractional Factorial Designs**—◆Hongquan Xu, University of California at Los Angeles; Yu Tang, Soochow University; Dennis Lin, Penn State University
- 2:50 p.m. **Automated Spectral Denoising with Feature-Based Adaptive Spline Smoothing**—◆Philip Manuel Fernandes, Queen's University; James McLellan, Queen's University
- 3:05 p.m. **Applications of Analysis of Variation for Data Measured on Ordinal Scale Base**—◆Tamar Gadrich, Ort Braude College; Emil Bashkansky, Ort Braude College
- 3:20 p.m. **Wavelet Variance-Based Estimation for Composite Stochastic Processes**—◆Stephane Guerrier, Queen's University
- 3:35 p.m. **Screening Strategies in the Presence of Interactions**—◆Angela Dean, The Ohio State University/Southampton University; Danel Draguljic, Battelle Memorial Institute; David Woods, University of Southampton; Susan Lewis, University of Southampton

401 CC-Room 33B

L1 and Other Regression Problems—Contributed

Section on Statistical Computing, Section on Statistical Learning and Data Mining

Chair(s): David Hunter, Penn State University

- 2:05 p.m. **Convexlars: A Solution Path Algorithm for General Convex Loss Function**—◆Wei Xiao, North Carolina State University
- 2:20 p.m. **Lasso-Type Estimators for Semiparametric Nonlinear Mixed-Effects Models Estimation**—◆Cristian Meza, Universidad de Valparaiso; Ana Arribas-Gil, Universidad Carlos III de Madrid; Karine Bertin, Universidad de Valparaiso; Vincent Rivoirard, Université Paris Dauphine
- 2:35 p.m. **The Spatial Lasso with Applications to Unmixing Hyperspectral Images**—◆Daniel Samarov, NIST; Matthew Clarke, National Institute of Standards and Technology; Ji Yoon Lee, National Institute of Standards and Technology; David Allen, National Institute of Standards and Technology; Maritoni Litorja, National Institute of Standards and Technology; Jeeseong Hwang, National Institute of Standards and Technology
- 2:50 p.m. **Edge Selection for Undirected Graphs**—◆Meng Hwee Victor Ong, National University of Singapore; Sanjay Chaudhuri, National University of Singapore



- 3:05 p.m. **Variable Selection Algorithms for the Proportional Odds Model**—◆Xizhen Cai, Penn State University; David Hunter, Penn State University
- 3:20 p.m. **A Robust Tobit Regression Model When Errors Are from the Epsilon Skew Exponential Power Family**—◆Jose Hector Guardiola, Texas A&M University at Corpus Christi; Ahmad Flaih, University of Arkansas at Little Rock; Hassan Elsalloukh, University of Arkansas at Little Rock
- 3:35 p.m. **Group Descent Algorithms for Nonconvex Penalized Linear and Generalized Linear Models with Grouped Predictors**—◆Patrick Breheny, University of Kentucky; Jian Huang, University of Iowa

402 CC-Room 33A Clustering—Contributed

Section on Statistical Learning and Data Mining, Section on Statistical Computing

Chair(s): Lie Wang, Massachusetts Institute of Technology

- 2:05 p.m. **Algorithms and Approaches for Analyzing Massive Structured Data with Sparse Generalized PCA**—◆Frederick Campbell; Genevra Allen, Rice University
- 2:20 p.m. **On the Estimation of Similarity Indices in Clustering Evaluation**—◆John Ramey, Baylor University
- 2:35 p.m. **Clustering a Large Number of Time Series with Vector Autoregression Model**—◆Chiu Tzu-En, National Cheng Kung University; Jeng Shuen-Lin, National Cheng Kung University
- 2:50 p.m. **Informative Clustering of Microarray Data Using Binary and Survival Outcomes**—◆Jessie Hsu, Harvard University; Dianne M Finkelstein, Massachusetts General Hospital/Harvard University; David A Schoenfeld, Harvard Medical School
- 3:05 p.m. **Unsupervised Learning for Intrusion Detection Using L2E**—◆Umashanger Thayasivam, Rowan University
- 3:20 p.m. **Clustering-Based Robust Multivariate Outlier Detection**—◆Nedret Billor, Auburn University; Gulsen Kiral, Cukurova University; Asuman Turkmen, The Ohio State University
- 3:35 p.m. **Cluster Analysis via Random Partition Distributions**—Bryce Little, Texas A&M University; ◆David Dahl, Brigham Young University; Mahlet Tadesse, Georgetown University

403 CC-Room 27B Applications and Modeling of Survival Data—Contributed

Biometrics Section, International Chinese Statistical Association, Section on Statistics in Epidemiology

Chair(s): Xiaogang Su, The University of Alabama at Birmingham

- 2:05 p.m. **Identifying Patients with Aggressive Prostate Cancer Using Prostate-Specific Antigen (PSA) Profiles**—◆Feng Gao, Washington University School of Medicine; Chengjie Xiong, Washington University School of Medicine; Ling Chen, Washington University School of Medicine
- 2:20 p.m. **Improved Estimation of Restricted Mean Survival**—◆Nabihah Tayob; Susan Murray, University of Michigan
- 2:35 p.m. **Eliminating the Impact of Reporting Delay on Survival Analysis with Right-Truncated Data**—◆Ruiguang Song, CDC
- 3:05 p.m. **Piecewise Exponential Models to Assess the Influence of Job-Specific Experience on the Hazard of Acute Injury for Hourly Factory Workers**—◆Jessica Kubo, Stanford University; Mark Cullen, Stanford University; Linda Cantley, Yale University; Martin Slade, Yale University; Sally Vegso, Yale University; Baylah Tessier-Sherman, Yale University; Oyebode Taiwo, Yale University; Manisha Desai, Stanford University
- 3:20 p.m. **Modeling a Progressive Disease Process Under Panel Observation**—◆Amy Laird, University of Washington; Lurdes Y.T. Inoue, University of Washington
- 3:35 p.m. **Evaluating the Effects of Time-Varying Exposures in Observational Studies Using Cox Models with Stabilized Inverse Probability of Treatment Weights**—◆Stanley Xu, Kaiser Colorado; Susan Shetterly, Kaiser Colorado; Michael Ho, Denver VA Medical Center; Thomas Tsai, Denver VA Medical Center; David Magid, Kaiser Colorado

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● Themed Session ■ Applied Session ◆ Presenter

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404 CC-Room 25A **Adaptive Designs with Applications in Phase I/II Trials—Contributed**

Biopharmaceutical Section

Chair(s): Annpey Pong, Merck

- 2:05 p.m. **Bayesian Adaptive Phase II Trial Combining Proof of Concept and Dose-Finding: Comparison of Potential Models**—Katherine Kacena, Aptiv Solutions; ◆ Robert Noble, GlaxoSmithKline; Ping Chen, Aptiv Solutions; Richard A Brigandi, GlaxoSmithKline
- 2:20 p.m. **A Phase I Bayesian Adaptive Design to Simultaneously Optimize Dose and Schedule Among and Within Patients**—◆ Jin Zhang, University of Michigan; Thomas M Braun, University of Michigan
- 2:35 p.m. **A Bayesian Phase I/II Trial Design with Delayed Outcomes**—◆ Ick Hoon Jin, MD Anderson Cancer Center; Ying Yuan, MD Anderson Cancer Center
- 2:50 p.m. **A Phase I Trial Design for Incorporating Efficacy Outcomes That are Conditional Upon Absence of Dose-Limiting Toxicities**—◆ Shan Kang, University of Michigan; Thomas M Braun, University of Michigan; Jeremy Michael George Taylor, University of Michigan
- 3:05 p.m. **Adaptive Design of Phase II Oncology Study with Multiple Arms**—◆ Xiaoyun (Nicole) Li, Merck; Cong Chen, Merck
- 3:20 p.m. **Web-EWOC: Interactive Web Tool for Designing and Conducting Dose-Finding Trials in Cancer**—◆ Dror Berel, Cedars Sinai Medical Center; Andre Rogatko, Cedars Sinai Medical Center; Shao-Chi Huang, Cedars Sinai Medical Center; Haibin Wang, Cedars Sinai Medical Center; Galen Cook-Wiens, Cedars Sinai Medical Center; Mourad Tighiouart, Cedars Sinai Medical Center
- 3:35 p.m. **Phase III Design for Continuous Responses with an Adaptive Tuning Parameter**—◆ Aleksandra Stein, University of Nebraska; Aleksandra Stein, University of Nebraska

405 CC-Room 27A **Advances in Design and Analysis of Clinical Trials—Contributed**

Biopharmaceutical Section

Chair(s): Xiaoping Jiang, FDA/CDER/OTS/OB

- 2:05 p.m. **Elemental Information Matrices in Optimal Design of Experiments**—◆ Valerii Fedorov, Quintiles, Inc.
- 2:20 p.m. **Minimal Plus One Point Designs for Testing Lack of Fit for Some Sigmoid Curve Models**—◆ Ying Su, Merck; Damaraju Raghavarao, Temple University

- 2:35 p.m. **Isotonic Regression for Estimating the Highest Impedance Time Point for Deep Brain Stimulation**—◆ Yufan Zhao, Boston Scientific Neuromodulation; Lilly Chen, Boston Scientific Neuromodulation; Nitzan Mekel-Bobrov, Boston Scientific Neuromodulation
- 2:50 p.m. **Minimal Plus One Design Points for Some Mixture Models**—◆ Yanyan Li, Teva Branded Pharmaceutical Products R&D, Inc.; Damaraju Raghavarao, Temple University
- 3:05 p.m. **Bayesian Two-Stage Sequential Design for Phase II Clinical Trials**—◆ Sumihiro Suzuki, University of North Texas Health Science Center; Jun Zhang, University of North Texas Health Science Center; Shande Chen, University of North Texas Health Science Center
- 3:20 p.m. **Hypothesis Testing and Estimation in Ordinal Data Under a Simple Crossover Design**—◆ Kung-Jong Lui, San Diego State University; Kuang-Chao Chao, Fu-Jen Catholic University
- 3:35 p.m. **A Patient Recruitment Mixed Distribution Model with Center Initiation Cycle Times**—◆ James Powers, Quintiles, Inc.

406 CC-Room 29C **Seasonal Time Series, Goodness-of-Fit, and Unit Root—Contributed**

Business and Economic Statistics Section

Chair(s): Barbara J. Robles, Board of Governors of the Federal Reserve System

- 2:05 p.m. **Detecting Hidden ‘Peaks’ in ARMA Spectral Estimators**—◆ Wayne Woodward, Southern Methodist University; Henry L Gray, Southern Methodist University; Alan C Elliott, The University of Texas Southwestern Medical Center at Dallas
- 2:20 p.m. **Weighted Portmanteau Statistics**—◆ Colin Gallagher, Clemson University; Thomas Fisher, University of Missouri-Kansas City
- 2:35 p.m. **Time Series Goodness-of-Fit Testing Using a Weighted Portmanteau Statistic**—◆ Thomas Fisher, University of Missouri-Kansas City; Colin Gallagher, Clemson University
- 2:50 p.m. **New Results on Linear Filters Minimizing Phase-Shift for Seasonal Adjustment**—◆ Fabien Guggemos, Insee; Dominique Ladiray, INSEE; Michel Grun-Rehomme
- 3:05 p.m. **The Quality of Seasonal Adjustment: An Empirical Comparison of Various Methods of Seasonal Adjustment**—◆ Raj Jain, Bureau of Labor Statistics

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

3:20 p.m. **A Note on Mean Squared Prediction Error Under the Unit Root Model with Deterministic Trend—**◆Shu-Hui Yu,

3:35 p.m. **Prediction Intervals for ARIMA Processes: A Sieve Bootstrap Approach—**◆Maduka Rupasinghe, Ashland University; V A Samaranyake, Missouri University of Science and Technology

407 CC-Room 28E

Testing and Confidence for Regression, Covariance, and Sequential Experiments—Contributed

IMS

Chair(s): Shujie Ma, University of California at Riverside

2:05 p.m. **Optimal Multiple Testing Procedure Under Linear Regression Model—**◆Zhigen Zhao, Temple University; Jichun Xie, Temple University

2:20 p.m. **Optimal Confidence Sets for Parameters in Discrete Distributions—**◆Josh Habiger, Oklahoma State University; Melinda McCann, Oklahoma State University; Joshua Tebbs, University of South Carolina

2:35 p.m. **Two-Sample Covariance Matrix Testing and Support Recovery—**◆Yin Xia, The Wharton School; Tony Cai, University of Pennsylvania; Weidong Liu, Shanghai Jiao Tong University

2:50 p.m. **An Adaptive Resampling Test for Detecting the Presence of Significant Predictors—**Ian Wray McKeague, Columbia University; ◆Min Qian, Columbia University

3:05 p.m. **Simultaneous Testing of Multiple Hypotheses in Sequential Experiments—**◆Shyamal Krishna De, The University of Texas at Dallas

3:20 p.m. **Almost Minimax Open-Ended Mixture-Based Sequential Tests—**◆Georgios Fellouris, University of Southern California; Alexander G. Tartakovsky, University of Southern California

3:35 p.m. **Adaptive Confidence Bands—**◆Zongming Ma, The Wharton School

408 CC-Room 28B

Bayesian Methods for Clinical Trials—Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section

Chair(s): Shibasish Dasgupta, University of Florida

2:05 p.m. **A Simulation Study of Bayesian Response-Adaptive Randomization in Clinical Trials—**◆Xiaoyan Yuan, MD Anderson Cancer Center

2:20 p.m. **Predicting Data Cut-Off Date in Event-Driven Clinical Trials When Treatment Assignments Blinded—**◆Jianming Wang, Celgene Corporation; Zhinuan Yu, Celgene Corporation

2:35 p.m. **Hierarchical Gaussian Process Latent Variable Model for Clinical Decisions—**◆Yanxun Xu, Rice University/MD Anderson Cancer Center

2:50 p.m. **Phase I Dose-Finding Designs for Optimal Biological Dose—**◆Yong Zang, MD Anderson Cancer Center; Jack Lee, MD Anderson Cancer Center; Ying Yuan, MD Anderson Cancer Center

3:05 p.m. **Multivariate Kth-Order Markov Models for the Conditional Probability of Toxicity in Phase II Trials—**◆Laura Fernandes, University of Michigan; Jeremy Michael George Taylor, University of Michigan; Susan Murray, University of Michigan

3:20 p.m. **Stage-Wise Bayesian Adaptive Designs for Clinical Trials—**◆Yi Cheng, Indiana University South Bend

3:35 p.m. **Frequentist Conditional Power, Bayesian Predictive Power, and Their Applications—**◆Aijun Gao, PharmaNet/i3; Fanni Natanegara, Eli Lilly and Company; Karen Price, Eli Lilly and Company

409 CC-Room 31A

Time Series, Longitudinal, and Index Data—Contributed

Section on Government Statistics, Section on Survey Research Methods, Committee on Applied Statisticians

Chair(s): Robert Parker, Consultant

2:05 p.m. **Coherence Structures of Mortality Time Series Data for All Causes of Deaths for Selected Neighboring States 2004–2006—**◆Diba Khan, National Center for Health Statistics; Benjamin Kedem, National Center for Health Statistics; Myron Katzoff, National Center for Health Statistics (retired)

2:20 p.m. **Cross-Section, Time-Series Approach for Small-Area Poverty Models—**◆Jasen Taciak, U.S. Census Bureau; Wesley Basel, U.S. Census Bureau

2:35 p.m. **Utilizing Change-point Detection to Improve Boundary Tracking in Noisy Images—**◆Alexander Chen, SAMSI

2:50 p.m. **Application of GEE and MRM in Evaluation of the Efficacy of an HIV Prevention Intervention—**◆Xinjian Zhang, CDC/DID/NCHHSTD/DHAP/CSDMB/SST; Brenda Chen, CDC; Tobey Sapiano, CDC; Gary Uhl, CDC

3:05 p.m. **Analyzing Nonresponse Bias in PPI Data—**◆Teresa Hesley, Bureau of Labor Statistics; Boriana Chopova, Bureau of Labor Statistics; Greg Kelly, Bureau of Labor Statistics; Soon Paik, Bureau of Labor Statistics; Andy Sadler, Bureau of Labor Statistics; Dave Slack, Bureau of Labor Statistics



● Themed Session ■ Applied Session ◆ Presenter

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- 3:20 p.m. **Using Contact History to Adjust for Nonresponse in the Current Population Survey**—◆John Dixon, Bureau of Labor Statistics
- 3:35 p.m. **A Prediction/Pseudo-Empirical Likelihood Raking Approach to Estimating Small-Area Occupational Employment Change Over Time**—◆Jane Osburn, Bureau of Labor Statistics

410 CC-Room 32A **Space-Time Modeling 2—Contributed**

Section on Statistics and the Environment
 Chair(s): Ali Arab, Georgetown University

- 2:05 p.m. **Spatio-Temporal Models for Some Data Sets in Continuous Space and Discrete Time**—◆Samuel Demel, Kansas State University; Juan Du, Kansas State University
- 2:20 p.m. **A Hybrid Approach to Identifying Local Spatial Variation**—◆Marc Scott, NYU; Sean Jack Buckley, National Center for Education Statistics
- 2:35 p.m. **Prediction and Estimation of Random Fields**—◆Priya Kohli, Texas A&M University; Mohsen Pourahmadi, Texas A&M University
- 2:50 p.m. **Spatial-Temporal Generalized Linear Models Analysis of Mountain Pine Beetle Outbreaks**—◆Kimberly Kaufeld, University of Northern Colorado; Trent L Lalonde, University of Northern Colorado
- 3:05 p.m. **Robust Estimation of Multivariable Spatial Mixed Effects Models**—◆Casey Jelsema, Western Michigan University; Rajib Paul, Western Michigan University; Joseph W McKean, Western Michigan University
- 3:20 p.m. **The Use of Bidimensional Regression and Multidimensional Scaling for Exploring Spatial Structure of Transportation Networks and Other Two-Dimensional Surfaces**—◆Tamas Dusek, Szechenyi Istvan University
- 3:35 p.m. **Hierarchical Dynamic Dispersion Models for Discrete-Valued Spatio-Temporal Data**—◆Guohui Wu, University of Missouri; Scott Holan, University of Missouri; Christopher Wikle, University of Missouri; Mark Wildhaber, U.S. Geological Survey

411 CC-Room 23B **Case Control and Case Cohort Studies—Contributed**

Section on Statistics in Epidemiology, Biopharmaceutical Section
 Chair(s): Jo Wick, University of Kansas Medical Center

- 2:05 p.m. **Decomposition, Gradient, and Reduction Colinearity in High-Dimension Data from Case-Control Study**—◆Yuanzhang Li, WRAIR; David Niebuhr, Walter Reed Army Institute of Research; Tianqing Liu, Walter Reed Army Institute of Research
- 2:20 p.m. **Accelerated Failure Time Model for Case-Cohort Design with Longitudinal Covariates Subject to Measurement Error and Detection Limits**—◆Xinxin Dong; Lan Kong, Penn State College of Medicine; Abdus S. Wahed, University of Pittsburgh
- 2:35 p.m. **Using the Stratification Score to Adjust U-Statistics to Account for Confounding Covariates**—◆Glen Satten, CDC; Somnath Datta, University of Louisville; Andrew Allen, Duke University
- 2:50 p.m. **Estimating the Population Association with a Secondary Outcome from Case-Control Data**—◆Yukun Wu, University of Maryland School of Medicine; Myron Levine, University of Maryland School of Medicine; Karen Kotloff, University of Maryland School of Medicine; Halvor Sommerfelt, University of Bergen; Håkon Gjessing, Norwegian Institute of Public Health; Lize Merwe, South Africa Medical Research Council; Hans Steinsland, University of Bergen; William Blackwelder, University of Maryland School of Medicine
- 3:05 p.m. **Vaccine Effectiveness Case-Control Studies: Out of Control?**—◆Elizabeth Zell, CDC; Jennifer Verani, CDC; Michelle Groome, Respiratory and Meningeal Pathogens Research Unit; David Moore, Respiratory and Meningeal Pathogens Research Unit; Cynthia Whitney, CDC; Shabir A Madhi, National Institute for Communicable Diseases
- 3:20 p.m. **Partially Linear Single Index Cox's Regression Model in Nested Case-Control Studies**—◆Shulian Shang, New York University; Mengling Liu, New York University; Anne Zeleniuch-Jacquotte, New York University; Tess Clendenen, New York University; Alan A Arslan, New York University; Vittorio Krogh, National Cancer Institute; Goran Hallmans, Umeå University; Yongzhao Shao, New York University; Wenbin Lu, North Carolina State University
- 3:35 p.m. **Estimating Exposure-Response Relationships in Case-Control Studies**—◆Catherine Mary Crespi, University of California at Los Angeles; Leeka Kheifets, University of California at Los Angeles; Marco Vinceti, University of Modena and Reggio Emilia

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

412 CC-Room 23C

■ Survival Analysis—Contributed

Section on Statistics in Epidemiology, Biometrics Section, International Chinese Statistical Association, WONAR

Chair(s): Alicia Chancellor Hansen, Statistical Consultant

- 2:05 p.m. **Application of Poisson Spatial Regression Models in Estimating Time-Varying and Covariate-Dependent Coefficient Functions in Survival Analysis—** ◆ Jianghua He, University of Kansas Medical Center
- 2:20 p.m. **Covariate Measurement Error Methods in Mediation Analysis with Failure Time Data—** ◆ Shanshan Zhao, University of Washington; Ross Prentice, Fred Hutchinson Cancer Research Center
- 2:35 p.m. **Application of Profile Likelihood Method in Censoring Data—** ◆ Yinding Wang, University of South Carolina
- 2:50 p.m. **A Statistical Model for Estimating Discrete Survival Time for Melanoma Patients—** ◆ TAYSSEER SHARAF, University of Southern Florida; Chris P. Tsokos, University of South Florida
- 3:05 p.m. **Mixture Modeling for Joint Analysis of Survival Process, Discrete, and Continuous Covariates—** ◆ Fu-Wen Liang, MD Anderson Cancer Center; Wenyaw Chan, The University of Texas at Houston; Carol Etzel, MD Anderson Cancer Center; Bouthaina S. Dabaja, MD Anderson Cancer Center; Michael D. Swartz, The University of Texas at Houston
- 3:20 p.m. **A Comparison of Prostate Cancer Survivorship by Race—** ◆ Yiu Ming Chan, University of South Florida; Nana Osei Mensa Bonsu, University of South Florida; Chris P. Tsokos, University of South Florida
- 3:35 p.m. **Explained Variation for the Proportional Hazards Mixed-Effects Model—** ◆ Gordon Honerkamp-Smith

413 CC-Room 30C

■ ● Surveys of Children, Students, and Schools—Contributed

Section on Survey Research Methods, Social Statistics Section

Chair(s): Michael P. Cohen, American Institutes for Research

- 2:05 p.m. **Optimal Designs for School Surveys—** ◆ Ronaldo Iachan, ICF Macro; William Robb, ICF International; Kate Flint, ICF International
- 2:20 p.m. **Exploring Geographic Clustering Methods in National School-Based Student Survey Samples—** ◆ William Robb, ICF International; Ronaldo Iachan, ICF Macro; Randal ZuWallack, ICF International; Kate Flint, ICF International; Paul Martino, ICF International

- 2:35 p.m. **A New Approach for Multiway Stratification: School Sampling in Charting the Progress of Education Reform: An Evaluation of the Recovery Act's Role—** ◆ Louis Rizzo, Westat; Jane Li, Westat; Yong Lee, Westat; Babette Gutmann, Westat; Patty Troppe, Westat
- 2:50 p.m. **Effectiveness of a Composite Size Measure for Sampling Students with Disabilities—** ◆ Frank Potter, Mathematica Policy Research
- 3:05 p.m. **Research and Development Into Methods of Estimating Poverty in School-Age Children at the School District Level Using the American Community Survey—** ◆ Ciara Nugent, U.S. Census Bureau; Sam Hawala, U.S. Census Bureau
- 3:20 p.m. **Weighting in the Dark: What to Do in the Absence of Benchmarks—** ◆ Barbara Lepidus Carlson, Mathematica Policy Research; Jerry West, Mathematica Policy Research
- 3:35 p.m. **Using Cognitive Interviewing to Detect Privacy and Confidentiality Concerns—** ◆ Jennifer Childs, U.S. Census Bureau; Michelle Smirnova, U.S. Census Bureau

414 CC-Room 30D

■ Small-Area Estimation: Applications and Enhanced Methods—Contributed

Section on Survey Research Methods

Chair(s): James Chromy, RTI International

- 2:05 p.m. **Small-Area Estimation Alternatives for the National Crime Victimization Survey—** ◆ Robert Fay, Westat; Mamadou Diallo, Westat
- 2:20 p.m. **Evaluation of Small-Area Estimates of Substance Use in the National Survey on Drug Use and Health—** ◆ Art Hughes, SAMHSA; Akhil K Vaish, RTI International; Neeraja Sathe, RTI International; Kathryn Spagnola, RTI International
- 2:35 p.m. **A Search for Robust Model-Based Small-Area Estimation Methods for the National Ambulatory Medical Care Survey (NAMCS)—** ◆ Vladislav Beresovsky, National Center for Health Statistics; Donald Malec, National Center for Health Statistics
- 2:50 p.m. **Estimation for Detailed Publication Levels in the Current Employment Statistics Survey—** ◆ Julie Gershunskaya, Bureau of Labor Statistics
- 3:05 p.m. **Estimating the Relative Variance of Replicate Weight Sampling Error Variance Estimators for Rates—** ◆ Jerry Maples, U.S. Census Bureau



● Themed Session ■ Applied Session ◆ Presenter

- 3:20 p.m. **Nonlinear Mixed Effects Cross-Sectional Models to Estimate Prevalence of Smoking Using the National Health Interview Survey**—◆Neung Ha, University of Maryland; Van Parsons, National Center for Health Statistics
- 3:35 p.m. **Small-Area Estimation in Household Surveys When Auxiliary Variable Totals Are Known**—◆Prabhakar Ghangurde, Consultant

415 CC-Room 23A General Methodology—Contributed

SSC
Chair(s): Karen A Kopciuk, University of Calgary

- 2:05 p.m. **Estimating Equation Approach for Joint Estimation of Regression Parameters and Missing Data Probabilities**—◆Yang Zhao, University of Regina; Meng Liu, University of Regina
- 2:20 p.m. **Two-Step and Likelihood Methods for HIV Viral Dynamic Models with Covariate Measurement Errors and Missing Data**—◆Wei Liu, York University
- 2:35 p.m. **Nonparametric Estimation of the Survival Function for Prevalent and Incident Cases Under Stationary Incidence**—◆Pierre-Jerome Bergeron, University of Ottawa; Masoud Asgharian, McGill University
- 2:50 p.m. **K Sample Cramer-Von Mises Tests for Grouped Data**—◆Zheng Sun, Simon Fraser University; Richard Lockhart, Simon Fraser University; Michael Stephens, Simon Fraser University
- 3:05 p.m. **Pitman Closeness as a Criterion for the Determination of the Optimal Progressive Censoring Scheme**—◆Katherine Davies, University of Manitoba; William Volterman, McMaster University; N. Balakrishnan, McMaster University
- 3:20 p.m. **Asymptotics of the Discrete Log-Concave Maximum Likelihood Estimator and Related Applications**—◆Hanna Jankowski, York University
- 3:35 p.m. **Introduction to M-Distributions**—◆David Vaughan, Wilfrid Laurier University

Contributed Poster Presentations 2:00 p.m.–3:50 p.m.

416 CC-Sails Pavilion Contributed Oral Poster Presentations: Business and Economic Statistics Section — Contributed

Business and Economic Statistics Section
Chair(s): Marie Kraska, Auburn University

- 01: Variance - Mean Relationships to Analyze Large Survey Data with Application to Health Expenditure Data** — ◆Wenli Luo, AstraZeneca; Howard Stratton, University of Albany
- 02: A Study of the Quality of Family Life for Business Executives** — ◆Jonathan Trower, Baylor University; Kris Moore, Baylor University; Charles Goldwaite, Baylor University
- 03: Investment Strategy in a Business Cycle** — ◆Joshua Burke, ICE Communications, DHS; Les Yen, PAE Inc.
- 04: A Subjective Production Function for Soybeans, Corn, and Sunflower in the Pampean Region (Argentina)** — ◆Luis Frank, University of Buenos Aires; Marcial Demarchi, University of Buenos Aires
- 05: Inference for Duration Models Using Estimating Functions** — ◆Julieta Frank, University of Manitoba; Melody Ghahramani, University of Winnipeg; Aerambamoorthy Thavaneswaran, University of Manitoba
- 06: Investigations Using the Weibull Analysis for Predictability of Failure in the Service Industry** — ◆Michael Anderson
- 07: Bayesian Modeling of Regime-Switching Models: An Application in Multistream Asset Pricing** — ◆David Engler, Brigham Young University; Brian Hartman, University of Connecticut

417 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Government Statistics — Contributed Poster Presentations

Section on Government Statistics
Chair(s): Marie Kraska, Auburn University

- 08: Electronic Medical Record/Electronic Health Record Systems Nonresponse Bias Analysis for 2011 NAMCS Mail Survey** — ◆Bill Cai, National Center for Health Statistics; Iris Shimizu, National Center for Health Statistics
- 09: Estimating Statistical Bias for County-Level Crime Rates** — ◆Emily Griffith, FBI; Samuel Berhanu, FBI

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

418 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Health Policy Statistics — Contributed

Health Policy Statistics Section

Chair(s): Marie Kraska, Auburn University

- 10: An Evaluation of a Sitter Reduction Program** — ◆ Lewis VanBrackle, Kennesaw State University; LeeAnna Spiva, WellStar Health System; Donna Hunter, WellStar Health System; Therese Feiner, WellStar Health System; Darcia Jones, WellStar Health System; Jayne Petefish, WellStar Health System
- 11: Statistical Issues in the Use of Aggregate Market Research Data in Health Communication Planning** — ◆ William Pollard
- 12: Has Health Care Efficiency Improved Over Time?** — ◆ Ana Mutu, University of Kansas Medical Center; Byron Gajewski, University of Kansas Medical Center; Nancy Dunton, NDNQI Project at University of Kansas Medical Center
- 13: Statistical Methods for Analysis of Cost Data** — ◆ Shizhe Chen, University of Washington; Xiao-Hua (Andrew) Zhou, University of Washington
- 14: Utilizing 2005–2009 CMS Medicare Data to Demonstrate the Shift of Oncology Patients and Medicare Payment from the Physician Office to the Institutional Outpatient Setting** — ◆ Zheng Wang, Trinity Partners; Emma Boswell, Trinity Partners; Fotios Kokkotos, Trinity Partners
- 15: Utilizing 2008–2009 CMS Medicare Data to Demonstrate the Overuse of Computed Tomography Scanning in Medicare Patients** — ◆ Emma Boswell, Trinity Partners; Zheng Wang, Trinity Partners; Fotios Kokkotos, Trinity Partners; Hong Yu Xiao, Cornell University; Xuan Dong, Cornell University; Hao Tong, Cornell University; Yang Liu, Cornell University

419 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Physical and Engineering Sciences — Contributed Poster Presentations

Section on Physical and Engineering Sciences

Chair(s): Marie Kraska, Auburn University

- 16: Asymptotically Efficient Estimation of a Bivariate Gaussian-Weibull Distribution and an Introduction to the Associated Pseudo-Truncated Weibull** — ◆ Steve Verrill, USDA Forest Products Laboratory; James Evans, USDA Forest Products Laboratory; David Kretschmann, USDA Forest Products Laboratory; Cherilyn Hatfield, USDA Forest Products Laboratory
- 17: Significance of Angle in the Statistical Comparison of Forensic Toolmarks** — ◆ Amy Hoeksema

- 18: Evaluation of a New Screening Procedure** — ◆ Steve Webb
- 19: A Functional Time Warping Approach to Modeling and Monitoring Truncated Degradation Signals** — ◆ Rensheng Zhou, Georgia Institute of Technology; Nicoleta Serban, Georgia Institute of Technology; Nagi Gebraeel, Georgia Institute of Technology; Hans-Georg Mueller, University of California at Davis
- 20: Uncertainty Assessments of a Daily Electricity System Demand Estimation Model** — ◆ Cha-Chi Fan, U.S. Energy Information Administration
- 21: A Statistical Method for Matching a Bullet to a Cartridge Case** — ◆ Tracy Morris, University of Central Oklahoma; Deion Christophe, University of Central Oklahoma
- 22: Variable Selection Using Lasso in Bayesian D-Optimal Supersaturated Design** — ◆ Jiayi Hou, Virginia Commonwealth University School of Medicine; Charlie Kish, Pfizer Consumer Healthcare
- 23: Approximate Tolerance Limits in a One-Way Random Model Using Bootstrap-Based Higher-Order Asymptotics** — ◆ Elizabeth Murrin, The Johns Hopkins University Applied Physics Laboratory; Thomas Mathew, University of Maryland Baltimore County

420 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Quality and Productivity — Contributed

Quality and Productivity Section

Chair(s): Marie Kraska, Auburn University

- 24: Statistical Modeling in Energy Efficiency Benchmarking** — ◆ Y V Hui, City University of Hong Kong; William Chung, City University of Hong Kong
- 25: Procedure for Process Control with Inspection Errors** — ◆ Michelle Smith, Eastern Kentucky University; William S. Griffith, University of Kentucky
- 26: Statistical Modeling of Queuing Systems for Capacity Management and Planning of It Services** — ◆ Ta-Hsin Li, IBM; Kaan Katircioglu, IBM
- 27: Application of Generalized Linear Models to Predict Semiconductor Yield** — ◆ Wenjun Ke, Arizona State University
- 28: Identification of Dispersion Effects in Robust Parameter Design Experiments** — ◆ Kwame Adu Kankam, Penn State University; James L. Rosenberger, Penn State University
- 29: Failure Prediction of Spatially Correlated Infrastructures** — ◆ Hongfei Li, IBM T. J. Watson Research Center; Yada Zhu, IBM Research



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 30: Precision of ED50 Estimate for Four-Parameter Logistic Model with Different Slopes and Testing Plans —** ◆Jianfang Hu, Merck
- 31: Investigating the Effect Bootstrapping Content Uniformity (CU) Data Has on Meeting FDA's Process Validation Guidance Expectations —** ◆Alex Viehmann, FDA; Karthik Iyer, FDA

- 39: Assessing the Impact of Simplified Design Assumptions When Analyzing Data from Public-Use Complex Surveys —** ◆Van Parsons, National Center for Health Statistics; Jennifer D Parker, National Center for Health Statistics
- 40: Measurement Error on Dual-Frame Estimation —** ◆Dong Lin
- 41: Weighting Methods in Survey Sampling —** ◆Chiaochih Chang, Sam Houston State University; Ferry Butar Butar, Sam Houston State University; Keerthi Palitha Dias Bandaranayake, Sam Houston State University

421 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Statistics and Defense and National Security — Contributed

Section on Statistics in Defense and National Security
Chair(s): Marie Kraska, Auburn University

- 32: Sequential Design Methods for Reliability Sensitivity Testing —** ◆Elise Roberts, The Johns Hopkins University Applied Physics Laboratory; Joseph Davis Warfield, The Johns Hopkins University Applied Physics Laboratory; Anindya Roy, University of Maryland Baltimore County

- 42: Continuous Measures of Response Latency in Evaluating Nonresponse Bias in a Large Randomized Community Trial of College Students Using the Continuum of Resistance Model —** ◆Jill N. Blocker, Wake Forest School of Medicine; Eddie Ip, Wake Forest School of Medicine; Thomas P. McCoy, The University of North Carolina at Greensboro
- 43: Assessing Coverage and Accuracy of an Address-Based Frame for Subgroups of the Population —** ◆Kelly Dixon, Arbitron, Inc.; Mike Kwanisai, Arbitron, Inc.; Al Tupek, Arbitron, Inc.

422 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Survey Research Methods — Contributed

Section on Survey Research Methods
Chair(s): Marie Kraska, Auburn University

- 33: Estimating Agreement Coefficients from Sample Survey Data —** ◆Hung-Mo Lin, Mount Sinai School of Medicine; Hae-Young Kim, New England Research Institute; John M Williamson, CDC/Kenya Medical Research Institute; Virginia Lesser, Oregon State University
- 34: Cell Phone Coverage in the REACH U.S. —** ◆Kanru Xia, NORC; Whitney Murphy, NORC
- 35: An Empirical Investigation of the Role of the Email Contact in Web Survey Response Rates —** ◆Hsien-Yuan Hsu, National Taiwan Normal University; Yi-Hua Lai, National Taiwan Normal University; Hsin-Ying Chin, National Taiwan Normal University
- 36: Sampling Design for the 2011–13 National Hospital Care Survey —** ◆Iris Shimizu, National Center for Health Statistics
- 37: Improving Small-Area Health Data: Developing an Outcome Screening Procedure to Support Small-Area Estimation Models —** ◆Donald Malec, National Center for Health Statistics; Peter Meyer, National Center for Health Statistics; Nathaniel Schenker, National Center for Health Statistics; Pavlina Rumcheva, National Center for Health Statistics
- 38: An 'Approximately Unbiased' Estimator May Be Uniformly Larger Than an 'Overestimate' —** ◆Robert Edson, U.S. Department of Veterans Affairs; Gary M Shapiro, Statistics Without Borders

- 44: Refining Cellular Phone Samples Using Switch Centers in a Multiregional Survey —** ◆Machell Town, CDC; Carol Pierannunzi, CDC; Ashley Hyon, Marketing Systems Group; William Garvin, CDC
- 45: Comparison of Imputation Procedures Once the Data Sets Contain Nonresponses —** ◆Ferry Butar Butar, Sam Houston State University; Keerthi Palitha Dias Bandaranayake, Sam Houston State University; Chiaochih Chang, Sam Houston State University
- 46: A Modeling Approach: Use of Survey Contact Data in the Medical Expenditure Panel Survey —** ◆Karen Davis, Agency for Healthcare Research and Quality
- 47: Modeling and Displaying the Precision of Radio Audience Estimates —** ◆Richard Griffiths, Arbitron, Inc.
- 48: Revisiting the Survey Form: The Effects of Redesigning the Current Employment Statistics Survey's Iconic One-Page Form with a Booklet-Style Form —** ◆Louis Harrell, Bureau of Labor Statistics; Edward Park, Bureau of Labor Statistics
- 49: Application of Small-Area Estimation in Surveys of Governments —** ◆Bac Tran, U.S. Census Bureau; Carma Ray Hogue, U.S. Census Bureau

Tuesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

423 CC-Sails Pavilion Contributed Oral Poster Presentations: Social Statistics Section — Contributed

Social Statistics Section

Chair(s): Marie Kraska, Auburn University

- 50: Socioeconomic Status and Life Expectancy in the United States, 1990–2010** — ◆ David A Swanson, University of California at Riverside; Adam Sanford, University of California at Riverside
- 51: Forecasting the U.S. Population with the Gompertz Growth Curve** — ◆ Peter Pflaumer, Technical University of Dortmund
- 52: Use of Bayesian Priors to Assist Ability Estimation for Nonexistent Maximum Likelihoods in 3-Parameter Logistic Models for Item Response Theory Applications** — ◆ Jerry Gorham, Pearson, Inc.; Huijuan Meng, Pearson, Inc.; Marijana Dragan, National Council of State Boards of Nursing
- 53: Impact of Including Item Response Time in a Model on Exam Score Rankings** — ◆ Huijuan Meng, Pearson, Inc.; Jerry Gorham, Pearson, Inc.; Joy Matthews-Lopez, National Association of Boards of Pharmacy
- 54: Effect Size Indexes for Dichotomized Outcomes Under Variance Heterogeneity: An Empirical Investigation of Accuracy and Precision** — ◆ Jeffrey Kromrey, University of South Florida; Bethany Bell, University of South Carolina
- 55: The Impact of Environmental Factors, Expectations, and Support on Adolescent Drug Use** — ◆ Simone Robers, American Institutes for Research; Samantha Neiman, American Institutes for Research
- 56: Effect of Nutrition Information on the Lifestyles of Older Adults** — ◆ Natalia Frishman, Iowa State University; Mack Shelley, Iowa State University; Doris Montgomery, Iowa Department of Public Health
- 57: Propensity Score Analysis with Nested Data: Comparing Single and Multilevel Model Estimates** — ◆ Rheta E. Lanehart, University of South Florida; Patricia Rodriguez De Gil, University of South Florida; Aarti P. Bellara, University of South Florida; Jeffrey Kromrey, University of South Florida; Eun Sook Kim, University of South Florida; Kathryn M. Borman, University of South Florida; Reginald S. Lee, University of South Florida
- 58: Reconstruction of Document History: A Parsimony Approach** — ◆ Guillermo Frank, University of Buenos Aires; Luis Frank, University of Buenos Aires
- 59: Using the Logit-Normal Distribution in Electoral Forensics** — ◆ Ole Forsberg, Oklahoma State University
- 60: Assessing the Impact of a New Science Curriculum on Under- and Over-Achieving Students** — ◆ Luke Fostvedt
- 61: Modern Statistical Methodologies for Developing Predictive Models for Educational Research** — ◆ Kevin McCarter, Louisiana State University
- 62: Finite Mixture Modeling of Censored Regression Models** — ◆ Maria Karlsson, Umeå University; Thomas Laitila, Örebro University/Statistics Sweden
- 63: Gender Gap in STEM Pipeline** — ◆ Xiaolei Wang, American Institutes for Research; Jijun Zhang, American Institutes for Research
- 64: Clustering-Imputation on Partially Observed Ecological Momentary Data** — ◆ Xiaoxue Li, University of Pittsburgh; Stewart Anderson, University of Pittsburgh; Saul Shiffman, University of Pittsburgh
- 65: Gender Gap in Math Course Taking and Math Achievement** — ◆ Jijun Zhang, American Institutes for Research; Xiaolei Wang, American Institutes for Research
- 66: A Monte Carlo Evaluation of the Robustness of Coefficient Alpha to Non-Normality** — ◆ Yanyan Sheng, Southern Illinois University-Carbondale; Zhaohui Sheng
- 67: Corrections for Measurement Error** — ◆ Zhaohui Sheng; Yanyan Sheng, Southern Illinois University-Carbondale
- 68: Workforce Health: The Impact of Social and Area Variables on a Repeated Events Model of Cardiovascular Health Outcomes** — ◆ Hope Buell, University of Auckland; Patricia Metcalf, University of Auckland; Daniel Exeter, University of Auckland
- 69: Comparing Propensity Score Methods Using Multilevel Level Modeling: A Monte Carlo Study** — ◆ Aarti P. Bellara, University of South Florida; Jeffrey Kromrey, University of South Florida; Eun Sook Kim, University of South Florida; John M. Ferron, University of South Florida; Zorka Karanxha, University of South Florida
- 70: Maximizing the Impact of Science, Technology, Engineering, and Math Outreach: Survey Instruments for Pre-College Student and Teacher Outreach Programs** — ◆ Alana Unfried, North Carolina State University
- 71: Model-Based and Scalable Tabular Report Discovery in Business Analytics** — ◆ Jane Chu, IBM; Jing Shyr, IBM; Damir Spisic, IBM SPSS Predictive Analytics; Sier Han, IBM; Xue Ying Zhang
- 72: Statistical Methods for Causal Inference Using Single-Case Time-Series Designs** — ◆ Bradley E Huitema, Western Michigan University
- 73: Selection Bias and Estimates of Social Quality of Life in Friend Comparison Groups** — ◆ Susan Stewart, University of California at Davis; Joan Bloom, University of California at Berkeley
- 74: How Much College Is Enough? Evaluating Characteristics of Adults with Some College and No Degree** — ◆ Angelina KewalRamani, American Institutes for Research



424 CC-Sails Pavilion
Contributed Oral Poster Presentations: Mental Health Research—Contributed

Statistics in Mental Health Research

Chair(s): Marie Kraska, Auburn University

75: Longitudinal Analysis of Health Care Costs in Patients with Major Depressive Disorder Treated with Duloxetine—◆ Zhanglin Lin Cui, Eli Lilly and Company; Douglas Faries, Eli Lilly and Company; Wei Shen, Eli Lilly and Company; Stephen Able, Eli Lilly and Company; Diego Novick, Eli Lilly and Company

76: Psychometric Method of Item Selection from an Item Bank to Create a Screening Test—◆ Douglas Tommet, Institute for Aging Research/Hebrew Senior Life; Frances M Yang, Institute for Aging Research/Hebrew Senior Life; Paul K Crane, University of Washington; Sharon K Inouye, Institute for Aging Research/Hebrew Senior Life; Edward R Marcantonio, Harvard Medical School/Beth Israel Deaconess Medical Center; Richard N Jones, Institute for Aging Research/Hebrew Senior Life

77: Impact of Biological Risk Factors of Cardiovascular Disease and Education on Cognitive Trajectories in Non-Demented Older Adults—◆ Shelley Han Liu, Harvard University; Maritza Dowling, University of Wisconsin-Madison

78: Statistical Challenges and Analysis of Longitudinal Mini-Mental State Examination Data in Frontotemporal Lobar Degeneration and Alzheimer's Disease—◆ Kay-See Tan, University of Pennsylvania; David J. Libon, Drexel University College of Medicine; Katya Rascovsky, University of Pennsylvania; Murray Grossman, University of Pennsylvania; Sharon Xie, University of Pennsylvania

79: A Two-Part Model to Assess the Impact of Coping Strategies on the Duration of Depression in Young Adults—◆ Jun Yan, University of Connecticut; Steven Chiou, University of Connecticut; Robert Aseltine, University of Connecticut Health Center; Elizabeth Schilling, University of Connecticut Health Center

Invited Sessions 4:00 p.m.–5:50 p.m.

425 CC-Ballroom 20AB

Deming Lecture—Invited

Deming Lectureship Committee, International Chinese Statistical Association, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Pam Craven, ASA

Chair(s): A Blanton Godfrey, North Carolina State University

4:05 p.m. **Quality Improvement: From Autos and Chips to Nano and Bio—**◆ C.F. Jeff Wu, Georgia Institute of Technology

5:35 p.m. **Floor Discussion**

Invited Sessions 8:00 p.m.–10:00 p.m.

426 CC-Ballroom 20AB

ASA Presidential Address and Awards—Invited

ASA, ENAR, IMS, SSC, WNNAR, International Chinese Statistical Association, International Indian Statistical Association, Representatives for Young Statisticians

Organizer(s): Robert N. Rodriguez, SAS Institute

Chair(s): Nancy L. Geller, National Heart, Lung, and Blood Institute

8:00 p.m. **Building the Big Tent for Statistics—**◆ Robert N. Rodriguez, SAS Institute

8:30 p.m. **Presentation of Awards—**◆ Nancy L. Geller, National Heart, Lung, and Blood Institute

9:00 p.m. **Presentation of Founders Awards and New ASA Fellows—**◆ Nancy L. Geller, National Heart, Lung, and Blood Institute

Plenary Awards and Sessions

You are invited to attend the
ASA Presidential Address and Awards Session
for the recognition of the ASA's most distinguished members.



Edward C. Bryant
Scholarship



Gertrude M. Cox
Scholarship



Gottfried E. Noether
Awards



W. J. Youden
Award in
Laboratory Testing



Samuel S. Wilks
Memorial Award

Tuesday, July 31, 2012, 8 p.m.

SAN DIEGO CONVENTION CENTER, BALLROOMS 20AB

Sponsored by the American Statistical Association, Committee of Presidents of Statistical Societies,
and Institute of Mathematical Statistics

PRESENTED AT THE 172ND ANNUAL MEETING • SAN DIEGO, CALIFORNIA



Wednesday, August 1

Committee/Business Meetings & Other Activities

<p>7:00 a.m.–8:30 a.m. HQ-Sapphire 402 Continuing Professional Development Committee (closed) Chair(s): Maura Stokes, SAS Institute</p> <p>7:00 a.m.–8:30 a.m. HQ-Sapphire 412 Scientific and Public Affairs Advisory Committee Business Meeting Chair(s): Clyde Tucker, CNN Consultant</p> <p>7:00 a.m.–8:30 a.m. HQ-Aqua 309 Committee on International Relations in Statistics Chair(s): Sonya Vartivarian, Government Accountability Office</p> <p>7:00 a.m.–8:30 a.m. HQ-Aqua 307 ASA Advisory Committee on Climate Change Policy Business Meeting Chair(s): Peter Guttorp, University of Washington</p> <p>7:00 a.m.–8:30 a.m. HQ-Aqua Boardroom Joint Meeting of the Conference on Statistical Practice Organizing and Conference Committees Chair(s): Philip Rocco Scinto, The Lubrizol Corporation</p> <p>7:00 a.m.–9:00 a.m. HQ-Sapphire Boardroom ASA 175th Anniversary Steering Committee Chair(s): Christy Chuang-Stein, Pfizer Inc.</p> <p>7:00 a.m.–6:00 p.m. CC-Ballroom 20A Workroom Speaker Management Room</p> <p>7:30 a.m.–4:30 p.m. CC-Ballroom 20 Foyer ASA Membership/Help Desk/Press Desk</p> <p>7:30 a.m.–4:30 p.m. CC-Ballroom 20 Foyer JSM Main Registration</p> <p>7:30 a.m.–8:00 p.m. CC-Ballroom 20 Foyer Cyber Center, Sponsored by IBM</p> <p>8:00 a.m.–2:30 p.m. CC-Sails Pavilion Career Placement Service</p>	<p>8:00 a.m.–4:00 p.m. HQ-Aqua 311 Meeting Within a Meeting (MWM) Statistics Workshop for Math and Science Teachers: 5–8 Strand Day 2 Chair(s): Katherine Halvorsen, Smith College</p> <p>8:30 a.m.–10:00 a.m. HQ-Aqua 300 JSM Diversity Workshop and Mentoring Program: Wrap-Up Chair(s): Brian Millen, Eli Lilly and Company</p> <p>8:30 a.m.–4:30 p.m. HQ-Aqua 312 Beyond AP Statistics (BAPS) Workshop Chair(s): Roxy Peck, Cal Poly</p> <p>9:00 a.m.–2:30 p.m. CC-Sails Pavilion American Statistical Association Booth #601/603</p> <p>9:00 a.m.–2:30 p.m. CC-Sails Pavilion ASA Marketplace</p> <p>9:00 a.m.–2:30 p.m. CC-Sails Pavilion EXPO 2012</p> <p>10:30 a.m.–11:30 a.m. HQ-Aqua Boardroom Advisory Committee on Continuing Education (ACCE) Debriefing Meeting Chair(s): Mary C. Christman, MCC Statistical Consulting LLC</p> <p>12:00 p.m.–2:30 p.m. HQ-Aqua 300 ENAR 2013 Spring Meeting Planning Luncheon Organizer(s): Dan Heitjan, ENAR; Karen Bandeen-Roche, ENAR</p> <p>12:30 p.m.–2:00 p.m. HQ-Sapphire Boardroom Committee on Meetings Business Meeting Chair(s): Xuming He, University of Michigan</p> <p>12:30 p.m.–2:00 p.m. HQ-Aqua 305 NISS/ASA Writing Workshop for Junior Researchers Chair(s): Keith Crank</p> <p>12:30 p.m.–2:00 p.m. HQ-Cobalt 500 Noether Award Committee Luncheon Chair(s): Pranab Sen, The University of North Carolina at Chapel Hill</p> <p>5:00 p.m.–6:00 p.m. CC-Room 33C ASA Science Policy: Learn More/Share Your Thoughts Chair(s): Steve Pierson, ASA</p>
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Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

5:30 p.m.–7:00 p.m. HQ-Indigo 202

ICSA Members Meeting

Organizer(s): Shuyen Ho, GlaxoSmithKline

6:00 p.m.–7:00 p.m. HQ-Aqua 300

STAT-HAWKERS

Organizer(s): Sarjinder Singh, Texas A&M University at Kingsville

6:00 p.m.–7:30 p.m.

2012 JSM Program Committee/Committee on Meetings Appreciation Reception (by invitation only)

6:00 p.m.–8:00 p.m. HQ-Sapphire EF

Section on Statistical Education Business Meeting

Chair(s): Brad Hartlaub, Kenyon College

6:00 p.m.–8:00 p.m. HQ-Sapphire L

Survey Research Methods Section Business Meeting

Chair(s): John Czajka, Mathematica Policy Research

7:00 p.m.–8:30 p.m. HQ-Cobalt 500

Statisticians Working on Complimentary and Alternative Medicine (CAM) and Integrative Medicine Studies

Organizer(s): Laura Lee Johnson, NCCAM/NIH

CE_28T

Predictive Modeling in the Life Sciences

8:00 a.m.–9:45 a.m.

HQ-Indigo 202

ASA, SAS

Instructor(s): Russell Wolfinger, SAS Institute; Richard Zink, SAS Institute

CE_29T

Advances in Tree-Based Modeling Tools, Data Mining, Predictive Analytics, and Modeling Automation Technology: Introduction to SPM, Salford Predictive Modeler

8:00 a.m.–9:45 a.m.

HQ-Indigo 204

ASA, Salford Systems

Instructor(s): Dan Steinberg, Salford Systems

CE_30T

Advances in Data Mining, State-of-the-Art Algorithms from Jerome Friedman: GPS (Generalized Pathseeker), ISLE (Importance Sampled Learning Ensembles), and RULEFIT Rule Extraction Engine

8:00 a.m.–9:45 p.m.

HQ-Indigo 206

ASA, Salford Systems

Instructor(s): Mikhail Golovnya, Salford Systems

CE_31T

Creating Statistical Graphics with SAS

10:00 a.m.–11:45 a.m.

HQ-Indigo A

ASA, SAS

Instructor(s): Warren Kuhfeld, SAS Institute

CE_32T

Survey Data Analysis with Stata

10:00 a.m.–11:45 a.m.

HQ-Indigo 202

ASA, Stata

Instructor(s): Jeffrey Pitblado, StataCorp

CE_33T

Introduction to CART: Data Mining with Decision Trees

10:00 a.m.–11:45 a.m.

HQ-Indigo 204

ASA, Salford Systems

Instructor(s): Mikhail Golovnya, Salford Systems

CE_34T

East Architect: A Powerful New Statistical Environment for Designing, Monitoring, and Simulating Clinical Trials

10:00 a.m.–11:45 a.m.

HQ-Indigo 206

ASA, Cytel Software Corporation

Instructor(s): Cyrus R Mehta, Cytel Inc.

Technology Theaters

11:00 a.m.–11:45 a.m. CC-Sails Pavilion Tech1

Introduction to Simulation Modeling (Monte-Carlo Simulation)

IBM

1:00 p.m.–1:45 p.m. CC-Sails Pavilion Tech1

Ask the Experts

IBM

Continuing Education (Fee Events)

CE_27T

SAS Procedures for Analyzing Survey Data

8:00 a.m.–9:45 a.m.

HQ-Indigo A

ASA, SAS

Instructor(s): Pushpal K Mukhopadhyay, SAS Institute



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

CE_35T
Group Sequential Analysis Using SAS Software
 1:00 p.m.–2:45 p.m. HQ-Indigo A
 ASA, SAS
 Instructor(s): Yang Yuan, SAS Institute

CE_36T
Multilevel/Mixed Models Using Stata
 1:00 p.m.–2:45 p.m. HQ-Indigo 202
 ASA, Stata
 Instructor(s): Bill Rising, StataCorp

CE_37T
Introduction to MARS: Predictive Modeling with Nonlinear Automated Regression Tools
 1:00 p.m.–2:45 p.m. HQ-Indigo 204
 ASA, Salford Systems
 Instructor(s): Mikhail Golovnya, Salford Systems

CE_38T
25 Years of Cytel Exact Software: Overview of StatXact for Nonparametric Tests with Special Application to Correlated Categorical Data
 1:00 p.m.–2:45 p.m. HQ-Indigo 206
 ASA, Cytel Software Corporation
 Instructor(s): Christopher D Corcoran, Utah State University; Pralay Senchaudhuri, Cytel Inc.

CE_39T
Structural Equation Modeling Using the CALIS Procedure in SAS/STAT Software: Basic and Advanced Topics
 3:00 p.m.–4:45 p.m. HQ-Indigo A
 ASA, SAS
 Instructor(s): Yiu-Fai Yung, SAS Institute; Xinming An, SAS Institute

CE_40T
Advances in Data Mining: Jerome Friedman's TreeNet/MART and Leo Breiman's Random Forests
 3:00 p.m.–4:45 p.m. HQ-Indigo 204
 ASA, Salford Systems
 Instructor(s): Mikhail Golovnya, Salford Systems

A.M. Roundtables 7:00 a.m.–8:15 a.m.

427 CC-Ballroom D
Biopharmaceutical Section A.M. Roundtable Discussion (fee event)
 Biopharmaceutical Section
 Organizer(s): Estelle Russek-Cohen, FDA/CBER
 WL01 Reducing Placebo Response in Adult and Pediatric Depression Studies—◆ Qi Zhang, Eli Lilly and Company

428 CC-Ballroom D
Section for Statistical Programmers and Analysts A.M. Roundtable Discussion (fee event)
 Section for Statistical Programmers and Analysts
 Organizer(s): Nancy Petersen, Department of Veterans Affairs
 WL02 Preparing to Share CDISC Data: A Discussion of How to Best Conduct (and Document) Review of SDTM and ADaM Data—◆ Steven R Kirby, ViroPharma Inc.

429 CC-Ballroom D
Section on Health Policy Statistics A.M. Roundtable Discussion (fee event)
 Health Policy Statistics Section, Statistics Without Borders
 Organizer(s): Ofer Harel, University of Connecticut
 WL03 Preparing to Work in a Developing Country—◆ Mark Griffin, Australian Development Agency for Statistics and Information Systems

430 CC-Ballroom D
Section on Physical and Engineering Sciences A.M. Roundtable Discussion (fee event)
 Section on Physical and Engineering Sciences, Section on Statistics in Defense and National Security
 Organizer(s): Stephanie Pickle DeHart, DuPont
 WL04 Statistical Analysis of Modern Reliability Data—◆ Yili Hong, Virginia Tech

431 CC-Ballroom D
Section on Statistical Computing A.M. Roundtable Discussion (fee event)
 Section on Statistical Computing
 Organizer(s): John W Emerson, Yale University
 WL05 Functional Programming Language for Statistics—◆ Babubhai Shah, SAFAL Institute Inc.

432 CC-Ballroom D
Section on Statistical Education A.M. Roundtable Discussion (fee event)
 Section on Statistical Education
 Organizer(s): Amy Wagaman, Amherst College
 WL06 Using Social Media to Engage and Motivate the Modern Statistics Student—◆ Michelle Gaddy Everson, University of Minnesota
 WL07 Hybrid Courses: The Best of Face-to-Face and Online Learning—◆ Herle McGowan, North Carolina State University



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

433 CC-Ballroom D Section on Statistics in Defense and National Security A.M. Roundtable Discussion (fee event)

Section on Statistics in Defense and National Security
Organizer(s): Aubrey Dale Magoun, Applied Research and Analysis
WL08 Supporting National Security Policy with Science, Technology, and Analysis—◆ Nancy Spruill, U.S. Office of the Secretary of Defense

434 CC-Ballroom D Section on Teaching of Statistics in the Health Sciences A.M. Roundtable Discussion (fee event)

Section on Teaching of Statistics in the Health Sciences
Organizer(s): Felicity Enders, Mayo Clinic
WL09 Wanted: Statistics Classroom Examples—◆ Amy Nowacki, Cleveland Clinic

Special Presentation 8:30 a.m.–10:20 a.m.

435 HQ-Sapphire MN Introductory Overview Lecture: Statistics and Climate—Other

ASA, ASA Advisory Committee on Climate Change Policy, ENAR, IMS, International Chinese Statistical Association, International Indian Statistical Association, SSC, WUNAR, Statistics Without Borders
Organizer(s): Peter Guttorp, University of Washington
Chair(s): Catherine Calder, The Ohio State University

- 8:35 a.m. Statistics and Climate—◆ Peter Guttorp, University of Washington
- 10:00 a.m. Floor Discussion

Invited Sessions 8:30 a.m.–10:20 a.m.

436 CC-Room 33B ■ ● New Developments in Bayesian Nonparametrics—Invited

Section on Bayesian Statistical Science, International Indian Statistical Association, Statistics Surveys Online Journal
Organizer(s): David Dunson, Duke University
Chair(s): David Dunson, Duke University

- 8:35 a.m. Recursive Mixture Modeling and Nonparametric Testing of Association in Case-Control Studies—◆ Li Ma, Duke University

- 9:00 a.m. Two Tales About Bayesian Nonparametric Modeling—Pierpaolo De Blasi, University of Torino & Collegio Carlo Alberto; Stefano Favaro, University of Torino & Collegio Carlo Alberto; Antonio Lijoi, University of Pavia; ◆ Igor Pruenster, University of Torino & Collegio Carlo Alberto

- 9:25 a.m. Modeling Genetic Variations Using Fragmentation-Coagulation Processes—◆ Yee Whye Teh, University College London; Charles Blundell, University College London

- 9:50 a.m. The Beta Process, Exchangeable Feature Models, and the Feature Paintbox—◆ Tamara Broderick, University of California at Berkeley; Michael I Jordan, University of California at Berkeley; Jim Pitman, University of California at Berkeley

- 10:15 a.m. Floor Discussion

437 CC-Room 22 ■ ● The Cancer Genome Atlas (TCGA): A Growing Data Resource—Invited

ENAR, International Indian Statistical Association
Organizer(s): Ronglai Shen, Memorial Sloan-Kettering Cancer Center; Laila Poisson, Henry Ford Health Systems
Chair(s): Ronglai Shen, Memorial Sloan-Kettering Cancer Center

- 8:35 a.m. The Cancer Genome Atlas (TCGA): An Introduction for Statisticians—◆ Laila Poisson, Henry Ford Health Systems

- 9:00 a.m. Batch Effects from Biological and Technological Artifacts in High-Throughput Data Collections—◆ Jeffrey Leek, The Johns Hopkins University

- 9:25 a.m. Pathway Index Models for Construction of Patient-Specific Risk Profiles—◆ Kevin H Eng, University of Wisconsin-Madison; Sijian Wang, University of Wisconsin-Madison; Christina Kendziorski, University of Wisconsin-Madison

- 9:50 a.m. Multivariate Multiple Testing Procedures for High-Throughput Data—◆ Debashis Ghosh, Penn State University

- 10:15 a.m. Floor Discussion

438 HQ-Sapphire B ■ ● Hierarchical Modeling in Sports—Invited

Section on Statistics in Sports, Section for Statistical Programmers and Analysts, CHANCE
Organizer(s): Shane T Jensen, The Wharton School
Chair(s): Shane T Jensen, The Wharton School

- 8:35 a.m. Hierarchical Bayesian Modeling of Hitting Performance in Baseball—◆ Blakeley B. McShane, Northwestern University; Shane T Jensen, The Wharton School; Abraham J Wyner, The Wharton School



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:00 a.m. **Estimating Fielding Ability in Baseball Players Over Time**—◆ James Piette, Krossover Intelligence, Inc./The Wharton School; Shane T Jensen, The Wharton School
- 9:25 a.m. **A Regression-Adjusted Hockey Plus-Minus Metric**—◆ Robert B Gramacy, The University of Chicago; Shane T Jensen, The Wharton School; Matthew A Taddy, The University of Chicago
- 9:50 a.m. **Regularized Bayesian NHL Player Ability Estimates**—◆ Samuel L Ventura, Carnegie Mellon University; Andrew C Thomas, Carnegie Mellon University
- 10:15 a.m. **Floor Discussion**

- 8:55 a.m. **Multiple Imputation for Missing Body-Scan (DXA) Data in the National Health and Nutrition Examination Survey**—◆ Nathaniel Schenker, National Center for Health Statistics; Lori G Borrud, National Center for Health Statistics; Vicki L. Burt, National Center for Health Statistics; Lester R. Curtin, National Center for Health Statistics; Katherine M. Flegal, National Center for Health Statistics; Jeffery Hughes, National Center for Health Statistics; Clifford L. Johnson, National Center for Health Statistics; Anne C. Looker, National Center for Health Statistics; Lisa Mirel, National Center for Health Statistics
- 9:15 a.m. **Multiple Imputation for Disclosure Limitation**—◆ Trivellore Raghunathan, University of Michigan
- 9:35 a.m. **Multiple Imputation for Correcting Rounding Errors from Heaped Income Data**—◆ Hans Kiesl, Regensburg University of Applied Sciences; Joerg Drechsler, German Institute for Employment Research (IAB)
- 9:55 a.m. Disc: Donald B Rubin, Harvard University
- 10:15 a.m. **Floor Discussion**

439 CC-Room 32B **Recent Developments in Functional Data Analysis—Invited**

Section on Nonparametric Statistics, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Fang Yao, University of Toronto

Chair(s): Fang Yao, University of Toronto

- 8:35 a.m. **Index Models with Sparse Functional Data**—◆ Gareth James, University of Southern California; Xinghao Qiao, University of Southern California; Peter Radchenko, University of Southern California
- 9:05 a.m. **Fisher-Rao Curve Registration in Proteomics**—◆ J. Steve Marron, The University of North Carolina at Chapel Hill
- 9:35 a.m. **Functional Prediction of Longitudinal Data**—◆ Jeng-Min Chiou, Academia Sinica
- 10:05 a.m. **Floor Discussion**

440 HQ-Sapphire U **Multiple Faces of Multiple Imputation: 25+ Years of Development, Innovation, and Application—Invited**

Section on Survey Research Methods, Biopharmaceutical Section, Section for Statistical Programmers and Analysts, Section on Statistical Computing, International Indian Statistical Association, Social Statistics Section

Organizer(s): Joerg Drechsler, German Institute for Employment Research (IAB)

Chair(s): Joerg Drechsler, German Institute for Employment Research (IAB)

- 8:35 a.m. **Data Fusion via Multiple Imputation**—◆ Jerome P Reiter, Duke University

441 CC-Room 31C **Integrating Complex Reliability Data in the Real World—Invited**

Section on Physical and Engineering Sciences, Quality and Productivity Section, Section on Statistics and the Environment, International Indian Statistical Association, Statistics Surveys Online Journal, Section on Statistics in Defense and National Security

Organizer(s): David H Collins, Los Alamos National Laboratory

Chair(s): Aparna V. Huzurbazar, Los Alamos National Laboratory

- 8:35 a.m. **Bayesian Semi-Markov Models for Combining Heterogeneous Reliability Data**—◆ Richard L. Warr, Air Force Institute of Technology; David H Collins, Los Alamos National Laboratory
- 9:05 a.m. **Statistical Methods for Degradation Data with Dynamic Covariates and an Application to Outdoor Weathering Prediction**—◆ William Q. Meeker, Iowa State University; Yili Hong, Virginia Tech
- 9:35 a.m. **Dynamic Bayesian Sequential Multi-Group and Multi-Agent Binary Decisionmaking**—◆ Edsel Aldea Pena, University of South Carolina; Blake Hill, University of South Carolina; Bereket Kindo, University of South Carolina; Fazlur Rahman, University of South Carolina; Ian Wanda, University of South Carolina; Wensong Wu, Florida International University
- 10:05 a.m. **Floor Discussion**

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

442 HQ-Sapphire L

■ ● Biomarkers for Risk Prediction, Disease Detection, and Treatment Effect Estimation: Statistical Issues—Invited

Biometrics Section, Section on Risk Analysis, Biopharmaceutical Section, Section for Statistical Programmers and Analysts, Section on Statistics in Epidemiology, International Indian Statistical Association

Organizer(s): Layla Parast, Harvard University

Chair(s): Layla Parast, Harvard University

- 8:35 a.m. **Biomarkers for Measuring HIV Incidence in Populations: Statistical Issues**—◆Ron Brookmeyer, University of California at Los Angeles
- 9:00 a.m. **Estimation of Subgroups in Randomized Clinical Trials**—◆Jeremy Michael George Taylor, University of Michigan; Jared Foster, University of Michigan
- 9:25 a.m. **A General Statistical Approach for Personalized Medicine**—◆Lu Tian, Stanford University
- 9:50 a.m. **Statistical Performance and Clinical Utility of Risk Prediction Models**—◆Nancy R. Cook, BWH
- 10:15 a.m. **Floor Discussion**

443 HQ-Sapphire C

Statistica Sinica Editors' Invited Papers—Invited

International Chinese Statistical Association, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Naisyin Wang, University of Michigan

Chair(s): Naisyin Wang, University of Michigan

- 8:35 a.m. **Segmenting Low- and High-Dimensional Time Series via Binary Segmentation and Its Modern Variants**—Haeran Cho, London School of Economics; ◆Piotr Fryzlewicz, London School of Economics
- 9:05 a.m. **Stochastic Counterfactuals, Sufficient Causes, and Quantum Mechanics**—◆James Robins, Harvard University; Tyler VanderWeele, Harvard School of Public Health
- 9:35 a.m. **Floor Discussion**

444 HQ-Sapphire E

New Developments in High-Dimensional Learning—Invited

IMS, International Chinese Statistical Association, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Jianqing Fan, Princeton University

Chair(s): Jianqing Fan, Princeton University

- 8:35 a.m. **Testing Hypotheses in the High-Dimensional Setting**—◆Tony Cai, University of Pennsylvania

- 9:05 a.m. **Assessing the Impacts of Interactions of Feature Selection**—◆Peter Hall, University of Melbourne; Jinghao Xue, University College London
- 9:35 a.m. **On the Distribution of Roy's Largest Root Test in MANOVA**—◆Iain M. Johnstone, Stanford University
- 10:05 a.m. **Floor Discussion**

Invited Panels 8:30 a.m.—10:20 a.m.

445 CC-Room 31A

■ ● Solo Consulting: The Good, the Bad, and the Ugly—Invited

Section on Statistical Consulting, International Indian Statistical Association, Committee on Professional Ethics

Organizer(s): Isabella R. Ghement, Ghement Statistical Consulting Company

Chair(s): Isabella R. Ghement, Ghement Statistical Consulting Company

- Panelists:**
- ◆William B. Fairley, Analysis & Inference, Inc.
 - ◆David Ray Bristol, Statistical Consulting Services Inc.
 - ◆MaryJo O. Smith, Ypsilon Associates
 - ◆Michael Chernick, Lankenau Institute for Medical Research
 - ◆Heather Krause, Datassist

- 10:05 a.m. **Floor Discussion**

Topic-Contributed Sessions 8:30 a.m.—10:20 a.m.

446 CC-Room 28B

■ ● Multivariate Methods for Engineering/Environmental Sciences—Topic-Contributed

Committee on Minorities in Statistics, Section on Statistics and the Environment, International Indian Statistical Association

Organizer(s): Kobi A Abayomi, Georgia Institute of Technology

Chair(s): Kobi A Abayomi, Georgia Institute of Technology

- 8:35 a.m. **Multivariate Probabilistic Sorting for Prognostic Data**—◆Fang Cao, Georgia Institute of Technology; Nagi Gabraeel, Georgia Institute of Technology
- 8:55 a.m. **Detecting Global Clustering Patterns and Outliers on Spatially Correlated Data for Disease Surveillance**—◆Monica Jackson, American University
- 9:15 a.m. **Multivariate Extreme Value Thresholding**—◆Matt Lacer, Georgia Institute of Technology
- 9:35 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

447 CC-Room 26A **■ Robust Inference in Clinical Trials—Topic-Contributed**

Biopharmaceutical Section, International Indian Statistical Association
 Organizer(s): Julie Ma, Gilead Sciences
 Chair(s): Julie Ma, Gilead Sciences

- 8:35 a.m. **Robust Inference in Clinical Trials—**◆Jitendra Ganju, Gilead Sciences
- 8:55 a.m. **Super Chain Procedures in Clinical Trials—**◆George Kordzakhia, FDA; Alex Dmitrienko, Quintiles, Inc.
- 9:15 a.m. **The Potential for Increased Power by Combining Correlated Tests—**◆Guoguang Ma, Gilead Sciences; Jitendra Ganju, Gilead Sciences
- 9:35 a.m. Disc: Tad Archambault, Virtustat
- 10:15 a.m. **Floor Discussion**

448 CC-Room 25A **■ ● Recent Advances in Spatial Modeling for Epidemiology and Health—Topic-Contributed**

Section on Statistics in Epidemiology, Committee on Applied Statisticians, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Sarat C Dass, Michigan State University
 Chair(s): Sarat C Dass, Michigan State University

- 8:35 a.m. **Bayesian Lasso Regression for Zero-Inflated Spatial Data—**◆Rajib Paul, Western Michigan University; Magdalena Niewiadomska-Bugaj, Western Michigan University; Amy B. Curtis, Western Michigan University; Catherine L. Kothari, Western Michigan University
- 8:55 a.m. **Simultaneous Estimation of Disease Risks and Spatial Clustering: A Hierarchical Bayes Approach—**◆Wenning Feng, Michigan State University; Chae Young Lim, Michigan State University; Tapabrata Maiti, Michigan State University
- 9:15 a.m. **Clustering Analysis for Functional Data—**◆Chae Young Lim, Michigan State University; Sarat C Dass, Michigan State University; Tapabrata Maiti, Michigan State University
- 9:35 a.m. **Bayesian Inference on Constrained Parameter Spaces of Functional Mixed Models—**◆Sarat C Dass, Michigan State University
- 9:55 a.m. **Comprehensive Smoking Bans and Acute Myocardial Infarction Among Medicare Enrollees in 387 U.S. Counties: 1999 to 2008—**◆Christopher Barr, Harvard University
 Disc: Sarat C Dass, Michigan State University
- 10:15 a.m. **Floor Discussion**

449 HQ-Sapphire A **■ Cell Phone-Landline Dual Frame (RDD) Surveys: Weighting Issues—Topic-Contributed**

Section on Survey Research Methods
 Organizer(s): John W Hall, Mathematica Policy Research
 Chair(s): Than Le, Westat

- 8:35 a.m. **Improvements for Dual-Frame RDD Sampling and Weighting Methodology—**◆Mansour Fahimi, Marketing Systems Group
- 8:55 a.m. **Venn Diagrams, Probability 101, and Sampling Weights Computed from Dual-Frame Telephone RDD Designs—**◆Trent Buskirk, The Nielsen Company; Jonathan Best, Princeton Survey Research International
- 9:15 a.m. **Finding an Optimal Composite Factor: Weighting Data from a Household Survey Using a Cell Overlap Design—**◆John W Hall, Mathematica Policy Research; Barbara Lepidus Carlson, Mathematica Policy Research; Karen CyBulski, Mathematica Policy Research
- 9:35 a.m. **An Approach for Incorporating an Undersampled Cell Phone Frame in a Dual-Frame Telephone Survey Through Weight Attenuation—**◆Elizabeth Ormson, NORC; Kennon R. Copeland, NORC; Kirk M. Wolter, NORC; N. Ganesh, NORC; Wei Zeng, NORC; Stephen J. Blumberg, National Center for Health Statistics
- 9:55 a.m. Disc: James Lepkowski, University of Michigan
- 10:15 a.m. **Floor Discussion**

450 CC-Room 29A **■ Topics in Seasonal Adjustment—Topic-Contributed**

Business and Economic Statistics Section, Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Tucker McElroy, U.S. Census Bureau
 Chair(s): Robert Lund, Clemson University

- 8:35 a.m. **Coupling X-12-Arima-Seats with a Multidimensional Direct Filter Approach for Signal Extraction in Nonstationary Seasonal Time Series—**◆Chris Blakely, U.S. Department of Commerce
- 8:55 a.m. **Evaluating AICC Tests in X-13Arima-Seats—**◆Brian Monsell, U.S. Census Bureau
- 9:15 a.m. **Differences in Performance Between Concurrent and Projected Seasonal Factors for Weekly UI Data—**◆Thomas Evans, Bureau of Labor Statistics
- 9:35 a.m. **Complementary Properties of an F-Test and an Empirical Spectral Test for Identifying Seasonality in Unadjusted or Seasonally Adjusted Series—**◆David Findley, U.S. Census Bureau

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:55 a.m. **Moving from X-12-Arima to X-13 Arima-Seats: The UK Experience**—◆ Gary Brown, Office for National Statistics; Daniel Ayoubkhani, Office for National Statistics
- 10:15 a.m. **Floor Discussion**

- 9:15 a.m. **The ABC Assumptions of Setting a Noninferiority Margin: When the Margin Assumptions Can Be Violated**—◆ Steven Julious, University of Sheffield
- 9:35 a.m. **Active Control Trials with Adaptive Modification of Margin to Address Nonconstancy**—◆ Scott Emerson, University of Washington; Siobhan P. Brown, University of Washington
- 9:55 a.m. Disc: Susan S Ellenberg, University of Pennsylvania
- 10:15 a.m. **Floor Discussion**

451 CC-Room 30D

● Next-Generation Matrix Decompositions: Methods and Applications—Topic-Contributed

Section on Statistical Learning and Data Mining, Section on Statistical Computing, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Vadim Zipunnikov, Johns Hopkins Bloomberg School of Public Health; Eric F Lock, The University of North Carolina at Chapel Hill

Chair(s): Ani Eloyan, Johns Hopkins Bloomberg School of Public Health

- 8:35 a.m. **Low-Rank Modeling Across Multiple High-Dimensional Data Sets**—◆ Eric F Lock, The University of North Carolina at Chapel Hill
- 8:55 a.m. **Longitudinal Functional Regression Models with Structured Penalties**—◆ Jaroslav Harezlak, Indiana University School of Medicine; Madan Gopal Kundu, Indiana University School of Medicine; Timothy W. Randolph, Fred Hutchinson Cancer Research Center
- 9:15 a.m. **Reconstruction of a Low-Rank Matrix in the Presence of Gaussian Noise**—◆ Andrey Shabalyn, The University of North Carolina at Chapel Hill; Andrew B Nobel, The University of North Carolina at Chapel Hill
- 9:35 a.m. **Robust and Compressive Matrix Decompositions**—◆ John Wright
- 9:55 a.m. **Floor Discussion**

453 CC-Room 26B

■ Statistics in Uncovering Administrative Cheating on Tests—Topic-Contributed

Section on Government Statistics, Section on Statistical Education, International Indian Statistical Association, Social Statistics Section

Organizer(s): Martin Levy, University of Cincinnati

Chair(s): Chaojiang Wu, University of Cincinnati

- 8:35 a.m. **Stolen Items, Copied Answers, and Fraudulent Erasures: How to Use Statistics to Detect Them**—◆ Wim J. Van Der Linden, CTB/McGraw-Hill
- 8:55 a.m. **A Case of Erasure Fraud in a Cincinnati School: The Role of Statistical Forensics**—◆ Martin Levy, University of Cincinnati
- 9:15 a.m. **The Role of Statistics in Uncovering Administrative Cheating on Tests: Use of Computer-Based Testing Data**—◆ Neal Kingston, University of Kansas; Gail Tiemann, University of Kansas
- 9:35 a.m. **Statistical Methods for Detecting Group-Based Test Fraud**—◆ Dennis Maynes, Caveon Test Security
- 9:55 a.m. Disc: James Cochran, Louisiana Tech University
- 10:15 a.m. **Floor Discussion**

452 CC-Room 25C

■ ● Issues in Noninferiority Assessment Trials When Active-Control Changes Over Time Due to Improved Efficacy—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Abdul J Sankoh, Vertex Pharmaceuticals

Chair(s): Abdul J Sankoh, Vertex Pharmaceuticals

- 8:35 a.m. **An Overview of Active-Controlled Clinical Trials and Some New Issues**—◆ Greg (Guoxing) Soon, FDA
- 8:55 a.m. **Interim Analysis of Constancy for Noninferiority Testing in Active Controlled Clinical Trials**—◆ Carl Dicasoli, Vertex Pharmaceuticals; Emily Martin, Vertex Pharmaceuticals; Cynthia Desouza, Vertex Pharmaceuticals

454 CC-Room 25B

Innovative Designs in Medical Device Trials—Topic-Contributed

Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Ying Yang, FDA

Chair(s): Nelson Lu, FDA

- 8:35 a.m. **Statistical Applications of Hybrid Cohort Post-Market Surveillance Studies in Medical Devices**—◆ Hsini Terry Liao, Boston Scientific Corporation
- 8:55 a.m. **Use of Bayesian Adaptive Design in Medical Device Trials**—◆ Weihua Cao, FDA; Nelson Lu, FDA; Rajesh Nair, FDA
- 9:15 a.m. **Propensity Score M:N Matching Approach in Medical Device Trials in Subgroup Analysis**—◆ Hong Wang, Boston Scientific Corporation; Songtao Jiang, Boston Scientific Corporation; H. Terry Liao, Boston Scientific Corporation



● Themed Session ■ Applied Session ◆ Presenter

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- 9:35 a.m. **An Adaptive Enrichment Design: Application to CRT Trial Data**—◆Yonghong Gao, FDA
- 9:55 a.m. **Contemporary and Historical Controlled Trial Design Using Propensity Score Method: A Reviewer's Perspective**—◆Xiting Yang, FDA; Yunling Xu, FDA
- 10:15 a.m. **Floor Discussion**

455 CC-Room 24C

■ ● **Design and Analysis Issues with Next-Generation Sequencing Data on Complex Traits—Topic-Contributed**

Biometrics Section, Section on Statistics in Epidemiology, International Indian Statistical Association
 Organizer(s): Shuang Wang, Columbia University
 Chair(s): William C.L. Stewart, Columbia University

- 8:35 a.m. **Quantifying Missing Heritability and Estimating Genetic Effects for Complex Traits Due to Rare Variants: Application to Sequence-Based Association Studies**—◆Suzanne Leal, Baylor College of Medicine; ◆Dajiang Liu, William Marsh Rice University
- 8:55 a.m. **Synergistic Gene-Gene Interactions in Common Complex Diseases**—◆Itsik Pe'er, Columbia University
- 9:15 a.m. **Efficient Two-Stage Association Analysis with Arbitrary Depth Sequencing-Based Studies**—◆Li Yun, The University of North Carolina at Chapel Hill
- 9:35 a.m. **Identifying Combinations of Genetic Variants**—◆Benjamin Raphael, Brown University
- 9:55 a.m. **A Parametric Bayesian Method to Test the Association of Rare Variants**—◆Yufeng Shen, Columbia University
- 10:15 a.m. **Floor Discussion**

456 CC-Room 28A

■ **Uncertainty Quantification in Climate and Geophysical Computer Models—Topic-Contributed**

Section on Statistics and the Environment, International Indian Statistical Association
 Organizer(s): Stephan Sain, Geophysical Statistics Project
 Chair(s): Stephan Sain, Geophysical Statistics Project

- 8:35 a.m. **Emulating and Calibrating the Lyon-Fedder-Mobarry Magnetosphere-Ionosphere Coupled Computer Model Using Predictive Processes**—◆Matthew Heaton, National Center for Atmospheric Research; Stephan Sain, Geophysical Statistics Project; William Kleiber, National Center for Atmospheric Research; Michael Wiltberger, National Center for Atmospheric Research

- 8:55 a.m. **Calibration for Large Multivariate Spatial Climate Models**—◆K. Sham Bhat, Los Alamos National Laboratory

- 9:15 a.m. **Functional Median Polish with Climate Applications**—◆Ying Sun, SAMSI; Marc Genton, Texas A&M University

- 9:35 a.m. **Bayesian Factor Analysis with Spatial Factor Loadings**—◆Eleanor Neeley, Brigham Young University; William Christensen, Brigham Young University; Stephan Sain, Geophysical Statistics Project

- 9:55 a.m. **Ensemble-Based Methods to Explore and Constrain Parametric Uncertainty in the Community Atmospheric Model (CAM)**—◆Gardar Johannesson, Lawrence Livermore National Laboratory; Donald D. Lucas, Lawrence Livermore National Laboratory; Richard I. Klein, Lawrence Livermore National Laboratory

- 10:15 a.m. **Floor Discussion**

457 CC-Room 27A

● **Causal Inferences with Multi-Level Data When the Covariates Are Imperfect—Topic-Contributed**

Social Statistics Section, Section on Statistics in Epidemiology, International Indian Statistical Association
 Organizer(s): Daniel F. McCaffrey, RAND Corporation
 Chair(s): Daniel F. McCaffrey, RAND Corporation

- 8:35 a.m. **Matching Strategies for Observational Multilevel Data**—◆Peter M. Steiner, University of Wisconsin-Madison; Jee-Seon Kim, University of Wisconsin-Madison; Felix Thoemmes, Cornell University

- 8:55 a.m. **Causal Inference for Multilevel Data Through Propensity Score and Prognostic Score Adjustment: The Case of Bernoulli-Distributed Outcomes**—◆Bing Yu, University of Toronto; Guanglei Hong, The University of Chicago

- 9:15 a.m. **Sensitivity Analysis for Multilevel Data**—◆Jennifer Hill, NYU Steinhardt; Marc Scott, NYU; Nicole Carnegie, NYU

- 9:35 a.m. **A Quality Threshold for Statistical Controls in Observational Studies (QTSC)**—◆Kenneth Aaron Frank, Michigan State University; Spiro Maroulis, Arizona State University; Minh Duong, ETS; Ben Kelcey, Wayne State University

- 9:55 a.m. **Inverse Probability Weighting with Error Prone Covariates**—◆Claude Setodji, RAND Corporation; Daniel F. McCaffrey, RAND Corporation; J.R. Lockwood, RAND Corporation

- 10:15 a.m. **Floor Discussion**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

458 CC-Room 30A

■ ● Enhancing the EM Algorithm by Leveraging Modern Advances in Computing—Topic-Contributed

Section on Statistical Computing, International Indian Statistical Association

Organizer(s): Ravi Varadhan, The Johns Hopkins University

Chair(s): Ravi Varadhan, The Johns Hopkins University

8:35 a.m. **Expectation Maximization for Distributed Computing**—◆Glen DePalma, Purdue University; Sanvesh Srivastava, Purdue University; Chuanhai Liu, Purdue University

8:55 a.m. **GPUs in High-Dimensional Statistical Computing**—◆Hua Zhou, North Carolina State University; Kenneth Lange, University of California at Los Angeles; Marc A Suchard, University of California at Los Angeles

9:15 a.m. **Integration and Benchmarking of State-of-Art Convergence Accelerators of the EM Algorithm**—◆Jennifer Bobb, Harvard School of Public Health

9:35 a.m. **Leveraging Hadoop for Escaping the Local Maxima Traps in EM Algorithms**—◆Putra Manggala,

9:55 a.m. **Floor Discussion**

Topic-Contributed Panels 8:30 a.m.–10:20 a.m.

459 HQ-Sapphire H

■ Publishing Your Statistics Education Research—Topic-Contributed

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences

Organizer(s): John G Gabrosek, Grand Valley State University

Chair(s): E. Jacquelin Dietz, Meredith College

Panelists: ◆John G Gabrosek, Grand Valley State University
◆Rob Gould, University of California at Los Angeles
◆Mary Richardson, Grand Valley State University
◆Bob del Mas, University of Minnesota
◆Roger Johnson, South Dakota School of Mines and Technology

10:15 a.m. **Floor Discussion**

460 CC-Room 31B

■ The Recent Controversy Involving GLP-1–Based Therapies for Type 2 Diabetes: Statistical and Epidemiologic Issues in Post-Marketing Database Studies—Topic-Contributed

ENAR, Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Mary Putt, University of Pennsylvania

Chair(s): Mary Putt, University of Pennsylvania

Panelists: ◆Michael Elashoff, University of California at Los Angeles/CardioDX

◆Cynthia Girman, Merck Research Laboratories

◆George Rochester, FDA

◆William DuMouchel, Oracle Health Sciences Global Business Unit

10:15 a.m. **Floor Discussion**

461 HQ-Sapphire D

■ From Graduate Student to Professional—Topic-Contributed

Committee on Membership Retention and Recruitment, International Indian Statistical Association

Organizer(s): Bhramar Mukherjee, University of Michigan

Chair(s): Bhramar Mukherjee, University of Michigan

Panelists: ◆Cathy Furlong,

◆Nancy Clusen, Mathematica Policy Research

◆Gerry Hahn, GE Global Research Center

◆Holly Shulman, CDC

10:15 a.m. **Floor Discussion**

Contributed Sessions 8:30 a.m.–10:20 a.m.

462 CC-Room 32A

Variance and Quantile Estimation—Contributed

Section on Nonparametric Statistics

Chair(s): Peng Wang, Bowling Green State University

8:35 a.m. **Inverse Probability Weighting for Quantile Regression**—◆Ben Sherwood,

8:50 a.m. **L-Statistics for Repeated Measurements Data with Application to Estimation of Trimmed Means and Quantiles and Construction of Tolerance Intervals**—◆Houssein Assaad; Pankaj Choudhary, The University of Texas at Dallas



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- 9:05 a.m. **Error Variance Estimation via Least Squares for Small Sample Nonparametric Regression**—Chun Gun Park, Kyonggi University; ◆ Inyoung Kim, Virginia Tech; Yung-Seop Lee, Dongguk University
- 9:20 a.m. **Finite-Sample Properties of Adjusted Empirical Likelihood**—◆ Yi Huang, University of British Columbia; Jiahua Chen, SSC
- 9:35 a.m. **Smoothed Bootstrap Percentile Ellipsoidal Confidence Region for Mean Vector**—◆ Santu Ghosh, Northern Illinois University; ALAN POLANSKY, Northern Illinois University
- 9:50 a.m. **Bootstrap Variance Estimator for Weighted Samples Quantiles**—◆ Xuan Yang, Columbia University; Jingchen Liu, Columbia University
- 10:05 a.m. **Bootstrap Variance Estimates for Bagged Predictors**—◆ Dennis D. Boos, North Carolina State University; Jiangtao Duan, BBVA Compass; Leonard Stefanski, North Carolina State University

463 CC-Room 306 Computer Experiments—Contributed

Section on Physical and Engineering Sciences, Quality and Productivity Section, Section on Statistical Computing
Chair(s): Roshan Joseph Vengazhiyil, Georgia Institute of Technology

- 8:35 a.m. **Initial Sample Size for the Sequential Search for a Global Minimum**—◆ Dexter Whittinghill, Rowan University
- 8:50 a.m. **Uncertainty Quantification for Carbon Capture Simulation**—◆ Joanne Wendelberger, Los Alamos National Laboratory
- 9:05 a.m. **Aggregation of Multiple Adaptive Sampling Criteria in Computer Experiments**—◆ Vera Bulaevskaya, Lawrence Livermore National Laboratory; Gardar Johannesson, Lawrence Livermore National Laboratory; David Domyancic, Lawrence Livermore National Laboratory
- 9:20 a.m. **Estimating Sensitivity Indices for Computer Experiment Output**—◆ Thomas Santner, The Ohio State University; Angela Dean, The Ohio State University/Southampton University; Josh Svenson, JPMorgan Chase & Co.; Hyejung Moon, The Bank of Korea
- 9:35 a.m. **Functional Data Analysis Methods for Predicting Process Run Time in Computing Systems**—◆ Wei Chen, Cornell University; Dawn Woodard, Cornell University; Moises Goldszmidt, Microsoft Research
- 9:50 a.m. **Filtering Partially Observed Multiscale Systems with Heterogeneous-Multiscale-Methods-Based Reduced Models**—◆ Emily Lei Kang, University of Cincinnati; John Harlim, North Carolina State University
- 10:05 a.m. **Composite Gaussian Process Model for Emulating Expensive Functions**—◆ Shan Ba, Georgia Institute of Technology; Roshan Joseph Vengazhiyil, Georgia Institute of Technology

464 CC-Room 29D Software: R and Otherwise—Contributed

Section on Statistical Computing, Biopharmaceutical Section, Section on Statistical Education, Section on Statistics and the Environment
Chair(s): A. Santos, Return Path

- 8:35 a.m. **An Overview of Current Software Procedures for Fitting Linear Mixed Models**—◆ Brady West, University of Michigan; Andrzej Galecki, University of Michigan
- 8:50 a.m. **Implementation of Influence Diagnostics for Linear Mixed Effects Models in R**—◆ Andrzej Galecki, University of Michigan; Tomasz Burzykowski, Hasselt University
- 9:05 a.m. **The Cyclor Package for R**—◆ Shannon Terry, Nationwide Insurance; Benjamin Ogorek, Nationwide Insurance
- 9:20 a.m. **Implementing NPSOL in R**—◆ Brad Price, University of Minnesota; Charles Geyer, University of Minnesota
- 9:35 a.m. **Getting the Best of Multiple Worlds: Combining IBM SPSS Statistics with Your R and Python Code for Extended Algorithms, Ease of Use, and Presentation Output**—◆ Jon Peck, IBM
- 9:50 a.m. **Identification of Intruder Paths in Sensor Networks**—◆ James Shine, U.S. Army Topographic Engineering Center; James Gentle, George Mason University
- 10:05 a.m. **Leveraging GPU Libraries for Efficient Computation of Bayesian Spatial Assignment Models in R**—◆ Colin Rundel, University of California at Los Angeles

465 CC-Room 30C Networks and Sparse Modeling—Contributed

Section on Statistical Learning and Data Mining
Chair(s): Patrick Danaher, University of Washington

- 8:35 a.m. **Estimating Network Degree Distributions from Sampled Networks: An Inverse Problem**—◆ Yaonan Zhang, Boston University; Eric D Kolaczyk, Boston University; Bruce D. Spencer, Northwestern University
- 8:50 a.m. **Bootstrap of Count Features in Stochastic Networks**—◆ Sharmodeep Bhattacharyya, University of California at Berkeley; Peter Bickel, University of California at Berkeley
- 9:05 a.m. **Regularized Non-Negative Matrix Factorization for Dynamic and Relational Data**—◆ Shawn Mankad; George Michailidis, University of Michigan
- 9:20 a.m. **Sparse Covariate Dependent Binary Markov Networks**—◆ Jie Cheng, University of Michigan; Ji Zhu, University of Michigan; Liza Levina, University of Michigan

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:35 a.m. **Decomposition of a Sparse Directed Graph—**
◆ Sungmin Kim, The Ohio State University; Tao Shi, The Ohio State University
- 9:50 a.m. **Estimating Workplace Contact Networks, Adjusting for Reporting Errors—**◆ Gail Potter, Fred Hutchinson Cancer Research Center; Timo Smieszek, Penn State University; Kerstin Sailer, University College London
- 10:05 a.m. **Sampling for Conditional Inference on Network Data—**◆ Jingfei Zhang, University of Illinois at Urbana-Champaign; Yuguo Chen, University of Illinois at Urbana-Champaign

- 9:05 a.m. **Copula-Based Dependence Structure Estimation for Monte Carlo Simulation in Marketing Research—**◆ Joseph Retzer, MarketTools Inc.; Michael Conklin, MarketTools Inc.
- 9:20 a.m. **Using Multivariate Adaptive Regression Splines (MARS) to Find Interactions of Socio-Demographics That Model Individual Differences in Australian Farmers Purchase Behavior—**◆ Ingo Bentrott, University of Technology Sydney
- 9:35 a.m. **Closed-Form of PDEs with Stochastic Volatility—**◆ Hui Gong, Valparaiso University; Aerambamoorthy Thavaneswaran, University of Manitoba; D. Kalajdziewska, University of Manitoba
- 9:50 a.m. **Interpretation of Shapley Value Regression Coefficients as Approximation for Coefficients Derived by Elasticity Criterion—**◆ Stan Lipovetsky, GfK CRNA
- 10:05 a.m. **Modeling Consumer Demand Systems for a Variety of Goods—**◆ Ignacio Vidal, Universidad de Talca; Walter Gómez, Universidad de La Frontera; Felipe Vásquez, Universidad de Concepción

466 CC-Room 30B Variable Selection Methods—Contributed

Section on Statistical Learning and Data Mining, Biometrics Section
Chair(s): Zugui Zhang, Christiana Care Health System

- 8:35 a.m. **An Efficient Pathwise Variable Selection Criterion in Weakly Sparse Regression Models—**◆ Ching-Kang Ing, Academia Sinica
- 8:50 a.m. **Conditional Sure Independence Screening—**◆ Emre Barut, Princeton University; Jianqing Fan, Princeton University; Anneleen Verhasselt, University of Antwerp
- 9:05 a.m. **The Sparse-MLE for Variable Screening in Ultra-High-Dimensional Feature Space—**◆ Chen Xu, University of British Columbia; Jiahua Chen, SSC
- 9:20 a.m. **Variable Selection: A Journey—**◆ Shibasish Dasgupta, University of Florida
- 9:35 a.m. **A Data-Dependent Method for Incorporating Known Structure Into Regression with Applications in Computer Vision—**◆ David Shaw; Rama Chellappa, University of Maryland
- 9:50 a.m. **Variable Selection via Subtle Uprooting—**◆ Xiaogang Su, The University of Alabama at Birmingham
- 10:05 a.m. **Feature Screening for Varying Coefficient Models—**◆ Jingyuan Liu, Penn State University; Runze Li, Penn State University; Rongling Wu, Penn State University

468 CC-Room 24B ■ New Developments in Large-Scale Hypothesis Testing—Contributed

Biometrics Section
Chair(s): Bin Zhang, Cincinnati Children's Hospital Medical Center

- 8:35 a.m. **Simultaneous Identification of Rare and Common Segment Variants—**◆ X. Jessie Jeng, University of Pennsylvania; Tony Cai, University of Pennsylvania; Hongzhe Li, University of Pennsylvania
- 8:50 a.m. **Gene-Environment Interactions via Algebraic Statistics, Markov Bases, and MCMC—**◆ Marepalli Rao, University of Cincinnati; Subramanian Venkatesan, University of Cincinnati; Jenny Chen, University of Cincinnati
- 9:05 a.m. **Estimating Tumor Cellularity Using Read Counts Obtained from Illumina Exome Sequencing—**◆ Minya Pu, University of California at San Diego; Lei Bao, University of California at San Diego; Hongying Li, University of California at San Diego; Loki Natarajan, University of California at San Diego; Karen Messer, University of California at San Diego
- 9:20 a.m. **Variable Selection-Based Weighting Schemes for Rare Variants in Sequence Data—**◆ Andrea Byrnes, The University of North Carolina at Chapel Hill; Mingyao Li, University of Pennsylvania School of Medicine; Michael C Wu, The University of North Carolina at Chapel Hill; Fred Wright, The University of North Carolina at Chapel Hill; Li Yun, The University of North Carolina at Chapel Hill
- 9:35 a.m. **Comparison of False Discovery Rates of Several Statistical Methods in the Context of Gene Expression Data—**◆ Nusrat Jahan, James Madison University; Pradeep Singh, Southeast Missouri State University

467 CC-Room 28D Section on Statistics and Marketing - 1—Contributed

Section on Statistics in Marketing
Chair(s): Gayla Olbricht, Missouri University of Science and Technology

- 8:35 a.m. **Telmar Centab: The New Analytical Possibilities—**◆ Igor Mandel, Telmar Group
- 8:50 a.m. **A Method for Developing Maximum Differential Scaling (MaxDiff) Segmentation Typing Tools—**◆ Shon Magnan, GfK CRNA



● Themed Session ■ Applied Session ◆ Presenter

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9:50 a.m. **A Unifying Dynamic Framework for Mapping Metabolic Genes**—◆Guodong Liu, Penn State College of Medicine; Lan Kong, Penn State College of Medicine; Zhong Wang, Penn State University; Rongling Wu, Penn State University

10:05 a.m. Floor Discussion

469 CC-Room 24A **■ The EM Algorithm and Its Applications—Contributed**

Biometrics Section, Committee on Applied Statisticians, UNAR, Section on Statistical Learning and Data Mining

Chair(s): Eric R. Siegel, University of Arkansas for Medical Sciences

8:35 a.m. **Dynamic Factor Analysis for Longitudinal Studies: An Application in Alzheimer's Disease**—◆Georgios Tripodis, Boston University; Nikolaos Zirogiannis, University of Massachusetts

8:50 a.m. **Estimation for General Birth-Death Processes**—◆Forrest Crawford; Vladimir N Minin, University of Washington; Marc A Suchard, University of California at Los Angeles

9:05 a.m. **Causal Mediation Analysis with Latent Mediators**—◆Jeffrey M Albert, Case Western Reserve University

9:20 a.m. **Models for a Longitudinal Quantitative Outcome with Multivariate Normal (MVN) Distribution Censored by Therapeutic Intervention**—◆Wanjie Sun, The George Washington University; Michael D. Larsen, The George Washington University; John M. Lachin, The George Washington University

9:35 a.m. **Sparse Logistic Normal Regression for Modeling Over-Dispersed Count Data with an Application to Microbiome Data Analysis**—◆Fan Xia, The University of Hong Kong; Hongzhe Li, University of Pennsylvania

9:50 a.m. **Measuring Reproducibility of RNA-Seq Data Using a Copula Mixture Model for Grouped and Truncated Data**—◆Qunhua Li, Penn State University; Peter Bickel, University of California at Berkeley

10:05 a.m. **Addressing Interval Censoring in the Stepped Wedge Design of Cluster-Randomized Clinical Trials**—◆Tanya Granston; James Hughes, University of Washington

470 CC-Room 23C **Semiparametric Modeling 1—Contributed**

Biometrics Section, International Chinese Statistical Association

Chair(s): Deborah V. Dawson, University of Iowa

8:35 a.m. **Covariate-Adjusted Classification Trees (COVACT) with Applications to Neuroscience**—◆Josephine Asafu-Adjei, Harvard School of Public Health; Allan Sampson, University of Pittsburgh

8:50 a.m. **Identifying Potentially Immunologically Relevant Regions in the HIV Envelope Protein via Logistic Kernel Machine Regression Models**—◆Saheli Datta, Fred Hutchinson Cancer Research Center; Youyi Fong, Fred Hutchinson Cancer Research Center; Georgia D. Tomaras, Duke Human Vaccine Institute

9:05 a.m. **Development of Dynamic Real-Time Robust Multivariable Monitoring Tool for Neonatology Data**—◆Joshua Callaway; Keith Williams, University of Arkansas for Medical Sciences; Jeff Kaiser, University of Arkansas for Medical Sciences; Zoran Bursac, University of Arkansas for Medical Sciences; Morris Cranmer, University of Arkansas for Medical Sciences

9:20 a.m. **Projecting Population Risk with Time-to-Event Data**—◆Dandan Liu, Vanderbilt University; Li Hsu, Fred Hutchinson Cancer Research Center; Yingye Zheng, Fred Hutchinson Cancer Research Center

9:35 a.m. **Semiparametric Evaluation of Specific Surrogates of Protection for Time-to-Event Clinical Endpoints Allowing for Time-Varying Treatment Effects**—◆Erin Gabriel, University of Washington; Peter B Gilbert, University of Washington/Fred Hutchinson Cancer Research Center

9:50 a.m. **Detection of Unusually Large Increases in MRI Lesion Counts in Multiple Sclerosis Patients**—◆Yinshan Zhao, University of British Columbia; John Petkau, University of British Columbia; David Li, University of British Columbia; Andrew Riddehough, University of British Columbia; Anthony Traboulsee, University of British Columbia

10:05 a.m. **Estimation of Boundary Curves in Threat Detection**—◆Shuang He, Purdue University; Xiao Wang, Purdue University

471 CC-Room 23B **■ Innovations in Design and Analysis of Clinical Trials—Contributed**

Biopharmaceutical Section

Chair(s): Chava Zibman, FDA

8:35 a.m. **Random Forest with Regression in the Nodes**—◆Georgiy Bobashev, RTI International; Barry Eggleston, RTI International; Nikhil Garge, RTI International



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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- 8:50 a.m. **Parametric Models for MRI Count Data in Multiple Sclerosis Clinical Trials: A Robustness Study**—
◆ Mallikarjuna Rettiganti, University of Arkansas for Medical Sciences; Haikady Nagaraja, The Ohio State University
- 9:05 a.m. **Analytical Methodologies for Clinical Endpoint Data with Excessive Zero**—◆ Nancy Liu, Merck; Amarjot Kaur, Merck Research Laboratories; Jing Li, Merck; Ziliang Li, Merck
- 9:20 a.m. **Oracle, Robust, and Best Linear Model Average Estimation in Randomized Trial**—◆ Kwun Chuen Chan, University of Washington
- 9:35 a.m. **Global Summary of Treatment Impact Using Multiple Patient Outcomes**—◆ Brian Claggett, Harvard University; Lu Tian, Stanford University; Sihai Dave Zhao, Harvard School of Public Health; Lee-Jen Wei, Harvard University
- 9:50 a.m. **Power Analysis for Testing Treatment Effect with a Covariate and a Covariate-Dependent Stratification Factor**—◆ Chii-Dean Lin, San Diego State University; Tao Lin, Allergon; Chien-Feng Chen, Otsuka Pharmaceutical; Larry Shen, Amylin Pharmaceutical
- 10:05 a.m. **A Hybrid Bootstrap Approach to Interim Analyses of Time-to-Event Data Using Kaplan-Meier Methods**—◆ Kevin Lawson, PPD; Aaron C Camp, PPD; Austin L Hand, PPD

472 CC-Room 28E **Panel Data, Skewness, and Testing—Contributed**

Business and Economic Statistics Section
Chair(s): Georgette Nicolaidis, Syracuse University

- 8:35 a.m. **Moment-Based Tests for Random Effects in Panel Data Models**—◆ Guodong Li, The University of Hong Kong
- 8:50 a.m. **Nonparametric Panel Data Model Estimation: Efficiency Comparison of Kernel and Spline Estimators**—◆ Yue Liu, University of California at Riverside
- 9:05 a.m. **Efficient Moment Selection from High-Dimensional Moment Conditions**—◆ Hyunkeun Cho, University of Illinois at Urbana-Champaign; Annie Qu, University of Illinois at Urbana-Champaign
- 9:20 a.m. **An Innovative Estimation Approach**—◆ Yang Yu, Bowling Green State University; John Chen, Bowling Green State University
- 9:35 a.m. **Student's T Confidence Intervals Adjusted for Skewed and Autocorrelated Populations**—
◆ Kyungduk Ko, Boise State University
- 9:50 a.m. **A Parametric Measure of Dispersion Derived from the Generalized Mean**—◆ Victor Guerrero, ITAM; Claudia R Solis Lemus, University of Wisconsin-Madison

- 10:05 a.m. **Directed T^* Tests of Inequality Constraints Under Alternatives in Linear and Nonlinear Models**—
◆ Zeng-Hua Lu, University of South Australia

473 CC-Room 23A **Innovations in Survival Analysis: PFS and Other Issues—Contributed**

Biopharmaceutical Section
Chair(s): Steven Sun, Johnson & Johnson

- 8:35 a.m. **On the Translation of a Treatment's Effect on Progression-Free Survival Into an Effect on Overall Survival**—◆ Qi Jiang, Amgen, Inc.; Steven Michael Snapinn, Amgen, Inc.
- 8:50 a.m. **Translation of Progression-Free Survival Benefit Into Overall Survival in Cancer Trials**—◆ Yiyun Tang, Pfizer Inc.; Keiji Imai, Pfizer Inc.; Paul Bycott, Pfizer Inc.
- 9:05 a.m. **Estimation of Correlation Between Overall Survival and Surrogate Endpoints**—Fang Fang, Bayer Healthcare Pharmaceuticals; ◆ Liping Huang, Bayer Healthcare Pharmaceuticals; Minghua Shan, Bayer Healthcare Pharmaceuticals; Xiaosha Zhang, Astellas Pharma U.S., Inc.
- 9:20 a.m. **Audit Strategies for Progressive-Free Survival**—
◆ Meihua Wu, University of Michigan; Kalyanee Kalyanee Appann, Novartis; William Mietlowski, Novartis; Yong Zhang, Novartis; Can Cai, Novartis; Paramita Saha, Novartis
- 9:35 a.m. **A Bayesian Approach in Assessing Surrogacy of Clinical Trial Endpoints**—◆ Manuela Buzoianu, FDA; Shengyan Hong, MedImmune
- 9:50 a.m. **Semi-Mechanistic Modeling of the Dependence Structure Between Progression-Free Survival and Overall Survival**—◆ Dominik Heinzmann, Roche
- 10:05 a.m. **Competing Risk Analysis of PFS Considering Patients Who Switch Therapy Prior to Progression**—◆ Lixia Jiao, Sanofi Aventis

474 CC-Room 33A **Bayesian Models and Applications—Contributed**

Section on Bayesian Statistical Science
Chair(s): Jianchang Lin, Millennium: The Takeda Oncology Company

- 8:35 a.m. **AdaptSpec: Adaptive Spectral Estimation for Nonstationary Time Series**—◆ Ori Rosen, The University of Texas at El Paso; Sally Wood, Melbourne Business School; David Stoffer, University of Pittsburgh
- 8:50 a.m. **Bayesian Hypothesis Testing in Two-Arm Trials with Dichotomous Outcomes**—◆ Boris Zaslavsky, FDA/CBER



● Themed Session ■ Applied Session ◆ Presenter

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- 9:05 a.m. **Quantifying the Uncertainty of Pollutant Loads in Great Barrier Reef Catchments: A Case Study Using Weany Creek**—◆ Petra Kuhnert, CSIRO Mathematics, Informatics, and Statistics; Rebecca Bartley, CSIRO Land and Water; Erin Peterson, CSIRO Mathematics, Informatics, and Statistics; Scott Wilkinson, CSIRO Land and Water; Christopher Wikle, University of Missouri
- 9:20 a.m. **Bayesian Models for Survival Data with Both Nonterminal and Terminal Events**—◆ Yuanye Zhang, University of Connecticut; Mário de Castro, ICMC, Universidade de São Paulo; Ming-Hui Chen, University of Connecticut
- 9:35 a.m. **A Class of Joint Models for Multivariate Longitudinal Measurements and a Binary Event: An Application to a Fetal Growth Study with Longitudinal Ultrasound Measurements**—◆ Sungduk Kim, National Institutes of Health; Paul S. Albert, National Institute of Child Health and Human Development; Kyeongmi Cheon, National Institute of Child Health and Human Development
- 9:50 a.m. **A Performance Comparison of Methods for Instrumental Variables Regression When Treatment Is Binary**—◆ Jessica Pruszyński, Medical College of Wisconsin; Purushottam Laud, Medical College of Wisconsin; Rodney Sparapani, Medical College of Wisconsin; Robert McCulloch, The University of Texas
- 10:05 a.m. **A Potential Outcome View to Analyze 2 Level Factorial Designs**—◆ Valeria Espinosa, Harvard University; Tirthankar Dasgupta, Harvard University; Donald B Rubin, Harvard University

475 CC-Room 21 **■ Longitudinal Data Methodology and Applications—Contributed**

Section on Statistics in Epidemiology, Biopharmaceutical Section
 Chair(s): Babette A Brumback, University of Florida

- 8:35 a.m. **Effects of Level 1 Variance on Level 2 Variance in Multilevel Model (Mixed Model) for Growth Repeated Data**—◆ Chong Yau Fu, National Yang Ming University; Hsin-Yi Huang, National Yang Ming University
- 8:50 a.m. **Bias-Corrected Estimates of the Longitudinal Slope Association with Baseline When the Outcomes Are Measured with Error**—◆ Zhanghua Chen, University of Southern California; Anny H Xiang, Kaiser Permanente
- 9:05 a.m. **A Bayesian Approach to Estimate the Transition Rates Between Disease Stages Using Hidden Markov Models**—◆ Lola Luo, University of Pennsylvania; Dylan Small, The Wharton School; Jason Roy, University of Pennsylvania

- 9:20 a.m. **The Impact of Covariance Misspecification in Multivariate Gaussian Mixtures on Estimation and Inference: An Application to Trajectory Modeling**—◆ Brianna Heggeseth, University of California at Berkeley; Nicholas Jewell, University of California at Berkeley
- 9:35 a.m. **A Multistate Time-Dependent Model of Health Transitions During Aging**—◆ Arnold Mitnitski, Dalhousie University; Xiaowei Song, Dalhousie University; Kenneth Rockwood, Dalhousie University
- 9:50 a.m. **Age, Incidence, Followup, Bias**—◆ Lev S Sverdlov, Redmond Analytics
- 10:05 a.m. **Modeling of Lifetime Systolic and Diastolic Blood Pressure with Concurrent BMI, Height**—◆ Shumei Sun, Virginia Commonwealth University; Robert Carrico, Virginia Commonwealth University; Bernard Rosner, Harvard Medical School

476 CC-Room 29B **Measurement, Survey Quality, and Interviewers—Contributed**

Section on Survey Research Methods
 Chair(s): Jamie Ridenhour, RTI International

- 8:35 a.m. **Encouraging Record Use in an Online Survey**—◆ Mick Couper, University of Michigan; Mary Beth Ofstedal, University of Michigan; Sunghee Lee, University of Michigan
- 8:50 a.m. **Cognitive Aspects of Dependent Verification in Survey Operations**—◆ Lars Lyberg, Stockholm University; Stephanie Eckman, Institute for Employment Research; Magnus Roos, Gothenburg School of Economics; Frauke Kreuter, Joint Program in Survey Methodology
- 9:05 a.m. **Outliers: an evaluation of methodologies**—◆ Dharendra Ghosh, Synectics for Management Decisions; Andrew Vogt, Georgetown University
- 9:20 a.m. **Statistics and Audit Sampling**—Mary Batcher, Ernst & Young; ◆ Fritz Scheuren, NORC
- 9:35 a.m. **Identifying Survey Interviewer Applicants with a High Probability of Early Termination**—◆ Heather M. Schroeder, Institute for Social Research; Frost Hubbard, Institute for Social Research; Kenneth Szmigiel, Institute for Social Research
- 9:50 a.m. **Evaluation of Interviewer Effects on Nonresponse Bias**—◆ Denize Barbosa, University of Southampton; Gabriele Durrant, University of Southampton; Chris Skinner, London School of Economics
- 10:05 a.m. **What's the Chance? Interviewers' Expectations of Response in the 2010 SCF**—◆ Arthur Kennickell, Federal Reserve Board



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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477 CC-Room 29C Calibration Estimation and Weighting in Sample Surveys—Contributed

Section on Survey Research Methods
Chair(s): Karol Krotki, RTI International

- 8:35 a.m. **Propensity Score Weight Adjustment for Dual-Mode Longitudinal Surveys**—◆Christian Boudreau, University of Waterloo; Mary E Thompson, University of Waterloo; Dagmar Mariaca Hajducek, University of Waterloo
- 8:50 a.m. **Calibration Adjustment for Nonresponse in Cross-Classified Data**—◆Gretchen Falk, Ernst & Young
- 9:05 a.m. **Calibrated Maximum Likelihood Design Weights in Survey Sampling**—◆Sarjinder Singh, Texas A&M University at Kingsville; Stephen A. Sedory, Texas A&M University at Kingsville
- 9:20 a.m. **What's New in SUDAAN 11?**—◆Angela Pitts, RTI International
- 9:35 a.m. **Practical Issues When Calibrating Weights for Multiple Skewed Variables**—◆Yan K Liu, IRS/SOI; Kimberly Henry, IRS/SOI; Michael Strudler, IRS/SOI
- 9:50 a.m. **Longitudinal Survey Weight Calibration: Theory and Methods**—◆Siyu Qing, The George Washington University; Michael D. Larsen, The George Washington University; Mary A Foulkes, The George Washington University; Beilei Zhou, The George Washington University
- 10:05 a.m. **Fixing the Sample and the Sample Weights When Problems Arise in the Frame: Experiences with a Survey of Physicians**—◆Eric Grau, Mathematica Policy Research

Invited Sessions 10:30 a.m.–12:20 p.m.

478 HQ-Sapphire II Noether Lectures—Invited

Noether Award Committee, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Pranab K. Sen, The University of North Carolina at Chapel Hill
Chair(s): Pranab K. Sen, The University of North Carolina at Chapel Hill

- 10:35 a.m. **The Under-Appreciated Insight Nonparametric Methodology Can Provide in the Analysis of Data Arising in Law and Public Policy**—◆Joseph Gastwirth, The George Washington University
- 11:15 a.m. **Regression-Based Principal Component Analysis and Its Application to Screen Individual Pediatric Growth Paths**—◆Ying Wei, Columbia University
- 11:55 a.m. **Floor Discussion**

479 HQ-Sapphire C ■ ● Paper Highlights from Bayesian Analysis—Invited

International Society of Bayesian Analysis, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Herbie Lee, University of California at Santa Cruz
Chair(s): Herbie Lee, University of California at Santa Cruz

- 10:35 a.m. **Data Augmentation for Support Vector Machines**—◆Steven Lee Scott, Google; Nicholas G Polson, The University of Chicago Booth School of Business
- 11:00 a.m. **Bayesian Estimation of Intensity Surfaces on the Sphere via Needlet Shrinkage and Selection**—◆James G Scott, The University of Texas at Austin
- 11:25 a.m. **Bayesian Estimation of Population Diversity**—◆John A Bunge, Cornell University
- 11:50 a.m. **Disc:** Chris Hans, The Ohio State University
- 12:15 p.m. **Floor Discussion**

480 CC-Room 29B ● Modeling and Seasonality in Economic Time Series—Invited

Business and Economic Statistics Section, International Indian Statistical Association, Section on Government Statistics

Organizer(s): Tucker McElroy, U.S. Census Bureau
Chair(s): Tucker McElroy, U.S. Census Bureau

- 10:35 a.m. **Models for High Lead Time Prediction**—◆Granville Tunnicliffe-Wilson, Lancaster University; John Haywood, Victoria University of Wellington
- 11:00 a.m. **Seasonal Heteroskedasticity and Signal Extraction in Time Series**—◆Thomas Morgan Trimbur, Federal Reserve Board; William Bell, U.S. Census Bureau
- 11:25 a.m. **Normally Distributed Seasonal Unit Root Tests**—◆David Alan Dickey, North Carolina State University
- 11:50 a.m. **Seasonal Autocovariance Structures: PARMA or SARMA?**—◆Robert Lund, Clemson University
- 12:15 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

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481 CC-Room 26B **High-Dimensional Unsupervised Learning—Invited**

WUNAR, International Chinese Statistical Association, Section on Statistical Computing, Section on Statistical Learning and Data Mining, International Indian Statistical Association

Organizer(s): Daniela Witten, University of Washington

Chair(s): Ali Shojaie, University of Washington

- 10:35 a.m. **Fast Graphical Model Estimation and Its Applications**—◆ Daniela Witten, University of Washington
- 11:00 a.m. **Forest Density Estimation**—◆ Han Liu, The Johns Hopkins University
- 11:25 a.m. **Positive Definite Estimators of Large Covariance Matrices**—◆ Adam Joseph Rothman, University of Minnesota
- 11:50 a.m. **Singular Value Decomposition for High-Dimensional Data**—◆ Dan Yang, The Wharton School; Zongming Ma, The Wharton School; Andreas Buja, The Wharton School
- 12:15 p.m. **Floor Discussion**

482 HQ-Sapphire A **Recent Developments in Value-Added Models—Invited**

JEBIS—Journal of Educational and Behavioral Statistics, International Indian Statistical Association, Social Statistics Section

Organizer(s): Sandip Sinharay, Educational Testing Service

Chair(s): Judith D. Singer, Harvard University

- 10:35 a.m. **What Are Error Rates for Classifying Teacher and School Performance Using Value-Added Models?**—◆ Peter Zygmont Schochet, Mathematica Policy Research; Hanley Chiang, Mathematica Policy Research
- 11:00 a.m. **Multidimensional Assessment of Value Added by Teachers to Real-World Outcomes**—◆ Jennifer Ellen Broatch, Arizona State University; Sharon Lohr, Arizona State University
- 11:25 a.m. **The Persistence of School-Level Value-Added**—◆ Derek Briggs, University of Colorado; Jonathan Paul Weeks, Educational Testing Service
- 11:50 a.m. Disc: Daniel F. McCaffrey, RAND Corporation
- 12:10 p.m. **Floor Discussion**

483 CC-Room 28E **Fostering Interdisciplinary Collaboration Through Statistical Consulting—Invited**

Section on Statistical Consulting, Biopharmaceutical Section, Quality and Productivity Section, International Indian Statistical Association, Section on Statistical Education

Organizer(s): Eric A. Vance, Virginia Tech

Chair(s): Dan Merl, Lawrence Livermore National Laboratory

- 10:35 a.m. **Creating Opportunities for Undergraduate Statistics Students to Become Collaborators in Interdisciplinary Research**—◆ Paul Roback, St. Olaf College
- 11:05 a.m. **Fostering the Culture of Collaboration at Virginia Tech**—◆ Eric A. Vance, Virginia Tech
- 11:35 a.m. **Common Habits of Consulting Clients**—◆ Michael Lavine, University of Massachusetts-Amherst
- 12:05 p.m. **Floor Discussion**

484 HQ-Sapphire D **New Developments in Mediation Analysis—Invited**

Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics Surveys Online Journal, Social Statistics Section

Organizer(s): Jing Cheng, University of California at San Francisco School of Dentistry

Chair(s): Jing Cheng, University of California at San Francisco School of Dentistry

- 2:05 p.m. **Varieties of Sensitivity Analysis for Mediation**—◆ Tyler VanderWeele, Harvard School of Public Health
- 2:25 p.m. **Assessing Mediation Using Principal Stratification in a Meta-Analysis**—◆ Yun Li, University of Michigan; Jeremy Michael George Taylor, University of Michigan; Michael R. Elliott, University of Michigan
- 2:45 p.m. **Targeted Maximum Likelihood Estimation of a Natural Direct Effect**—◆ Mark van der Laan, University of California at Berkeley School of Public Health; Wenjing Zheng, University of California at Berkeley; Alan Hubbard, University of California at Berkeley School of Public Health
- 3:05 p.m. **Dealing with Time-Varying Confounding in Mediation Analysis**—◆ Stijn Vansteelandt, Ghent University
- 3:25 p.m. Disc: James Robins, Harvard University
- 3:45 p.m. **Floor Discussion**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

485 CC-Room 30A ■ ● Statistical Learning for Complex Data Structures—Invited

SSC, Section on Statistical Learning and Data Mining, International Indian Statistical Association

Organizer(s): Alejandro Murua, Université de Montréal

Chair(s): Russel Stee, McGill University

10:35 a.m. **Discovery and Prediction with Transactional Network Data**—◆ Hugh Chipman, Acadia University; Mahdi Shafiei, Dalhousie University

11:00 a.m. **Ensemble Learning: Variable Selection and Collective Decisionmaking**—◆ Mu Zhu, University of Waterloo

11:25 a.m. **Clustering and Biclustering of Relational Data**—◆ Alejandro Murua, Université de Montréal; Thierry Chekouo Tekougang, Université de Montréal

11:50 a.m. **Modeling Complex Time Series with the Gamma-Exponential Process**—◆ Alexandre Bouchard, University of British Columbia

12:15 p.m. **Floor Discussion**

486 HQ-Sapphire B ■ ● Internet-Scale Statistical Computing—Invited

Section on Statistical Computing, Section on Statistical Learning and Data Mining, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Marianna Dizik, Google

Chair(s): Marianna Dizik, Google

10:35 a.m. **How Google Estimates Traffic for Millions of Queries**—◆ Tim Hesterberg, Google; Oliver Dain, MIT Lincoln Laboratory; Yogita Mehta, Google; Laramie Leavitt, Google

11:05 a.m. **Scaling R to Internet Scale Data**—◆ Karl Millar, Google; Murray Stokely, Google

11:35 a.m. **Section on Statistical Computing**—◆ Saptarshi Guha, Mozilla

12:05 p.m. **Floor Discussion**

487 HQ-Sapphire L ■ Statistical Best Practices for the Development and Acquisition of Defense Systems—Invited

Section on Statistics in Defense and National Security, Section for Statistical Programmers and Analysts, International Indian Statistical Association

Organizer(s): Laura Freeman, Institute for Defense Analyses

Chair(s): Alyson Wilson, IDA Science and Technology Policy Institute

10:35 a.m. **Statistical Rigor in Operational Test and Evaluation**—◆ Michael Gilmore, Operational Test and Evaluation (DOT&E); Catherine Warner, DOT&E

11:00 a.m. **Industrial Methods for Effective Testing and Development of Defense Systems: A Panel Report**—◆ Vijay Nair, University of Michigan

11:25 a.m. **Experimental Designs to Produce Reliable and Robust Weapon Systems**—◆ G. Geoffrey Vining, Virginia Tech

11:50 a.m. **Experiments with Physical and Resource Constraints**—◆ Doug Montgomery, Arizona State University

12:15 p.m. **Floor Discussion**

488 HQ-Sapphire E ■ ● Statistics and the 2012 Elections—Invited

Scientific and Public Affairs Advisory Committee, Section on Survey Research Methods, International Indian Statistical Association, Social Statistics Section

Organizer(s): J. Michael Brick, Westat

Chair(s): J. Michael Brick, Westat

10:35 a.m. **Decisionmaking About Redistricting**—◆ Thomas R. Belin, University of California at Los Angeles

10:55 a.m. **Methodological Aspects of Pre-Election Polling**—◆ Michael W. Traugott, University of Michigan

11:15 a.m. **Preventing Fraud Versus Preventing Voting**—◆ Arlene S. Ash, University of Massachusetts Medical School; John Lamperti, Dartmouth College

11:35 a.m. **Statistical Estimation and Election Night Decisionmaking**—◆ Clyde Tucker, CNN Consultant

11:55 a.m. **Disc: Vincent Barabba**

12:15 p.m. **Floor Discussion**

489 HQ-Sapphire MN Medallion Lecture III—Invited

IMS, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Hans-Georg Mueller, University of California at Davis

Chair(s): Peter Bickel, University of California at Berkeley

10:35 a.m. **Order Statistics and Gene Regulation**—◆ Donald Geman, The Johns Hopkins University

12:05 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

490 CC-Room 30C

■ ● Recent Trends in Forecasting—Topic-Contributed

Section on Statistical Learning and Data Mining, Section for Statistical Programmers and Analysts, International Indian Statistical Association

Organizer(s): Kyle A Caudle, South Dakota School of Mines and Technology

Chair(s): Kyle A Caudle, South Dakota School of Mines and Technology

- 10:35 a.m. **Robust Methods for Forecast Aggregation—**
◆ Jaime Ramos, Rice University; David W. Scott, Rice University
- 10:55 a.m. **Flow Field Forecasting: An Introduction—**
◆ Michael Frey, Bucknell University; Kyle A Caudle, South Dakota School of Mines and Technology
- 11:15 a.m. **Mining for Patterns in Financial Time Series—**
◆ James Gentle, George Mason University
- 11:35 a.m. **Time-Varying and Spatial Modeling of Precipitation Extremes—**
◆ Gabriel Huerta, Indiana University; Glenn Stark, University of New Mexico
- 11:55 a.m. **Forecasting Levels and Standard Errors to Enable Prospective—**
◆ Howard Burkom, The Johns Hopkins University Applied Physics Laboratory; Yevgeniy Elbert, The Johns Hopkins University Applied Physics Laboratory; Steven Babin, The Johns Hopkins University Applied Physics Laboratory
- 12:15 p.m. **Floor Discussion**

491 CC-Room 25C

■ ● Challenges in Biomarker and Surrogate Endpoint Qualification—Topic-Contributed

Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Qunming Dong, Vertex Pharmaceuticals

Chair(s): Qunming Dong, Vertex Pharmaceuticals

- 10:35 a.m. **Statistical Evaluation of Surrogate Endpoints: Validity, Efficiency, and Sensitivity—**
◆ Pandurang Kulkarni, Eli Lilly and Company; Yongming qu, Eli Lilly and Company; Wen Li, Singapore Clinical Research Institute
- 10:55 a.m. **Biomarker Qualification: FDA Experience—**
◆ Aloka Chakravarty, FDA/CDER
- 11:15 a.m. **Design and Estimation for Evaluating Principal Surrogate Markers in Vaccine Trials—**
◆ Ying Huang, Fred Hutchinson Cancer Research Center; Peter B Gilbert, University of Washington/Fred Hutchinson Cancer Research Center

- 11:35 a.m. **Related Causal Frameworks for Surrogate Outcomes in Randomized Trials, with Extensions to Observational Studies and Beyond—**
◆ Marshall Joffe, University of Pennsylvania
- 11:55 a.m. **The Impact of Using Sub-Units in Meta-Analytic Surrogacy Estimation: Are We Being Naïve?—**
◆ Qian Shi, Mayo Clinic; Lindsay A Renfro, Mayo Clinic; Junlong Li, University of Missouri; Daniel J. Sargent, Mayo Clinic
- 12:15 p.m. **Floor Discussion**

492 CC-Room 33B

■ ● Patient-Reported Outcomes in Mental and Behavioral Health—Topic-Contributed

Social Statistics Section, Biopharmaceutical Section, Section for Statistical Programmers and Analysts, Section on Statistics in Epidemiology, Statistics in Mental Health Research

Organizer(s): Douglas David Gunzler, Case Western Reserve University

Chair(s): Yuanjia Wang, Columbia University

- 10:35 a.m. **Disentangling Multiple Sclerosis-Associated Fatigue and Depression: Methods to Improve Clinical Research and Care—**
◆ Douglas David Gunzler, Case Western Reserve University
- 10:55 a.m. **Self-Reported Measures of Depression and Physical Functioning in Cognitively Impaired Populations—**
◆ Curtis Tatsuoka, Case Western Reserve University; Martha Sajatovic, Case Western Reserve University; Kathleen Smyth, Case Western Reserve University
- 11:15 a.m. **Evaluating the Utility of Collateral Informants in College Drinking Studies—**
◆ Michael Fendrich, University of Wisconsin-Milwaukee; Daniel Fuhrmann, University of Wisconsin-Milwaukee; Lisa Berger, University of Wisconsin-Milwaukee; Charles Plate, U.S. Drug Testing Laboratories; Joseph Jones, U.S. Drug Testing Laboratories
- 11:35 a.m. **Modeling HIV Risk Reduction Interventions: The Zero-Inflated Negative Binomial Regression Model—**
◆ Yinglin Xia, University of Rochester
- 11:55 p.m. **Floor Discussion**

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

493 CC-Room 25B Bayesian Applications in Clinical Trial Safety Assessment—Topic-Contributed

Biopharmaceutical Section
Organizer(s): Haijun Ma, Amgen, Inc.
Chair(s): Haijun Ma, Amgen, Inc.

- 10:35 a.m. **Recent Developments of Bayesian Meta-Analysis for Safety Evaluation in Randomized Clinical Trials**—◆Karen Price, Eli Lilly and Company
- 10:55 a.m. **Identifying Potential Adverse Events Dose-Response Relationships via Bayesian Indirect and Mixed Treatment Comparison Models**—◆Haoda Fu; Karen Price, Eli Lilly and Company; Mary E. Nilsson, Eli Lilly and Company; Stephen J. Ruberg, Eli Lilly and Company
- 11:15 a.m. **Bayesian Meta Experimental Design: Evaluating Cardiovascular Risk in New Antidiabetic Therapies to Treat Type 2 Diabetes**—◆H. Xia, Amgen, Inc.; Joseph Ibrahim, The University of North Carolina at Chapel Hill; Ming-Hui Chen, University of Connecticut; Thomas Liu, Amgen, Inc.
- 11:35 a.m. **Applications of Bayesian Model Selection for Clinical Safety Data**—◆Bradley McEvoy, FDA/CDER; Rajesh R Nandy, University of California at Los Angeles; Ram C. Tiwari, FDA/CDER/OTS/OB
- 11:55 a.m. Disc: George Rochester, FDA
- 12:15 p.m. **Floor Discussion**

494 CC-Room 25A ■ ● Advances in the Design and Analysis of Multi-Reader Diagnostic Imaging Evaluation—Topic-Contributed

Biopharmaceutical Section, Section on Statistics in Imaging
Organizer(s): Nancy A. Obuchowski, Cleveland Clinic Foundation
Chair(s): John W. Seaman III, Alcon Laboratories

- 10:35 a.m. **Multi-Reader Diagnostic Imaging Case Studies: Components of Variance**—◆Brandon Gallas, FDA/CDRH/OSEL/DIAM
- 10:55 a.m. **ANOVA Models for Nontraditional ROC Multi-Reader Imaging Studies**—◆Stephen Hillis, University of Iowa
- 11:15 a.m. **Analysis of Multi-Reader Studies of Accuracy in Detecting and Localizing Multiple Disease Targets**—◆Andriy Bandos, University of Pittsburgh
- 11:35 a.m. **Mixed Designs for Multi-Reader ROC Imaging Studies**—◆Nancy A. Obuchowski, Cleveland Clinic Foundation; Stephen Hillis, University of Iowa; Brandon Gallas, FDA/CDRH/OSEL/DIAM
- 11:55 a.m. Disc: Alicia Toledano, Statistics Collaborative
- 12:15 p.m. **Floor Discussion**

495 CC-Room 24C ■ ● eQTL and Causal Analysis in Genomics—Topic-Contributed

Biometrics Section, Section on Statistics in Epidemiology, UNPAR
Organizer(s): Wei Sun, The University of North Carolina at Chapel Hill
Chair(s): Peng Wei, The University of Texas Health Science Center

- 10:35 a.m. **Identifying Gene Regulatory Networks Using Multiple-Tissue eQTL Data**—◆Jichun Xie, University of Pennsylvania School of Medicine; Tony Cai, University of Pennsylvania; Hongzhe Li, University of Pennsylvania; Weidong Liu, Shanghai Jiao Tong University
- 10:55 a.m. **Methylation Quantitative Trait Loci and Epigenetic Networks Underlying Asthma-Related Traits**—◆Liming Liang, Harvard School of Public Health; Saffron A.G. Willis-Owens, National Heart and Lung Institute, Imperial College; Kenny C.C. Wong, National Heart and Lung Institute, Imperial College; Aristeia Binia, National Heart and Lung Institute, Imperial College; Gwyneth Davies, Swansea University, School of Medicine; Julian M. Hopkin, Swansea University, School of Medicine; Ivana Yang, University of Colorado School of Medicine and National Jewish Health; Tomi M. Pastinen, McGill University and Genome Quebec Innovation Centre; David A. Schwartz, University of Colorado School of Medicine and National Jewish Health; Goncalo Abecasis, University of Michigan; G. Mark Lathrop, CEA/Centre National de Genotypage; Miriam Moffatt, National Heart and Lung Institute, Imperial College; William O.C.M. Cookson, National Heart and Lung Institute, Imperial College
- 11:15 a.m. **Studying the Evolution of Transcription Factor Binding Events Using Multispecies ChIP-Seq Data**—◆Wei Zheng, Yale University; Hongyu Zhao, VA Cooperative Studies Program
- 11:35 a.m. **A General Framework for eQTL Mapping Using RNA-Seq Data**—◆Yijuan Hu, Emory University; Wei Sun, The University of North Carolina at Chapel Hill; Jung-Ying Tzeng, North Carolina State University
- 11:55 a.m. **Differential Usage of RNA Isoforms**—◆Wei Sun, The University of North Carolina at Chapel Hill; Hua Zhou, North Carolina State University; Pei Fen Kuan, The University of North Carolina at Chapel Hill; Haitao Chu, University of Minnesota; Yichao Wu, North Carolina State University; Yufeng Liu, The University of North Carolina at Chapel Hill
- 12:15 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

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496 CC-Room 28C Survey Sampling and Missing Data Problems— Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Zhiqiang Tan, Rutgers University

Chair(s): Eric Slud, U.S. Census Bureau

- 10:35 a.m. **Propensity Score Weight Adjustment with Several Follow-Ups**—◆ Jaekwang Kim, Iowa State University; Jongho Im, Iowa State University
- 10:55 a.m. **Semiparametric Fractional Imputation for Complex Survey Data**—◆ Changbao Wu, University of Waterloo; Jiahua Chen, SSC; Jaekwang Kim, Iowa State University
- 11:15 a.m. **Exploring the Many Uses for Instrumental-Variable Calibration**—◆ Phillip Kott, RTI International
- 11:35 a.m. **Unified Methods for Calibration in Some Missing Data and Sampling Problems**—◆ Zhiqiang Tan, Rutgers University
- 11:55 a.m. Disc: Joseph Schafer, U.S. Census Bureau
- 12:15 p.m. **Floor Discussion**

497 CC-Room 29D ■ ● Robust Inference—Topic-Contributed

Section on Nonparametric Statistics, Biometrics Section, International Chinese Statistical Association, International Indian Statistical Association

Organizer(s): Steven MacEachern, The Ohio State University

Chair(s): Michael Evans, University of Toronto

- 10:35 a.m. **Inferences from Prior-Based Loss Functions**—◆ Gun Ho Jang, University of Pennsylvania; Michael Evans, University of Toronto
- 10:55 a.m. **Robust Loss Function for Model Selection and Evaluation in Quantile Regression**—◆ Yoonsuh Jung, MD Anderson Cancer Center; Yoonkyung Lee, The Ohio State University; Steven MacEachern, The Ohio State University
- 11:15 a.m. **Robustifying a Nonlinear Model Using Wavelets with an Application to PK Modeling**—◆ Siva Sivaganesan, University of Cincinnati; Yuanshu Zou, University of Cincinnati; Peter Mueller, The University of Texas at Austin
- 11:35 a.m. **Blended Paradigm Inference**—◆ Steven MacEachern, The Ohio State University; Yoonkyung Lee, The Ohio State University; John Lewis, The Ohio State University
- 11:55 a.m. **A Comparison of Classification Methods for Robustness**—◆ Yoonkyung Lee, The Ohio State University; Rui Wang, The Ohio State University
- 12:15 p.m. **Floor Discussion**

498 CC-Room 33A ■ ● Innovations in Study Design in the VA Cooperative Studies Program (CSP)—Topic- Contributed

Section on Government Statistics, International Indian Statistical Association

Organizer(s): Ying Lu, VA Palo Alto Healthcare System/Stanford University

Chair(s): Gary Johnson, VA Connecticut Healthcare System, West Haven

- 10:35 a.m. **Sample Size Determination and Hypothesis Testing for the Mean of a Lognormal Distribution**—◆ Kush Kapur,
- 10:55 a.m. **Nonparametric Bayesian Methods for Prediction of Event Times for Analysis with Interval-Censored Data**—◆ Stephanie Lustgarten, Boston University; Gheorghe Doros, Boston University
- 11:15 a.m. **Evaluation of Methods to Simulate Correlated Binary Data**—◆ Robert Lew, VA Boston Healthcare; Hongsheng Wu, VA Boston Healthcare; David Gagnon, Department of Veterans Affairs; Soe Soe Thwin, Department of Veterans Affairs
- 11:35 a.m. **Evaluation of an Odds Ratio Using a Longitudinal Case-Control Study Design**—◆ Ying Lu, VA Palo Alto Healthcare System/Stanford University; Joong-Ho Won, VAPAHCS
- 11:55 a.m. Disc: John Boscardin, University of California at San Francisco
- 12:15 p.m. **Floor Discussion**

499 CC-Room 26A ■ ● Mixture Models for Estimation and Inference in Basic Science and Population Genetics—Topic-Contributed

WINAR, International Indian Statistical Association

Organizer(s): Christine E. McLaren, University of California at Irvine

Chair(s): Ranjan Maitra, Iowa State University

- 10:35 a.m. **Mixture Modeling for Identifying Spatial Interactions of Chromatins**—◆ Liang Niu, The Ohio State University; Shili Lin, The Ohio State University
- 10:55 a.m. **Estimating Mixture Components from Qqplots: Gene Expression Vectors in Beetles**—◆ Karen Kafadar, Indiana University
- 11:15 a.m. **Signal Extraction in Discrete Mixture Models**—◆ Volodymyr Melnykov, North Dakota State University

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 11:35 a.m. **Bivariate Mixture Models of Iron Measures with Longitudinal Evaluation of Component Stability in an Australian Population**—◆Christine E. McLaren, University of California at Irvine; Wen-Pin Chen, Chao Family Comprehensive Cancer Center; Nadine A. Bertalli, University of Melbourne; Martin Delatycki, University of Melbourne; Katrina Allen, University of Melbourne; Lyle Gurrin, University of Melbourne
- 11:55 a.m. **Penalized Mixtures of Variable Order Markov Chains for Biological Sequence Data**—◆Karin S Dorman, Iowa State University
- 12:15 p.m. **Floor Discussion**

- Panelists:** ◆Megan Elizabeth Mocko, University of Florida
 ◆Jackie Miller, The Ohio State University
 ◆Leigh Harrell-Williams, Virginia Tech
 ◆Michelle Gaddy Everson, University of Minnesota
- 12:15 p.m. **Floor Discussion**

500 CC-Room 28B Evaluation and Research on the Current Population Survey—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Yang Cheng, U.S. Census Bureau

Chair(s): Partha Lahiri, University of Maryland

- 10:35 a.m. **Overview of Current Population Survey Methodology**—◆Yang Cheng, U.S. Census Bureau; Patrick Flanagan, U.S. Census Bureau; Eric Slud, U.S. Census Bureau
- 10:55 a.m. **The Impact of Different Rotation Patterns on the Composite Estimator**—◆Khandaker Mansur, U.S. Census Bureau; Yang Cheng, U.S. Census Bureau
- 11:15 a.m. **Changes in Panel Bias in the U.S. Current Population Survey and Its Effects on Labor Force Estimates**—◆Greg Erkens, Bureau of Labor Statistics
- 11:35 a.m. **Modeling Variances to Determine Sample Allocation for the Current Population Survey**—◆Reid Rottach, U.S. Census Bureau; Greg Erkens, Bureau of Labor Statistics
- 11:55 a.m. Disc: Jun Shao, University of Wisconsin-Madison
- 12:15 p.m. **Floor Discussion**

502 CC-Room 31A Surviving Academia as an Applied Biotatistician—Topic-Contributed

Committee on Applied Statisticians, WUNAR

Organizer(s): Shari Messinger, University of Miami Miller School of Medicine

Chair(s): Marlene J. Egger, University of Utah

- Panelists:** ◆Shari Messinger, University of Miami Miller School of Medicine
 ◆Motomi Mori, Oregon Health and Science University
 ◆Ralph O'Brien, Case Western Reserve University
 ◆James Grady, University of Connecticut Health Center
 ◆Shari Messinger, University of Miami Miller School of Medicine

12:15 p.m. **Floor Discussion**

503 HQ-Sapphire H Scoring Systems for Person-Reported Outcome Measurements—Topic-Contributed

Health Policy Statistics Section, International Indian Statistical Association

Organizer(s): Laura Lee Johnson, National Center for Complementary and Alternative Medicine

Chair(s): Cynthia R. Long, Palmer Center for Chiropractic Research

- Panelists:** ◆Lisa A. Kammerman, FDA/CDER
 ◆M. Colin Ard, University of California at San Diego
 ◆Steven D. Edland, University of California at San Diego
 ◆Laura Lee Johnson, National Center for Complementary and Alternative Medicine

12:15 p.m. **Floor Discussion**

Topic-Contributed Panels 10:30 a.m.–12:20 p.m.

501 CC-Room 31B The Novice Online Instructor's Survival Guide: Lessons and Resources from the CAUSE Online Cluster—Topic-Contributed

Section on Statistical Education, International Indian Statistical Association

Organizer(s): Megan Elizabeth Mocko, University of Florida

Chair(s): C. Shane Reese, Brigham Young University



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GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Contributed Sessions 10:30 a.m.–12:20 p.m.

504 CC-Room 29C Local Polynomial and Splines—Contributed

Section on Nonparametric Statistics, Biometrics Section

Chair(s): Christopher L DuBois, University of California at Irvine

- 10:35 a.m. **A Single Pass Smoothness Parameter Selection in the Estimation of the Pair Correlation Function for Spatial Point Processes**—◆ Ivan Simeonov, Penn State University; Francesca Chiaromonte, Penn State University; John Fricks, Penn State University
- 10:50 a.m. **Robust Compound Regression: A New Approach for Robust Estimation of Errors-in-Variables Models**—◆ Hao Han, SUNY at Stony Brook; Yeming Ma, National Institutes of Health; Xiangmin Jiao, SUNY at Stony Brook; Ling Leng, SUNY at Stony Brook; Zhengrong Liang, SUNY at Stony Brook; Wei Zhu, SUNY at Stony Brook
- 11:05 a.m. **Local Polynomial Regression with an Ordinal Covariate**—◆ Zonglin He, Colorado State University; Jean Opsomer, Colorado State University
- 11:20 a.m. **A Test for Constant Versus Monotone Regression Function in the Presence of Correlated Errors**—◆ Huan Wang; Mary C Meyer, Colorado State University; Jean Opsomer, Colorado State University
- 11:35 a.m. **Uniform Convergence and Rate Adaptive Estimation of a Convex Function**—◆ Xiao Wang, Purdue University; Jinglai Shen, University of Maryland
- 11:50 a.m. **Efficient Spline Estimation of Nonparametric Additive Functions with Repeated Measures**—◆ Rong Liu, University of Toledo; Rong Liu, University of Toledo
- 12:05 p.m. **A Spline-Based Lack-of-Fit Test for Parametric Zero-Inflated Poisson Regression Models**—◆ Chin-Shang Li, University of California at Davis

505 CC-Room 30E Earth and Atmosphere Sciences—Contributed

Section on Physical and Engineering Sciences, Quality and Productivity Section, Section on Statistics and the Environment

Chair(s): Shan Ba, Georgia Institute of Technology

- 10:35 a.m. **Integrated Methods to Detect and Locate Electrical Continuity and Leakage: A Bayes Approach**—◆ Cheng Chen, Texas A&M University at Kingsville; Roberto Torres, Texas A&M University at Kingsville; Patricia Gomez, Texas A&M University at Kingsville

- 10:50 a.m. **Using Novel Distance Metrics to Evaluate Statistical Robustness of Chaotic Control Systems**—◆ Morris Morgan, Hampton University; Carolyn Bradshaw Morgan, Hampton University
- 11:05 a.m. **Statistical Programming of Chemical Separation Profiles**—◆ H. Dennis Tolley, Brigham Young University; Samuel E. Tolley, Brigham Young University; Milton L. Lee, Brigham Young University
- 11:20 a.m. **Analysis of Time Series Generated by Low-Order Models of Atmospheric Dynamics**—◆ Alexander Gluhovsky, Purdue University
- 11:35 a.m. **Particle Energy Spectrum, Revisited from a Counting Statistics Perspective**—◆ Ding Yuan, NSTec LAO; Daniel G. Marks, NSTec LAO; Paul Guss, NSTec RSL
- 11:50 a.m. **An Examination of Spatial Correlation in Hurricane Wind Fields**—◆ Shurong Fang, Michigan Technological University; Yue Li, CEE/Michigan Tech University; Weichiang Pang, Clemson University; Fangqian Liu, Clemson University
- 12:05 p.m. **Floor Discussion**

506 CC-Room 21 Risk in Finance, Insurance, or Regulation—Contributed

Section on Risk Analysis

Chair(s): Alexandra Kapatou, American University

- 10:35 a.m. **A Note on the Cost of Hedging Variable Annuities**—◆ Liang Hong, Bradley University
- 10:50 a.m. **Grouping Variables and Collapsing Levels in Credit Scoring**—◆ Yoshinori Kawasaki, Institute of Statistical Mathematics; Masao Ueki, Yamagata University
- 11:05 a.m. **Modeling Mortality and Longevity Risk**—◆ Mary M Louie, AIR Worldwide; Greta M Ljung, AIR Worldwide
- 11:20 a.m. **Statistical Challenges in Life Insurance Industry**—◆ Zhiwei Zhu, Scor Global Life Americas
- 11:35 a.m. **Analyzing the Dynamics of the U.S. Blood Supply Using a Computer Simulation Model**—◆ Arianna Simonetti, FDA/CBER; Mark Walderhaug, FDA/CBER
- 11:50 a.m. **An Analysis of Historical Aviation Accident Data**—◆ Nastaran Coleman, Federal Aviation Administration
- 12:05 p.m. **Determining a BMDL of Blood Lead Based on ADHD Scores Using a Semiparametric Regression**—◆ Byung-Soo Kim, Yonsei University; Ah Hyun Kim, Yonsei University



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

507 CC-Room 28D **■ ● Innovative Solutions to Global Problems: Applications from Statistical Practices—Contributed**

Section on Statistical Consulting, Statistics Without Borders
 Chair(s): Wei-Ting Hwang, University of Pennsylvania School of Medicine

- 10:35 a.m. **A Bayesian Hierarchical Joint Model to Determine the Bundled Payment Cost for Efficient and Effective Knee Replacement Surgery—◆ Sherry Lin,**
- 10:50 a.m. **Alternative Method of Estimating IC50 Compares to Traditional Method—◆ Fu-Chih Cheng,**
- 11:05 a.m. **Computing Optimal Strata Bounds Using Dynamic Programming—◆ Eric Miller, Summit Consulting**
- 11:20 a.m. **Design of Infectious Disease Surveillance in Swine—◆ Chong Wang, Iowa State University**
- 11:35 a.m. **Methods for Classifying Changes in Bacterial Prevalence Over Time—◆ Raymond G Hoffmann, Medical College of Wisconsin; Thomas J Hoffmann, University of California at San Francisco; Sandra McLellan, University of Wisconsin-Milwaukee; Jessica VandeWalle, University of Wisconsin-Milwaukee; Pippa Simpson, Medical College of Wisconsin**
- 11:50 a.m. **Zero-Inflated Mixed Regression to Predict Self-Reported Frequency of Problems with Female Condoms Use Among Women at High Risk of Sexually Transmitted Disease—◆ Resmi Gupta, Cincinnati Children's Hospital Medical Center; Rhonda D Vandyke, Cincinnati Children's Hospital Medical Center; Maurizio Macaluso, Cincinnati Children's Hospital Medical Center**
- 12:05 p.m. **Extending the Application of an Instrument to Facilitate Interdisciplinary Research—◆ Christopher Williams, University of Idaho**

508 CC-Room 31C **■ ● The Introductory Statistics Course: Design, Implementation, and Teacher Training—Contributed**

Section on Statistical Education
 Chair(s): Amy Phelps, Duquesne University

- 10:35 a.m. **A Professor's Argument for the Need for a Higher Level of Sophistication in Introductory Statistics Courses—◆ Laurence Robinson, Ohio Northern University**
- 10:50 a.m. **Teaching Statistics to Students on a Technology Overload—◆ Anna Peterson**
- 11:05 a.m. **Overcoming Barriers to Using Free Resources in Teaching Introductory Statistics—◆ David Diez**

- 11:20 a.m. **Introductory Statistics for Mathematical Sciences Majors: Feedback Requested on MAA Guidelines—◆ Patti Frazer Lock, St. Lawrence University; Allan Rossman, California Polytechnic State University**
- 11:35 a.m. **Clicker Technology: An Active Learning Approach in a Large Statistics Class—◆ Zenaida Florendo Mateo, University of Manitoba; Rojjar Haddadian, University of Manitoba**
- 11:50 a.m. **Organizing a Statistics Study Abroad Course—◆ Justin Fisher, U.S. Government Accountability Office**
- 12:05 p.m. **Training Graduate or Advanced Undergraduate Students to Be Effective Teaching Assistants in Undergraduate Introductory Statistics Classes—◆ Nancy Pfenning, University of Pittsburgh**

509 CC-Room 30B **The Lasso and L1 Regularization Methods—Contributed**

Section on Statistical Learning and Data Mining, Biometrics Section
 Chair(s): Vivian H Shih, University of California at Los Angeles

- 10:35 a.m. **Estimation and Statistical Inference for Partial Correlations—◆ Tingni Sun, Rutgers University; Cun-Hui Zhang, Rutgers University**
- 10:50 a.m. **Nonparametric Learning in Hazard Regression—◆ Jelena Bradic, University of California at San Diego**
- 11:05 a.m. **Variable Selection via L1 Penalized LAD Method—◆ Lie Wang, Massachusetts Institute of Technology**
- 11:20 a.m. **Large Vector Auto Regressions for Multilayer Spatially Correlated Time Series—◆ Rodrigue Ngueyep Tzoumpe, Georgia Institute of Technology; Nicoleta Serban, Georgia Institute of Technology**
- 11:35 a.m. **Evaluation and Developments of Methods for the Tuning Parameter Choice in Sparse Clustering—◆ Wenzhu Bi, University of Pittsburgh; George C Tseng, University of Pittsburgh; Lisa A Weissfeld, University of Pittsburgh**
- 11:50 a.m. **Regularization Parameter Selection in Convex and Non-Convex Penalized Least Squares Estimation—◆ Kei Hirose, Osaka University; Shohei Tateishi, Toyama Chemical Co., Ltd.; Sadanori Konishi, Chuo University**
- 12:05 p.m. **Lasso for Clustered Data—◆ Rosanna Overholser, University of California at San Diego; Ronghui Xu, University of California at San Diego**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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510 CC-Room 23C Mixed-Effects Modeling—Contributed

Biometrics Section, Committee on Applied Statisticians

Chair(s): Nusrat Jahan, James Madison University

- 10:35 a.m. **Simple Estimation of Hidden Correlation in Repeated Measures**—◆ Thuan Nguyen, Oregon Health and Science University; Jiming Jiang, University of California at Davis
- 10:50 a.m. **A Terminal Decline Model for Quality of Life and Survival in Palliative Care Studies**—◆ Zhigang Li, Dartmouth Medical School; Tor Tosteson, Dartmouth Medical School; Marie Bakitas, Dartmouth Medical School
- 11:05 a.m. **Estimating Heritability Based on Censored Twin Data**—◆ Klaus Kähler Holst, University of Copenhagen
- 11:20 a.m. **Optimization of Sampling Schemes for Population Pharmacokinetic/Pharmacodynamic Studies**—◆ Sergei Leonov, Vertex Pharmaceuticals
- 11:35 a.m. **Parameter Estimation for HIV Dynamic Model by Mixed-Effects Models**—◆ Yao Yu, University of Rochester
- 11:50 a.m. **Exploring Spatial Information for Improved Microarray Image Segmentation and Quality Assessment**—◆ Minyao Sun, Arizona State University; Yan Yang, Arizona State University
- 12:05 p.m. **Statistical Analysis of Proteomics Mass Spectrometry Data in a Ubiquitin Substrate Profiling**—◆ Qinghua Song, Genentech; Anita Izrael-Tomasevic, Genentech; Eugene Varfolomeev, Genentech; Daisy Bustos, Genentech; Corey P Bakalarski, Genentech; Domagoj Vucic, Genentech; Donald Kirkpatrick, Genentech; William Forrest, Genentech

511 CC-Room 23B ROC Methodology—Contributed

Biometrics Section, Biopharmaceutical Section, Section on Statistics in Epidemiology, WJNAR

Chair(s): Feng-Chang Lin, The University of North Carolina at Chapel Hill

- 10:35 a.m. **Correcting AUC's for Measurement Error**—◆ Bernard Rosner, Harvard Medical School; Weiliang Qiu, Harvard Medical School; Robert Glynn, Harvard Medical School
- 10:50 a.m. **Equivalence of Improvement in Area Under ROC Curve and Linear Discriminant Analysis Coefficient Under Assumption of Normality**—◆ Olga Demler, Boston University; Michael Pencina, Boston University; Ralph D'Agostino, Boston University
- 11:05 a.m. **A Linear Model-Based Approach for Inferences About the Area Under the Curve with Repeated Measures and Values Below the Limit of Detection**—◆ Rameela Chandrasekhar, Vanderbilt University School of Medicine; Alan D Hutson, SUNY at Buffalo; Gregory E Wilding, SUNY at Buffalo

- 11:20 a.m. **Penalized AUC Maximization with Kernel Property**—◆ Shuxin Yin, Fred Hutchinson Cancer Research Center; Youyi Fong, Fred Hutchinson Cancer Research Center; Ying Huang, Fred Hutchinson Cancer Research Center

- 11:35 a.m. **Making Diagnosis Based on Multiple Diagnostic Tests Without a Gold Standard**—◆ Jingyang Zhang, Fred Hutchinson Cancer Research Center; Ying Zhang, University of Iowa; Kathryn Chaloner, University of Iowa; Jack T Stapleton, University of Iowa

- 11:50 a.m. **Tutorial: Statistical Methods for Meta-Analysis of Diagnostic Tests**—◆ Xiaoye Ma, University of Minnesota; Haitao Chu, University of Minnesota; Lei Nie, FDA/CDER/OTS; Stephen Cole, The University of North Carolina at Chapel Hill

- 12:05 p.m. **Evaluation of the Sensitivity of the Adverse-Events Signal by Screening Test**—◆ Qian Graves, FDA; Peng T Liu, FDA; Stuart Chirtel, FDA

512 CC-Room 23A Functional Data Analysis—Contributed

Biometrics Section, International Chinese Statistical Association, Section on Statistical Learning and Data Mining

Chair(s): Ann M. Brearley, University of Minnesota

- 10:35 a.m. **Varying Coefficient Models for Neuroimaging Data**—◆ Linglong Kong, The University of North Carolina at Chapel Hill; Hongtu Zhu, The University of North Carolina at Chapel Hill

- 10:50 a.m. **Joint Modeling of Paired Spatially Correlated Multilevel Functional Data**—◆ Beth Tidemann-Miller, North Carolina State University; Ana-Maria Staicu, North Carolina State University; Daowen Zhang, North Carolina State University

- 11:05 a.m. **Detecting Distributional Shifts in Functional Data**—◆ Gina-Maria Pomann, North Carolina State University; Ana-Maria Staicu, North Carolina State University; Sujit Kumar Ghosh, North Carolina State University

- 11:20 a.m. **Functional Multiple Imputation for Longitudinal Data with Binomial Outcomes**—◆ Stephanie Kliethermes, University of Iowa; Jacob Oleson, University of Iowa

- 11:35 a.m. **Oracally Efficient Estimation of Autoregressive Error Distribution Function**—◆ Jiangyan Wang, Soochow University; Lijian Yang, Soochow University/Michigan State University; Rong Liu, University of Toledo; Fuxia Cheng, Illinois State University

- 11:50 a.m. **A Wavelet-Based Nonparametric Approach to Association Analysis of Functional Data**—◆ Heejung Shim, The University of Chicago; Matthew Stephens, The University of Chicago

- 12:05 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

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513 CC-Room 24B **Interim Analysis Methods and Innovations—Contributed**

Biopharmaceutical Section

Chair(s): A. Lawrence Gould, Merck

- 10:35 a.m. **Multivariate B-Value: A Tool for Monitoring Data with Multiple Co-Primary Endpoints**—◆Yansong Cheng, Boston University; Surajit Ray, Boston University; Ying Zhu, Biogen Idec
- 10:50 a.m. **An Efficiency Ratio for Criteria Selection in Futility Assessment of Clinical Trials**—◆Jianliang Zhang, MedImmune
- 11:05 a.m. **Data Monitoring in Clinical Trials Using Innovative and Practical Bayesian Tool**—◆Soumi Lahiri, GlaxoSmithKline
- 11:20 a.m. **Predictive Power for Group Sequential Trials with Different Endpoint at Interim Look**—◆Shengyan Hong, MedImmune; Songfeng Wang, University of South Carolina
- 11:35 a.m. **Predicting the Event Time in Multicenter Clinical Trials with Time-to-Event Outcome as Primary Endpoint**—◆Nibedita Bandyopadhyay, Janssen Pharmaceuticals R&D
- 11:50 a.m. **Closed Tests for Multi-Arm Phase II Oncology Trials**—◆Karen Messer, University of California at San Diego; Hongying Li, University of California at San Diego; Minya Pu, University of California at San Diego
- 12:05 p.m. **The Case for Bayesian Predictive Probabilities for Interim Monitoring of Clinical Trials**—◆Benjamin Saville, Vanderbilt University School of Medicine; Jason Connor, Berry Consultants; Gregory Ayers, Vanderbilt University School of Medicine; JoAnn Alvarez, Vanderbilt University School of Medicine

514 CC-Room 29A **Heavy Tails and Long Memory—Contributed**

Business and Economic Statistics Section

Chair(s): Myung Suk Kim, Sogang University

- 10:35 a.m. **Robust Fitting of Heavy-Tailed Autoregressive Models Using Gini Autocovariance Functions**—◆Marcel Carcea; Robert Serfling, The University of Texas at Dallas
- 10:50 a.m. **Are the Tails Different from the Body? An International Approach to Stock Returns' Tail Dependence**—◆Jose Faias, Catolica Lisbon SBE
- 11:05 a.m. **Goodness-of-Fit Testing for Non-Causal Autoregressive Time Series with Stable Noise**—◆Yunwei Cui, University of Houston-Downtown; Thomas Fisher, University of Missouri-Kansas City; Rongning Wu, Baruch College

- 11:20 a.m. **A Goodness-of-Fit Test for Identifying the Maximum Domain of Attraction**—◆Tatsuyoshi Okimoto, Hitotsubashi University; Hiroaki Kaido, Boston University
- 11:35 a.m. **A New Portmanteau Test for Short Memory in Long Memory Processes**—Timothy Hughes, PacificSource; ◆Jaechoul Lee, Boise State University
- 11:50 a.m. **Risk and Return: Long-Run Relationships, Fractional Cointegration, and Return Predictability**—◆Natalia Sizova, Rice University
- 12:05 p.m. **Floor Discussion**

515 CC-Room 24A **Planning and Analysis in Oncology Clinical Trials—Contributed**

Biopharmaceutical Section

Chair(s): Tianle Hu, Eli Lilly and Company

- 10:35 a.m. **Confidence Interval Estimation of the Response Rate in a Two-Stage Gehan Design**—◆Xiaoling Wu, Celgene Corporation
- 10:50 a.m. **Two-Stage Winner Design with Survival Outcomes: Methods and Features**—◆Fang Fang, Bayer Healthcare Pharmaceuticals; Yong Lin, University of Medicine and Dentistry of New Jersey; Yunlin Li, K&L Consulting Services, Inc.; Jay Yang, K&L Consulting Services, Inc.; Xiaosha Sherman Zhang, Astellas Pharma Global Development, Inc.
- 11:05 a.m. **Statistical Evaluation of Loewe Additivity Model and Bliss Independence Model**—◆Wei Zhao, MedImmune; Lanju Zhang, MedImmune; Harry Yang, MedImmune
- 11:20 a.m. **Changes in Tumor Size as a Continuous Variable in Phase II Trials Rather Than WHO/RECIST Response to Improve Success Rate of Confirmatory Phase III Trials**—◆Zhengjia Chen, Biostatistics and Bioinformatics Shared Resource at Winship Cancer Institute; Sungjin Kim, Winship Cancer Institute; Taofeek K Owonikoko, Emory University; Zhibo Wang, Winship Cancer Institute; Suresh S Ramalingam, Emory University; Dong M Shin, Emory University; Fadlo R Khuri, Emory University; Jeanne Kowalski, Biostatistics and Bioinformatics Shared Resource at Winship Cancer Institute
- 11:35 a.m. **Analysis of Time-to-Event Data with Categories of Response**—◆Beiying Ding, Amgen, Inc.; Chunlei Ke, Amgen, Inc.
- 11:50 a.m. **Analyzing Time-to-Event of Interest: Methods of Competing Risk Analysis**—◆Kathy Zhang, Amgen, Inc.
- 12:05 p.m. **Event Projection and Adaptive Adjustment for Event-Driven Trials**—◆Xiaoqiang Xue, Quintiles, Inc.

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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516 CC-Room 27A Methods for Cancer Research—Contributed

ENAR, Biopharmaceutical Section

Chair(s): Jennifer Bobb, Harvard School of Public Health

- 10:35 a.m. **A Stochastic and State Space Mixture Model of Human Liver Cancer: Multiple Pathway Model Involving Both Hereditary and Non-Hereditary Cancer**—◆ Xiaowei Yan; Wai-Yuan Tan, University of Memphis
- 10:50 a.m. **A Prognostic Signature of Defective P53-Dependent G1 Checkpoint Function in Melanoma Cell-Lines**—◆ Bernard Omolo, University of South Carolina Upstate; William Kaufmann, The University of North Carolina at Chapel Hill; Joseph Ibrahim, The University of North Carolina at Chapel Hill; Craig Carson, The University of North Carolina at Chapel Hill
- 11:05 a.m. **A Joint Model of Cervical Cancer and Screening Tests for Use in Developing Cancer Screening Guidelines**—◆ Hormuzd Katki, National Cancer Institute; Rajeshwari Sundaram, National Institute of Child Health and Human Development
- 11:20 a.m. **A Genome-Wide Association Study of Lung Cancer and Copy Number Variation**—◆ Gen Nowak, Australian National University; Xihong Lin, Harvard University
- 11:35 a.m. **Biomarker Classifiers for Identifying Susceptible Subpopulations for Treatment Decisions**—◆ Wei-Jiun Lin, Feng Chia University; James J. Chen, FDA
- 11:50 a.m. **Detecting Substrates of Proteolysis via Silac Assays**—◆ William Forrest, Genentech
- 12:05 p.m. **Floor Discussion**

517 CC-Room 30D Bayesian Models and Applications 2—Contributed

Section on Bayesian Statistical Science

Chair(s): Samprit Banerjee, Weill Cornell Medical College

- 10:35 a.m. **Stepwise Signal Extraction via Marginal Likelihood**—◆ Chao Du, Harvard University; Sam Kou, Harvard University
- 10:50 a.m. **Robust Filtering**—◆ Laurent Calvet, HEC Paris; Veronika Czellar, HEC Paris
- 11:05 a.m. **A Bayesian Multivariate State-Space Connectivity Approach to Modeling Brain Dynamics**—◆ Jairo Fuquene, University of California at Santa Cruz; Raquel Prado, University of California at Santa Cruz
- 11:20 a.m. **Functional Time Series Analysis: A Bayesian Framework**—◆ Giovanni Petris, University of Arkansas

- 11:35 a.m. **A Relabeling Procedure for Dealing with Rotational Invariance in Bayesian Confirmatory Factor Analysis**—◆ Elena Erosheva, University of Washington; S. McKay Curtis, University of Washington
- 11:50 a.m. **Model-Based Comparative Effectiveness Estimation for Observational Time-to-Event Data Using Instrumental Variables**—◆ Purushottam Laud, Medical College of Wisconsin; Rodney Sparapani, Medical College of Wisconsin; Jessica Pruszynski, Medical College of Wisconsin; Robert McCulloch, The University of Texas
- 12:05 p.m. **Floor Discussion**

518 CC-Room 32B Inference from Combined Data Sets—Contributed

Section on Government Statistics, Section on Survey Research Methods

Chair(s): Wendy Martinez, Bureau of Labor Statistics

- 10:35 a.m. **Estimates of Correct and Erroneous Enumeration with Duplicates in the 2010 U.S. Census**—◆ Rachel Bray, U.S. Census Bureau
- 10:50 a.m. **Approaches to Designing and Conducting Research on Hospitalization in View of the Reduced Samples in the 2008–2010 National Hospital Discharge Surveys**—◆ Margaret Jean Hall, National Center for Health Statistics; Maria F Owings, National Center for Health Statistics
- 11:05 a.m. **Meta-Analysis of Sample Survey Data**—◆ Abera Wouhib, National Center for Health Statistics; Joe Fred Gonzalez, National Center for Health Statistics
- 11:20 a.m. **Linking the Teacher's Attitude Toward Job Condition 2003–04 Scale to 2007–08 Scale Using Concurrent Calibration**—◆ Weiwei Cui, National Institute of Statistical Sciences
- 11:35 a.m. **Racial Disparities in Delay of Diagnosis and Treatment Among Cancer Patients: Data Management Challenges for the SEER-Medicare Linked Database**—◆ Ji-Hyun Lee, Moffitt Cancer Center; Kate Fisher, Moffitt Cancer Center; Richard Roetzheim, University of South Florida
- 11:50 a.m. **The Rise in Multiple Births in the U.S.: An Analysis of a Hundred-Million Birth Records with R**—◆ Susan Ranney,
- 12:05 p.m. **Parametric Test of Equality of Two Frequency Distributions/Matrices**—◆ Silvia Irin Sharna, Jahangirnagar University; Mian Arif Shams Adnan, Jahangirnagar University; Md Shamsuddin, King Abdulaziz University



● Themed Session ■ Applied Session ◆ Presenter

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519 CC-Room 32A **■ Climate Applications—Contributed**

Section on Statistics and the Environment

Chair(s): Emily Lei Kang, University of Cincinnati

- 10:35 a.m. **Derivation of Phenological Information from Remotely Sensed Imagery for Improved Regional Climate Modeling**—◆Jing Wang, University of Illinois at Chicago; Nathan Moore, Michigan State University; Jiaguo Qi, Michigan State University; Lijian Yang, Soochow University/Michigan State University; Jennifer Olson, Michigan State University; Nathan Torbick, Applied Geosolutions; Jianjun Ge, Oklahoma State University
- 10:50 a.m. **Spatio-Temporal Data Fusion for Remote-Sensing Applications**—◆Hai Nguyen, California Institute of Technology; Matthias Katzfuss, Universität Heidelberg; Noel Cressie, The Ohio State University; Amy Braverman, California Institute of Technology
- 11:05 a.m. **Investigating the Spring-to-Summer Transition in Georgia**—◆Raymond Mooring, Analysis Made Easy; Lynne Seymour, The University of Georgia
- 11:20 a.m. **Model Sensitivity in Climate Reconstruction Using Tree-Ring Data**—◆Matthew Schofield, University of Kentucky
- 11:35 a.m. **Downscaling High-Resolution Precipitation from Regional Climate Model Output**—◆Ernst Linder, University of New Hampshire; Yibin Pan, University of New Hampshire; Eric M Laflamme, University of New Hampshire
- 11:50 a.m. **Spatio-Temporal Trend Analysis of Historic Records of Spring Bird Arrival**—◆Ali Arab, Georgetown University
- 12:05 p.m. **Hotspot Identification for Massive Spatial Data Sets**—◆Joshua French, University of Colorado Denver

520 CC-Room 22 **■ Epidemiologic Applications Involving Children and Women's Health and Smoking—Contributed**

Section on Statistics in Epidemiology, Section on Survey Research Methods

Chair(s): Robert (Bob) B Gerzoff, CDC

- 10:35 a.m. **Linkage of National Data on Assisted Reproductive Technology with Vital Records in Florida, Massachusetts, and Michigan**—◆Yujia Zhang, CDC; Bruce Cohen, Massachusetts Department of Public Health; William Sappenfield, University of South Florida; Violanda Grigorescu, CDC; Tonji Durant, CDC; Maurizio Macaluso, Cincinnati Children's Hospital Medical Center
- 10:50 a.m. **Classifications of Women's Menstrual Patterns and Related Epidemiology Explanations**—◆Xiaobi Huang, Merck; Sioban D Harlow, University of Michigan; Michael R. Elliott, University of Michigan

- 11:05 a.m. **Neighborhood Context Effects on Childhood Obesity: A Multilevel Analysis of Geocoded NSCH 2007**—◆Xingyou Zhang, CDC; James B Holt, CDC; Stephen Onufrak, CDC; Hua Lu, CDC; Janet B. Croft, CDC
- 11:20 a.m. **Optimum Grouping of Children Based on Early Childhood Growth Patterns**—◆Md Jobayer Hossain, Nemours Biomedical Research; Mingxing Gong, University of Delaware; Tim Bunnell, A.I. duPont Children Hospital; Samuel S. Gidding, A.I. duPont Children Hospital; Tim Wysocki, Nemours Children Clinic
- 11:35 a.m. **Bayesian Zero-Inflated Poisson Model and Its Application in Age-Specific Fertility Rate Pattern Estimation**—◆Yi Cao, The University of Texas at San Antonio; Jerome Keating, The University of Texas at San Antonio; Keying Ye, The University of Texas at San Antonio
- 11:50 a.m. **Measuring Social Smoking: Challenges for Analysis and Implications for Surveys and Intervention**—◆Kevin Delucchi, University of California at San Francisco; Danielle Ramo, University of California at San Francisco
- 12:05 p.m. **A Robust Bayesian Approach to Assessing Average Indirect (Mediation) Effect in Multilevel Models, with Application to a Smoking Study**—◆Yisheng Li, MD Anderson Cancer Center; Ying Yuan, MD Anderson Cancer Center

521 CC-Room 28A **■ Survey Measurement and Redesign—Contributed**

Section on Survey Research Methods

Chair(s): Bryan Sayer, Social and Scientific Systems, Inc.

- 10:35 a.m. **New Composite Indicator for the Business Tendency Survey**—◆Michel Grun-Rehomme; Olga Vasyechko, University Paris 1
- 10:50 a.m. **On the Performance of Redesigned Consumer Confidence Measurement**—◆Turknur Brand,
- 11:05 a.m. **Does Moving the Priority Condition Questions to the Beginning of Round 1 and the Streamlining of These Questions in the Medical Expenditure Panel Survey Produce Different Estimates?**—◆Frances M. Chevarley, Agency for Healthcare Research and Quality
- 11:20 a.m. **Concurrent Criterion-Related Validity of a Multidimensional Model of Symptoms of Depression in Organ Transplant Recipients**—◆Irene Feurer, Vanderbilt University Medical Center; Leigh Anne D Redhage, Vanderbilt University Medical Center
- 11:35 a.m. **Methodological Considerations in Estimating Adolescent Substance Use**—◆Joseph Gfroerer, SAMHSA; Jonaki Bose, SAMHSA; Larry Kroutil, RTI International; Marsha Lopez, NIDA; Laura Kann, CDC

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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- 11:50 a.m. **Kappa Statistic for Surveys and Complex Data—**
◆G. Gordon Brown, RTI International; Gayle S Bieler,
RTI International; Robert J Morris, RTI International
- 12:05 p.m. **Floor Discussion**

Contributed Poster Presentations 10:30 a.m.–12:20 p.m.

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Biopharmaceutical Section

Chair(s): Jianwei Chen, San Diego State University

- 01: Did Adult Liver Transplant Recipients Who Had Hepatitis C Prior to Transplant Receive Antiviral Therapy, January 1997 to June 2009 —** ◆Feifei Wei, University of Arkansas for Medical Science; Robin R. Whitebird, HealthPartners Research Foundation
- 02: Multivariate Statistical Methods Used for Lymphoblastoid Cell Lines Drug Response Shows Promise in Pharmacogenomics Gene Discovery —** ◆Chad C Brown, North Carolina State University; Tammy Havener, The University of North Carolina at Chapel Hill; Ronald Krauss, Children's Hospital Oakland Research Institute; Marisa Wong-Medina, Children's Hospital Oakland Research Institute; Kevin Long, The University of North Carolina at Chapel Hill; Howard McLeod, The University of North Carolina at Chapel Hill; Alison Anne Motsinger-Reif, North Carolina State University
- 03: Application of Masked Data Analysis for Study of Time-to-Event Endpoints: A Simulation Approach —** ◆Moumita Sinha, Biocon Limited; Ashok Kumar Singh, Biocon Limited
- 04: Development of Software for Simulation and Implementation of Optimal Response-Adaptive Randomization Designs in Time-to-Event Trials —** ◆Oleksandr Sverdlov, Bristol-Myers Squibb; Yevgen Ryznik, Kharkov National University of Economics; Weng-kee Wong, University of California at Los Angeles Fielding School of Public Health
- 05: Precision Study for a Qualitative Assay —** ◆Paul Hshieh, FDA/CBER; Tie-Hua Ng, FDA/CBER
- 06: Comparability of CTC/AE Grading and Clinical Significance in Abnormal Clinical Laboratory Results —** ◆Ashley Marie Pinckney, Rho, Inc.; Brian Hetzell, Rho, Inc.; Katharine Marie Poole, Rho, Inc.
- 07: Methods for Responder Analysis of Patient-Reported Outcomes —** ◆Alexandra I. Barsdorf, Pfizer Inc.; Kelly Zou, Pfizer Inc.; Martin M Carlsson, Pfizer Inc.; Joseph Cappelleri, Pfizer Inc.
- 08: Study at a Glance: Old Wine in a New Bottle —** ◆William Coar
- 09: Estimators of a Dose-Reduction Factor: A Comparison Study —** ◆Reid Landes, University of Arkansas for Medical Sciences; Shelly Y. Lensing, University of Arkansas for Medical Sciences; Ralph L Kodell, University of Arkansas for Medical Sciences; Martin Hauer-Jensen, University of Arkansas for Medical Sciences
- 10: A General Approach for Estimating Stopping Probabilities of Large Group Sequential Trials in Life-Threatening Conditions Monitoring Binary Efficacy and Safety Outcomes —** ◆Yanqiu Weng, Medical University of South Carolina; Wenle Zhao, Medical University of South Carolina; Yuko Palesch, Medical University of South Carolina
- 11: Escalation with Overdose Control Using Ordinal Toxicity Grades for Cancer Phase I Clinical Trials —** ◆Galen Cook-Wiens, Cedars Sinai Medical Center; Mourad Tighiouart, Cedars Sinai Medical Center; Andre Rogatko, Cedars Sinai Medical Center
- 12: Matching-Adjusted Indirect Comparison Using Bootstrapping for Comparative Effectiveness: Individual Patient Data vs. Published Aggregated Data —** ◆Daniel Parks, GlaxoSmithKline; Xiwu Lin, GlaxoSmithKline; Alan J Menius, GlaxoSmithKline; Kwan R. Lee, GlaxoSmithKline
- 13: Analyzing Hypoglycemia Events with Negative Binomial Regression Model —** ◆Yongming Qu, Eli Lilly and Company; Junxiang Luo, Eli Lilly and Company
- 14: A Comparison of Multivariate Methods for Measuring Change from Pre-Test to Post-Test —** ◆Justin Rogers, Abbott Laboratories; Daniel Mundfrom, Eastern Kentucky University
- 15: Zero-Inflated Poisson and Negative Binomial Models Applied to the Analysis of Colorectal Polyp Prevention Trial Data —** ◆Christopher Davidson, University of Arizona; Chiu-Hsieh Hsu, University of Arizona
- 16: Some Considerations in Selecting Noninferiority (NI) Margin in Noninferiority Trials —** ◆Huei Wang, Amgen, Inc.; Guanghui Wei, Amgen, Inc.
- 17: Simulation Study on Bioequivalence Tests Under Several Variability Conditions —** ◆Denka Markova, Axio Research Inc.; Dean Young, Baylor University
- 18: An Application of Adaptive Randomization to Guide Dose-Finding in a Large Multicenter Phase I Clinical Trial —** ◆Alison Marie Graham, Abbott; Wijith Prasantha Munasinghe, Abbott Laboratories; James Bolognese, Cytel Inc.; Yi-Lin Chiu, Abbott Laboratories
- 19: 1 Plus 1 Equals 3: Searching for In Vivo Synergy —** ◆Mandy Bergquist, GlaxoSmithKline; Jonathan Hommel, University of Texas Medical Branch; Andrea Acker, GlaxoSmithKline; Mark Paulik, GlaxoSmithKline
- 20: Aligned Rank Tests: An Application to Clinical Trials —** ◆John Kloke, University of Wisconsin-Madison; Tom Cook, University of Wisconsin-Madison
- 21: Evaluating Oncology Phase II Study Designs —** ◆Zhuying Huang, PPD; Hui Liu, PPD; Lindsey Lian, PPD



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- 22: On the Problem of Identifiability of the EMAX Model** — ◆ Ha Nguyen, Pfizer Inc.; Birol Emir, Pfizer Inc.; Javier Cabrera, Rutgers University; Feihan Lu, New York University
- 23: Power and Sample Size Investigation for Exact McNemar and Cochran's Q Tests in Repeated Measurements of Binary Data** — ◆ James Lee, Daiichi Sankyo Pharma Development; Dar Shong Hwang, BRSI; Chyi-Hung Hsu, Janssen Pharmaceuticals, Inc.
- 24: Measures of Agreement Beyond Two Raters** — ◆ Tie-Hua Ng, FDA/CBER
- 25: Power and Sample Size Estimation in Clinical Trials with Multiple Co-Primary Endpoints** — ◆ Zuoshun Zhang, Celgene Corporation
- 26: Estimating Pharmacokinetics Parameters Using Meta-Analysis and Nonlinear Mixed Effects Model** — ◆ Wijith Prasantha Munasinghe, Abbott Laboratories; Balakrishna Hosmane, Abbott Laboratories; Rajendra Pradhan, Abbott Laboratories; Yi-Lin Chiu, Abbott Laboratories
- 27: Case-Cohort Data Analyses with an Application in Vaccine Trial** — ◆ Shu-Chih Su, Merck Research Laboratories; Guanghan Liu, Merck Research Laboratories; Ivan Chan, Merck
- 28: Methods for Pairwise Comparison of Treatment Levels in a Functional Data Setting** — ◆ Olga Vsevolozhskaya, Montana State University; Mark Greenwood, Montana State University; Dmitri Holodov, Voronezh State University
- 29: Predicting a Binary Outcome with Dose-Response Data** — ◆ Yang Zhang, University of Pittsburgh
- 30: An Adaptive Oncology Dose-Finding Trial Using the Time-to-Event Continual Reassessment Method Incorporating Cycle Information** — ◆ Bo Huang, Pfizer Inc.
- 31: Generalized Estimation of the Treatment Effects in Mixed-Effects Model: A Comparison with ML and REML** — ◆ Ching-Ray Yu, Pfizer Inc.; Kelly Zou, Pfizer Inc.; Martin M Carlsson, Pfizer Inc.; Samaradasa Weerahandi, Pfizer Inc.
- 32: A New Tool for Flagging Adverse Events of Potential Clinical Interest** — ◆ Li Zhou, Axio Research Inc.; David Kerr, Axio Research Inc.
- 33: The Optimal Thresholds of Biomarkers by Maximizing Various Metrics** — ◆ Kelly Zou, Pfizer Inc.; Martin M Carlsson, Pfizer Inc.; Kezhen Liu, State University of New Jersey; Ching-Ray Yu, Pfizer Inc.
- 34: Incorporating Continuity Corrections When Illustrating Noninferiority with Binomial Proportions** — ◆ Brianna Bright, University of Nebraska; Julia Soulakova, University of Nebraska
- 35: Considering Efficacy in Tumor Genotypes in a Two-Stage Adaptive Design for Oncology Trials** — ◆ Jinwei Yuan, ICON Clinical Research
- 36: Creating a Better, Shorter DMC Report: A Stack of Needles, Not a Needle in a Haystack** — ◆ David Kerr, Axio Research Inc.; William Coar; Shannon Grant, Axio Research Inc.

523 CC-Sails Pavilion Contributed Oral Poster Presentations: ENAR — Contributed

ENAR

Chair(s): Jianwei Chen, San Diego State University

- 37: A Simulation Study Comparing Methods for Adjusting Confounding in EMR Data with Real World Complex Heterogeneity in the Treatment Assignment** — ◆ Haibo Zhou, The University of North Carolina at Chapel Hill; Jichang Yu, The University of North Carolina at Chapel Hill; Fei Zou, The University of North Carolina at Chapel Hill; Xianchen (Jason) Liu, Pfizer Inc.; Richard J Willke, Pfizer Inc.
- 38: Latent Process Decomposition of Next-Generation Sequencing Data** — ◆ Sanvesh Srivastava, Purdue University; R. W. Doerge, Purdue University
- 39: Using the Polynomial Power Method to Simulate Data with Correlated Non-Normal Error Structure for Assessing Methods Proposed for Family-Containing Genetic Association Tests** — ◆ T. Beasley, The University of Alabama at Birmingham; Russell Wolfinger, SAS Institute; Wendy Czika, SAS Institute; Hemant K Tiwari, The University of Alabama at Birmingham; David B. Allison, The University of Alabama at Birmingham
- 40: A Study on the Role of Stress in the Lives of African-American Women** — ◆ Sayan Dasgupta; Cheryl Giscombe, The University of North Carolina at Chapel Hill
- 41: Assessing Correlation of Clustered Mixed Outcomes from a Multivariate Generalized Linear Mixed Model** — ◆ Hsiang-chun Chen, Texas A&M University; Thomas E. Wehrly, Texas A&M University

524 CC-Sails Pavilion Contributed Oral Poster Presentations: IMS — Contributed

IMS

Chair(s): Jianwei Chen, San Diego State University

- 42: Non-Convex Penalized Conditional Mean Subspace in Multivariate Regression** — ◆ Chongsun Park, Sungkyunkwan University; Jae Keun Yoo, Ewha Womans University
- 43: Comparing Two Scales Measuring Perceived Leg Exertion During Exercise in Children** — ◆ Marianne Huebner, Mayo Clinic; Zhen Zhang, Michigan State University; Patrick McGrath, Dalhousie University; Paolo Pianosi, Mayo Clinic
- 44: The Effect of Uncertainty About the Alternative Source Population on the Assessment of the Value of Forensic Evidence** — ◆ Christopher Saunders, George Mason University

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

525 CC-Sails Pavilion Contributed Oral Poster Presentations: International Chinese Statistical Association — Contributed

International Chinese Statistical Association

Chair(s): Jianwei Chen, San Diego State University

- 45: **Survival Analysis for Melanoma Brain Metastasis in the Presence of Competing Risks** —◆ Meng Qian, New York University; Michelle Ma, New York University; Iman Osman, New York University; Yongzhao Shao, New York University
- 46: **Recursive Equations in Finite Markov Chain Imbedding** —◆ Yu-Fei Hsieh
- 47: **On Variable Selection for Large-Dimensional Categorical Data Analysis** —◆ Philip E. Cheng, Academia Sinica; Keng-Min Lin, Academia Sinica; Michelle Liou, Academia Sinica; Ben-Chang Shia, Fu-Jen Catholic University

526 CC-Sails Pavilion Contributed Oral Poster Presentations: Section on Statistics in Epidemiology — Contributed

Section on Statistics in Epidemiology, Section on Statistics and the Environment

Chair(s): Jianwei Chen, San Diego State University

- 48: **Mapping Disease Risk with Changing Census Boundaries** —◆ Paul Nguyen, University of Toronto; Patrick Brown, Cancer Care Ontario; Jamie Stafford, University of Toronto
- 49: **The Comprehensive Epidemiologic Data Resource** —◆ Janice Watkins, Oak Ridge Associated Universities
- 50: **Piecewise Exponential Survival Times and Analysis of Case-Cohort Data** —◆ Barry I. Graubard, National Cancer Institute; Yan Li, The University of Texas at Arlington; Jay Lubin, National Cancer Institute; Dale Preston, Hirosoft International; Mitchell H Gail, National Cancer Institute
- 51: **Confidence Intervals for Subsampled Poisson Random Variables** —◆ Owen Devine, CDC
- 52: **Data Quality Evaluation Using MART Guided Generalized Linear Mixed Model with Application to Evaluate the Seer Cancer Staging Data** —◆ Qingzhao Yu, Louisiana State University Health Sciences Center; Ying Fan, Louisiana State University Health Sciences Center; Xiao Cheng Wu, Louisiana State University Health Sciences Center
- 53: **Semi-Markov Models for Transitions from Cognitively Intact to Clinically Impaired** —◆ Richard Kryscio, University of Kentucky; Yushun Lin, Citi Bank; Erin Abner, Center on Aging
- 54: **The Robust TDT-Type Test Under Informative Parental Missingness** —◆ Jin-Hua Chen; Kuang-Fu Cheng, China Medical University
- 55: **The Keokuk County CAFO Study: A Complementary Analysis Using Classification Trees** —◆ Leonard Gordon

- 56: **Development of a Bayesian Joint Logistic Model (BJLM) to Better Study the Association Between Haplotypes and Disease** —◆ Anthony D'Amelio, MD Anderson Cancer Center; Carol Etzel, MD Anderson Cancer Center
- 57: **Comparison of Internal Model Validation Methods for Multifactor Dimensionality Reduction to Find Genetic Heterogeneity Models** —◆ Holly Sweeney, North Carolina State University; Jeffrey Joseph Gory, North Carolina State University
- 58: **Predicting Cholera Cases from Environmental Variables Using Sequential Monte Carlo Methods** —◆ Amanda Allen, University of Washington; Vladimir N Minin, University of Washington; Ira Longini, Emerging Pathogens Institute; Jon Wakefield, University of Washington; Elizabeth Halloran, University of Washington
- 59: **Extension of Grammatical Evolution Decision Trees for Family Trio Data** —◆ Amanda English
- 60: **A Forest Approach to Defining a Study Population** —◆ Emil Pitkin, The Wharton School
- 61: **A Forest Approach to Defining a Study Population** —◆ Justin Bleich, The Wharton School
- 62: **An Adaptation of Weighted Case-Control Logistic Regression to Predict Alcohol Withdrawal in Hospitalized Patients** —◆ G. Kolm, Christiana Center for Outcomes Research; Edward Ewen, Christiana Care Health System
- 63: **Bridged or Not Bridged** —◆ Jieru Chen, CDC
- 64: **Variance Estimation for Directly Standardized Surveillance Rates with Multiply Imputed Race Categories** —◆ Tracy Pondo, CDC
- 65: **Using a Reference Survey and Propensity Scores to Adjust BRFSS Survey Weights to Compensate for Non-Cell Phone Coverage** —◆ Julia Zhu, CDC
- 66: **Childhood Obesity Disparities: A Case Study of Hierarchical Spatial Models** —◆ Jonggyu Baek, University of Michigan; Emma V. Sanchez-Vaznaugh, San Francisco State University
- 67: **Robust Outcome Analysis for Observational Studies Designed Using Propensity Score Matching** —◆ Bradley E Huitema, Western Michigan University; Scott Kosten, Western Michigan University; Joseph W McKean, Western Michigan University
- 68: **Methodology for Measuring Progress and Disparities in Healthy People 2010** —◆ Leda Gurley, National Center for Health Statistics
- 69: **Modeling Highly Complex Models of Disease Risk** —◆ Bethany Vohlers, North Carolina State University; Erika Alpeter, North Carolina State University
- 70: **A Simulation Adjustment for Ancestry Using GWAS in Recently Admixed Populations** —◆ Jianqi Zhang, University of Southern California; Daniel O. Stram, University of Southern California



● Themed Session ■ Applied Session ◆ Presenter

- 71: Homozygosity by Descent and Risk for Schizophrenia in Palau** — ◆ Cong Lu, Carnegie Mellon University; Nadine Melhem, University of Pittsburgh; Bernie Devlin, University of Pittsburgh
- 72: Regional Income Differences as a Predictor of Immunological Outcomes** — ◆ Henry Bahnson
- 73: Genotype Imputation with Population-Specific Reference Panels** — ◆ Hye Sung Min; Matthew Zawistowski, University of Michigan; Sebastian Zöllner, University of Michigan
- 74: Meta-Analysis of Epidemiologic Studies on Tricyclic Antidepressants and Fracture Risk** — ◆ Qing Wu, Mayo Clinic; Wenchun Qu, Mayo Clinic; Michael D Crowell, Mayo Clinic; Joseph G Hentz, Mayo Clinic; Keith A Frey, Mayo Clinic

527 CC-Sails Pavilion
Contributed Oral Poster Presentations: SSC — Contributed

- SSC
 Chair(s): Jianwei Chen, San Diego State University
- 75: A Hierarchical Bayes Model for Biomarker Subset Effects in Clinical Trials** —◆ Bingshu Chen, Queen's University; Wenyu Jiang, Queen's University; Dongsheng Tu, Queen's University
 - 76: Stein Rules in Some Heteroscedastic Linear Model** — ◆Severien Nkurunziza, University of Windsor

528 CC-Sails Pavilion
Contributed Oral Poster Presentations: WNAR—Contributed

- WNAR
 Chair(s): Jianwei Chen, San Diego State University
- 77: A Scoring System for Consensus Sequence Matching**— ◆Dongseok Choi, Oregon Health and Science University; Kathryn Carr, Oregon Health and Science University; Lauren Hayashi, Oregon Health and Science University; Marry J Kelley, Oregon Health and Science University; Ted Acott, Oregon Health and Science University
 - 78: Estimating Identity by Descent Among Multiple Individuals in Populations**—◆Christopher Glazner, University of Washington; Elizabeth Alison Thompson, University of Washington

Speaker with Lunch 12:30 p.m.–1:50 p.m.

- 529** CC-Room 33C
Section on Health Policy Statistics Speaker with Lunch (fee event)—Speaker with Lunch
 Health Policy Statistics Section
 Organizer(s): Ofer Harel, University of Connecticut
- WL10 The Impact of Comparative Effectiveness Research on the Clinical Research Enterprise—◆Sheldon Greenfield, Health Policy Research Center

P.M. Roundtables 12:30 p.m.–1:50 p.m.

- 530** CC-Ballroom D
Biopharmaceutical Section P.M. Roundtable Discussion (fee event)
 Biopharmaceutical Section
 Organizer(s): Estelle Russek-Cohen, FDA/CBER
- WL11 Existing Practice and New Trends in Bioassay—◆Lev Sirota, FDA
 - WL12 Postmarket Surveillance Issues—◆Theodore Lystig, Medtronic
 - WL13 Evaluation of Sex Differences in Clinical Studies—◆Chul Ahn, FDA/CDRH
 - WL14 Design a Clinical Trial: Sequential Design or Fixed Sample Size Design?—◆Judy Li, FDA
 - WL15 Testing the Assumptions of Proportional Hazards—◆Nfi Ndikintum
 - WL16 Guidelines on Handling Missing Data in Clinical Trials: Present and Future—◆Xin Zhao, Merck

531 CC-Ballroom D
Section for Statistics Programmers and Analysts P.M. Roundtable Discussion (fee event)

- Section for Statistical Programmers and Analysts
 Organizer(s): Nancy Petersen, Department of Veterans Affairs
- WL17 Writing a Statistical Programming Blog: Strategies for Effective Communication—◆Rick Wicklin, SAS Institute

532 CC-Ballroom D
Section on Bayesian Statistics P.M. Roundtable Discussion (fee event)

- Section on Bayesian Statistical Science
 Organizer(s): Peter Thall, MD Anderson Cancer Center
- WL18 Bayesian Models for High-Throughput Omics Data— ◆Yuan Ji, Northshore University Healthcare System
 - WL19 Bayesian Nonparametrics Methods: Practical Issues and Current Frontiers—◆David Dahl, Brigham Young University



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

533 CC-Ballroom D Section on Government Statistics P.M. Roundtable Discussion (fee event)

Section on Government Statistics

Organizer(s): Eric Rancourt, Statistics Canada

WL20 The Census of Population. Now What?—◆David Dolson, Statistics Canada

534 CC-Ballroom D Section on Quality and Productivity P.M. Roundtable Discussion (fee event)

Quality and Productivity Section

Organizer(s): Willis Jensen, W.L. Gore and Associates

WL21 Multivariate Process Monitoring for Nonmanufacturing Applications—◆James Christian, SAS Institute

535 CC-Ballroom D Section on Statistical Consulting P.M. Roundtable Discussion (fee event)

Section on Statistical Consulting

Organizer(s): Nancy Hu, University of Utah

WL22 Beyond Number Crunching and Data Monitoring: Challenging Roles for CRO Statisticians—◆Jia Hu, Synteract Inc.; Mark Mortier, Synteract Inc.; Elizabeth Ludington, Synteract Inc.

536 CC-Ballroom D Section on Statistical Education P.M. Roundtable Discussion (fee event)

Section on Statistical Education

Organizer(s): Amy Wagaman, Amherst College

WL23 What's Done on Day One? Set the Tone for the Long Run!—◆Larry Lesser, The University of Texas at El Paso

WL24 Implementing Group Projects in College Statistics Courses—◆Stacey Hancock, Clark University

WL25 Using Simulation Methods to Introduce Inference: Why, When, and How?—◆Kari Lock Morgan, Duke University

537 CC-Ballroom D Section on Statistics and the Environment P.M. Roundtable Discussion (fee event)

Section on Statistics and the Environment

Organizer(s): Veronica J Berrocal, University of Michigan

WL26 How Do We Adjust for Confounding Factors in Environmental Health?—◆Francesca Dominici, Harvard School of Public Health

538 CC-Ballroom D Section on Survey Research Methods P.M. Roundtable Discussion (fee event)

Section on Survey Research Methods

Organizer(s): Frauke Kreuter, Joint Program in Survey Methodology

WL27 Challenges with Linking Survey and Administrative Data Sets—◆Joe Sakshaug, German Institute for Employment Research (IAB)

539 CC-Ballroom D Social Statistics Section P.M. Roundtable Discussion (fee event)

Social Statistics Section

Organizer(s): Deborah H Griffin, U.S. Census Bureau

WL28 Testing and Implementing an Internet Survey Response Option—◆Jennifer Tancreto, U.S. Census Bureau

WL29 Using the American Community Survey to Improve Sample Design and Survey Weighting—◆Alfredo Navarro, U.S. Census Bureau

Invited Sessions 2:00 p.m.–3:50 p.m.

540 HQ-Sapphire B ■ ● Shrinkage Estimation: Unifying Different Perspectives—Invited

Biometrics Section, Section on Survey Research Methods, International Chinese Statistical Association, International Indian Statistical Association

Organizer(s): Bhramar Mukherjee, University of Michigan

Chair(s): Philip S Boonstra, University of Michigan

2:05 p.m. Bayesian Friends with Benefits: Partial Shrinkage—◆Xiao-Li Meng, Harvard University

2:30 p.m. Shrinkage Adjustment for Model Selection—◆Edward I. George, University of Pennsylvania; Dani Yekutieli, Tel Aviv University

2:55 p.m. Robust Minimax Shrinkage Estimation for Spherically Symmetric Distributions Under Concave Loss—◆William E. Strawderman, Rutgers University

3:20 p.m. Understanding Shrinkage in a Decision Theoretic Framework—◆Kenneth M. Rice, University of Washington

3:45 p.m. Floor Discussion

541 CC-Room 26B ■ ● Statistical Issues in Modeling fMRI Data—Invited

ENAR, International Indian Statistical Association, Statistics Surveys Online Journal, Section on Statistics in Imaging

Organizer(s): Mulugeta Gebregziabher, MUSC

Chair(s): Kenneth Vaden, MUSC



● Themed Session ■ Applied Session ◆ Presenter

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- 2:05 p.m. **An Overview of Statistical Issues in fMRI Data Analysis**—◆ Nicole A. Lazar, University of Georgia
- 2:25 p.m. **The Effect of Model Misspecification in Functional Connectivity**—◆ Gina D'Angelo, Washington University School of Medicine
- 2:45 p.m. **Modeling Complex Functional Brain Networks: A Brief Overview of Challenges and Potential Solutions**—◆ Sean Lorenzo Simpson, Wake Forest School of Medicine
- 3:05 p.m. **Dealing with Missing fMRI Data in Whole-Brain Analysis**—◆ Mulugeta Gebregziabher, MUSC; Kenneth Vaden, MUSC; Stefanie E Kuchinsky, MUSC; Mark A. Eckert, MUSC
- 3:25 p.m. Disc: Martin Lindquist, Columbia University
- 3:45 p.m. **Floor Discussion**

- 2:05 p.m. **Human Rights and Statistics: A Reciprocal Relationship**—◆ Jessica Mary Wyndham, AAAS Scientific Responsibility, Human Rights and Law Program
- 2:30 p.m. **Argentina: An Update on Credibility in CPI and Other Official Statistics and Perils Endured by Some Statisticians**—◆ Edmundo Berumen, Berumen y Asociados, SA de CV; Victor A Beker, Economia de la Universidad de Belgrano
- 2:55 p.m. **International Responses to Governmental Targeting of Statisticians and Research Organizations in Argentina**—◆ William Seltzer, Fordham University
- 3:20 p.m. Disc: Joseph B. Kadane, Carnegie Mellon University
- 3:40 p.m. **Floor Discussion**

542 CC-Room 22
■ ● Progress in Pre-Clinical Safety Biomarker Qualification in the Predictive Safety Testing Consortium (PSTC): An FDA Critical Path Initiative—Invited

Biopharmaceutical Section
 Organizer(s): Xiaoyu Jiang, Boehringer Ingelheim Pharmaceuticals, Inc.
 Chair(s): Xiaoyu Jiang, Boehringer Ingelheim Pharmaceuticals, Inc.

- 2:05 p.m. **Observational Study to Determine Reference Ranges for Novel Renal Biomarkers in Healthy Volunteers**—◆ Jaromir Mikl, Boehringer Ingelheim Pharmaceuticals, Inc.
- 2:25 p.m. **Statistical Methods for Biomarker Performance Evaluation**—◆ David Raunig, ICON Medical Imaging
- 3:05 p.m. **Kidney Toxicity Biomarker Qualification: A Journey Along the Critical Path**—◆ Dan Holder, Merck Research Laboratories
- 3:25 p.m. **Lessons Learned from the Carcinogenicity Working Group: From Biomarker Discovery to Predictive Modeling**—◆ Alex Adai, Asuragen, Inc.
- 3:35 p.m. Disc: Sue-Jane Wang, FDA
- 3:45 p.m. **Floor Discussion**

544 HQ-Sapphire L
■ The Roles of Language in Teaching Statistics: Research and Practice—Invited

Section on Statistical Education, International Indian Statistical Association
 Organizer(s): Lawrence M Lesser, The University of Texas at El Paso
 Chair(s): Allan Rossman, California Polytechnic State University

- 2:05 p.m. **Addressing Lexical Ambiguity in the Classroom**—◆ Diane Fisher, University of Louisiana at Lafayette; Jennifer Kaplan, University of Georgia; Neal Rogness, Grand Valley State University
- 2:35 p.m. **Assessing Student Writing in Statistics**—◆ Jennifer Kaplan, University of Georgia; Neal Rogness, Grand Valley State University; Diane Fisher, University of Louisiana at Lafayette
- 3:05 p.m. **English Language Learners in the Statistics Classroom: Research, Resources, and Recommendations**—◆ Amy Wagler, The University of Texas at El Paso; Lawrence M Lesser, The University of Texas at El Paso; Angelica Monarrez, The University of Texas at El Paso; Berenice Salazar, The University of Texas at El Paso
- 3:35 p.m. **Floor Discussion**

543 HQ-Sapphire U
■ Repression of Statistics and Statisticians by the Argentine Government: Recent Developments, the Human Rights Context, and International Responses—Invited

Committee on Scientific Freedom and Human Rights, SSC, Section on Survey Research Methods, Business and Economic Statistics Section, International Indian Statistical Association, Section on Government Statistics, Statistics Without Borders
 Organizer(s): Joseph B. Kadane, Carnegie Mellon University
 Chair(s): Joseph B. Kadane, Carnegie Mellon University

545 HQ-Sapphire E
● Extremes with Applications to Climate Studies—Invited

Section on Statistics and the Environment, Section on Risk Analysis, SSC
 Organizer(s): Huixia Judy Wang, North Carolina State University
 Chair(s): Huixia Judy Wang, North Carolina State University

- 2:05 p.m. **A Model for Extremes on a Regular Spatial Lattice**—◆ Daniel Cooley, Colorado State University
- 2:30 p.m. **Bayesian Empirical Likelihood for Quantile Regression: A Bayesian Approach to Efficiently Model Multiple Tail Quantiles**—◆ Yunwen Yang, Drexel University; Xuming He, University of Michigan

Wednesday



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

550 HQ-Sapphire C
● Memorial Session for Paul Meier: Statistician, Scientist, and Educator—Invited

Memorial, JSM 2012 Host Local Chapter - San Diego, Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Sandy Zabell, Northwestern University; Chris Barker, Statistical Planning and Analysis Service

Chair(s): Chris Barker, Statistical Planning and Analysis Service

- 2:05 p.m. **A Brief Overview of the Life of Paul Meier—**
◆ Ronald Thisted, The University of Chicago
- 2:15 p.m. **Memories of Working on Clinical Trials with Paul Meier—**
◆ David DeMets, University of Wisconsin-Madison
- 2:35 p.m. **Paul Meier as a National Spokesman for Good Science: His Roles in AIDS Research and as an FDA Advisor—**
◆ Susan S Ellenberg, University of Pennsylvania
- 2:55 p.m. **Paul Meier's Anatomy of the Cox Regression Model—**
◆ Theodore Karrison, The University of Chicago
- 3:15 p.m. **The Foundations of Randomized Clinical Trials—**
◆ Marvin Zelen, Harvard School of Business
- 3:35 p.m. **Paul Meier and the Law—**
◆ Sandy Zabell, Northwestern University
- 3:45 p.m. **Floor Discussion**

Invited Panels 2:00 p.m.—3:50 p.m.

551 HQ-Sapphire D
■ ● Predictive Analytics and Data Mining: The Software-Makers—Invited

Section on Statistical Learning and Data Mining, International Indian Statistical Association

Organizer(s): Peter C Bruce, Statistics.com

Chair(s): Peter C Bruce, Statistics.com

- Panelists:**
- ◆ Ralf Klinkenberg, Rapid-I
 - ◆ Daniel Fylstra, Frontline Systems
 - ◆ Dean Abbott, Abbott Analytics
 - ◆ Dan Steinberg, Salford Systems
 - ◆ David Smith, Revolution Analytics
 - ◆ Thomas Hill, Statsoft
 - ◆ Wayne Thompson, SAS Institute
- 3:45 p.m. **Floor Discussion**

Topic-Contributed Sessions 2:00 p.m.—3:50 p.m.

552 CC-Room 30D
■ ● Flexible and Powerful Approaches to Process Optimization Using Bayesian Methods—Topic-Contributed

Quality and Productivity Section, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): John J. Peterson, GlaxoSmithKline

Chair(s): Aili Cheng, GlaxoSmithKline

- 2:05 p.m. **Bayesian Optimization for a Chemical Reaction Using a Nonlinear Mixed-Effects Model—**
◆ Richard Lewis, GlaxoSmithKline; Brian Crump, GlaxoSmithKline; Zifang Guo, North Carolina State University; John J. Peterson, GlaxoSmithKline
- 2:25 p.m. **Compromise Ascent Directions for Multiple Response Applications—**
◆ David Edwards, Virginia Commonwealth University
- 2:45 p.m. **A Bayesian Approach to the Analysis of Split-Plot Product Arrays and Prediction in Robust Parameter Design—**
◆ Adam Pintar, National Institute of Standards and Technology; Timothy Robinson, University of Wyoming; Christine Anderson-Cook, Los Alamos National Laboratory; Michael S Hamada, Los Alamos National Laboratory
- 3:05 p.m. **A QBD Case Study: Bayesian Prediction of Lyophilization Cycle Parameters—**
◆ David LeBlond, Abbott; Linas Mockus, Purdue University
- 3:25 p.m. **Disc:** Daniel Apley, Northwestern University
- 3:45 p.m. **Floor Discussion**

553 CC-Room 26A
■ ● Recent Advances in Survival Analysis—Topic-Contributed

ENAR, Biopharmaceutical Section, Biometrics Section, International Chinese Statistical Association, Statistics Surveys Online Journal

Organizer(s): Mei-Ling Ting Lee, University of Maryland

Chair(s): David Oakes, University of Rochester

- 2:05 p.m. **Recent Advances in Survival Analysis—**
◆ Thomas Scheike, University of Copenhagen
- 2:25 p.m. **Bayesian Variable Selection Under the Proportional Hazards Mixed-Effects Model—**
◆ Ronghui Xu, University of California at San Diego; Kyeong Eun Lee, Kyungpook National University; Yongku Kim, Yoengnam University
- 2:45 p.m. **Analysis of Failure Time Using Threshold Regression with Semiparametric Varying Coefficients—**
◆ Jialiang Li, Duke-NUS Graduate Medical School; Mei-Ling Ting Lee, University of Maryland

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 3:05 p.m. **Sequential Test with Linear Transformation Model for Censored Data**—Lin Huang, Children's Hospital Boston/Harvard Medical School; ◆ Zhezhen Jin, Columbia University
- 3:25 p.m. **Variable Selection for Penalized Threshold Regression**—◆ Xin He, University of Maryland; Mei-Ling Ting Lee, University of Maryland
- 3:45 p.m. **Floor Discussion**

554 CC-Room 23A ■ **Drug Combination Studies: From Discovery to Clinical—Topic-Contributed**

Biopharmaceutical Section

Organizer(s): Gregory Hather, Millennium: The Takeda Oncology Company

Chair(s): Ray Liu, Millennium: The Takeda Oncology Company

- 2:05 p.m. **Nonlinear Blending: A General Approach to Synergy Assessment**—◆ John J. Peterson, GlaxoSmithKline
- 2:25 p.m. **A Phase I/II Clinical Trial Design for Drug Combinations**—◆ Xuelin Huang, MD Anderson Cancer Center; Sangbum Choi, MD Anderson Cancer Center
- 2:45 p.m. **Codevelopment of Two Unmarketed Investigational Drugs: FDA Guidance and Experiences**—◆ Wen Zeng, FDA; Greg (Guoxing) Soon, FDA
- 3:05 p.m. **Experimental Design for In Vitro Drug Combination Studies**—◆ Gregory Hather, Millennium: The Takeda Oncology Company; Huaihou Chen, Columbia University; Ray Liu, Millennium: The Takeda Oncology Company
- 3:25 p.m. **Applying Parametric and Nonparametric Models to Assess Treatment Effect and Drug Synergy for Combination Therapy**—◆ Maiying Kong, University of Louisville; Jack Lee, MD Anderson Cancer Center
- 3:45 p.m. **Floor Discussion**

555 CC-Room 29B **Bayesian Modeling: Application in Clinical Trial Design and Analysis—Topic-Contributed**

Section on Bayesian Statistical Science, Biopharmaceutical Section

Organizer(s): Huyuan Yang, Millennium Pharmaceuticals, Inc.

Chair(s): Mingxiu Hu, Millennium Pharmaceuticals, Inc.

- 2:05 p.m. **Multivariate Meta-Analysis Box-Cox Transformation Models for Individual Patient Data with Applications to Evaluation of Cholesterol-Lowering Drugs**—◆ Ming-Hui Chen, University of Connecticut; Sungduk Kim, National Institutes of Health; Joseph Ibrahim, The University of North Carolina at Chapel Hill; Arvind K Shah, Merck Research Laboratories; Jianxin Lin, Merck Research Laboratories
- 2:25 p.m. **Bayesian Adaptive Design for Evaluating Treatment with Predefined Subgroup**—◆ Ying Yang, FDA
- 2:45 p.m. **A Bayesian Adaptive Design for Phase II Clinical Trials**—◆ Sijin Wen, MD Anderson Cancer Center; Donald Berry, MD Anderson Cancer Center
- 3:05 p.m. **Bayesian Resampling in Futility Analysis Based on Multiple Studies**—◆ Jun Zhao, Merck; Annpey Pong, Merck; Jingshan Zhang, Celgene Corporation
- 3:25 p.m. **Bayesian Approach in Phase III Outcome Prediction Aiming Early Phases Decisionmaking**—Yuanjun Shi, Millennium Pharmaceuticals, Inc.; Bronwyn Loong, Harvard University; ◆ Huyuan Yang, Millennium Pharmaceuticals, Inc.
- 3:45 p.m. **Floor Discussion**

556 CC-Room 21 ■ ● **Recent Innovations in Pharmaceutical Statistics—Topic-Contributed**

Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Sujit Kumar Ghosh, North Carolina State University

Chair(s): Amit Bhattacharyya, GlaxoSmithKline

- 2:05 p.m. **Gatekeeping Procedures in Complex Multiplicity Problems in Clinical Trials**—◆ Olga V Marchenko, Quintiles, Inc.; Alex Dmitrienko, Quintiles, Inc.
- 2:25 p.m. **Use of Bayesian Methods in Making Pharmaceutical Internal Decisions**—◆ Mani Lakshminarayanan, Merck
- 2:45 p.m. **A Comparative Study of the Estimation of the Maximum Tolerated Dose**—◆ Sujit Kumar Ghosh, North Carolina State University; Seung Jun Shin, North Carolina State University
- 3:05 p.m. **On the Efficiency of Two-Stage Response-Adaptive Designs**—◆ Frank Bretz, Novartis; Holger Dette, Ruhr-Universität Bochum; Björn Bornkamp, Novartis
- 3:25 p.m. **Disc:** Amit Bhattacharyya, GlaxoSmithKline
- 3:45 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

557 CC-Room 31C

● Evaluating Two-Phase Mail Survey Methods—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Jill M. Montaquila, Westat

Chair(s): Jill M. Montaquila, Westat

- 2:05 p.m. **Transitioning from RDD to ABS in the National Household Education Surveys Program**—◆Kwang Kim, Westat; Jill M. Montaquila, Westat; J. Michael Brick, Westat
- 2:25 p.m. **An Evaluation of Incentive Experiments in a Two-Phase Address-Based Sample Mail Survey**—◆Daifeng Han, Westat; J. Michael Brick, Westat; Jill M. Montaquila, Westat
- 2:45 p.m. **Mail Surveys Including the Spanish-Speaking Population**—◆J. Michael Brick, Westat; Jill M. Montaquila, Westat; Daifeng Han, Westat; Douglas Williams, Westat
- 3:05 p.m. **The ABS Frame: Quality and Considerations**—◆Shelley Brock, Westat; Daifeng Han, Westat; Jill M. Montaquila, Westat
- 3:25 p.m. Disc: Brian A. Harris-Kojetin, U.S. Office of Management and Budget
- 3:45 p.m. **Floor Discussion**

558 CC-Room 25A

■ Recent Development in Statistical Analysis of Genomic Data—Topic-Contributed

Biometrics Section, Biopharmaceutical Section, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Min Chen, The University of Texas Southwestern Medical Center at Dallas

Chair(s): Xinlei Wang, Southern Methodist University

- 2:05 p.m. **Statistical Methods for Genome-Wide Evaluation of Gene Expression Regulation Mechanisms Using TCGA Data**—◆Peng Wei, The University of Texas Health Science Center
- 2:25 p.m. **Discovery of Prognostic and Predictive Gene Signatures in Non-Small-Cell Lung Cancer from an Integrative Systems Biology Approach**—◆Hao Tang, The University of Texas Southwestern Medical Center; Guanghua Xiao, The University of Texas Southwestern Medical Center at Dallas; Jeffrey Allen, The University of Texas Southwestern Medical Center; Michael White, The University of Texas Southwestern Medical Center; Ignacio Ivan Wistuba, MD Anderson Cancer Center; John Minna, The University of Texas Southwestern Medical Center; Yang Xie, The University of Texas Southwestern Medical Center

- 2:45 p.m. **Bayesian Meta-Analysis for Pathway Enrichment Analysis**—◆Miao Zang, Southern Methodist University; Sherry Wang, Southern Methodist University; Andy Xiao, The University of Texas Southwestern Medical Center; Min Chen, The University of Texas Southwestern Medical Center at Dallas

- 3:05 p.m. **Robust Gene Expression Signature from Formalin-Fixed Paraffin-Embedded Samples Predicts Prognosis of Non-Small-Cell Lung Cancer Patients**—◆Yang Xie, The University of Texas Southwestern Medical Center; Andy Xiao, The University of Texas Southwestern Medical Center

- 3:25 p.m. **Generalized Poisson Regression Analysis of Spatially Correlated ChIP-Seq Data**—◆Min Chen, The University of Texas Southwestern Medical Center at Dallas; Sherry Wang, Southern Methodist University; Guanghua Xiao, The University of Texas Southwestern Medical Center at Dallas; Yang Xie, The University of Texas Southwestern Medical Center

- 3:45 p.m. **Floor Discussion**

559 CC-Room 30A

● Recent Advances in Computational Biology—Topic-Contributed

IMS, Section on Statistical Computing, WNAAR, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Ping Ma, University of Illinois at Urbana-Champaign

Chair(s): Ping Ma, University of Illinois at Urbana-Champaign

- 2:05 p.m. **Estimating Gene Expression Levels Using RNA-Seq Short Reads**—◆David Dalpiaz; Ping Ma, University of Illinois at Urbana-Champaign

- 2:25 p.m. **Base Calling and SNP Calling on Next-Generation Sequencing Data**—◆Xinping Cui, University of California at Riverside; Gabriel Murillo, University of California at Riverside; Ping Ma, University of Illinois at Urbana-Champaign; Na You, Sun Yat-Sen University

- 2:45 p.m. **Feature Selection Using General Index Model for Motif Screening**—◆Wenxuan Zhong, University of Illinois at Urbana-Champaign

- 3:05 p.m. **Bayesian Models for Rare Genetic Variants**—◆Chiara Sabatti, Stanford University

- 3:25 p.m. **Penalized Regression and Risk Prediction in Genome-Wide Association Studies**—◆Erin Edward Austin, University of Minnesota; Wei Pan, University of Minnesota; Xiaotong Shen, University of Minnesota-Twin Cities

- 3:45 p.m. **Floor Discussion**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

560 CC-Room 28A

■ ● Analysis of Complex Survey Data in Epidemiology—Topic-Contributed

Section on Statistics in Epidemiology, Section on Survey Research Methods

Organizer(s): Babette A Brumback, University of Florida

Chair(s): Yi Pan, CDC

- 2:05 p.m. **Testing for Hardy Weinberg Equilibrium in National Household Surveys That Collect Family-Based Genetic Data**—◆ Yan Li, The University of Texas at Arlington; Zhaohai Li, The George Washington University; Barry I. Graubard, National Cancer Institute
- 2:25 p.m. **A Randomized Experiment to Increase Response Rates to a Health Care Survey Among Individuals with a High Predicted Probability of Preferring Spanish**—◆ Marc Elliott, RAND Corporation
- 2:45 p.m. **Conditional Logistic Regression Estimators for Ordinal or Multinomial Outcomes and Complex Survey Data**—◆ Babette A Brumback, University of Florida; Zhulin He, University of Florida; Hao Zheng, University of Florida; Amy Dailey, Gettysburg College; Zhuangyu Cai, University of Florida
- 3:05 p.m. **Outcome Vector-Dependent Sampling with Longitudinal Continuous Response Data: Stratified Sampling Based on Summary Statistics**—◆ Jonathan Schildcrout, Vanderbilt University
- 3:25 p.m. **Linear Rank Tests for Survival Outcomes in Complex Sample Survey Data**—◆ Stuart Lipsitz, Harvard Medical School; Debajyoti Sinha, Florida State University; Kevin Rader, Harvard University; Sundar Natarajan, New York University
- 3:45 p.m. **Floor Discussion**

561 CC-Room 28E

■ ● Use of Models to Enhance Inference—Topic-Contributed

Section on Statistics and the Environment, Section for Statistical Programmers and Analysts, International Indian Statistical Association

Organizer(s): Ronald E McRoberts, U.S. Forest Service

Chair(s): Estelle Russek-Cohen, FDA/CBER

- 2:05 p.m. **An Application of Endogenous Post-Stratification Using Forest Inventory and Lidar Data**—◆ Ronald E McRoberts, U.S. Forest Service; Erik Næsset, Norwegian University of Life Sciences; Terje Gobakken, Norwegian University of Life Sciences
- 2:25 p.m. **Model-Based Estimation of Resource Selection in Animal Populations**—◆ Mevin Hooten, Colorado State University; Ephraim Hanks, California State University; Devin S. Johnson, National Oceanic and Atmospheric Administration

- 2:45 p.m. **An Application of Bayesian Small-Area Estimation for Circular Data**—◆ Jean Opsomer, Colorado State University; Jay Breidt, Colorado State University; Daniel Hernandez-Stumpfhauser, Colorado State University
- 3:05 p.m. **Model-Based Inference for Stratified Rotating Panel Surveys: A Strategy for Estimating the Number of Bald Eagle Nesting Territories in Florida**—◆ Mary C Christman, MCC Statistical Consulting LLC
- 3:25 p.m. **Nonparametric Endogenous Post-Stratification Estimation**—◆ Mark Dahlke; Jay Breidt, Colorado State University; Jean Opsomer, Colorado State University; Ingrid van Keilegom, Institut de Statistique
- 3:45 p.m. **Floor Discussion**

562 CC-Room 25B

■ ● New Challenges in Survival Analysis and Clinical Trials—Topic-Contributed

Biometrics Section, Biopharmaceutical Section, International Chinese Statistical Association

Organizer(s): Yichuan Zhao, Georgia State University

Chair(s): Yichuan Zhao, Georgia State University

- 2:05 p.m. **Variable Selection with Estimating Equations Using Decomposable Norm-Based Regularizers**—◆ Yi Li, University of Michigan; Dave Zhao, Harvard University
- 2:25 p.m. **Quantile Regression for Competing Risks Data with Missing Cause of Failure**—◆ Yanqing Sun, The University of North Carolina at Charlotte; Huixia Judy Wang, North Carolina State University; Peter B Gilbert, University of Washington/Fred Hutchinson Cancer Research Center
- 2:45 p.m. **Weighted Estimators for Additive Risk Models with Missing Covariates**—◆ Lihong Qi, University of California at Davis; Lu Wang, University of California at Davis; Yueheng An, Georgia State University; Yichuan Zhao, Georgia State University
- 3:05 p.m. **A Bayesian Approach for Instrumental Variable Analysis with Time-to-Event Outcome**—◆ Xuyang Lu, University of California at Los Angeles; Gang Li, University of California at Los Angeles
- 3:25 p.m. **A Novel Phase II Design to Minimize Trial Duration and Improve the Success Rate of Follow-Up Phase III Trial**—◆ Ye Cui, Georgia State University; Taofeek K Owonikoko, Emory University; Zhibo Wang, Winship Cancer Institute; Sungjin Kim, Winship Cancer Institute; Dong M Shin, Emory University; Fadlo R Khuri, Emory University; Jeanne Kowalski, Biostatistics and Bioinformatics Shared Resource at Winship Cancer Institute; Zhengjia Chen, Biostatistics and Bioinformatics Shared Resource at Winship Cancer Institute
- 3:45 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

563 CC-Room 31A **Modeling and Analyzing Data Revisions— Topic-Contributed**

Business and Economic Statistics Section, Section for Statistical Programmers and Analysts, Section on Government Statistics

Organizer(s): gatto riccardo, Eurostat

Chair(s): gatto riccardo, Eurostat

- 2:05 p.m. **The Importance of Metadata for Analyzing Data Revisions**—◆ Andreas Lorenz, Deutsche Bundesbank
- 2:25 p.m. **Data Revisions and ISO Vintages**—◆ Jorge Dias, European Central Bank; Magdalena Lalik, European Central Bank
- 2:45 p.m. **Modeling Multivariate Data Revisions**—◆ Jan-Egbert Sturm, KOF Swiss Economic Institute, ETH Zurich
- 3:05 p.m. **Modeling Multivariate Revisions in a Cointegrated Vector Autoregressive Model**—◆ Gatto Riccardo, Eurostat; Gian Luigi Mazzi, Eurostat; Alain Hecq, Maastricht University
- 3:25 p.m. **An Area-Wide Real-Time Database for the Euro Area**—◆ Domenico Giannone, Universite' Libre de Bruxelles
- 3:45 p.m. **Floor Discussion**

564 CC-Room 28C **Challenges in Statistical Geo-Informatics Enhanced by Ecological and Environmental Sciences—Topic-Contributed**

International Indian Statistical Association, Section on Statistics and the Environment, IINAR

Organizer(s): Ashis SenGupta, Indian Statistical Institute

Chair(s): Ashis SenGupta, Indian Statistical Institute

- 2:05 p.m. **Monitoring and Forecasting Air Quality in the Eastern United States**—◆ Sujit Sahu, University of Southampton
- 2:25 p.m. **Statistical Challenges to Linking the Spatial Pattern of Cancer to Radiation Exposure**—◆ Stephen Rathbun, University of Georgia; Sara Wagner, University of Georgia; John Vena, University of Georgia
- 2:45 p.m. **How to Incorporate Heterogeneity, Scale, and Effective Sample Size Into the Spatio-Temporal Analysis of Environmental Data Sets: Theoretical and Practical Aspects**—◆ Pierre Dutilleul, McGill University
- 3:05 p.m. Disc: Ganapati P Patil, Penn State University
- 3:25 p.m. Disc: Ashis SenGupta, Indian Statistical Institute
- 3:45 p.m. **Floor Discussion**

Topic-Contributed Panels 2:00 p.m.–3:50 p.m.

565 CC-Room 31B **Teaching Statistics to Nursing Students— Topic-Contributed**

Section on Teaching of Statistics in the Health Sciences, Section on Statistical Education

Organizer(s): Matt Hayat, Rutgers University

Chair(s): MyoungJin Kim, Illinois State University

- Panelists:** ◆ Matt Hayat, Rutgers University
- ◆ Sarah Schmiede, University of Colorado at Denver School of Nursing
 - ◆ Patricia Eckardt, SUNY at Stony Brook
 - ◆ Melinda Higgins, Emory University

3:45 p.m. **Floor Discussion**

Contributed Sessions 2:00 p.m.–3:50 p.m.

566 CC-Room 30C **Applications of Nonparametric Methods— Contributed**

Section on Nonparametric Statistics

Chair(s): Jessi Cisewski, The University of North Carolina at Chapel Hill

- 2:05 p.m. **A Nonparametric Test for Identifying Differentially Expressed Genes from Genomics Data**—◆ Lauren Weatherall, University of Mississippi; Sunil Mathur, University of Memphis
- 2:20 p.m. **Generalized Volterra Model and Its Applications on Neurobiological Signal Processing**—◆ Dong Song, University of Southern California; Haonan Wang, Colorado State University; Theodore W Berger, University of Southern California
- 2:35 p.m. **Recursive Partitioning for Latent Recurrent Events: Application to Multiple Sclerosis Data**—◆ Shannon Stock, Harvard University; Brian C. Healy, Massachusetts General Hospital; Victor G. DeGruttola, Harvard School of Public Health
- 2:50 p.m. **Assessing the Dependency Between Magnitudes of Earthquakes and Magnitudes of Their Aftershocks**—◆ Kevin Nichols, California State University Fullerton
- 3:05 p.m. **Application of Smoothing Methods to Dynamic Energy Expenditure Measurements in Children**—◆ Jong Soo Lee, University of Delaware; Nancy Butte, Baylor College of Medicine; Issa Zakeri, Drexel University
- 3:20 p.m. **GAM Models for Electricity Consumption Forecasts**—◆ Yannig Goude, EDF France; Amandine Pierrot, EDF R&D; Audrey Pichavant, EDF R&D

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

3:35 p.m. **Nonparametric Estimation for Censored Mixture Data with Application to the Cooperative Huntington's Observational Research Trial—**
◆ Tanya Garcia, Texas A&M University; Yuanjia Wang, Columbia University; Yanyuan Ma, Texas A&M University

2:35 p.m. **Quadratic Information Criterion for Model Selection in Nonlinear Mixed Effects Models—**
◆ Rositsa B Dimova, Weill Cornell Medical College; Marianthi Markatou, IBM T. J. Watson Research Center

2:50 p.m. **Sequential Sufficient Dimension Reduction for Large P, Small N Problems—**◆ Haileab Hilafu, The University of Georgia; Xiangrong Yin, University of Georgia

3:05 p.m. **Groupwise Elastic Net—**◆ Miae Oh; Yongdai Kim, Seoul National University

3:20 p.m. **Simultaneous Dimension Reduction and Variable Selection in Multivariate Regression—**◆ Lisha Chen, Yale University; Jianhua Huang, Texas A&M University

3:35 p.m. **Degrees of Freedom of the Reduced Rank Regression—**◆ Ashin Mukherjee, University of Michigan; Ji Zhu, University of Michigan; Naisyin Wang, University of Michigan

567 CC-Room 33A **Computing with Time Series Data—Contributed**

Section on Statistical Computing
Chair(s): Dongyu Lin, AT&T Labs

2:05 p.m. **Distribution of the Discrete Scan Statistic Using Slack Variables—**◆ Donald Martin, North Carolina State University

2:20 p.m. **Semiparametric Forecasting of Nonlinear Temporal Processes—**◆ Jane Harvill, Baylor University; Nalini Ravishanker, University of Connecticut

2:35 p.m. **Conditional Autoregressive Hilbertian Processes—**
◆ Jairo Cugliari, INRIA

2:50 p.m. **Optimal Design of Challenge-Response Experiments for Mechanistic Model Discrimination—**◆ Matthew Shotwell, Vanderbilt University

3:05 p.m. **Online Kernel Density Estimation for Nonstationary Time Series—**◆ Yinxiao Huang, University of Illinois at Urbana-Champaign

3:20 p.m. **Complexity of Continuous Functions and Segmentation of Time Series—**◆ Alexandra Piryatinska, San Francisco State University; Boris Darkhovsky, Russian Academy of Sciences

3:35 p.m. **Estimating Bias and Lag on Indexes Proposed to Be Moved to Less Than Bimonthly Pricing—**◆ Onimissi Sheidu, Bureau of Labor Statistics

569 CC-Room 24C **Modeling of Survival Data—Contributed**

Biometrics Section, Biopharmaceutical Section, Section on Statistics in Epidemiology
Chair(s): Rebecca Scherzer, University of California at San Francisco

2:05 p.m. **The Bi-Epsilon Skew Exponential Power (BIESEP) ROC Curve—**◆ Ahmad Flaih, University of Arkansas at Little Rock; Hassan Elsalloukh, University of Arkansas at Little Rock

2:20 p.m. **The Epsilon Skew Inverted Gamma Distribution—**
◆ Ebtisam Abdulah, University of Arkansas at Little Rock; Hassan Elsalloukh, University of Arkansas at Little Rock

2:35 p.m. **A Test for Skewness Within the Univariate and Multivariate Epsilon Skew Laplace Distributions—**
◆ Howraa Al-Mousawi, University of Arkansas at Little Rock; Hassan Elsalloukh, University of Arkansas at Little Rock

2:50 p.m. **A Test for Comparing the Cumulative Hazard Functions with Right-Truncated Data—**◆ Haci Akcin, CDC/Georgia State University

3:05 p.m. **Joint Inference of Overall Survival and Progression-Free Survival—**◆ Somesh Chattopadhyay, FDA; Shenghui Tang, FDA; Rajeshwari Sridhara, FDA

3:20 p.m. **Hoeffding-Type and Bernstein-Type Inequalities for Right-Censored Data—**◆ Yair Goldberg, Haifa University; Michael Kosorok, The University of North Carolina at Chapel Hill

3:35 p.m. **Recursive Partitioning and Locally Weighted Conditional Distributions for Censored Quantile Regression—**◆ Kyle Rudser, University of Minnesota; Andrew Wey, University of Minnesota

568 CC-Room 33B **Methods for Variable and Model Selection—Contributed**

Section on Statistical Learning and Data Mining
Chair(s): Jing Ma, University of Michigan

2:05 p.m. **Model Selection for Nearly Replicated Data Based on All Possible Subsets—**◆ Zugui Zhang, Christiana Care Health System

2:20 p.m. **Model Selection for Categorical Data When the Interaction Effect Is Presented—**◆ Pannapa Changpetch, Penn State University; Dennis Lin, Penn State University



● Themed Session ■ Applied Session ◆ Presenter

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570 CC-Room 24B **■ Lasso: Applications and Methods—Contributed**

Biometrics Section, Biopharmaceutical Section, Committee on Applied Statisticians, International Chinese Statistical Association, UNAR
 Chair(s): Yahong Peng, Pfizer Inc.

- 2:05 p.m. **Variable Selection in Monotone Single-Index Models via the Adaptive Lasso**—◆ Jared Foster, University of Michigan; Jeremy Michael George Taylor, University of Michigan; Bin Nan, University of Michigan
- 2:20 p.m. **High-Dimensional Linear State Space Models for Dynamic Gene Regulatory Networks**—◆ Iris Chen, University of Rochester; Hulin Wu, University of Rochester
- 2:35 p.m. **Variable Selection for Sparse Dirichlet-Multinomial Regression with an Application to Microbiome Data Analysis**—◆ Jun Chen; Hongzhe Li, University of Pennsylvania
- 2:50 p.m. **Non-Asymptotic Oracle Inequalities for the High-Dimensional Cox Regression via Lasso**—◆ Shengchun Kong, University of Michigan; Bin Nan, University of Michigan
- 3:05 p.m. **Multinomial Regression with Variable Selection and Outcome Merging Penalty**—◆ Sheng-Mao Chang, National Cheng Kung University
- 3:20 p.m. **Selecting Biomarkers for Personalized Medicine in Randomized Clinical Trials via Statistical Learning Methods**—◆ Soyeon Kim, Rice University/MD Anderson Cancer Center; Jack Lee, MD Anderson Cancer Center
- 3:35 p.m. **Floor Discussion**

571 CC-Room 24A **■ RNA-Sequencing Data Analysis—Contributed**

Biometrics Section
 Chair(s): Tieming Ji, Iowa State University

- 2:05 p.m. **Analysis of RNA-Seq Data with Excess of Zeros**—◆ Marcus Nunes, Penn State University; James L Rosenberger, Penn State University
- 2:20 p.m. **Statistical Power for Detecting Several Epigenetic Factors Using RNA-Seq Data**—◆ Dao-Peng Chen,
- 2:35 p.m. **Clustering High-Throughput Sequencing Data with Poisson Mixture Models**—◆ Andrea Rau, INRA GABI; Gilles Celeux, Inria Saclay; Marie-Laure Martin-Magniette, INRA URGV/AgroParisTech; Cathy Maugis-Rabusseau, IMT/INSA

- 2:50 p.m. **Higher-Order Asymptotics for Negative Binomial Regression Inferences from RNA-Sequencing Data**—◆ Yanming Di, Oregon State University; Sarah C Emerson, Oregon State University; Daniel W Schafer, Oregon State University; Jeff A Kimbrel, Oregon State University; Jeff H Chang, Oregon State University
- 3:05 p.m. **Using Finite Poisson Mixture Models for Gene Differential Expression Analysis in RNA-Seq**—◆ Han Wu, Purdue University; Yu Zhu, Purdue University
- 3:20 p.m. **Differential Gene Expression Pattern Analysis Using Exon-Level RNA-Seq Data**—◆ Zhaonan Sun, Purdue University; Yu Zhu, Purdue University
- 3:35 p.m. **Multivariate Profiling Approach to Inference on Differential Expression in RNA-Seq Data with Small Sample Size**—◆ Sunghee Oh, Cincinnati Children's Hospital Medical Center; Mi-Ok Kim, Cincinnati Children's Hospital Medical Center; Seongho Song, University of Cincinnati

572 CC-Room 23B **■ Analysis of Therapeutic Area-Specific Clinical Trials—Contributed**

Biopharmaceutical Section, Committee on Gay and Lesbian Concerns in Statistics
 Chair(s): Ha Nguyen, Pfizer Inc.

- 2:05 p.m. **New Era of HIV Drug Development in a Noninferiority Setting**—◆ Jing Zhao, Merck Research Laboratories
- 2:20 p.m. **Methods for Confidence Intervals for Vaccine Efficacy**—◆ Tian Dai, Emory University; Kerry Go, Sanofi Pasteur; Fabrice Bailleux, Sanofi Pasteur; Xiao Geng, Michigan State University; Andrew Dunning, Sanofi Pasteur; Huiling Xiong, Sanofi Pasteur
- 2:35 p.m. **A Bivariate Normal Random-Effects Model with Left-Censoring to Estimate Duration of Antibody and TNA Responses to Anthrax Vaccine in Non-Human Primates**—◆ Charles Rose, CDC; Brian D Plikaytis, CDC; Conrad P Quinn, CDC
- 2:50 p.m. **Islet Cell Transplantation in Type 1 Diabetes: An Analysis of Clinical Outcomes in Data from Collaborative Islet Transplant Registry (CITR)**—◆ Jawahar Tiwari, FDA/CBER; Bruce Schneider, FDA/CBER; Franca Barton, EMMES Corporation; Steven A Anderson, FDA/CBER
- 3:05 p.m. **Testing CV Effects Using Ultrasound Imaging Biomarkers**—◆ Shubing Wang, Merck
- 3:20 p.m. **A Bayesian Secondary Analysis in an Asthma Study**—◆ Samuel P. Wilcock, Messiah College; Vernon M. Chinchilli, Penn State Hershey College of Medicine



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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3:35 p.m. **The Public Health Effects of DHA Supplementation on the Joint Distribution of Birthweight and Gestational Age with Implications on Clinical Trials Design and Analysis**—◆Byron Gajewski, University of Kansas Medical Center; C. Shane Reese, Brigham Young University; John Colombo, University of Kansas; Susan Carlson, University of Kansas Medical Center

2:20 p.m. **Inference on Optimal Portfolio Weights Using Generalized Pivotal Quantity**—◆Yuanyuan Zhu, The University of Hong Kong; Philip L.H. Yu, The University of Hong Kong; Thomas Mathew, University of Maryland Baltimore County

2:35 p.m. **Utilizing ARC Length to Cluster Stocks According to Risk**—◆Ferebee Tunno, Arkansas State University; Tharanga Wickramarachchi, Clemson University

2:50 p.m. **A Bayesian Model on Market Microstructure and Asymmetric Information Trading**—◆Fang Liu, University of Notre Dame

3:05 p.m. **Day of the Week Effect on Turkish Foreign Exchange Market Volatility During the Global Financial Crisis**—◆Ece Oral, Central Bank of the Republic of Turkey

3:20 p.m. **Lasso for Change-Point Detection in Time Series**—◆Chun-Yip Yau, Chinese University of Hong Kong; Ngai Hang Chan, Chinese University of Hong Kong; Rongmao Zhang, Zhejiang University

3:35 p.m. **Arc Length as a Measure of Risk**—◆Tharanga Wickramarachchi, Clemson University; Colin Gallagher, Clemson University; Robert Lund, Clemson University

573 CC-Room 23C

■ Advances in Time-to-Event Analysis—Contributed

Biopharmaceutical Section

Chair(s): Junwu Shen, Novartis Oncology

2:05 p.m. **Landmark Estimation of Survival Incorporating Intermediate Event Information in a Randomized Clinical Trial**—◆Layla Parast, Harvard University; Tianxi Cai, Harvard University

2:20 p.m. **Model-Free Tests for Hypotheses of No Quantitative and No Qualitative Interactions in Survival Analysis**—◆Kallappa Koti, FDA

2:35 p.m. **Prediction of Event Time for a Time-to-Event Endpoint Under a Piecewise Exponential Model**—◆Liang Chen, Pfizer Inc.; Xiaoyu Dong, MedImmune

2:50 p.m. **Application of Disease Progression and Time-to-Event Models to Heart Failure and Large-Tumor Oncology Data**—◆Shu Yang, Novartis; David James, Novartis; Ramesh Sarangapani, Novartis

3:05 p.m. **Semiparametric Estimation in the Proportional Subdistribution Hazards Model with Missing Cause of Failure**—◆Jonathan Yabes, University of Pittsburgh; Chung-Chou H Chang, University of Pittsburgh

3:20 p.m. **Competing Risk Factor Handling in Survival Data Analysis**—Grace Liu, Johnson & Johnson; ◆Lejia Lou, Penn State University

3:35 p.m. **An Analysis of the Survival Aspect of COPD Gene**—◆Andre Williams, National Jewish Health; Russell Bowler, National Jewish Health; Anna Forssen, National Jewish Health

575 CC-Room 27A

New Approaches for Longitudinal and Dependent Data—Contributed

ENAR, Biopharmaceutical Section

Chair(s): Jeanette E. Eckel-Passow, Mayo Clinic

2:05 p.m. **Mixed-Effect Hybrid Models for Dyadic Longitudinal Data with Nonignorable Dropout**—◆Jaeil Ahn, MD Anderson Cancer Center; Ying Yuan, MD Anderson Cancer Center

2:20 p.m. **Robust Principal Interactions Analysis for Gene-Gene, Gene-Environment Interactions with Repeated Measures Data**—◆Yi-An Ko, University of Michigan; Bhramar Mukherjee, University of Michigan; Sung Kyun Park, University of Michigan

2:35 p.m. **Longitudinal Genetic Analysis of Complex Traits**—◆Ruzong Fan

2:50 p.m. **Bayesian Analysis of Time-Series Data Under Case-Crossover Designs**—◆Shi Li, University of Michigan; Bhramar Mukherjee, University of Michigan

3:05 p.m. **Nonlinear Mixed Effects Models for Ozone Exposure-Response**—◆Paul Stewart, The University of North Carolina at Chapel Hill; William F McDonnell, WFM Consulting; Marjo V Smith, SRA International

3:20 p.m. **A Goodness-of-Fit Test for the Protein Conformational Sampling**—◆Mehdi Maadooliat

3:35 p.m. **Floor Discussion**

574 CC-Room 30E

● Optimal Portfolios, Clustering, and Change Points—Contributed

Business and Economic Statistics Section

Chair(s): Jason Duan, The University of Texas at Austin

2:05 p.m. **Optimal Orthogonal Portfolios with Conditioning Information**—◆Andrew Siegel, University of Washington; Wayne E. Ferson, University of Southern California



● Themed Session ■ Applied Session ◆ Presenter

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576 CC-Room 30B Nonparametric, Empirical Likelihood, and Bootstrap Methods—Contributed

IMS

Chair(s): John Aston, University of Warwick

- 2:05 p.m. **A Necessary and Sufficient Condition for Justifying Nonparametric Likelihood with Censored Data**—◆ Qiqing Yu, Binghamton University; Yuting Hsu, Penn State University; Kai Yu, University of Mississippi
- 2:20 p.m. **Improving Distribution Estimators Under Kullback-Leibler Loss**—◆ Qiang Wu, East Carolina University; Paul Vos, East Carolina University
- 2:35 p.m. **Sharp Adaptive Nonparametric Hypothesis Testing for Sobolev Ellipsoids**—◆ Pengsheng Ji; Michael Nussbaum, Cornell University
- 2:50 p.m. **Empirical Likelihood-Based CUSUM Method**—◆ Yijie Xue, University of Georgia; Nicole A. Lazar, University of Georgia
- 3:05 p.m. **Empirical Likelihood Inference for Parameters of Spatial Branching Process**—◆ Pin Ren; Anand N. Vidyashankar, George Mason University
- 3:20 p.m. **Bootstrapping Misspecified Over-Identified Models**—◆ Mihai Giurcanu, University of Florida; Brett Douglas Presnell, University of Florida
- 3:35 p.m. **Nonparametric Estimation of Hazard in Presence of Dependent Censoring**—◆ Desale Habtzghi, University of Akron; Somnath Datta, University of Louisville

577 CC-Room 28B General Methodology—Contributed

International Chinese Statistical Association

Chair(s): Lu Wang, University of Michigan

- 2:05 p.m. **Stepwise Regression Method for High-Dimensional Variable Selection**—◆ Jing-Shiang Hwang, Academia Sinica; Tsuey-Hwa Hu, Academia Sinica
- 2:20 p.m. **Optimal Designs for Locating Regression Variables in a Multivariate Regression Model Under Trace Criteria**—◆ Chun Sui Lin, Cheng Shiu University; Mong-Na Lo Huang, National Sun Yat-sen University; Jia-Ming Guo, National Sun Yat-sen University
- 2:35 p.m. **On Some Study of Skew-Normal-Uniform Distribution**—◆ Nan-Cheng Su, National Cheng Kung University
- 2:50 p.m. **Multivariate Density Forecast: An Application to Multivariate Duration Models**—◆ Yingying Sun, University of California at Riverside; Gloria González-Rivera, University of California at Riverside

- 3:05 p.m. **A Confidence Region for the Largest and Smallest Means of Correlated Normal Populations**—◆ Janpeing Hubert Chen, National Cheng Kung University; Shu-Fei Wu, Tamkang University
- 3:20 p.m. **Homogeneity Test for Correlated Data in Ophthalmologic Studies**—◆ Changxing Ma, SUNY at Buffalo; Guogen Shan, Brain Trauma Foundation
- 3:35 p.m. **Parameter Estimation Following a Group Sequential Test: A Likelihood Ratio Estimator**—◆ Tung-Lung Wu

578 CC-Room 29C Bayesian Modeling in Social Sciences—Contributed

Section on Bayesian Statistical Science, Section on Survey Research Methods, Social Statistics Section

Chair(s): Deukwoo Kwon, University of Miami

- 2:05 p.m. **Multiple Imputation for Nonignorable Attrition in Panel Studies with Refreshment Samples**—◆ Yajuan Si, Duke University; Jerome P Reiter, Duke University
- 2:20 p.m. **A Bayesian Degree-Corrected Stochastic Block Model for Community Detection**—◆ Luis Carvalho, Boston University; Lijun Peng, Boston University
- 2:35 p.m. **How Far off Is Implicit Modeling in Multiple Imputation?**—◆ Florian Meinfelder, Universitaet Bamberg
- 2:50 p.m. **Bayesian Transition Models for Multivariate Event Histories**—◆ Adam King, University of California at Los Angeles; Robert E Weiss, University of California at Los Angeles Fielding School of Public Health
- 3:05 p.m. **A Bayesian Analysis of the Spatial Distribution of Alcohol Outlets and Assaultive Violence**—◆ Loni Philip Tabb, Drexel University School of Public Health; Anthony H Grubestic, Drexel University; Dominique A. Williams, West Chester University
- 3:20 p.m. **Model Selection Strategies Applied to Customer Research Data**—◆ Jorge Alejandro, Market Probe
- 3:35 p.m. **Hierarchical, Continuous-Time Models for Network-Based Event Data**—◆ Christopher L DuBois, University of California at Irvine; Padhraic Smyth, University of California at Irvine; Carter T. Butts, University of California at Irvine

Wednesday



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

579 CC-Room 29D Bayesian Theory and Methods 2—Contributed

Section on Bayesian Statistical Science

Chair(s): Abdus Sattar, Case Western Reserve University

- 2:05 p.m. **Bayesian Inference Based on Conditional Priors for a Bivariate Hidden Truncated Pareto(II) Model—** ◆Indranil Ghosh, North Dakota State University
- 2:20 p.m. **Nonparametric Distributions for the Mean and Variance Using Bayesian Analysis and Maximum Entropy—**◆Bahman Shafii, University of Idaho; William J. Price, University of Idaho
- 2:35 p.m. **Semiparametric Gaussian Variance-Mean Mixtures for Heavy-Tailed and Skewed Data—**◆Kai Cui, Duke University; David Dunson, Duke University
- 2:50 p.m. **Quasi-Bayesian Approach to a Nonlinear Random Effects Quantile Regression Model—**◆Mi-Ok Kim, Cincinnati Children's Hospital Medical Center
- 3:05 p.m. **Modeling Cluster Mobility: A DPM Model for Longitudinal Data—**◆Yuda Zhu, University of California at Los Angeles Fielding School of Public Health; Robert E Weiss, University of California at Los Angeles Fielding School of Public Health
- 3:20 p.m. **Semiparametric Local Multivariate Priors for Bayesian Model Averaging—**◆Yingbo Li, Duke University
- 3:35 p.m. **Detection of Changes of Multiple Poisson Processes Monitored at Discrete Time Points Where the Arrival Rates Are Unknown—**◆Marlo Brown, Niagara University

580 CC-Room 25C ■ Disease Prediction—Contributed

Section on Statistics in Epidemiology

Chair(s): Owen Devine, CDC

- 2:05 p.m. **An Absolute Risk Model for Population-Based Survey Data—**◆Stephanie Kovalchik, National Cancer Institute; Ruth Pfeiffer, National Cancer Institute
- 2:20 p.m. **Attributable Risk for a Multilevel Risk Factor at Intermediate Base Levels Under a Cross-Sectional Study—**◆Khairul Islam, Eastern Michigan University; Tanweer J Shapla, Eastern Michigan University
- 2:35 p.m. **Statistical Strategies for Developing Classification Algorithms with Application to Insulin Sensitivity Status in Humans—**◆Wenting Xie; Charmaine S Tam, Pennington Biomedical Research Center; Bin Li, Louisiana State University; Eric Ravussin, Pennington Biomedical Research Center; William D. Johnson, Pennington Biomedical Research Center

- 2:50 p.m. **Inference Using Impact Numbers for a Multinomial Sampling Design—**◆Tanweer J Shapla, Eastern Michigan University; Khairul Islam, Eastern Michigan University
- 3:05 p.m. **Identifying Glucose-Related Dietary Patterns Accounting for Within Individual Variation—**◆Hsing-Yi Chang, National Health Research Institutes
- 3:20 p.m. **A New Explained-Variance-Based Genetic Risk Score for Predictive Modeling of Disease Risk—**◆Ronglin Che, North Carolina State University; Alison Anne Motsinger-Reif, North Carolina State University
- 3:35 p.m. **Diagnostic Thresholds for Two and Three Ordinal Groups—**◆Kristopher Attwood, SUNY at Buffalo; Lili Tian, SUNY at Buffalo

581 CC-Room 27B ■ Epidemiological Applications—Contributed

Section on Statistics in Epidemiology

Chair(s): Bing Han, RAND Corporation

- 2:05 p.m. **Statistics Explanation of Congenital Heart Defects Among Children Born to New York State Residents, 1983–2005—**◆Gang Liu, New York State Department of Health; Ying Wang, NYS DOH; Charlotte Druschel, NYS DOH; Igor Zurbenko, SUNY at Albany
- 2:20 p.m. **Application of the Time-Series Approach to Assess the Temporal Trend of Disparities in Health Outcomes—**◆Lin Tian, CDC
- 2:35 p.m. **Application of Change Point Analysis in Post-Market Surveillance—**◆Zhiheng Xu, FDA; Greg Campbell, FDA
- 2:50 p.m. **On the Use of Fractional Polynomial Models in Time-Series Studies of Particulate Matter and Mortality—**◆Ayano Takeuchi,
- 3:05 p.m. **Statistical Model for Ranking Institutions by Measures Clustered in Different Domains—**◆Yan Wang, University of California at Los Angeles Fielding School of Public Health; David Zingmond, University of California at Los Angeles; Honghu Liu, University of California at Los Angeles School of Dentistry
- 3:20 p.m. **Obesity and Mortality Rate: Are the Risks Declining? Evidence from 18 Prospective Studies in U.S.—**◆Tapan Mehta; Kevin Fontaine, The Johns Hopkins University School of Medicine; Scott W Keith, Thomas Jefferson University; Sai Santosh Bangalore, The University of Alabama at Birmingham; Gustavo de los Campos, The University of Alabama at Birmingham; Nicholas Pajewski, Wake Forest University Health Sciences; Alfred Bartolucci, The University of Alabama at Birmingham; David B. Allison, The University of Alabama at Birmingham



3:35 p.m. **The State of Men's Health in Europe: The Contribution of Different Causes of Death in Life Expectancy**—◆ Bruno de Sousa, Instituto de Higiene e Medicina Tropical - UNL; Alan White, Leeds Metropolitan University

582 CC-Room 32A Stratification and Other Survey Sampling Theory—Contributed

Section on Survey Research Methods

Chair(s): Jeffrey Gonzalez, Bureau of Labor Statistics

- 2:05 p.m. **A Simple Approach to Sample Allocation for Multivariate Stratified Sampling**—◆ Sun Woong Kim, Dongguk University; Eun-Jeong Nam, Korea Statistics Promotion Institute; Young Sung Han, Dongguk University
- 2:20 p.m. **A Hierarchical Clustering Algorithm for Multivariate Stratification in Stratified Sampling**—◆ Stephanie Zimmer; Jaekwang Kim, Iowa State University; Sarah Nusser, Iowa State University
- 2:35 p.m. **The Equivalence of Neyman Optimum Allocation for Sampling and Equal Proportions for Apportioning the U. S. House of Representatives**—◆ Tommy Wright, U.S. Census Bureau
- 2:50 p.m. **Two Measures for Assisting Sample Size Discussions**—◆ Beat Hulliger, University of Northwestern Switzerland
- 3:05 p.m. **An Equivalence of Conditional and Unconditional Maximum Likelihood Estimators via Infinite Replication of Observations for Matched Pairs Designs**—◆ Zhulin He, University of Florida; Babette A Brumback, University of Florida
- 3:20 p.m. **Interval Estimation for Small-Area Proportions with Small True Proportions from Surveys with Stratified Random Sampling Designs**—◆ Carolina Franco, University of Maryland; Partha Lahiri, University of Maryland
- 3:35 p.m. **Significance Testing for Two Cluster Samples with Identical Clusters and Different Units**—◆ R. Lee Harding, ICF International; Pedro J Saavedra, ICF International; Ronaldo Iachan, ICF Macro

583 CC-Room 32B Advances in Multiple Imputation Methodology—Contributed

Section on Survey Research Methods, Section on Statistical Computing

Chair(s): Siyu Qing, The George Washington University

- 2:05 p.m. **Multiple Imputation for Hierarchical Data Sets**—◆ Joerg Drechsler, German Institute for Employment Research (IAB); Joe Sakshaug, German Institute for Employment Research (IAB); Matthias Speidel, Ludwig-Maxilians-Universität München
- 2:20 p.m. **A Two-Step Semiparametric Method to Account for Complex Survey Designs in Multiple Imputation**—◆ Hanzhi Zhou, University of Michigan
- 2:35 p.m. **Estimation of Two-Level Hierarchical Generalized Linear Models Given a Mixture of Ordinal and Continuous Missing Data**—◆ Yongyun Shin, Virginia Commonwealth University
- 2:50 p.m. **Imputation Models to Estimate Mean Fatty Acid Percentages in NHANES**—◆ Maya Sternberg, CDC; Rosemary Schleicher, CDC
- 3:05 p.m. **Investigating the Bias of Alternative Statistical Inference Methods in Sequential Mixed-Mode Surveys**—◆ Tuba Suzer-Gurtekin, University of Michigan; Steven G. Heeringa, University of Michigan; Richard Valliant, University of Maryland
- 3:20 p.m. **Using Imputation to Adjust for Seam Bias in a Rotating Panel Survey**—◆ Joe Sakshaug, German Institute for Employment Research (IAB); Joerg Drechsler, German Institute for Employment Research (IAB)
- 3:35 p.m. **Fitting Additive Hazards Models for Case-Cohort Studies: A Multiple Imputation Approach**—◆ Jinyouk Jung, University of Connecticut; Sangwook Kang, University of Connecticut; Ofer Harel, University of Connecticut

584 CC-Room 28D ● Innovative Statistical Methods Applied to the Social Sciences—Contributed

Social Statistics Section

Chair(s): Carol B. Thompson, Johns Hopkins Bloomberg School of Public Health

- 2:05 p.m. **Are Nonprofit Antipoverty Organizations Located Where They Are Needed? Analysis from a Spatial Zero-Inflated Poisson Model with Census Tracts in Greater Hartford**—◆ Yung-Wei Chen, University of Connecticut
- 2:20 p.m. **Newton-Type Algorithms for the Estimation of Item Response Theory Model**—◆ Xinming An, SAS Institute; Yiu-Fai Yung, SAS Institute



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 2:35 p.m. **Spatial Biclustering and Nonlinear Modeling of a Complex Data Set**—◆ Alan Izenman, Temple University
- 2:50 p.m. **Modeling Naturalistic Clusters of Adolescent Substance Abuse Treatment Services: A Latent Class Analysis**—◆ Megan Suzanne Schuler, Johns Hopkins Bloomberg School of Public Health; Elizabeth Stuart, Johns Hopkins Bloomberg School of Public Health; Beth Ann Griffin, RAND Corporation; Rajeev Ramchand, RAND Corporation
- 3:05 p.m. **A Model of the Dynamics of the Distribution of U.S. Labor Incomes Reproduces the 1961–2010 Time-Series of a Variety of Labor Income Inequality Indicators**—◆ John Angle, Inequality Process Institute
- 3:20 p.m. **Modeling Associations Between Home Ownership and Mentally Unhealthy Days**—◆ Hong Zhou, Columbus Technologies and Services, Inc.
- 3:35 p.m. **A Study of Homelessness**—◆ Renjin Tu, Columbus State University

Invited Sessions 4:00 p.m.–5:50 p.m.

585 CC-Ballroom 20AB **COPSS Awards and Fisher Lecture—Invited**

ASA, Committee of Presidents of Statistical Societies, International Chinese Statistical Association, SSC

Chair(s): Xihong Lin, Harvard University

Organizer(s): Bhramar Mukherjee, University of Michigan

4:05 p.m. **In Praise of Simplicity, Not Mathematistry! Ten Simple, Powerful Ideas for the Statistical Scientist**—◆ Roderick Little, University of Michigan/U.S. Census Bureau

5:30 p.m. **Floor Discussion**



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Thursday, August 2

Committee/Business Meetings & Other Activities

7:00 a.m.–10:30 a.m. CC-Ballroom 20A Workroom
Speaker Management Room

7:30 a.m.–10:30 a.m. CC-Ballroom 20 Foyer
Cyber Center, Sponsored by IBM

7:30 a.m.–10:30 a.m. CC-Ballroom 20 Foyer
ASA Membership/Help Desk/Press Desk

7:30 a.m.–10:30 a.m. CC-Ballroom 20 Foyer
JSM Main Registration

8:00 a.m.–9:30 a.m. HQ-Sapphire 412
Council of Sections Response Meeting
 Chair(s): Eileen King, Cincinnati Children's Hospital Medical Center

8:30 a.m.–8:00 p.m. HQ-Sapphire 411
Census at School International Workshop
 Chair(s): Roxy Peck, Cal Poly; Rob Gould, University of California at Los Angeles; Rebecca Nichols, ASA

9:30 a.m.–10:30 a.m. HQ-Sapphire 412
Council of Sections Governing Board Debriefing Meeting
 Chair(s): Eileen King, Cincinnati Children's Hospital Medical Center

Invited Sessions 8:30 a.m.–10:20 a.m.

586 HQ-Sapphire A
● Statistical Genomics Making Use of Public Databases—Invited
 ENAR, International Indian Statistical Association
 Organizer(s): Zhijin Wu, Brown University
 Chair(s): Yi Huang, University of Maryland Baltimore County

8:35 a.m. **Detecting Differential Expression with Shrinkage Variance Estimate Using Public Databases of Gene Expression Data—◆ Zhijin Wu, Brown University**

9:00 a.m. **Predicting Functional Targets of Transcription Factors by Coupling ChIP-Seq with Geo—◆ Hongkai Ji, The Johns Hopkins University; George Wu, The Johns Hopkins University**

9:25 a.m. **Integration of Protein Binding Data in eQTL Mapping—◆ Hao Wu, Emory University**

9:50 a.m. **Equivalence Evaluation Between Xenografts and Primary Tumors—◆ Xiangqin Cui, The University of Alabama at Birmingham; Zhijin Wu, Brown University**

10:15 a.m. **Floor Discussion**

587 CC-Room 30B
● Multiway World: Modern Data Analysis with Tensor Decompositions—Invited

Section on Statistical Computing, International Indian Statistical Association

Organizer(s): Vadim Zipunnikov, Johns Hopkins Bloomberg School of Public Health; Eric C Chi, University of California at Los Angeles
 Chair(s): Vadim Zipunnikov, Johns Hopkins Bloomberg School of Public Health

8:35 a.m. **Principal Components of Cumulants—◆ Lek-Heng Lim, The University of Chicago; Jason Morton, Penn State University**

9:00 a.m. **Regularized Tensor Factorizations and Higher-Order PCA—◆ Genevera Allen, Rice University**

9:25 a.m. **Hierarchical Tensor Priors for Deep Interactions—◆ Alex Volfovsky, University of Washington; Peter David Hoff, University of Washington**

9:50 a.m. **Non-Negative Tensor Factorization: Refurbishing an Old Standby—◆ Eric C Chi, University of California at Los Angeles; Tamara G Kolda, Sandia National Laboratories**

10:15 a.m. **Floor Discussion**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

588 HQ-Sapphire EF ■ ● Innovations in Bioimaging and the Impact of Statistics—Invited

Biopharmaceutical Section, Section for Statistical Programmers and Analysts, WJNAR, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Mariusz S Lubomirski, Johnson & Johnson

Chair(s): Dhammika Amaratunga, Johnson & Johnson

- 8:30 a.m. **Modeling and Inference in Medical Image Analysis**—◆ William Mercer Wells III, Harvard Medical School/Brigham and Women's Hospital
- 8:55 a.m. Disc: Brandon Gallas, FDA/CDRH/OSEL/DIAM
- 9:05 a.m. **Quantitative Analysis of Longitudinal Molecular Images to Monitor Lung Infection**—◆ Bruno Michel Jedynak, The Johns Hopkins University
- 9:30 a.m. Disc: Paul Acton, Janssen Pharmaceuticals R&D
- 9:40 a.m. **Computational Neuroinformatics: Challenges, Methods, and Tools**—◆ Ivo D Dinov, SOCR Resource
- 10:05 a.m. Disc: Richard Baumgartner, Merck

589 HQ-Sapphire B ● New Methodological Advances in Network-Based Analysis of Omics Data—Invited

Biometrics Section, International Chinese Statistical Association, WJNAR, International Indian Statistical Association

Organizer(s): Ali Shojaie, University of Washington

Chair(s): Sumanta Basu, University of Michigan

- 8:35 a.m. **Robust Gaussian Graphical Modeling Via L_1 Penalization**—◆ Hongzhe Li, University of Pennsylvania
- 9:05 a.m. **Statistical Methods for Dynamic Spatio/Temporal Networks**—◆ Adrian Dobra, University of Washington
- 9:35 a.m. **High-Dimensional Hypothesis Screening Using P-Value Perturbation**—◆ Ali Shojaie, University of Washington; Moulinath Banerjee, University of Michigan; George Michailidis, University of Michigan
- 10:05 a.m. **Floor Discussion**

590 CC-Room 26B ● Efficient Approaches to Analyzing Incomplete Data—Invited

Section on Nonparametric Statistics, Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Ursula U. Müller, Texas A&M University

Chair(s): Ursula U. Müller, Texas A&M University

- 8:35 a.m. **Efficiency of Complete Case Statistics in Semiparametric Regression Models with Responses Missing at Random**—◆ Anton Schick, Binghamton University
- 9:05 a.m. **Complete Case Analysis: Goodness-of-Fit Testing and Lack-of-Fit Testing**—◆ Hira L. Koul, Michigan State University
- 9:35 a.m. **Nonparametric Curve Estimation with Missing Data**—◆ Sam Efromovich, The University of Texas at Dallas
- 10:05 a.m. **Floor Discussion**

591 CC-Room 31C ● Analysis of Complex Time Series: Correlation, Nonlinearity, Nonstationarity, and Functional Structure—Invited

Business and Economic Statistics Section, Section on Survey Research Methods, International Indian Statistical Association

Organizer(s): Lily Wang, The University of Georgia

Chair(s): Lily Wang, The University of Georgia

- 8:35 a.m. **Functional Dynamic Factor Models with Application to Yield Curve Forecasting**—◆ Haipeng Shen, The University of North Carolina at Chapel Hill; Spencer Hays, Pacific Northwest Research Laboratory; Jianhua Huang, Texas A&M University
- 9:05 a.m. **Robust Association Studies Using Density Power Divergences with Application to Consumer Expenditure Survey and Survey of Consumer Finance**—◆ T N Sriram, University of Georgia; Ross Iaci, The College of William and Mary
- 9:35 a.m. **Efficient Inference for Autoregression in the Presence of Trend**—◆ Lijian Yang, Soochow University/Michigan State University; Debin Qiu, Soochow University; Qin Shao, University of Toledo
- 10:05 a.m. **Floor Discussion**

592 HQ-Sapphire C ■ ● Uses of Administrative Record Benchmarking in Modern Census-Taking—Invited

International Association of Survey Statisticians, International Indian Statistical Association

Organizer(s): Asaph Chun, U.S. Census Bureau

Chair(s): Howard Hogan, U.S. Census Bureau

- 8:35 a.m. **Evaluation of the Quality of Administrative Data Used in the Dutch Virtual Census**—◆ Piet Daas, Statistics Netherlands; Saskia Ossen, Statistics Netherlands; Martijn Tennekes, Statistics Netherlands; Eric Schulte Nordholt, Statistics Netherlands



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 8:55 a.m. **Input Data Quality in Register-Based Statistics: The Norwegian Experience**—◆ Coen Hendriks, Statistics Norway
- 9:15 a.m. **Doing a Register-Based Census for the First Time: The Swedish Experiences**—◆ Martin Axelson, Statistics Sweden; Anders Holmberg, Statistics Sweden; Ingegerd Jansson, Statistics Sweden; Peter Werner, Statistics Sweden; Sara Westling, Statistics Sweden
- 9:35 a.m. Disc: Constance F Citro, Committee on National Statistics
- 9:55 a.m. Disc: Amy B O'Hara, U.S. Census Bureau
- 10:15 a.m. **Floor Discussion**

- 9:00 a.m. **Individualized Comparative Effectiveness Mental Health Research: Estimating Treatment Effects Accounting for Patient Preferences**—◆ Zhehui Luo, Michigan State University; Qiaoling Chen, Michigan State University; Carlos Weiss, Michigan State University; Joseph C Gardiner, Michigan State University
- 9:25 a.m. **Application of Propensity Score in Estimating Dose Response: Maternal Antidepressant Use and Adverse Pregnancy Outcomes**—◆ Pingsheng Wu, Vanderbilt University School of Medicine; Chang Yu, Vanderbilt University School of Medicine; William Dupont, Vanderbilt University School of Medicine; Tina Hartert, Vanderbilt University School of Medicine; Richard Shelton, The University of Alabama at Birmingham; Ed Mitchel, Vanderbilt University School of Medicine; Jeffrey Horner, Vanderbilt University School of Medicine; Patrick Arbogast, Kaiser Permanente
- 9:50 a.m. **Reducing Bias in Studies of Comparative Effectiveness: Applications from Mental Health**—◆ Yulei He, Harvard University; James O'Malley, Harvard Medical School; Alisa Busch, Harvard Medical School; Katya Zelevinsky, Harvard Medical School
- 10:15 a.m. **Floor Discussion**

593 HQ-Sapphire L Statistical Methods for Non- and Semiparametric Models with Censored Data—Invited

IMS
Organizer(s): Ingrid van Keilegom, Institut de Statistique
Chair(s): Michael Kosorok, The University of North Carolina at Chapel Hill

- 8:35 a.m. **Identifiability, Estimation, and Inference for Copula Models Based on Censored Data**—◆ Ingrid van Keilegom, Institut de Statistique; Maik Schwarz, Université Catholique de Louvain; Geurt Jongbloed, Delft University of Technology
- 9:20 a.m. **Empirical Likelihood Tests of Stochastic Ordering for Censored Data**—◆ Ian Wray McKeague, Columbia University
- 10:05 a.m. **Floor Discussion**

594 CC-Room 29D ■ ● Reducing Bias in Studies of Comparative Effectiveness: Applications from Mental Health—Invited

Health Policy Statistics Section, Section on Risk Analysis, Biopharmaceutical Section, Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics in Mental Health Research
Organizer(s): James O'Malley, Harvard Medical School
Chair(s): James O'Malley, Harvard Medical School

- 8:35 a.m. **Sensitivity Analysis for Instrumental Variables Regression**—◆ Jaeun Choi, Harvard Medical School; Mary Beth Landrum, Harvard Medical School; James O'Malley, Harvard Medical School

Invited Panels 8:30 a.m.–10:20 a.m.

595 HQ-Sapphire D ■ Small Population, Big Impact: Improving the Measurement of the Group Quarters Population in the American Community Survey—Invited

Social Statistics Section, Section on Survey Research Methods, International Indian Statistical Association

Organizer(s): Krisztina Marton, Committee on National Statistics
Chair(s): Kennon R. Copeland, NORC

- Panelists:** ◆ Joseph Salvo, New York City Department of City Planning
 ◆ Graham Kalton, Westat
 ◆ Richard Valliant, University of Maryland
 ◆ Alfredo Navarro, U.S. Census Bureau

- 10:05 a.m. **Floor Discussion**



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

Topic-Contributed Sessions 8:30 a.m.–10:20 a.m.

596 CC-Room 29B Recent Advances in Theory and Methods of Spatial Statistics—Topic-Contributed

Section on Statistics and the Environment, International Indian Statistical Association

Organizer(s): Wei-Ying Wu, Academia Sinica

Chair(s): Chae Young Lim, Michigan State University

- 8:35 a.m. **Nonstationary Random Fields: Applications and Theory**—◆Ethan Anderes, University of California at Davis
- 8:55 a.m. **On Likelihood-Based Inference for Spatial Linear Model**—◆Jun Zhu, University of Wisconsin-Madison
- 9:15 a.m. **Estimation of Tail Behavior of the Spectral Density Under the Infill Asymptotics**—◆Wei-Ying Wu, Academia Sinica
- 9:35 a.m. **Covariance Models for Vector Random Fields in Space and Time**—◆Juan Du, Kansas State University; Chunsheng Ma, Wichita State University
- 9:55 a.m. **How Do the Asymptotics Help the Spatial Modeling?**—◆Hao Zhang, Purdue University
- 10:15 a.m. **Floor Discussion**

597 CC-Room 23C ■ ● Advances in Spatial Latent Variable Modeling, with Applications to Biomedical Sciences—Topic-Contributed

Biometrics Section, Section on Statistics in Epidemiology, International Indian Statistical Association

Organizer(s): Dipankar Bandyopadhyay,

Chair(s): Ling Lan, Georgia Health Sciences University

- 8:35 a.m. **Bridging Conditional and Marginal Inference for Spatially Referenced Binary Data**—◆Laura Boehm, North Carolina State University; Brian Reich, North Carolina State University; Dipankar Bandyopadhyay,
- 8:55 a.m. **Process-Based Bayesian Melding of Occupational Exposure Models and Industrial Workplace Data**—◆Joao Vitor Dias Monteiro, University of Minnesota; Sudipto Banerjee, University of Minnesota; Gurumurthy Ramachandran, University of Minnesota
- 9:15 a.m. **Multivariate Spatial Disease Surveillance Using a Latent Shared Component Model**—◆Ana Corberan-Vallet, University of Valencia; Andrew B Lawson, Medical University of South Carolina

- 9:35 a.m. **Bayesian Spatially Varying Coefficient Models for Estimating the Toxicity of the Chemical Components of Fine Particulate Matter**—◆Yeonseung Chung, Korea Advanced Institute of Science and Technology; Francesca Dominici, Harvard School of Public Health; Brent Coull, Harvard School of Public Health; Michelle Bell, Yale University

- 9:55 a.m. **Nonparametric Spatial Models for Periodontal Disease Data with Spatially Varying Non-Random Missingness**—◆Dipankar Bandyopadhyay; Brian Reich, North Carolina State University; Howard Bondell, North Carolina State University

- 10:15 a.m. **Floor Discussion**

598 CC-Room 27B ■ ● Bayesian Methods with Applications to Health Sciences—Topic-Contributed

Section on Bayesian Statistical Science, WNAAR, International Indian Statistical Association

Organizer(s): Saman Muthukumarana, University of Manitoba

Chair(s): Ram C. Tiwari, FDA/CDER/OTS/OB

- 8:35 a.m. **Bayesian Meta-Analysis of Epidemiological Data with Missing Covariates**—◆Lawrence McCandless,
- 8:55 a.m. **Bayesian Methods for Sets of Multi-Way Contingency Tables**—◆Theresa Smith, University of Washington
- 9:15 a.m. **Random-Effects Meta-Analysis Using Dirichlet Process**—◆Saman Muthukumarana, University of Manitoba; Ram C. Tiwari, FDA/CDER/OTS/OB
- 9:35 a.m. **Joint High-Dimensional Bayesian Variable and Covariance Selection with an Application to eQTL Analysis**—◆Anindya Bhadra, Texas A&M University; Bani K Mallick, Texas A&M University
- 9:55 a.m. **Bayesian Modeling with Prior Information on the Strength of Regression**—◆Agniva Som, The Ohio State University; Chris Hans, The Ohio State University; Steven MacEachern, The Ohio State University
- 10:15 a.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

599 CC-Room 26A

■ ● Some Current Research Problems in Statistical Process Control—Topic-Contributed

Quality and Productivity Section, Section for Statistical Programmers and Analysts, International Indian Statistical Association

Organizer(s): Subha Chakraborti, The University of Alabama

Chair(s): Subha Chakraborti, The University of Alabama

8:35 a.m. **Effect of the Number and Size of the Initial Samples on the Performance of the S Chart**—◆ Eugenio Epprecht, PUC-Rio; Lorena Drumond Loureiro, PUC-Rio

8:55 a.m. **On Nonparametric Phase-II Joint Monitoring of Location and Scale Based on a Single Chart**—◆ Amitava Mukherjee, Indian Institute of Technology, Madras

9:15 a.m. **A Class of Nonparametric Control Charts for Monitoring Location Based on the Exceedance Statistic**—◆ Marien Graham, University of Pretoria; Amitava Mukherjee, Indian Institute of Technology, Madras; Subha Chakraborti, The University of Alabama

9:35 a.m. **Guaranteed Conditional Performance of Control Charts via Bootstrap Methods**—◆ Axel Gandy, Imperial College London; Jan Terje Kvaloy, University of Stavanger

9:55 a.m. **Determining Robust Control Limits for Hotelling's T^2 Control Chart**—◆ Gary R Mercado, The University of Alabama; Marcus Perry, The University of Alabama

10:15 a.m. **Floor Discussion**

600 CC-Room 30E

■ Consulting in an Interdisciplinary Nursing Environment—Topic-Contributed

Section on Statistical Consulting, Committee on Applied Statisticians, International Indian Statistical Association

Organizer(s): Matt Hayat, Rutgers University

Chair(s): Matt Hayat, Rutgers University

8:35 a.m. **Avoiding the Lower Bound: Practical Tools for Estimating Unified Reliability of Psychometric Instruments**—◆ Yu Jiang, Kansas University Medical Center; Byron J. Gajewski, Kansas University Medical Center; Hung-Wen Yeh, Kansas University Medical Center; Kimberly Engelman, Kansas University Medical Center; Cynthia Teel, Kansas University Medical Center; Won S. Choi, Kansas University Medical Center; Allen K. Greiner, Kansas University Medical Center; Christine Makosky Daley, Kansas University Medical Center

8:55 a.m. **Building a Biostatistics Business Model Within a Nursing School**—◆ Alexandra Hanlon, University of Pennsylvania

9:15 a.m. **Investigating Statistical Preparedness of Nursing Graduates for the Workplace**—◆ MyoungJin Kim, Illinois State University

9:35 a.m. **Nursing Science Research Consulting: A Multidisciplinary Framework**—◆ Tom Templin, Wayne State University

9:55 a.m. **Experiences Leveraging Biostatistical Work on Nursing Projects Into Personal Research**—◆ George Knafl, The University of North Carolina at Chapel Hill

10:15 a.m. **Floor Discussion**

601 CC-Room 29C

■ ● Nonparametric Estimation of Spatial Covariance Functions and Its Application in Environmental Statistics—Topic-Contributed

Section on Statistics and the Environment

Organizer(s): Zhengyuan Zhu, Iowa State University

Chair(s): Jaekwang Kim, Iowa State University

8:35 a.m. **Nonparametric Methods for Estimating Nonstationary Covariance Functions on Spheres**—◆ Zhengyuan Zhu, Iowa State University; Yang Li, Iowa State University

8:55 a.m. **Nonparametric Covariance Functions for Multivariate Geostatistics**—◆ Juan Hu, Purdue University; Hao Zhang, Purdue University

9:15 a.m. **Nonparametric Estimation of Stationary Isotropic Covariance Functions**—◆ Chunfeng Huang, Indiana University

9:35 a.m. **Disc: Gabriel Huerta, Indiana University**

9:55 a.m. **Floor Discussion**

602 CC-Room 21

■ Recent Developments in Bayesian Evidence Synthesis with Applications in Health Technology Evaluation and Comparative Effectiveness—Topic-Contributed

Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): David I Ohlssen, Novartis

Chair(s): Karen Price, Eli Lilly and Company

8:35 a.m. **Statistical Approaches for Conducting Network Meta-Analysis in Drug Development**—◆ Byron Jones, Novartis Pharma AG

8:55 a.m. **Use of Bayesian Meta-Analysis Methods to Develop a Tool to Predict the Risk of Stent Thrombosis (ST) Following the Implantation of a Coronary Artery Stent**—◆ Mark Belger, Eli Lilly and Company; Fanni Natanegara, Eli Lilly and Company; Ming-Dauh Wang, Eli Lilly and Company; Walid Fakhouri, Eli Lilly and Company; Peita Graham-Clarke, Eli Lilly and Company



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:15 a.m. **A Bayesian Approach to Three Levels Surrogacy Modeling for Multiple Sclerosis**—◆ Luca Pozzi, University of California at Berkeley; David I Ohlssen, Novartis; Heinz Schmidli, Novartis Pharma AG
- 9:35 a.m. **Application of Bayesian Nonparametric Models in Comparative Effectiveness Research**—◆ Gary Rosner, The Johns Hopkins University
- 9:55 a.m. Disc: Greg (Guoxing) Soon, FDA
- 10:15 a.m. **Floor Discussion**

603 CC-Room 28E

■ ● Frequentist and Bayesian Models in Government Studies—Topic-Contributed

Section on Government Statistics, International Indian Statistical Association

Organizer(s): Wendy Barboza, USDA/National Agricultural Statistics Service

Chair(s): Wendy Barboza, USDA/National Agricultural Statistics Service

- 8:35 a.m. **Application of Pattern-Mixture Models for Evaluation of Estimation Methods Under Responsive Designs**—◆ Randall Powers, Bureau of Labor Statistics; John Eltinge, Bureau of Labor Statistics
- 8:55 a.m. **Bayesian Functional Models for Biomarker Discovery in Clinical Proteomics Study**—◆ Xia Wang, University of Cincinnati
- 9:15 a.m. **Estimating the Number of U.S. Farms with Adjustment for Misclassification**—◆ Denise A Abreu, USDA/National Agricultural Statistics Service; Kenneth K Lopiano, University of Florida; Samuel C Garber, National Agricultural Statistics Service; Andrea C Lamas, National Agricultural Statistics Service; Linda J Young, University of Florida
- 9:35 a.m. **Choosing a Copula to Preserve Important Measures of Association**—◆ Timothy Keller, National Agricultural Statistics Service
- 9:55 a.m. **Polytomous Logistic Regression with Multi-Cohort Longitudinal Surveys**—◆ Ivan Carrillo-Garcia, NISS; Alan F. Karr, NISS
- 10:15 a.m. **Floor Discussion**

604 CC-Room 28B

■ ● Novel Statistical Methods for RNA-Seq Data Analysis—Topic-Contributed

IMS, Biometrics Section, WJNAR, International Indian Statistical Association

Organizer(s): Peng Liu, Iowa State University

Chair(s): Chong Wang, Iowa State University

- 8:35 a.m. **Pathway Analysis Using a Score-Based Approach for RNA-Seq Data**—◆ Yihui Zhou, The University of North Carolina at Chapel Hill; Fred Wright, The University of North Carolina at Chapel Hill
- 8:55 a.m. **Empirical Bayesian Analyses of High-Throughput Sequencing Data**—◆ Thomas James Hardcastle, University of Cambridge
- 9:15 a.m. **Comparative Analysis of RNA-Seq Data from Different Species**—◆ Peng Liu, Iowa State University; Yaqing Si, Iowa State University
- 9:35 a.m. **Using Finite Poisson Mixture Models for RNA-Seq Data Analysis and Transcript Expression Level Quantification**—◆ Yu Zhu, Purdue University; Han Wu, Purdue University; Zhaohui Qin, Emory University
- 9:55 a.m. **Differential Expression in RNA-Seq Data with a New Shrinkage Estimate on Dispersion**—◆ Chi Wang, University of Kentucky; Hao Wu, Emory University; Zhijin Wu, Brown University
- 10:15 a.m. **Floor Discussion**

605 CC-Room 30A

■ ● Innovative Data Analysis of Clinical Trials in the VA Cooperative Studies Program—Topic-Contributed

Section on Government Statistics, Biopharmaceutical Section

Organizer(s): Ying Lu, VA Palo Alto Healthcare System/Stanford University

Chair(s): Robert Lew, VA Boston Healthcare

- 8:35 a.m. **Dealing with Missing Data in Clinical Trials: A CSP Perspective**—◆ Kousick Biswas, CSPCC
- 8:55 a.m. **The Best Treatment Modality Selection for Multiple Binary Endpoints**—◆ Stephen F. Bingham, VA Cooperative Studies Program; Zhibao Mi, VA Cooperative Studies Program; Dimitri Novitzky, Haley VA Medical Center; Joseph Collins, VA Cooperative Studies Program
- 9:15 a.m. **The VACS Index as a Surrogate Outcome for HIV/AIDS Clinical Trials**—◆ Katherine Kirkwood, VA Cooperative Studies Program; Tassos Kyriakides, VA Cooperative Studies Program; Sheldon T. Brown, James J. Peters VAMC; Amy C. Justice, VA Connecticut Healthcare System, West Haven; Janet Tate, VA Connecticut Healthcare System, West Haven



● Themed Session ■ Applied Session ◆ Presenter

- 9:35 a.m. **The Impact of Missing Data on the Results of a Schizophrenia Study**—◆ Denis V Rybin, Boston University/VA Boston Healthcare System; Gheorghe Doros, Boston University; Robert A Rosenheck, Yale Medical School/VA Connecticut Health Care System; Robert Lew, VA Boston Healthcare
- 9:55 a.m. Disc: Mei-Chiung Shih, VA Palo Alto Healthcare System/Stanford University
- 10:15 a.m. **Floor Discussion**

606 CC-Room 22

■ Sample Size Adjustment for Clinical Trial with Multiple Comparisons—Topic-Contributed

Biopharmaceutical Section, Section for Statistical Programmers and Analysts

Organizer(s): Yi Tsong, FDA/CDER

Chair(s): Joanne Zhang, FDA/CDER

- 8:35 a.m. **Sample Size Determination in Clinical Trials with Multiple Correlated Endpoints**—◆ Toshimitsu Hamasaki, Osaka University Graduate School of Medicine; Takashi Sozu, Kyoto University; Tomoyuki Sugimoto, Hiroasaki University; Scott Evans, Harvard University
- 8:55 a.m. **Test and Power Considerations for Multiple Endpoint Analyses**—◆ Frank Bretz, Novartis; Willi Maurer, Novartis; Ekkehard Glimm, Novartis
- 9:15 a.m. **Implementation of Patient Enrichment Design in a Phase II Oncology Trial**—◆ James Song, Roche
- 9:35 a.m. **On Power and Sample Size Computation for Multiple Testing Procedures**—◆ Jie Chen, Merck Serono (Beijing) R&D Hub; Jianfeng Luo, Fudan University; Kenneth Liu, Merck; Devan Mehrotra, Merck Research Laboratories
- 9:55 a.m. **Sample Size Adjustment for Clinical Trial with Multiple**—◆ Yi Tsong, FDA/CDER; Anna Sun, University of Maryland Baltimore County; Seung-Ho Kang, Yonsei University
- 10:15 a.m. **Floor Discussion**

607 CC-Room 32B

● Improving Coverage of U.S.-Trained Doctorate Recipients—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Dan Kasprzyk, NORC

Chair(s): Benjamin M. Reist, U.S. Census Bureau

- 8:35 a.m. **Development of the Sample Design for the International Survey of Doctorate Recipients (SDR)**—◆ Karen Grigorian, NORC; Brenda G. Cox, SRA International; Lynn Milan, National Science Foundation
- 8:55 a.m. **Integration of the National and International SDR Data Sets: Bridging Effects and Expected Improvements to the Time Series Data**—◆ Y. Michael Yang, NORC; Wan-Ying Chang, National Science Foundation; Stephen Cohen, National Science Foundation; Rachel Harter, RTI International
- 9:15 a.m. **Utilizing a Logistic Regression Approach for Weighting Adjustment in a Longitudinal Data Set**—◆ Michael Sinclair, NORC; Wan-Ying Chang, National Science Foundation; Julia Batishev, NORC; Michael Yang, NORC
- 9:35 a.m. **Migration Patterns of U.S.-Trained Doctorate-Holders**—◆ Wan-Ying Chang, National Science Foundation; Lance Selfa, NORC; Michael Sinclair, NORC; Lynn Milan, National Science Foundation
- 9:55 a.m. Disc: Donsig Jang, Mathematica Policy Research
- 10:15 a.m. **Floor Discussion**

Topic-Contributed Panels 8:30 a.m.–10:20 a.m.

608 CC-Room 31A

● Expanding the Job Search—Topic-Contributed

Isolated Statisticians, Section on Statistical Education, International Indian Statistical Association

Organizer(s): Patricia B Humphrey, Georgia Southern University

Chair(s): Patricia B Humphrey, Georgia Southern University

Panelists: ◆ Patricia B Humphrey, Georgia Southern University

◆ K. B. Boomer, Bucknell University

◆ Mary Parker, Austin Community College

◆ Leigh V Slauson, Capital University

◆ Jason Wilson, Biola University

◆ Philip Yates, Saint Michael's College

10:15 a.m. **Floor Discussion**



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● Themed Session ■ Applied Session ◆ Presenter

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609 CC-Room 31B ■ ● Business Analytics—Topic-Contributed

Statistics in Business Schools, International Indian Statistical Association

Organizer(s): John D. McKenzie, Babson College
Chair(s): Debra K. Stiver, University of Nevada, Reno

Panelists: ◆ Curt Hinrichs, SAS Institute
 ◆ Kellie Keeling, University of Denver
 ◆ John D. McKenzie, Babson College

10:15 a.m. **Floor Discussion**

610 HQ-Sapphire H ■ ● Rising to the Challenge: Preparing Educators and Society for the Common Core State Standards—Topic-Contributed

Section on Statistical Education, International Indian Statistical Association, Social Statistics Section

Organizer(s): Jennifer L Green, University of Nebraska
Chair(s): Sharon Lohr, Arizona State University

Panelists: ◆ Jennifer L Green, University of Nebraska
 ◆ Walter W Stroup, University of Nebraska
 ◆ Gary D Kader, Appalachian State University

10:15 a.m. **Floor Discussion**

Contributed Sessions 8:30 a.m.–10:20 a.m.

611 CC-Room 29A ■ ● Using Data Sets, Technology, and Activities to Teach Statistics—Contributed

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences

Chair(s): Megan Elizabeth Mocko, University of Florida

8:35 a.m. **Powerball: A Wealth of Data for a Variety of Student Projects**—◆ Edward Mansfield, The University of Alabama

8:50 a.m. **Using Data from Climate Science to Teach Introductory Statistics**—◆ Gary Witt, Temple University

9:05 a.m. **Using CrunchIt to Bring R Into the Introductory Statistics Classroom**—◆ Alan Dabney,

9:20 a.m. **Bringing Data to Life Into an Introductory Statistics Course with Gapminder**—◆ Dai-trang Le, Iowa State University

9:35 a.m. **Integrating R Into Introductory Statistics**—◆ Mine Cetinkaya-Rundel, Duke University; Andrew Bray, University of California at Los Angeles

9:50 a.m. **Implementing Auto-Generated Power Point Slides for Teaching Statistics**—◆ Jen-Ting Wang, SUNY at Oneonta; Sen Zhang, SUNY at Oneonta

10:05 a.m. **Developing a Test of Normality in the Classroom**—◆ Robert Jernigan, American University

612 CC-Room 30C Visualizing Complex Models—Contributed

Section on Statistical Graphics, Section on Statistical Computing
Chair(s): Charlotte Wickham, Oregon State University

8:35 a.m. **HLMdiag: An Implementation of Diagnostics for Hierarchical Linear Models in R**—◆ Adam Loy, Iowa State University; Heike Hofmann, Iowa State University

8:50 a.m. **Design of Plots for Likert and Other Rating Scales**—◆ Richard Heiberger, Temple University; Naomi B Robbins, NBR

9:05 a.m. **Model Deconstruction and Hill Causality**—◆ William Heavlin, Google

9:20 a.m. **Interpreting the Differences Among LsMeans in Generalized Linear Models**—◆ Robin High, University of Nebraska Medical Center

9:35 a.m. **Seeing the Forest for the Trees: Graphical Methods for Logic Forest**—◆ Bethany Wolf, Medical University of South Carolina; Elizabeth G. Hill, Medical University of South Carolina; Elizabeth H. Slate, Florida State University

9:50 a.m. **DaViTo: An Open-Source Mapping, Graphics, and Analysis Tool**—◆ Samuel Buttrey, Naval Postgraduate School; James Henry, U.S. Army TRAC-Monterey; Lyn R Whitaker, Naval Postgraduate School; Arnold Buss, Naval Postgraduate School

10:05 a.m. **Visualization of Complex Statistical Information in Maps: The Checkerplot**—◆ Matthias Templ, Vienna University of Technology; Alexander Kowarik, Statistics Austria; Beat Hulliger, University of Northwestern Switzerland

613 CC-Room 30D Bootstrapping, Resampling, and Ranking—Contributed

Section on Statistical Learning and Data Mining, Section on Statistical Computing

Chair(s): Desale Habtzghi, University of Akron

8:35 a.m. **A Bootstrap Estimator of the Rank of Random Matrices and Its Application**—◆ Wei Luo, Penn State University; Bing Li, Penn State University

8:50 a.m. **Changes in the Degree of Connectivity Between Multidimensional Characteristics in Longitudinal Studies**—◆ Arnold Mitnitski, Dalhousie University; Matthew Richard, DGI Clinical; Michael Gold, Allon Therapeutics Inc.; Kenneth Rockwood, Dalhousie University



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- 9:05 a.m. **Bootstrap Methods for Lasso-Type Regression Estimators**—◆ Wenlong Cai, The University of Hong Kong; Stephen Man Sing Lee, The University of Hong Kong
- 9:20 a.m. **Smoothed Stability Selection for Analysis of Sequencing Data**—◆ Eugene Urrutia, The University of North Carolina at Chapel Hill; Li Yun, The University of North Carolina at Chapel Hill; Michael C Wu, The University of North Carolina at Chapel Hill
- 9:35 a.m. **Resampling-Based Test for Variable Selection with Gradient Boosting Trees**—◆ Qianyi Zhang, Eli Lilly and Company
- 9:50 a.m. **Is There a Partial Consensus Ordering Among Rankings?**—◆ Srinath Sampath, The Ohio State University; Joseph Verducci, The Ohio State University
- 10:05 a.m. **Compound Ranking in High-Throughput Screening by Using Time Course Data from Cell-Based Assays**—◆ Francisco Diaz, University of Kansas Medical Center

614 CC-Room 24A Mixed- and Random-Effects Modeling—Contributed

Biometrics Section

Chair(s): Jason Brinkley, East Carolina University

- 8:35 a.m. **Dimension Reduction and Alleviation of Confounding for Spatial Generalized Linear Mixed Models**—◆ John Hughes, University of Minnesota; Murali Haran, Penn State University
- 8:50 a.m. **Multivariate Meta-Analysis: A Robust Approach Based on the Theory of U-Statistic**—◆ Yan Ma, Cornell University; Madhu Mazumdar, Weill Cornell Medical College
- 9:05 a.m. **Comparing Methods of Small Sample Inference for Linear Mixed Models**—◆ Min Zhu, SAS Institute; Guixian Lin, SAS Institute
- 9:20 a.m. **Model Selection for Mixed Models**—◆ Hui Xu, St. Cloud State University
- 9:35 a.m. **Measurement Errors in Times for Blood Sampling in Population Pharmacokinetic Models**—◆ Leena Choi, Vanderbilt University
- 9:50 a.m. **Bivariate Copula Random-Effect (BCRE) Model for Length of Stay and Cost**—◆ Xiaoqin Tang, Geisinger Health System; Joseph C Gardiner, Michigan State University; Zhehui Luo, Michigan State University
- 10:05 a.m. **A Test for Comparing the Location of Quadratic Growth Curves**—◆ Wanchunzi Yu, Mark Reiser, Arizona State University

615 CC-Room 24B Biometrical Applications—Contributed

Biometrics Section

Chair(s): Patrick Breheny, University of Kentucky

- 8:35 a.m. **Adoption of Recent Biostatistical Methods Into General/Internal Medicine Research**—◆ Paul Nietert, Medical University of South Carolina; Amy E Wahlquist, Medical University of South Carolina; Teri Lynn Herbert, Medical University of South Carolina
- 8:50 a.m. **Why Bother Psychometrics? One Example from the Hamilton Rating Scale for Depression (HRSD) in a Depression Trial**—◆ Chengwu Yang, Penn State College of Medicine; Wenle Zhao, Medical University of South Carolina
- 9:05 a.m. **Model Uncertainty and Model Averaging in the Estimation of Infectious Doses for Microbial Pathogens**—◆ Hojin Moon, California State University Long Beach; Steven Kim, University of California at Irvine; James J. Chen, FDA; Ralph L Kodell, University of Arkansas for Medical Sciences
- 9:20 a.m. **Analysis of CBCT Shift Data from Head-and-Neck Cancer Patients**—◆ Yijiang Pan, INC Research; Yi Zhang, The University of North Carolina at Chapel Hill; Xiaoli Tang, The University of North Carolina at Chapel Hill
- 9:35 a.m. **Exact Poly-K Test**—◆ Mohammad Rahman, FDA; Karl K Lin, FDA; Ram C. Tiwari, FDA/CDER/OTS/OB
- 9:50 a.m. **Statistical Analysis of Seasonal Variation in Vitamin D Concentrations in the MESA Study**—◆ Michael Sachs; Ian DeBoer, Kidney Research Institute
- 10:05 a.m. **Choosing Number of Cores in a Prostate Cancer Biopsy Session to Achieve Desired Specificity-Sensitivity Trade-Off**—◆ Gerald Ogola, Baylor Health Care System; Robert Serfling, The University of Texas at Dallas

616 CC-Room 23A Advances in Clinical Trial Methodologies—Contributed

Biopharmaceutical Section

Chair(s): Edwin A. Ndum, ACT, Inc.

- 8:35 a.m. **Determinations of Dilution Series and Sample Sizes in Quantal Bioassays**—◆ Qianqiu Li, Janssen Pharmaceuticals, Inc.; Bill Pikounis, Janssen Pharmaceuticals, Inc.; Justin Smith, Mentor Corporation
- 8:50 a.m. **Statistical Issues for Genotyping Blood Pressure Sensitivity to Weight Loss and Sodium Diet in the Elderly**—◆ Jie Liu, Rutgers University; Javier Cabrera, Rutgers University; John Kostis, Robert Wood Johnson Medical School; William Kostis, General Hospital of Boston



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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- 9:05 a.m. **Weighted Log-Rank Statistic to Compare Shared-Path Adaptive Treatment Strategies**—◆Kelley Kidwell, University of Pittsburgh; Abdus S. Wahed, University of Pittsburgh
- 9:20 a.m. **Optimization as a Practical Tool in Clinical Trial Design**—◆Walter Boyle, SAS Institute
- 9:35 a.m. **A Group Sequential Method Based on the Weighted Log-Rank Test for Delayed Treatment Effects**—◆Mizuki Yoshida, Pfizer Inc.; Yutaka Matsuyama, University of Tokyo
- 9:50 a.m. **A Delayed Response Model to Assess the Proof of Concept Clinical Design in Treatment to Rheumatoid Arthritis**—◆Feng Liu, GlaxoSmithKline/University of Sheffield; Daren Austin, GlaxoSmithKline; Steven Julious, University of Sheffield
- 10:05 a.m. **Floor Discussion**

617 CC-Room 32A ■ ● Demand and Non-Gaussian Data—Contributed

Business and Economic Statistics Section

Chair(s): Baoline Chen, Bureau of Economic Analysis

- 8:35 a.m. **Assessing the Difference Between Demand Sharing and Shock Sharing in Supply Chains**—◆Vladimir Kovtun, Stern School of Business; Avi Giloni, Yeshiva University; Clifford Hurvich, Stern School of Business
- 8:50 a.m. **Analysis of Multinomial Discrete Choice Probit Model with Structured Correlation Matrix**—◆Bhaskara Ravi, Old Dominion University; N. Rao Chaganty, Old Dominion University
- 9:05 a.m. **Censored Regression with Heteroskedasticity**—◆Hieu Nguyen, Brigham Young University; James McDonald, Brigham Young University
- 9:20 a.m. **Learning from Only Positive and Unlabeled Data Using Generalized Stochastic Frontier Model**—◆Liuxia Wang, Sentrana Inc.
- 9:35 a.m. **Multifractal Processes for Count Data, with an Application in Car Insurance**—◆Jean-Philippe Boucher

Université du Québec à Montréal
- 9:50 a.m. **Estimation and Evaluating of Aggregate Discounted Claims**—◆Min Deng, University of Maryville of St. Louis
- 10:05 a.m. **Floor Discussion**

618 CC-Room 25A **Statistical Methods for Clinical Studies—Contributed**

ENAR, Biopharmaceutical Section

Chair(s): Jeff Goldsmith, The Johns Hopkins University

- 8:35 a.m. **Time-Varying Coefficient Proportional Hazards Model with Missing Covariates**—◆Xiao Song, University of Georgia; C.Y. Wang, Fred Hutchinson Cancer Research Center
- 8:50 a.m. **Evaluating Center-Specific Long-Term Outcomes Through Differences in Mean Survival Time**—◆Zhi He, University of Michigan; Douglas E Schaubel, University of Michigan
- 9:05 a.m. **An Innovative Application of Sampling Weights to Evaluate Screening Versus Standard Assessments in COPD**—◆Diana Lam, The University of North Carolina at Chapel Hill; Gary Koch, The University of North Carolina at Chapel Hill
- 9:20 a.m. **Adaptive Designs for Comparative Effectiveness Trials**—◆John Kairalla, University of Florida; Christopher S Coffey, University of Iowa; Mitchell Thomann, University of Iowa; Keith E. Muller, University of Florida
- 9:35 a.m. **Meta-Analysis of One Outcome from Group Sequential Trials with Composite Outcomes: Are Standard Methods Appropriate?**—◆Abigail Shoben, The Ohio State University
- 9:50 a.m. **The Summary Predictive Curve: A Novel Method for Evaluating Prediction Performance of Biomarkers and Tests**—◆Zheng Zhang, Brown University
- 10:05 a.m. **Extending the TITE CRM to Multiple Outcomes**—◆Joseph S Koopmeiners, University of Minnesota

619 CC-Room 23B ■ Methodologies Related to Dose Response/Dose Finding—Contributed

Biopharmaceutical Section

Chair(s): James Jiao, Janssen Pharmaceuticals R&D

- 8:35 a.m. **A Dose-Finding Design with Time-to-Toxicity Endpoint**—◆Rui Qin, Mayo Clinic; Xian-Jin Xie, The University of Texas Southwestern Medical Center at Dallas
- 8:50 a.m. **Interim Pharmacokinetic Assessment Using a Bayesian Decision Analysis in Phase II Clinical Trials**—◆Bo Jin, Pfizer Inc.; Keying Ye, The University of Texas at San Antonio
- 9:05 a.m. **Preliminary Assessment of MCPMod for Dose-Response Modeling**—◆James Reynolds; Joseph Gao, Shire Development Inc.



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- 8:50 a.m. **Binary Mixed Effects Models and Improper Priors with Application in Meta-Analysis**—◆ Arpita Chatterjee, Northern Illinois University; Sanjib Basu, Northern Illinois University
- 9:05 a.m. **The Intrinsic Prior as a Scaled Mixture of G-Priors**—◆ Andrew Womack
- 9:20 a.m. **A New Bayesian Partial Membership Model for Soft Clustering with Mixed Outcomes**—◆ Jonathan Gruhl, University of Washington; Elena Erosheva, University of Washington; Paul K Crane, University of Washington
- 9:35 a.m. **An Investigation of Importance Sampling to Estimate Parameters with the Availability of Unbiased Likelihood Function**—◆ Xiaojing Wang, Duke University; A. Ronald Gallant, Duke University; James O. Berger, Duke University
- 9:50 a.m. **Prediction Intervals Based on the Best Linear Predictor for Generalized Linear Mixed Models**—◆ Chengsueh Yang, University of California at Riverside; Daniel Jeske, University of California at Riverside
- 10:05 a.m. **Floor Discussion**

- 10:05 a.m. **Multivariate Score Tests in GWAS of Binary Traits in Related Populations with Risk Covariates: The GLOMS System for Gene-Wise, GxE, and GxG Analyses**—◆ Stephen Stanhope, The University of Chicago; Mark Abney, The University of Chicago

623 CC-Room 25B

■ Genetic Association Studies—Contributed

Section on Statistics in Epidemiology

Chair(s): Jianghua He, University of Kansas Medical Center

- 8:35 a.m. **Design and Analysis of Multiple Diseases GWAS Without Controls**—◆ Zhongxue Chen, The University of Texas at Houston
- 8:50 a.m. **Identify Rare Variants Underlying Complex Disease Through a Family-Based Association Design**—◆ Jin Zhou, Harvard University; Nan Laird, Harvard University
- 9:05 a.m. **Genotype-Specific Missingness in Genetic Data**—◆ Zhaoxia Yu, University of California at Irvine
- 9:20 a.m. **Genome-Wide Association Studies in Unrelated Donor Transplant Recipients and Donors**—◆ Li Liu, Carnegie Mellon University
- 9:35 a.m. **Comparisons of SNP Partitioning Strategies for Regression-Based Multi-Marker Scanning of Genetic Association**—◆ Yun Joo Yoo, Seoul National University; Shelley B. Bull, Samuel Lunenfeld Research Institute; Lei Sun, University of Toronto
- 9:50 a.m. **Detecting Association for Low-Frequency Exposures in Case-Control Studies**—◆ Guan Xing; Chang-Yun Lin, The University of Texas Southwestern Medical Center; Chao Xing, The University of Texas Southwestern Medical Center at Dallas

624 CC-Room 25C

■ Causal Inference in Epidemiology—Contributed

Section on Statistics in Epidemiology

Chair(s): Zhiheng Xu, FDA

- 8:35 a.m. **Estimation of the Common Risk Difference in Stratified Paired Binary Data with Homogeneous Stratum Effect**—◆ Yan Zhao, Oklahoma University Health Sciences Center; Dewi Gabriela Rahardja, FDA
- 8:50 a.m. **A Simulation Study of the Performance of the Prescription Time-Distribution Matching Method to Address Immortal Time Bias**—◆ Mohammad Ehsanul Karim, University of British Columbia; Paul Gustafson, University of British Columbia; John Petkau, University of British Columbia; Yinshan Zhao, University of British Columbia; Afsaneh Shirani, University of British Columbia; Charity Evans, University of British Columbia; Elaine Kingwell, University of British Columbia; Mia Van Der Kop, University of British Columbia; Helen Tremlett, University of British Columbia
- 9:05 a.m. **Statistical Assessment of Injury Diagnosis and Causation**—◆ Heather Watson, Exponent; Duane Steffey, Exponent
- 9:20 a.m. **Tripartite Matching in Multi-Group Observational Studies**—◆ Zhenzhen Xu, Abbott Laboratories; John Kalbfleisch, University of Michigan
- 9:35 a.m. **Does Exact Test of Poisson Models Yield Reasonable Confidence Intervals When Estimating Relative Risks for Small Samples with Common Binary Outcomes**—◆ Wansu Chen, Kaiser Permanente; Zoe Li, Kaiser Permanente; Michael Schatz, Kaiser Permanente; Robert Zeiger, Kaiser Permanente
- 9:50 a.m. **Testing Multiple Biological Mediators Simultaneously**—◆ Simina Boca, National Cancer Institute; Joshua Sampson, National Cancer Institute
- 10:05 a.m. **Confounder Adjustment in Vaccine Safety Studies: Comparing Three Offset Terms for Case-Centered Approach**—◆ Lei Qian, Kaiser Permanente Southern California; HungFu Tseng, Kaiser Permanente Southern California; Lina S Sy, Kaiser Permanente Southern California; Steven J Jacobsen, Kaiser Permanente Southern California



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625 CC-Room 33A Regression Estimators for Survey Sampling— Contributed

Section on Survey Research Methods

Chair(s): Yang Cheng, U.S. Census Bureau

- 8:35 a.m. **The Implications of Ignoring the Uncertainty in Control Totals for Generalized Regression Estimators**—◆ Jill Dever, RTI International; Richard Valliant, University of Maryland
- 8:50 a.m. **Regression Coefficient Estimation in Dual Frame Surveys**—◆ Yan Lu, University of New Mexico
- 9:05 a.m. **New Model-Optimized Sampling Techniques**—◆ Sung Joon Hong, Dongguk University; Sun Woong Kim, Dongguk University
- 9:20 a.m. **Model-Assisted Lasso Regression Estimator**—◆ Kelly McConville, Whitman College; Jay Breidt, Colorado State University; Thomas Lee, University of California at Davis
- 9:35 a.m. **Inference in Cutoff Sampling**—◆ Alan H Dorfman, BLS
- 9:50 a.m. **Floor Discussion**

626 CC-Room 33B Imputation Methods for Sample Surveys— Contributed

Section on Survey Research Methods

Chair(s): Darryl Creel, RTI International

- 8:35 a.m. **Using Administrative Records to Augment Unit Nonresponse to Facilitate Hot-Deck Imputation**—◆ Vincent Welch, NORC; Fang Wang, NORC
- 8:50 a.m. **Imputation Using the Other Pair Member**—◆ Peter Frechtel, RTI International; Victoria Scott, RTI International; Amy Couzens, RTI International; Andrew Moore, RTI International; Jonaki Bose, SAMHSA
- 9:05 a.m. **NORCSuite_Impute: Two-Way Search Hot-Deck Imputation Macro Using SAS IML**—◆ Fang Wang, NORC; Steven Pedlow, NORC; Yongyi Wang, NORC
- 9:20 a.m. **Semiparametric Imputation of a Large Set of Short Time Series**—◆ David Judkins, Abt Associates; Andrea Piesse, Westat; Wen-Chau Haung, Westat
- 9:35 a.m. **Fractional Imputation for Cluster Data with Nonignorable Missing Data**—◆ Shu Yang, Iowa State University; Jaekwang Kim, Iowa State University; Zhengyuan Zhu, Iowa State University
- 9:50 a.m. **Handling Nonignorable Missing Data**—◆ Minhui Paik, University of Toledo
- 10:05 a.m. **Jackknife Empirical Likelihood Method for Inference with Imputed Data**—◆ Sixia Chen, Iowa State University

627 CC-Room 27A Longitudinal and Survival Data Analysis— Contributed

Section on Nonparametric Statistics, Biopharmaceutical Section, UNAR

Chair(s): Xuerong Wen, Missouri University of Science and Technology

- 8:35 a.m. **Nonparametric Estimation of Conditional Quantile Residual Life Under Censoring**—◆ Wen-Chi Wu, University of Pittsburgh; Jong-Hyeon Jeong, University of Pittsburgh
- 8:50 a.m. **Inferences on Several Survival Functions Under Uniform Stochastic Ordering**—◆ Hammou El Barmi, Baruch College; Hari Mukerjee, Wichita State University
- 9:05 a.m. **A Comparison of a New Piecewise Exponential Estimator with Existing Nonparametric Estimators of a Survival Function: A Simulation Study**—◆ Ganesh Malla
- 9:20 a.m. **Rank-Tracking Probabilities with Applications in Longitudinal Studies**—◆ Xin Tian, National Heart, Lung, and Blood Institute; Colin Wu, National Heart, Lung, and Blood Institute
- 9:35 a.m. **Mixed Effect Modeling HIV Dynamic Models for Longitudinal Data with Application**—◆ Jianwei Chen, San Diego State University; Boming Fan, San Diego State University
- 9:50 a.m. **Weighted Kernel Regressions in Longitudinal Studies with Dropout**—◆ Lu Wang, University of Michigan; Xihong Lin, Harvard University; Andrea Rotnitzky, Di Tella University/Harvard School of Public Health
- 10:05 a.m. **Joint Modeling of Longitudinal Continuous and Binary Responses**—◆ Esra Kurum, Penn State University; Runze Li, Penn State University; Saul Shiffman, University of Pittsburgh

628 CC-Room 24C Statistical Miscellanea—Contributed

Biometrics Section, Section on Government Statistics, Biopharmaceutical Section, Section on Bayesian Statistical Science

Chair(s): Ren He, University of California at Los Angeles Fielding School of Public Health

- 8:35 a.m. **Correct Unequal Tail Probabilities When Comparing Two Independent Proportions**—◆ Jin Xu, Merck; Frank Liu, Merck
- 8:50 a.m. **Empirical Bayes Methods for Large-Scale Risk Prediction on Mini-Exome Sequence Data**—◆ Gengxin Li, Yale University; Hongyu Zhao, VA Cooperative Studies Program



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

CC-San Diego Convention Center HQ-Hilton Bayfront San Diego Hotel

- 9:05 a.m. **Converting the National Center for Education Statistics' (NCES) In-Person Complex Survey Data Set Training Seminars to an Online Distance Education Model**—◆ Andrew A. White, National Center for Education Statistics
- 9:20 a.m. **A Comparison of Statistical Methods for Comparative Metagenomic Analysis**—◆ Lingling An, University of Arizona; Hongmei Jiang, Northwestern University; Naruekamol Pookhao, University of Arizona; Isaac Jenkins, University of Arizona
- 9:35 a.m. **Analytical Methods for RRBS Methylation Data**—◆ Michelle Lacey, Tulane University
- 9:50 a.m. **A Multivariate Poisson/Gamma Model with Two- and Three-Way Covariance Structure to Construct Candidate Lists for Different Severities**—◆ Kristian Schmidt, Iowa State University; Alicia L. Carriquiry, Iowa State University; Michael D. Pawlovich, Iowa Department of Transportation
- 10:05 a.m. **A Composite Likelihood Approach Using the Evidential Paradigm to Analyze Genetic Association in Pedigrees**—◆ Zeynep Baskurt, University of Toronto; Lisa J Strug, The Hospital for Sick Children

- 11:35 a.m. **Modeling Seroadaptation and Sexual Behavior with a Simultaneously Multilevel and Multivariate Longitudinal Count Model**—Yuda Zhu, University of California at Los Angeles Fielding School of Public Health; ◆ Robert E Weiss, University of California at Los Angeles Fielding School of Public Health
- 12:05 p.m. **Floor Discussion**

Invited Sessions 10:30 a.m.–12:20 p.m.

629 HQ-Sapphire EF ■ Bayesian Longitudinal Data Analysis—Invited

Section on Bayesian Statistical Science, Biopharmaceutical Section, International Indian Statistical Association

Organizer(s): Lurdes Y.T. Inoue, University of Washington

Chair(s): Donatello Telesca, University of California at Los Angeles Fielding School of Public Health

- 10:35 a.m. **Bayesian Analysis of Longitudinal Binary Data Using Multivariate Bridge and Other Random Effects Models**—◆ Bani K Mallick, Texas A&M University; Souparno Ghosh; Debajyoti Sinha, Florida State University; Stuart Lipsitz, Harvard Medical School
- 11:05 a.m. **A Nonparametric Prior for Simultaneous Covariance Estimation in Longitudinal Data**—Jeremy Gaskins, University of Florida; ◆ Michael Daniels, University of Florida

630 HQ-Sapphire A ■ ● Water and Climate—Invited

ASA Advisory Committee on Climate Change Policy, International Indian Statistical Association, Statistics Surveys Online Journal, Statistics Without Borders

Organizer(s): Peter Guttorp, University of Washington

Chair(s): Rick Katz, National Center for Atmospheric Research

- 10:35 a.m. **Decline of Arctic Sea-Ice Thickness as Evidenced by Submarine Measurements**—◆ Donald Bame Percival, University of Washington
- 11:00 a.m. **Trends in US Precipitation Extremes**—◆ Michael Wehner, Lawrence Berkeley National Laboratory
- 11:25 a.m. **Spatio-Temporal Climate Structures That Determine Extreme Floods**—◆ Upmanu Lall, Columbia University; Mengqian Lu, Columbia University; Tian Zheng, Columbia University; Jennifer Nakamura, Columbia University; Andrew Robertson, The International Research Institute for Climate and Society; Aurelien Schwarz, Columbia University; Carlos Henrique Ribeiro Lima, Universidade de Brasilia; Yochanan Kushnir, Columbia University
- 11:50 a.m. Disc: Peter F Craigmile, The Ohio State University
- 12:10 p.m. **Floor Discussion**

631 HQ-Sapphire L ● Statistical Methods for Analyzing Second-Generation DNA Sequencing Data—Invited

ENAR, WINAR, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Wenyi Wang, MD Anderson Cancer Center

Chair(s): Wenyi Wang, MD Anderson Cancer Center

- 10:35 a.m. **Srfim2: Using Basecalling Model Parameter Estimates to Understand Sequencing Bias**—◆ Hector Corrada Bravo, University of Maryland; Joyce Hsiao, University of Maryland
- 11:00 a.m. **Summarizing and Correcting the GC Content Bias in High-Throughput Sequencing**—◆ Yuval Benjamini, University of California at Berkeley; Terence P Speed, Walter and Eliza Hall Institute



● Themed Session ■ Applied Session ◆ Presenter

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- 11:25 a.m. **Determining Probability of Rare Variants: Design Implications for Family-Based Sequencing Studies**—◆Wenyi Wang, MD Anderson Cancer Center; Gang Peng, MD Anderson Cancer Center
- 11:50 a.m. **Studying Histone Modification by CHiP-Seq**—◆Nancy R. Zhang, The Wharton School; Wenyi Wang, MD Anderson Cancer Center
- 12:15 p.m. **Floor Discussion**

632 CC-Room 33A

■ ● Spatially Distributed Environmental Factors and Health Effects—Invited

Section on Statistics and the Environment, Section on Survey Research Methods, Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics Surveys Online Journal, ASA Advisory Committee on Climate Change Policy, Statistics Without Borders

Organizer(s): Katherine Bennett Ensor, Rice University

Chair(s): Stephan Sain, Geophysical Statistics Project

- 10:35 a.m. **Climate, Health, and Vulnerability in Urban Populations**—◆Tamara Anne Greasby, National Center for Atmospheric Research; Stephan Sain, Geophysical Statistics Project
- 11:00 a.m. **Spatial Uncertainty Estimation and Public Health Data**—◆Lance A. Waller, Emory University; Howard Chang, Emory University; John Pearce, Emory University; Matthew Strickland, Emory University; Stefanie Sarnat, Emory University; Paige Tolbert, Emory University
- 11:25 a.m. **The Association Between Ambient Ozone and Cardiac Arrest at a Fine Spatial and Temporal Scale**—◆Katherine Bennett Ensor, Rice University; Loren H. Raun, Rice University
- 11:50 a.m. **A Bayesian Model-Averaging Approach for Estimating the Relative Risk of Mortality Associated with Heat Waves in 105 U.S. Cities**—◆Francesca Dominici, Harvard School of Public Health; Jennifer Bobb, Harvard School of Public Health; Roger D. Peng, The Johns Hopkins University
- 12:15 p.m. **Floor Discussion**

633 HQ-Sapphire C

■ ● Dual-Frame RDD vs. Address-Based Sampling: Conducting Scientific Surveys in the 21st Century—Invited

Section on Survey Research Methods

Organizer(s): Meena Khare, National Center for Health Statistics

Chair(s): Meena Khare, National Center for Health Statistics

- 10:35 a.m. **Dual-Frame Sample Weighting for a Telephone Survey of Children's Vaccination Status**—◆Kennon R. Copeland, NORC; Kirk M. Wolter, NORC; N. Ganesh, NORC; Meena Khare, National Center for Health Statistics; Stacie M. Greby, National Center for Immunization and Respiratory Diseases
- 10:50 a.m. **New Directions for State and Local Telephone Surveys**—◆Michael P Battaglia, Abt Associates; Martin R. Frankel, Baruch College; Lina S. Balluz, CDC
- 11:05 a.m. **Transitioning from RDD to ABS with Mail as the Primary Mode**—◆Jill M. Montaquila, Westat; J. Michael Brick, Westat
- 11:20 a.m. **Recruitment and Nonresponse Challenges with Unmatched Cases in an Address-Based Sample Design**—◆Michael W Link, The Nielsen Company; Anh Thu Burks, The Nielsen Company
- 11:35 a.m. **Beyond the USPS CDs File: Extending the Coverage of ABS Frames**—◆Bonnie Elizabeth Shook-Sa, RTI International; Doug Currivan, RTI International; Joseph McMichael, RTI International; Vincent Iannacchione, RTI International
- 11:50 a.m. Disc: Mansour Fahimi, Marketing Systems Group
- 12:05 p.m. **Floor Discussion**

634 CC-Room 26B

■ ● Challenges in the Evaluation of Emerging Infectious Diseases—Invited

Section on Statistics in Epidemiology, International Indian Statistical Association, Statistics Surveys Online Journal

Organizer(s): Nicholas G Reich, University of Massachusetts

Chair(s): Nicholas G Reich, University of Massachusetts

- 10:35 a.m. **Heterogeneity in Disease Transmission Parameters**—◆Laura Forsberg White, Boston University School of Public Health; Marcello Pagano, Harvard School of Public Health; Brett Archer, National Institute for Communicable Diseases
- 11:00 a.m. **Graphical Methods for Making Empirically Supported Decisions in Emerging Epidemics**—◆Justin Lessler, Johns Hopkins Bloomberg School of Public Health
- 11:25 a.m. **Formulation and Estimation of the Effectiveness of Quarantine Against Emerging Diseases: Statistical Challenges**—◆Hiroshi Nishiura, The University of Hong Kong



GENERAL PROGRAM SCHEDULE

● Themed Session ■ Applied Session ◆ Presenter

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- 11:50 a.m. Disc: Ron Brookmeyer, University of California at Los Angeles
- 12:10 p.m. **Floor Discussion**

- 11:25 a.m. **Perspectives on Machine Bias Versus Human Bias: Generalized Linear Models**—◆Ejaz Ahmed, University of Windsor
- 11:50 a.m. **Fixed and Random Effect Selection in Finite Mixture of Linear Mixed-Effects Models**—◆Abbas Khalili, McGill University; Yeting Du, McGill University; Johanna Neslehova, McGill University; Russel Steele, McGill University
- 12:15 p.m. **Floor Discussion**

635 HQ-Sapphire H ■ ● **Burning Issues of Mixed Models and Nonstandard Applications—Invited**

WINAR, Section for Statistical Programmers and Analysts, International Indian Statistical Association, Statistics Surveys Online Journal
 Organizer(s): Eugene Demidenko, Dartmouth Medical School
 Chair(s): Eugene Demidenko, Dartmouth Medical School

- 10:35 a.m. **Observed Best Prediction via Nested-Error Regression**—◆Jiming Jiang, University of California at Davis; Thuan Nguyen, Oregon Health and Science University; J.S. Rao, University of Miami
- 10:55 a.m. **A Mixed Effects Location Scale Model for Ordinal Data**—◆Donald Hedeker, University of Illinois at Chicago; Hakan Demirtas, University of Illinois at Chicago; Robin J. Mermelstein, University of Illinois at Chicago
- 11:15 a.m. **Transformations and Variance Functions in Nonlinear Mixed-Effects Models**—◆Jose Carlos Pinheiro, Johnson & Johnson
- 11:35 a.m. **Protective Estimation of Random Intercept Logistic Regression When Data Are Missing at Random**—◆Sophia Rabe-Hesketh, University of California at Berkeley; Anders Skronndal, Norwegian Institute of Public Health
- 11:55 a.m. **Bridges Between Classical and Bayesian Computation for Multilevel Models**—◆Andrew Gelman, Columbia University; Vincent Dorie, Columbia University
- 12:15 p.m. **Floor Discussion**

637 CC-Room 31B ● **Undergraduate Capstone and Research Courses—Invited**

Mu Sigma Rho, Section on Statistical Education, International Indian Statistical Association, CHANCE
 Organizer(s): Lynne Seymour, The University of Georgia
 Chair(s): Lynne Seymour, The University of Georgia

- 10:35 a.m. **An Undergraduate Course in Statistical Consulting and Communication**—◆Tisha Lynn Hooks, Winona State University
- 11:00 a.m. **Maintaining Quality in the Face of Rapid Program Expansion**—◆Rebecca Nugent, Carnegie Mellon University; Oded Meyer, Carnegie Mellon University; Brian Junker, Carnegie Mellon University; Cosma Shalizi, Carnegie Mellon University; Gordon Weinberg, Carnegie Mellon University
- 11:25 a.m. **The Senior Capstone/Research Course at Duke University**—◆Dalene Kay Stangl, Duke University
- 11:50 a.m. **Undergraduate Capstone Course at University of Georgia**—◆Adam Jaeger, University of Georgia
- 12:15 p.m. **Floor Discussion**

636 CC-Room 30B ■ ● **High-Dimensional Data Analysis—Invited**

SSC, Biometrics Section, International Chinese Statistical Association, Section on Statistical Learning and Data Mining
 Organizer(s): Ejaz Ahmed, University of Windsor
 Chair(s): Yulia Gel, University of Waterloo

- 10:35 a.m. **Regularized Semiparametric Additive Mixed-Effects Models for High-Dimensional Longitudinal Data**—◆Peter Song, University of Michigan; Yun Li, University of Michigan; Naisyin Wang, University of Michigan; Sijian Wang, University of Wisconsin-Madison; Ji Zhu, University of Michigan
- 11:00 a.m. **Fusion Estimation with \$L_{\infty}\$ Forcing**—◆Keith Knight, University of Toronto

638 HQ-Sapphire B ■ ● **Design and Modeling of Computer Experiments—Invited**

Section on Physical and Engineering Sciences, Quality and Productivity Section, SSC, International Indian Statistical Association
 Organizer(s): Peter Z. G. Qian, University of Wisconsin-Madison
 Chair(s): Peter Z. G. Qian, University of Wisconsin-Madison

- 10:35 a.m. **Computer and Statistical Models for Geophysical Hazards**—◆M.J. Bayarri, Universitat de València
- 11:00 a.m. **Kernel Approximation: From Regression to Interpolation**—◆Roshan Joseph Vengazhiyil, Georgia Institute of Technology; Lulu Kang, Illinois Institute of Technology



● Themed Session ■ Applied Session ◆ Presenter

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- 11:25 a.m. **Sequential Importance Sampling for Rare-Event Estimation with Computer Experiments**—◆ Brian Williams, Los Alamos National Laboratory; Rick Picard, Los Alamos National Laboratory
- 11:50 a.m. **Computer Model Calibration and Prediction Using Outputs from Multi-Fidelity Simulators**—◆ Derek Bingham, Simon Fraser University; Joslin Goh, Simon Fraser University; James Paul Holloway, University of Michigan; Forrest W. Doss, University of Michigan; Carolyn C. Kuranz, University of Michigan; M.J. Grosskopf, University of Michigan; E. Rutter, University of Michigan
- 12:15 p.m. **Floor Discussion**

- 11:15 a.m. **Biomarker-Calibrated Activity-Related Energy Expenditure Estimation**—◆ Ross Prentice, Fred Hutchinson Cancer Research Center
- 11:35 a.m. **Estimating Park-Based Moderate to Vigorous Physical Activities by a Bayesian Infinite Server Queue Model**—◆ Bing Han, RAND Corporation
- 11:55 a.m. Disc: Bonnie Ghosh-Dastidar, RAND Corporation
- 12:15 p.m. **Floor Discussion**

639 HQ-Sapphire U
● Interface Time Series and Functional Data—Invited

IMS, Statistics Surveys Online Journal
 Organizer(s): Qiwei Yao, London School of Economics
 Chair(s): Wolfgang Polonik, University of California at Davis

- 10:35 a.m. **Topics in Functional Time Series**—◆ Alexander Aue, University of California at Davis
- 11:05 a.m. **Modeling and Forecasting Daily Electricity Load Curves: A Hybrid Approach**—◆ Haeran Cho, London School of Economics; Yannig Goude, EDF France; Qiwei Yao, London School of Economics
- 11:35 a.m. **Functional Time-Series Prediction and Applications**—◆ Anestis Antoniadis, University Joseph Fourier
- 12:05 p.m. **Floor Discussion**

641 CC-Room 25B
■ Statistical Methods for Proteomics Research—Topic-Contributed

Biometrics Section, Biopharmaceutical Section, WNAF, International Indian Statistical Association
 Organizer(s): Bart Mertens, Leiden University
 Chair(s): Jeanine Houwing, Leiden University

- 10:35 a.m. **Application of Survival Analysis Methodology to the Quantitative Analysis of LC-MS Proteomics Data**—◆ Carmen Tekwe, Texas A&M University; Alan Dabney; Raymond Carroll, Texas A&M University
- 10:55 a.m. **DELPTM: A Statistical Algorithm to Identify Post-Translational Modifications from Tandem Mass Spectrometry (MS/MS) Data**—◆ Susmita Datta, University of Louisville
- 11:15 a.m. **Extracting the Signal from MALDI-TOF Spectra by Using the Expected Isotopic Distribution**—◆ Tomasz Burzykowski, Hasselt University
- 11:35 a.m. **Modeling Calibration of Targeted Mass Spectrometry Protein Measurements in Complex Fluids**—◆ Steven Skates, MGH
- 11:55 a.m. **Double Cross-Validation for the Combination of Information in Proteomic Cancer Diagnostic Studies**—◆ Bart Mertens, Leiden University
- 12:15 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.—12:20 p.m.

640 CC-Room 25C
■ ● Recent Developments and Applications in Physical Activity Data Analysis—Topic-Contributed

Biometrics Section, Committee on Applied Statisticians, Section on Statistics in Epidemiology, International Indian Statistical Association
 Organizer(s): Bing Han, RAND Corporation
 Chair(s): Greg Ridgeway, RAND Corporation

- 10:35 a.m. **Estimating Park Improvement Effects on Physical Activity and Park Use**—◆ Daniela Golinelli, RAND Statistics Group
- 10:55 a.m. **Modeling Physical Activity Distributions for Populations**—◆ Sarah Nusser, Iowa State University; David Osthus, Iowa State University; Bryan Stanfill, Iowa State University; Wayne A. Fuller, Iowa State University; Alicia L. Carriquiry, Iowa State University

642 CC-Room 28C
● Advances in Mixture Modeling and Applications—Topic-Contributed

Section on Nonparametric Statistics, Biometrics Section, Committee on Applied Statisticians, International Indian Statistical Association
 Organizer(s): Daeyoung Kim, University of Massachusetts-Amherst
 Chair(s): Daeyoung Kim, University of Massachusetts-Amherst

- 10:35 a.m. **Semiparametric Mixture Models and High-Dimensional Inference**—◆ Ryan Martin, University of Illinois at Chicago; Surya T Tokdar, Duke University



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● Themed Session ■ Applied Session ◆ Presenter

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- 10:55 a.m. **EM and Stochastic EM Algorithms for Reliability Mixture Models Under Random Censoring**—◆Didier Chauveau, UMR CNRS 7349; Laurent Bordes, UMR CNRS 4152
- 11:15 a.m. **Large-Sample Convergence of the Nonparametric Density Mixture Estimators**—◆Michael Levine, Purdue University; David Hunter, Penn State University
- 11:35 a.m. **Adaptive Robust Regression with Infinite Gaussian Scale Mixture Errors**—◆Byungtae Seo, Sungkyunkwan University; Taewook Lee, Hankuk University of Foreign Studies; Youngjoo Yoon, Konkuk University
- 11:55 a.m. **Semiparametric Mixtures of Regressions**—◆David Hunter, Penn State University; Derek Young, U.S. Census Bureau
- 12:15 p.m. **Floor Discussion**

643 CC-Room 32B

■ ● Research in NSF Network ‘Statistics in the Atmospheric and Oceanic Sciences’—Topic-Contributed

Section on Statistics and the Environment, International Indian Statistical Association, Statistics Surveys Online Journal, ASA Advisory Committee on Climate Change Policy

Organizer(s): Michael L Stein, The University of Chicago
Chair(s): Jarrett Barber, Arizona State University

- 10:35 a.m. **Conditional Simulation of Nonstationary Spatial-Temporal Processes**—◆Joseph Guinness, The University of Chicago
- 10:55 a.m. **Space-Time Global Models for Climate Ensembles**—◆Stefano Castruccio, The University of Chicago; Michael L Stein, The University of Chicago; David J. McInerney, The University of Chicago; Elisabeth J. Moyer, The University of Chicago
- 11:15 a.m. **Uncertainty Quantification for Regional Climate Model Output Using Space-Time Self-Exciting Point Processes**—◆Souparno Ghosh; Alan Gelfand, Duke University; Stephan Sain, Geophysical Statistics Project
- 11:35 a.m. **Daily Spatio-Temporal Stochastic Weather Simulation**—◆William Kleiber, National Center for Atmospheric Research; Rick Katz, National Center for Atmospheric Research; Balaji Rajagopalan, University of Colorado at Boulder
- 11:55 a.m. **Spatial Modeling of Global Atmospheric Carbon Dioxide Concentrations from Satellite Observations**—◆Dorit Hammerling
- 12:15 p.m. **Floor Discussion**

644 CC-Room 28E

Managing Nonresponse Bias in Sample Surveys—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Wesley Yung, Statistics Canada
Chair(s): Fritz Scheuren, NORC

- 10:35 a.m. **Challenges in the Treatment of Nonresponse for Selected Business Surveys**—◆Katherine Thompson, U.S. Census Bureau; Katrina Washington, U.S. Census Bureau
- 10:55 a.m. **Using Paradata to Understand Effort and Attrition in a Panel Survey**—◆Andrew Mercer, Westat
- 11:15 a.m. **Chasing the Nonrespondents: Use of the Conditional Bias**—◆David Haziza, Université de Montréal; Wesley Yung, Statistics Canada; Jean-François Beaumont, Statistics Canada
- 11:35 a.m. **Dynamic Adaptive Design for Business Surveys?**—◆Serge Godbout, Statistics Canada; Keven Bosa, Statistics Canada; Claude Turmel, Statistics Canada
- 11:55 a.m. Disc: John Eltinge, Bureau of Labor Statistics
- 12:15 p.m. **Floor Discussion**

645 CC-Room 29C

■ ● Recent Developments in Benchmarking and Reconciliation of Large Systems of Time Series Data: Theory and Practice—Topic-Contributed

Business and Economic Statistics Section, International Indian Statistical Association, Statistics Surveys Online Journal, Section on Government Statistics

Organizer(s): Baoline Chen, Bureau of Economic Analysis
Chair(s): Tommaso Di Fonzo, ISTAT/University of Padua

- 10:35 a.m. **Diagnostics for Benchmarking Economic Time Series at the U.S. Census Bureau**—◆Irene Brown, U.S. Census Bureau
- 10:55 a.m. **Restoring Accounting Constraints in Time Series of U.S. Industry Accounts**—◆Baoline Chen, Bureau of Economic Analysis
- 11:15 a.m. **Benchmarking and Reconciliation of Time Series According to a Growth Rates Preservation Principle**—◆Marco Marini, International Monetary Fund; Tommaso Di Fonzo, ISTAT/University of Padua
- 11:35 a.m. **A New Method of Simultaneously Balancing Economic Accounting Systems at Current and Constant Prices**—◆Vittorio Nicolardi
- 11:55 a.m. **A Review of Benchmarking Methods**—◆Neil Parkin, Office for National Statistics; Gary Brown, Office for National Statistics
- 12:15 p.m. **Floor Discussion**



● Themed Session ■ Applied Session ◆ Presenter

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646 CC-Room 33B **● ● Predictive Methodologies and Analysis of Spatiotemporal Data in Environmental Research—Topic-Contributed**

Section on Statistics and the Environment

Organizer(s): Alexander Kolovos, SpaceTimeWorks; Andreas Langousis, University of Patras

Chair(s): Alexander Kolovos, SpaceTimeWorks

- 10:35 a.m. **Minimum Divergence Solutions for Incorporating Categorical Information in a Spatial Mapping Context**—◆ Patrick Bogaert, Universite Catholique de Louvain
- 10:55 a.m. **A Bayesian Maximum Entropy Framework for Real-Time Infectious Disease Prediction**—◆ Hwa-Lung Yu, National Taiwan University; George Christakos, San Diego State University; Jose Angulo, University of Granada
- 11:15 a.m. **A Nonlinear Model for Predicting Interannual Changes in Zooplankton Abundance in the Gulf of Maine**—◆ Barbara Bailey, San Diego State University
- 11:35 a.m. **Disc:** Lung-Chang Chien, Washington University School of Medicine
- 11:55 a.m. **Floor Discussion**

647 CC-Room 30C **● ● Bayesian Machine Learning and Its Applications—Topic-Contributed**

International Indian Statistical Association, WUNAR, Section on Statistical Learning and Data Mining

Organizer(s): Sounak Chakraborty, University of Missouri-Columbia

Chair(s): Vivekananda Roy, Iowa State University

- 10:35 a.m. **Estimation of a Proportion in a Mixed Sample Using Gene Expression Data**—◆ Bertrand Clarke, University of Miami; Jennifer L. Clarke, University of Miami
- 10:55 a.m. **Bayesian Kernel-Based Modeling of Single and Multiple Genetic Pathways for Cancer**—◆ Sounak Chakraborty, University of Missouri-Columbia
- 11:15 a.m. **A SVM-Based Meta-Analytic Approach for Simultaneous Gene Selection and Case Prediction in Alzheimer's Disease**—◆ Samiran Ghosh, Winthrop University Hospital; Meeta Pradhan, Indiana University Purdue University Indianapolis
- 11:35 a.m. **Integrative Bayesian Analysis of High-Dimensional Multi-Platform Genomics Data**—◆ Kim-Anh Do, MD Anderson Cancer Center; Wenting Wang, MD Anderson Cancer Center; Veera Baladandayuthapani; Bradley M Broom, MD Anderson Cancer Center; Jeffrey S Morris, MD Anderson Cancer Center; Ganiraju C Manyam, MD Anderson Cancer Center

- 11:55 a.m. **Spatially Weighted Principal Component Analysis for Image Classification**—◆ Ruixin Guo, University of Colorado; Hongtu Zhu, The University of North Carolina at Chapel Hill

12:15 p.m. **Floor Discussion**

648 CC-Room 24A **● ● Missing Data, Agreement, and Method-Comparison Studies of Medical Devices and Diagnostics—Topic-Contributed**

Biopharmaceutical Section

Organizer(s): Jingjing Ye, FDA

Chair(s): Jingjing Ye, FDA

- 10:35 a.m. **Improved Confidence Intervals for the Difference of Paired Binomials in Presence of Unpaired Data**—◆ Vivek Pradhan, Boston Scientific Corporation; Yun Lu, Boston Scientific Corporation
- 10:55 a.m. **A Bayesian Approach to Handle Missing Data in Evaluation of Diagnostic Medical Devices**—◆ Qin Li, FDA; Gene Pennello, FDA
- 11:15 a.m. **Study Design Issues and Statistical Challenges in Personalized Medicine Bridging Studies**—◆ Meijuan Li, FDA/CDRH
- 11:35 a.m. **Assessment of Agreement for Unbalanced Continuous and Categorical Data with Covariates**—◆ Yue Yu, University of Illinois at Chicago; Lawrence Lin, Baxter Healthcare
- 11:55 a.m. **Some Issues in Method Comparison Studies for Diagnostic Medical Devices**—◆ Shanti Gomatam, FDA
- 12:15 p.m. **Floor Discussion**

649 CC-Room 31A **● Evaluations of American Community Survey and 2010 Census Data—Topic-Contributed**

Social Statistics Section, Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Linda A Jacobsen, Population Reference Bureau

Chair(s): Linda A Jacobsen, Population Reference Bureau

- 10:35 a.m. **ACS Issues for Small Jurisdictions**—◆ Richard Rathge, North Dakota State University
- 10:55 a.m. **An Early Look at Small-Area Data from the American Community Survey**—◆ Ken Hodges, The Nielsen Company; Ed Spar, COPAFS
- 11:15 a.m. **Measuring Neighborhood Poverty with the American Community Survey**—◆ Mark Mather, Population Reference Bureau; Genevieve Dupuis, Population Reference Bureau



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● Themed Session ■ Applied Session ◆ Presenter

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- 11:35 a.m. **What Demographic Analysis Tells Us About the Undercount of Children in the 2010 Census—**
◆ William O'Hare, U.S. Census Bureau
- 11:55 a.m. **Disc:** Deborah H Griffin, U.S. Census Bureau
- 12:15 p.m. **Floor Discussion**

650 CC-Room 23C **Statistical Considerations in Design and Analysis of Bridging and Multi-Regional Trials—Topic-Contributed**

Biopharmaceutical Section

Organizer(s): Yi Tsong, FDA/CDER

Chair(s): Xiao Ding, FDA

- 10:35 a.m. **Weighted Z-Test and Weighted Evidence Approaches of Testing Bridging Evidence Into a New Region—**◆ Xiaoyu Dong, MedImmune; Yu Guo, University of Maryland; Yi Tsong, FDA/CDER
- 10:55 a.m. **Decision Rules and Associated Sample Size Planning for Regional Approval Utilizing Multiregional Clinical Trials—**◆ Nelson Lu, FDA; Rajesh Nair, FDA; Yunling Xu, FDA
- 11:15 a.m. **Design and Evaluation of Multiregional Clinical Trials: Experience in Japan—**◆ Yuki Ando, Pharmaceuticals & Medical Devices Agency
- 11:35 a.m. **A Predictive Bayesian Approach to the Design and Analysis of Bridging Studies—**◆ A. Lawrence Gould, Merck; Tian Jin, Shanghai University of Finance and Economics; Li Xin Zhang, MSD (Shanghai) Pharma Co.; William W. B. Wang, MSD (Shanghai) Pharma Co.
- 11:55 a.m. **Disc:** Yi Tsong, FDA/CDER
- 12:15 p.m. **Floor Discussion**

Topic-Contributed Panels 10:30 a.m.—12:20 p.m.

651 HQ-Sapphire D **Interview with the Vampire Researcher: An Adventure in Applied Statistics—Topic-Contributed**

Section on Statistical Education, International Indian Statistical Association

Organizer(s): Ann Maria DeMars, The Julia Group

Chair(s): Steven Yong Cen, University of Southern California

- Panelists:**
- ◆ Reagan Rose, University of Southern California
 - ◆ Cynthia Vinney, Fielding Graduate University
 - ◆ Brenda Osuna, University of Southern California

12:05 p.m. **Floor Discussion**

Contributed Sessions 10:30 a.m.—12:20 p.m.

652 CC-Room 28B **Miscellaneous Topics in Nonparametric Problems—Contributed**

Section on Nonparametric Statistics

Chair(s): Lin Huang, Children's Hospital Boston/Harvard Medical School

- 10:35 a.m. **Power of the Scan Statistics via FMCI—**◆ Wanchen Lee, University of Manitoba
- 10:50 a.m. **Instrumental Variables for Causal Inference: Deciding When to Use Them—**◆ Boriska Toth; Mark van der Laan, University of California at Berkeley School of Public Health
- 11:05 a.m. **Assessing the Stability of Classification Trees at Different Cost Ratios in Cost-Sensitive Learning—**◆ hongjuan liu; Lisa Dooley, Johnson & Johnson
- 11:20 a.m. **Index Measures of Separation and Similarity Among K Distributions—**◆ Rajarshi Dey, Central Michigan University; Paul Nelson, Kansas State University
- 11:35 a.m. **Biclustering with the EM Algorithm—**◆ Prabhani Kuruppumullage Don, Penn State University; Bruce G. Lindsay, Penn State University; Francesca Chiaromonte, Penn State University
- 11:50 a.m. **Nonparametric Species Delimitation Based on Branching Rates—**◆ Edward Roualdes, University of Kentucky
- 12:05 p.m. **On the Estimation of Order Statistics Under Measurement Error—**◆ Nilabja Guha, University of Maryland Baltimore County

653 CC-Room 27A **Experiments: Design, Modeling, and Analysis—Contributed**

Quality and Productivity Section, Section on Statistics in Defense and National Security

Chair(s): Willis Jensen, W.L. Gore and Associates

- 10:35 a.m. **A Generalized Confidence Region for Robust Parameter Design Experiments—**◆ Aili Cheng, GlaxoSmithKline; John J. Peterson, GlaxoSmithKline; Pallavi Chitturi, Temple University
- 10:50 a.m. **Design of Experiments for Interpolation-Based Metamodels—**◆ Min Li, California State University Sacramento; Jack Chen, BASF Corporation



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- 11:05 a.m. **Optimal Experimental Designs via Particle Swarm Optimization Methods**—◆Ray-Bing Chen, National Cheng Kung University; Shin-Perng Chang, Tokyo University; Weichung Wang Wang, National Taiwan University; Weng-Kee Wong, University of California at Los Angeles Fielding School of Public Health
- 11:20 a.m. **Robust Step-Stress Designs for Heteroscedastic Accelerated Life-Testing Models**—◆Xiaojian Xu, Brock University
- 11:35 a.m. **Combining Two-Level and Three-Level Orthogonal Arrays for Factor Screening and Response Surface Exploration**—◆Jessica Jaynes
- 11:50 a.m. **Is Deming's Red Bead Experiment Misleading?**—◆Charles Goldsmith, Simon Fraser University
- 12:05 p.m. **Homogeneity and Heterogeneity Study of an Ordinal Property Test Results: Analysis of Variations and Uncertainties**—◆Emil Bashkansky, ORT Braude College; Tamar Gadrich, Ort Braude College

654 CC-Room 21 Risk Model Selection and Extreme Values— Contributed

Section on Risk Analysis, Quality and Productivity Section
Chair(s): Elizabeth H. Margosches, EPA

- 10:35 a.m. **IDI Analysis for Competing-Risk Censored Outcomes**—◆Haiwen Shi, University of Pittsburgh; Yu Cheng, University of Pittsburgh
- 10:50 a.m. **Cross-Validation and BIC in Model Selection**—◆Qing Wang, Penn State University; Bruce G. Lindsay, Penn State University
- 11:05 a.m. **Toxicity Profiling and Quantitative Risk Assessment of Engineered Nanomaterials**—◆Trina Patel; Donatello Telesca, University of California at Los Angeles Fielding School of Public Health; Saji George, University of California at Los Angeles; Andre Nel, University of California at Los Angeles
- 11:20 a.m. **Temporal Prediction Models from Marginal and Small Data Signal: The Otolith Data Example**—◆Rajan Lamichhane, Old Dominion University; Rajan Lamichhane, Old Dominion University; Cynthia Jones, Old Dominion University
- 11:35 a.m. **Modeling Extreme Events Using Generalized Pareto Distributions**—◆Kumer Pial Das, Lamar University; Gui Li Liu, Lamar University
- 11:50 a.m. **Floor Discussion**

655 CC-Room 27B Computational Bayes and MCMC— Contributed

Section on Statistical Computing
Chair(s): Yi Fang Chen, AT&T

- 10:35 a.m. **Population SAMC vs. SAMC: Convergence and Applications to Gene Selection Problems**—◆Mingqi Wu, Merck; Faming Liang, Texas A&M University
- 10:50 a.m. **Variable Transformation to Obtain Geometric Ergodicity in the Random-Walk Metropolis Algorithm**—◆Leif Johnson, Google
- 11:05 a.m. **Perfect Sampling in the Dirichlet-Multinomial Hierarchical Model**—◆Nathan Stein, Harvard University; Xiao-Li Meng, Harvard University
- 11:20 a.m. **Bayesian Parameter Estimations in the Joint Co-Evolution Model of Social Behavior and Network**—◆Liping Tong, Loyola University Chicago; David Shoham, Loyola University Medical Center
- 11:35 a.m. **Detecting a Local Change in Brain Structures by the Matrix Normal Model**—◆Michelle Liou, Academia Sinica; Wei-Chen Cheng, Academia Sinica; Aleksandr A Simak, National Taiwan University; Philip E. Cheng, Academia Sinica
- 11:50 a.m. **Joint Models for Longitudinal Binary and Survival Data**—◆Yi-Ting Hwang, National Taipei University; Tzu-Yin Lin, National Taipei University
- 12:05 p.m. **Joint Inversion of Seismic and Electromagnetic Data Using Statistical Rock-Physics Models and Markov Random Fields**—◆Jinsong Chen, Lawrence Berkeley National Laboratory; Michael G. Hoversten, Chevron Energy Technology Company

656 CC-Room 30A Section on Statistics and Marketing - 2— Contributed

Section on Statistics in Marketing
Chair(s): Michael Trusov, University of Maryland

- 10:35 a.m. **Combining Attribute Classification with Utilities in Conjoint Studies**—◆Ulderico Santarelli, Marketing Consultant
- 10:50 a.m. **Bayesian Analysis on Unobserved Components**—◆Woosuk Kim,
- 11:05 a.m. **Family Robots: Testing a Variety of Theories in Innovation Adoption**—◆Nai-Hua Chen, Chienkuo Technology University; Stephen Chi-Tsun Huang, National Kaohsiung First University of Science and Technology
- 11:20 a.m. **Effectiveness of Automobile Salesperson Training**—◆James Wendelberger, Urban Science



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- 11:35 a.m. **A Framework for Modeling Ordinal Data in Survey of Ratings and Evaluations**—◆ Maria Iannario, University of Naples Federico II; Domenico Piccolo, University of Naples Federico II
- 11:50 a.m. **A Multinomial Logit Model for Cross-Price Elasticities**—◆ Graciela Gonzalez-Farias, CIMAT; Rogelio Ramos, CIMAT; Ramon Dominguez-Molina, CIMAT
- 12:05 p.m. **Applied Statistics on Business at Spain: A Case of Statistical Engineering**—◆ Igor Barahona, Technical University of Catalonia/BarcelonaTech; Alex Riba, Technical University of Catalonia/BarcelonaTech

657 CC-Room 25A New Methods for Analyzing Clinical Trials—Contributed

Biometrics Section, Biopharmaceutical Section

Chair(s): Feifei Wei, University of Arkansas for Medical Science

- 10:35 a.m. **Exploratory Efficacy Analyses for Antidepressant Clinical Trials Using Integrated Trial Data**—◆ Yeh-Fong Chen, FDA; Peiling Yang, FDA
- 10:50 a.m. **Statistical Inference in Dynamic Treatment Regimes**—◆ Eric B Laber, North Carolina State University; Daniel J Lizotte, University of Waterloo; Min Qian, Columbia University; William E Pelham, SUNY at Stony Brook; Susan Murphy, University of Michigan
- 11:05 a.m. **Bounds for the Causal Infectiousness Effect in Vaccine Trials**—◆ Yasutaka Chiba,
- 11:20 a.m. **Sample Size Re-Estimation for Laboratory Experiments**—◆ Lai Wei, The Ohio State University; David Jarjoura, The Ohio State University
- 11:35 a.m. **Stronger-Winner Design of Randomized Phase II Clinical Trials with Binary Outcome**—◆ Zhiying You, The University of Alabama at Birmingham
- 11:50 a.m. **Sample Size for Pre-Post Comparison with Intervention Delivered to Cluster**—◆ Zhiying You, The University of Alabama at Birmingham; Ming Ji, San Diego State University; O. Dale Williams, Florida International University
- 12:05 p.m. **Statistical Issues for Genotyping Blood Pressure Sensitivity to Weight Loss and Sodium Diet in the Elderly**—◆ Jie Liu, Rutgers University; Jerry Cheng, Robert Wood Johnson Medical School; Javier Cabrera, Rutgers University; John Kostis, Robert Wood Johnson Medical School; William Kostis, General Hospital of Boston

658 CC-Room 24C Missing Data Methods—Contributed

Biometrics Section, Biopharmaceutical Section, Committee on Applied Statisticians, Section on Statistics in Epidemiology

Chair(s): Zhaoxia Yu, University of California at Irvine

- 10:35 a.m. **Simulation Study on Selection of Latent Class Model for Missing Data**—◆ Jun Zhang, Arizona State University; Mark Reiser, Arizona State University
- 10:50 a.m. **A Comparison of Strategies to Handle Missing Data in Random Forests**—Ren He, University of California at Los Angeles Fielding School of Public Health; Christina Ramirez Kitchen, University of California at Los Angeles Fielding School of Public Health; ◆ Anna Liza Antonio, University of California at Los Angeles Fielding School of Public Health
- 11:05 a.m. **Longitudinal Data Analysis with Measurement Errors and Nonignorable Missing Data**—◆ Chi-hong Tseng, University of California at Los Angeles; Robert Elashoff, University of California at Los Angeles; Gang Li, University of California at Los Angeles
- 11:20 a.m. **Conditional-Mean Model Selection with Multiple Covariates and Missing Data**—◆ Gregory DiRienzo
- 11:35 a.m. **Estimating AUC Using Test-Dependent Sampling**—◆ Bethany Horton, The University of North Carolina at Chapel Hill; Haibo Zhou, The University of North Carolina at Chapel Hill
- 11:50 a.m. **Evaluating Incomplete Multiple Imperfect Diagnostic Tests with a Probit Latent Class Model**—◆ Yi Zhang, The University of North Carolina at Chapel Hill; Donglin Zeng, The University of North Carolina at Chapel Hill; Haitao Chu, University of Minnesota
- 12:05 p.m. **On Estimation of Nuisance Working Models in Doubly Robust Estimators**—◆ Karel Vermeulen; Stijn Vansteelandt, Ghent University

659 CC-Room 24B Modern Statistical Methods—Contributed

Biometrics Section

Chair(s): Hongmei Jiang, Northwestern University

- 10:35 a.m. **Wald-Type Rank Tests with Improved Small-Sample Properties**—◆ Chunpeng Fan, Sanofi U.S. Inc.; Donghui Zhang, Sanofi U.S. Inc.
- 10:50 a.m. **The Implications of Misspecifying Cluster Membership When Robustly Estimating Standard Errors to Account for Correlated Data**—◆ Manisha Desai, Stanford University; Susan Bryson, Stanford University; Thomas Robinson, Stanford University
- 11:05 a.m. **Distinguishing Multilevel Effects in Oral Health Research**—◆ Julie A Stoner, University of Oklahoma; David M Thompson, University of Oklahoma Health Sciences Center; Jeffrey B Payne, University of Nebraska



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- 11:20 a.m. **Stochastic and Nonstochastic Explanatory Variables in Generalized Linear Models**—◆Evrin Oral, Louisiana State University Health Sciences Center
- 11:35 a.m. **Multivariate Regression Hidden Markov Models**—◆Yeonok Lee
- 11:50 a.m. **A Resampling Approach to Degree-of-Freedom Estimation**—◆Clayton Barker, SAS Institute; Leonard Stefanski, North Carolina State University; Jason Osborne, North Carolina State University
- 12:05 p.m. **Too Many Covariates and Too Few Cases? A Comparative Study**—◆Qingxia Chen, Vanderbilt University; Yuwei Zhu, Vanderbilt University; Keipp H Talbot, Vanderbilt University; Marie R Griffin, Vanderbilt University; Frank E Harrell, Vanderbilt University; Patrick Arbogast, Kaiser Permanente

660 CC-Room 23B **Probability of Success in Clinical Trials and Decision Rule—Contributed**

Biopharmaceutical Section
 Chair(s): Adam Polis, Merck

- 10:35 a.m. **Decision Rule Based on a Noninferiority Trial**—◆Madhuj Mallick, Merck Research Laboratories
- 10:50 a.m. **On the Probability of a Successful Trial in Clinical Research**—◆Adina Soaita, Pfizer Inc.; Robb J Muirhead
- 11:05 a.m. **Go/No-Go Decisions Based on Probability of Success**—◆Kaihong Jiang, Sanofi; Yan Zheng, Sanofi
- 11:20 a.m. **Probability of Success Based on Confidence Distribution and Its Application in Clinical Development**—◆Yabing Mai, Merck Research Laboratories; Jiajun Liu, Merck Research Laboratories; Yue Shentu, Merck
- 11:35 a.m. **Principled Approaches for Quantifying Probability of Success in Clinical Trials**—◆Suvajit Samanta, Merck Research Laboratories; Devan Mehrotra, Merck Research Laboratories; Robin Mogg, Merck Research Laboratories; Fang Liu, University of Notre Dame; Gang Jia, Merck Research Laboratories; Yang Song, Merck; Weili He, Merck; Jared Lunceford, Merck Research Laboratories
- 11:50 a.m. **Single-Arm Phase IIA Clinical Trials with Go/No-Go Decisions**—◆Bob Zhong, Johnson & Johnson
- 12:05 p.m. **Prentice Criteria for the Validation of Surrogate Endpoints: An Alternative Formulation**—◆Sanatan Saraf, University of Maryland Baltimore County; Thomas Mathew, University of Maryland Baltimore County; Anindya Roy, University of Maryland Baltimore County

661 CC-Room 23A **Statistical Methodologies to Deal with Multiplicities—Contributed**

Biopharmaceutical Section
 Chair(s): Xiaobi Huang, Merck

- 10:35 a.m. **A Generalized Multistage Gatekeeping Procedure**—◆Dong Xi, Northwestern University; Ajit C. Tamhane, Northwestern University
- 10:50 a.m. **Multiplicity Strategies for Multiple Treatments and Multiple Endpoints**—◆Kenneth Liu, Merck; Duane Snaveley, Merck; Nancy Liu, Merck; Jin Xu, Merck; Ivan Chan, Merck; Paulette Ceesay, Merck
- 11:05 a.m. **An Improved Hommel-Hochberg Hybrid Procedure**—◆Jiangtao Gou, Northwestern University; Dror Rom, Prosoft Software, Inc.; Ajit C. Tamhane, Northwestern University; Dong Xi, Northwestern University
- 11:20 a.m. **Flexible Multiple Testing Procedures Based on Resampling Methods for Gatekeeping Applications**—◆Kentaro Sakamaki, University of Tokyo; Yutaka Matsuyama, University of Tokyo; Yasuo Ohashi, University of Tokyo
- 11:35 a.m. **A Multiplicity Adjustment Problem in Clinical Trials with Multiple Co-Primary Endpoints**—◆Yi Ma, Quintiles, Inc.
- 11:50 a.m. **Expected Loss Functions as Additional Measures to Assess Performance of Multiple Testing Procedures for Combination Drug Dose Finding**—◆Julia Soulakova, University of Nebraska; Allan Sampson, University of Pittsburgh
- 12:05 p.m. **Floor Discussion**

662 CC-Room 29D **Option Pricing, Nonparametrics, and Testing—Contributed**

Business and Economic Statistics Section
 Chair(s): Song Lin, The Nielsen Company

- 10:35 a.m. **Option Pricing and Distribution Characteristics**—◆David Mauler, Brigham Young University; James McDonald, Brigham Young University
- 10:50 a.m. **European Option Pricing Under Jump Diffusion with Proportional Transaction Costs**—◆Yang Yu, SUNY at Stony Brook; Haipeng Xing, SUNY at Stony Brook; Tiong Wee Lim, National University of Singapore
- 11:05 a.m. **C(a)-Type LM Tests in Time Series GEL Model Under Strong and Weak Identification**—◆Kalidas Jana, The University of Texas at Brownsville
- 11:20 a.m. **Smoothed Jackknife Empirical Likelihood Inferences for Lorenz Curves**—◆Shan Luo, Georgia State University; Gengsheng Qin, Georgia State University; Xin Huang, Fred Hutchinson Cancer Research Center



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- 11:35 a.m. **A New Test For Randomness with Application to Stock Market Index Data**—◆Boris Iglewicz, Temple University; Alicia Graziosi Strandberg, Temple University
- 11:50 a.m. **Examining Inequality in Subpopulations Using the Gini Index**—◆Chaitra Nagaraja, Fordham University
- 12:05 p.m. **Semiparametric Conditional Moment Models with Possibly Nonsmooth Residuals and Nonclassical Measurement Errors**—◆Suyong Song, University of Wisconsin-Milwaukee

- Sloan-Kettering Cancer Center; Thomas M Atkinson, Memorial Sloan-Kettering Cancer Center; Antonia V Bennett, Memorial Sloan-Kettering Cancer Center; Steven B Clauser, National Cancer Institute; Ethan Basch, Memorial Sloan-Kettering Cancer Center
- 11:20 a.m. **Exploratory Scientific Data Analysis**—◆Gary Cline, ICON Clinical Research
- 11:35 a.m. **Planning for Pharmacovigilance in Phase III Vaccine Trials**—◆Zhen Jiang, FDA/CBER; Estelle Russek-Cohen, FDA/CBER; Michael Nguyen, FDA/CBER
- 11:50 a.m. **Active Surveillance on Medical Observational Databases**—◆Ivan Zorych, Columbia University; Patrick Ryan, Johnson & Johnson; Martijn Schuemie, Erasmus Medical Center; David Madigan, Columbia University
- 12:05 p.m. **Considerations on Sampling for Medical Chart Review**—◆Haijun Ma, Amgen, Inc.; Jason Legg, Amgen, Inc.; Jaekwang Kim, Iowa State University

663 CC-Room 22 ■ **Advances in Innovations in Pharmacovigilance and Pro Analysis—Contributed**

Biopharmaceutical Section

Chair(s): Michelle Ge, Janssen Pharmaceuticals R&D

- 10:35 a.m. **High-Dimensional Symptom Data in Cancer Trials: Exploring Item Redundancy in the Patient-Reported Outcomes Version of the Common Terminology Criteria for Adverse Events (PRO-CTCAE)**—◆Sandra A. Mitchell, National Cancer Institute; Amylou C Dueck, Mayo Clinic; Tito R Mendoza, MD Anderson Cancer Center; Steven B Clauser, National Cancer Institute; Bryce B Reeve, The University of North Carolina at Chapel Hill; Thomas M Atkinson, Memorial Sloan-Kettering Cancer Center; Antonia V Bennett, Memorial Sloan-Kettering Cancer Center; Yuelin Li, Memorial Sloan-Kettering Cancer Center; Jeff A Sloan, Mayo Clinic; Ethan Basch, Memorial Sloan-Kettering Cancer Center
- 10:50 a.m. **Multiple Testing in Patient-Reported Symptom Data with Application to the Patient-Reported Outcomes Version of the Common Terminology Criteria for Adverse Events (PRO-CTCAE)**—◆Amylou C Dueck, Mayo Clinic; Sandra A. Mitchell, National Cancer Institute; Tito R Mendoza, MD Anderson Cancer Center; Pamela J Atherton, Mayo Clinic; Daniel V Satele, Mayo Clinic; Antonia V Bennett, Memorial Sloan-Kettering Cancer Center; Yuelin Li, Memorial Sloan-Kettering Cancer Center; Thomas M Atkinson, Memorial Sloan-Kettering Cancer Center; Bryce B Reeve, The University of North Carolina at Chapel Hill; Steven B Clauser, National Cancer Institute; Jeff A Sloan, Mayo Clinic; Ethan Basch, Memorial Sloan-Kettering Cancer Center
- 11:05 a.m. **The Effect of Skip Patterns on the Validity and Reliability of Selected Items from the Patient-Reported Outcomes Version of the Common Terminology Criteria for Adverse Events**—◆Tito R Mendoza, MD Anderson Cancer Center; Amylou C Dueck, Mayo Clinic; Sandra A. Mitchell, National Cancer Institute; Bryce B Reeve, The University of North Carolina at Chapel Hill; Yuelin Li, Memorial

664 CC-Room 28A **Bayesian Modeling in Life Sciences 2—Contributed**

Section on Bayesian Statistical Science

Chair(s): Saman Muthukumarana, University of Manitoba

- 10:35 a.m. **Assessment of Parametric and Nonparametric Bayesian Hierarchical Models for Profiling Health Care Providers**—◆Xiaowei Yang, University of California at Davis; Hongxia Yang, University of California at Davis; Dao Zhou, University of California at Davis; Qian Zhang, University of California at Davis
- 10:50 a.m. **Segmental Modeling of Viral Load Changes for HIV Longitudinal Data with Skewness and Detection Limits**—◆Yangxin Huang, University of South Florida
- 11:05 a.m. **Bayesian Hierarchical Model for Analyzing Multiple Correlated Outcomes of Familial Data**—◆Qiaolin Chen, University of California at Los Angeles; Robert E Weiss, University of California at Los Angeles Fielding School of Public Health; Catherine A Sugar, University of California at Los Angeles
- 11:20 a.m. **Bayesian Threshold Regression Model for Current Status Data with Informative Censoring**—◆Tao Xiao, The Ohio State University; Michael Lindsey Pennell, The Ohio State University College of Public Health
- 11:35 a.m. **A Bayesian Approach to the Instrumental Variable Problem with a Binary Outcome and a Binary Treatment**—◆Rodney Sparapani, Medical College of Wisconsin; Purushottam Laud, Medical College of Wisconsin; Jessica Pruszynski, Medical College of Wisconsin; Robert McCulloch, The University of Texas



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- 11:50 a.m. **Empirical Bayesian Modeling of Pharmacokinetic Data**—◆David Bryant King, FDA/CBER; Richard A Forshee, FDA/CBER; Robert Mitkus, FDA/CBER
- 12:05 p.m. **Nonparametric Bayes Modeling for Jointly Analyzing Family and Unrelated Data**—◆Chuanhua Xing, Boston University; Andrew Allen, Duke University; Yi-Ju Li, Duke University

- 10:50 a.m. **Economic Applications of Time Series Forecasting of Government Health Expenditures**—◆Michael Kotarinos; Chris P. Tsokos, University of South Florida
- 11:05 a.m. **A Reference-Invariant Health Disparity Index Based on Rényi Divergence**—◆Makram Talih, National Center for Health Statistics
- 11:20 a.m. **Linear Combinations of Biomarkers to Improve Diagnostic Accuracy with Three Ordinal Diagnostic Categories**—◆Le Kang, FDA/CDRH; Lili Tian, SUNY at Buffalo; Chengjie Xiong, Washington University School of Medicine; Paul K Crane, University of Washington
- 11:35 a.m. **Which Newborns Missed the First Dose of Hepatitis B Vaccination?**—◆Zhen Zhao, National Center for Immunization and Respiratory Diseases; Trudy V. Murphy, CDC
- 11:50 a.m. **Construct Validation of Measures Used for Assessing the Effect of Nutrition Education on the Lifestyles of Third-Grade Children**—◆Mack Shelley, Iowa State University; Doris Montgomery, Iowa Department of Public Health; Xia Chen, Iowa Department of Public Health; Marilyn Jones, Iowa Department of Public Health; Christine Hradek, Iowa State University
- 12:05 p.m. **Impact of Routine Exercises on the Quality of Life of Diabetics with Peripheral Arterial Disease (PAD)**—◆Philip Twumasi-Ankrah, University of Kansas School of Medicine; Tracie C. Collins, University of Kansas School of Medicine

665 CC-Room 31C **Disclosure Limitation and Other Missing Data Issues—Contributed**

Section on Government Statistics, Section on Survey Research Methods, Committee on Applied Statisticians, Committee on Gay and Lesbian Concerns in Statistics

Chair(s): Morgan Erp, Bureau of Labor Statistics

- 10:35 a.m. **Generalized Linear Models with Variables Subject to Post Randomization Method**—◆Yong Ming Jeffrey Woo, Penn State University; Aleksandra Slavkovic, Penn State University
- 10:50 a.m. **A Discussion of Uncongeniality for Synthetic Data**—◆Bronwyn Loong, Harvard University; Carl Morris, Harvard University; Donald B Rubin, Harvard University
- 11:05 a.m. **Asymptotic Inferences in Synthesized Microdata via Multiple Imputation**—◆Fang Liu, University of Notre Dame; Kaifeng Lu, Forest Labs
- 11:20 a.m. **More Effective Database Construction: Enhancing the Utility of Secure Databases**—◆Hui Xie, University of Illinois; Yi Qian, Northwestern University
- 11:35 a.m. **Propensity Score Adjustments Using Covariates in Observational Studies**—◆Daniel Yang, Bureau of Labor Statistics; Alix I. Gitelman, Oregon State University; Virginia Lesser, Oregon State University; David D. Birkes, Oregon State University
- 11:50 a.m. **A Model-Based Approach to Assessing and Mitigating Nonresponse Bias for the Monthly Wholesale Trade Survey**—◆Joanna Lineback, U.S. Census Bureau; Eric B. Fink, U.S. Census Bureau
- 12:05 p.m. **Floor Discussion**

667 CC-Room 32A **Animal Population Modeling—Contributed**

Section on Statistics and the Environment

Chair(s): Paul L. Patterson, USDA

- 10:35 a.m. **Asymptotic Behavior of a Stochastic Population Model**—◆Samuel Woolford, Bentley University; Norm Josephy, Bentley University; Mihaela Predescu, Bentley University
- 10:50 a.m. **Augmenting Superpopulation Capture-Recapture Models with Population Assignment Data**—◆Zhi Wen, FDA; Kenneth Pollock, North Carolina State University; James Nichols, Patuxent Wildlife Research Center; Peter Waser, Purdue University
- 11:05 a.m. **Limited-Information Modeling of Loggerhead Turtle Population Size**—◆David Hitchcock, University of South Carolina; John Grego, University of South Carolina
- 11:20 a.m. **Robust Abundance Estimation in Animal Surveys with Imperfect Detection**—◆Thomas Bohrmann, EPA; Mary C Christman, MCC Statistical Consulting LLC

666 CC-Room 30D **Recent Advances of Statistical Application to the Health Policy Studies—Contributed**

Health Policy Statistics Section, Section on Statistics in Epidemiology

Chair(s): Nancy Gordon, U.S. Census Bureau

- 10:35 a.m. **Sequential Decision Processes in Kidney Paired Donation Programs with Altruistic Donors**—◆Yijiang Li, University of Michigan; John Kalbfleisch, University of Michigan; Peter Song, University of Michigan; Alan Leichtman, University of Michigan



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- 11:35 a.m. **Incorporating Random Effects Into Classification and Regression Trees with Correlated Binary Data**—◆ Mark McKelvey, Iowa State University; Philip Dixon, Iowa State University
- 11:50 a.m. **The Art of Composition: Estimation Combining Two Golden Eagles Population Surveys**—◆ Mark Otto, Fish and Wildlife Service
- 12:05 p.m. **Applying a Spatial Occupancy Model to Presence-Absence Data from an Atlas Project**—◆ Kristin Broms, University of Washington; John Skalski, University of Washington; Devin S. Johnson, National Oceanic and Atmospheric Administration

668 CC-Room 26A ■ Genetic Epidemiology and Genomics—Contributed

Section on Statistics in Epidemiology
Chair(s): Feng Dai, Yale University

- 10:35 a.m. **Comparison of Somatic Mutation-Calling Methods Based on DNA Sequence from Matched Tumor-Normal Pairs**—◆ Su Yeon Kim, University of California at Berkeley; Terry Speed, University of California at Berkeley
- 10:50 a.m. **Bump Hunting to Identify Differentially Methylated Regions in Epigenetic Epidemiology Studies**—◆ Andrew Jaffe, The Lieber Institute
- 11:05 a.m. **DNA Methylation in Blood Is Associated with Breast Cancer: A Study in Prospective Samples from the Sister Study**—◆ Zongli Xu, National Institute of Environmental Health Sciences; Sophia C.E. Bolick, National Institute of Environmental Health Sciences; Lisa A. DeRoo, National Institute of Environmental Health Sciences; Dale P. Sandler, National Institute of Environmental Health Sciences; Clarice Weinberg, National Institute of Environmental Health Sciences; Jack A. Taylor, National Institute of Environmental Health Sciences
- 11:20 a.m. **Correcting for Residual Population Substructure in Family-Based Tests of Gene-Environment Interactions with Application to Gene-Virus Interactions in Non-Diabetic Nephropathy**—◆ Jasmin Divers, Wake Forest School of Medicine; Barry I Freedman, Wake Forest School of Medicine; Carl D Langefeld, Wake Forest School of Medicine
- 11:35 a.m. **An Alternative Method of Multiple Sequence Alignment**—◆ Mian Arif Shams Adnan, Jahangirnagar University; Md Shamsuddin, King Abdulaziz University
- 11:50 a.m. **Algorithm Development for Detection of Low-Prevalence Mutations Through Ultra-Deep Targeted Sequencing**—◆ Lei Bao, University of California at San Diego; Karen Messer, University of California at San Diego
- 12:05 p.m. **Floor Discussion**

669 CC-Room 29A Variance Estimation in Sample Surveys—Contributed

Section on Survey Research Methods
Chair(s): Iris Shimizu, National Center for Health Statistics

- 10:35 a.m. **Can Replicate-Based Methods Be Used in Variance Estimation for Cut-Point Estimators Derived Through ROC Analysis?**—◆ Dan Liao, RTI International; Phillip Kott, RTI International; Sarra Lorraine Hedden, SAMHSA
- 10:50 a.m. **Properties of Smoothed Design-Based Variance Estimators from Complex Sample Surveys**—◆ MoonJung Cho, Bureau of Labor Statistics; John Eltinge, Bureau of Labor Statistics; Julie Gershunskaya, Bureau of Labor Statistics; Larry Huff, Bureau of Labor Statistics
- 11:05 a.m. **Variance Estimation for the Multidisciplinary Treatment Planning (MTP) Survey**—◆ Hyunshik James Lee, Westat; Benmei Liu, National Cancer Institute; Irene Prabhu Das, National Cancer Institute
- 11:20 a.m. **Comparing Recent Approaches for Bootstrapping Probability-Proportional-to-Size Samples: A Simulation Study**—◆ M. Giovanna Ranalli, University of Perugia; Fulvia Mecatti, University of Milano-Bicocca
- 11:35 a.m. **Single Versus Replicate Survey Weights: Toward Guidance for Choosing an Optimal Approach**—◆ Jamie Ridenhour, RTI International; Andy Peytchev, RTI International
- 11:50 a.m. **A Unified Theory of Empirical Likelihood Ratio Confidence Intervals for Survey Data with Unequal Probabilities**—◆ Yves Berger, University of Southampton; Omar De La riva Torres, University of Southampton
- 12:05 p.m. **Confidence Intervals for Quantile Estimation from Complex Survey Data**—◆ Babubhai Shah, SAFAL Institute Inc.; Akhil K Vaish, RTI International

670 CC-Room 30E ■ Advances in Methods for Causal Inference—Contributed

Social Statistics Section, Section on Statistics in Epidemiology
Chair(s): Megan Suzanne Schuler, Johns Hopkins Bloomberg School of Public Health

- 10:35 a.m. **Mediation Analysis Based on Propensity Scores**—◆ Yeying Zhu, Penn State University; Debashis Ghosh, Penn State University; Donna Coffman, Penn State University
- 10:50 a.m. **How Do We Measure and Account for Treatment Compliance in Community-Based, Multi-Layered Intervention Trials**—◆ Pan Wu, University of Rochester
- 11:05 a.m. **Covariate Balancing Propensity Score**—◆ Kosuke Imai, Princeton University; Marc Thomas Ratkovic, Princeton University



● Themed Session ■ Applied Session ◆ Presenter

- 11:20 a.m. **Using Simulated Data for Covariate Selection in Propensity Score Models**—◆Douglas Galagate, University of Maryland
- 11:35 a.m. **Model-Free Selection of Covariates for Estimating Average Causal Effects**—◆Jenny Häggström, Umeå University; Emma Persson, Umeå University; Xavier Luna de Luna, Umeå University; Ingeborg Waernbaum, Umeå University
- 11:50 a.m. **Small Samples and Propensity Score Methods**—◆Ana Kolar, University of Ljubljana; Vasja Vehovar, University of Ljubljana
- 12:05 p.m. **Causal Inference When the Intervention Is Prioritization**—◆Benjamin Ogorek, Nationwide Insurance; Shannon Terry, Nationwide Insurance

671 CC-Room 29B

■ Nonresponse Adjustment and Advances in Post-Stratification—Contributed

Section on Survey Research Methods

Chair(s): Brady West, University of Michigan

- 10:35 a.m. **Assessing Effectiveness of Nonresponse Adjustment Methods: Response Propensity Weighting and Generalized Regression Calibration Estimation**—◆Cong Ye, University of Maryland; Roger Tourangeau, Westat
- 10:50 a.m. **A Cautionary Note on Post-Stratification Adjustment**—◆Hee-Choon Shin, National Center for Health Statistics
- 11:05 a.m. **Comparing Alternative Weight Adjustment Methods**—◆Kimberly Henry, IRS/SOI; Richard Valliant, University of Maryland
- 11:20 a.m. **Adjustment for Unit Nonresponse in the National Health Interview Survey**—◆Chris Moriarity, National Center for Health Statistics; James Dahlhamer, National Center for Health Statistics
- 11:35 a.m. **Evaluation of Two-Step Nonresponse Adjustment in the Mental Health Surveillance Study**—◆Emilia Peytcheva, RTI International; Phillip Kott, RTI International; Dan Liao, RTI International; Kevin Wang, RTI International; Art Hughes, SAMHSA
- 11:50 a.m. **Endogenous Post-Stratification Estimation Using a Random Forests Model**—◆John Tipton, Colorado State University; Jean Opsomer, Colorado State University; Gretchen Moisen, U.S. Forest Service
- 12:05 p.m. **Floor Discussion**

672 CC-Room 28D

Hypothesis Testing, Matching, and Coding—Contributed

Section on Statistical Learning and Data Mining

Chair(s): Min Tang, Harvard University

- 10:35 a.m. **Creating an Automated Industry- and Occupation-Coding Process for the American Community Survey**—◆Michael Kornbau, U.S. Census Bureau; Julie Vesely, U.S. Census Bureau; Matthew Thompson, U.S. Census Bureau
- 10:50 a.m. **CDfdr: Direct Approach to Signal and Noise Separation**—◆Subhadeep Mukhopadhyay, Texas A&M University
- 11:05 a.m. **Hypothesis Testing for the Mean Vector in High Dimension**—◆Edgard Maboudou
- 11:20 a.m. **A More Powerful Two-Sample Test in High Dimensions Using Random Projection**—◆Miles Lopes, University of California at Berkeley; Laurent Jacob, University of California at Berkeley; Martin J. Wainwright, University of California at Berkeley
- 11:35 a.m. **Soft Null Hypotheses: A Case Study of Image Enhancement Detection in Brain Lesions**—◆Haochang Shou, Johns Hopkins Bloomberg School of Public Health; Russell Shinohara, The Johns Hopkins University; Han Liu, The Johns Hopkins University; Daniel S. Reich, National Institute of Neurological Disorders and Stroke; Ciprian Crainiceanu, The Johns Hopkins University
- 11:50 a.m. **Joint Optimization of Fidelity and Commensurability for Manifold Alignment and Vertex Assignment**—◆Sancar Adali
- 12:05 p.m. **Estimating Large Correlation Matrices by Banding the Partial Autocorrelation Matrix**—◆Yanpin Wang, University of Florida; Michael Daniels, University of Florida

Friday, August 3

Committee/Business Meetings & Other Activities

8:30 a.m.– 5:00 p.m. HQ-Sapphire 411

Census at School International Workshop

Chair(s): Roxy Peck, Cal Poly; Rob Gould, University of California at Los Angeles; Rebecca Nichols, ASA

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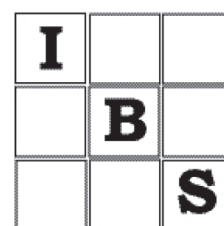
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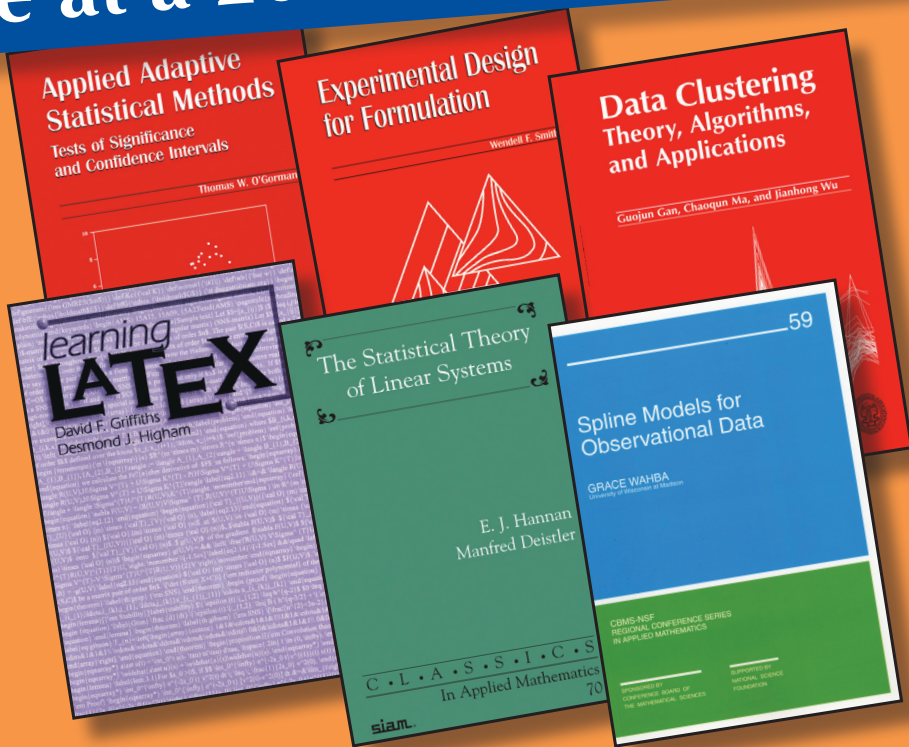
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