JSM2007

July 29 to August 2, 2007

Program Book

Sponsored by

The American Statistical Association

Institute of Mathematical Statistics

International Biometric Society
Eastern North American Region
Western North American Region

Statistical Society of Canada

UTAH

Salt Lake City

July 29 to August 2, 2007

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East® 5 Version

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- Simulation of single-look designs
- New visualization tools make it easier to communicate trial concepts amongst clinical team

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- Tests for continuous data: Carryover, Period and Treatment effects
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when continuous variable data from paired samples arise from several strata

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for parameters of binary logistic regression - use with or without Firth correction

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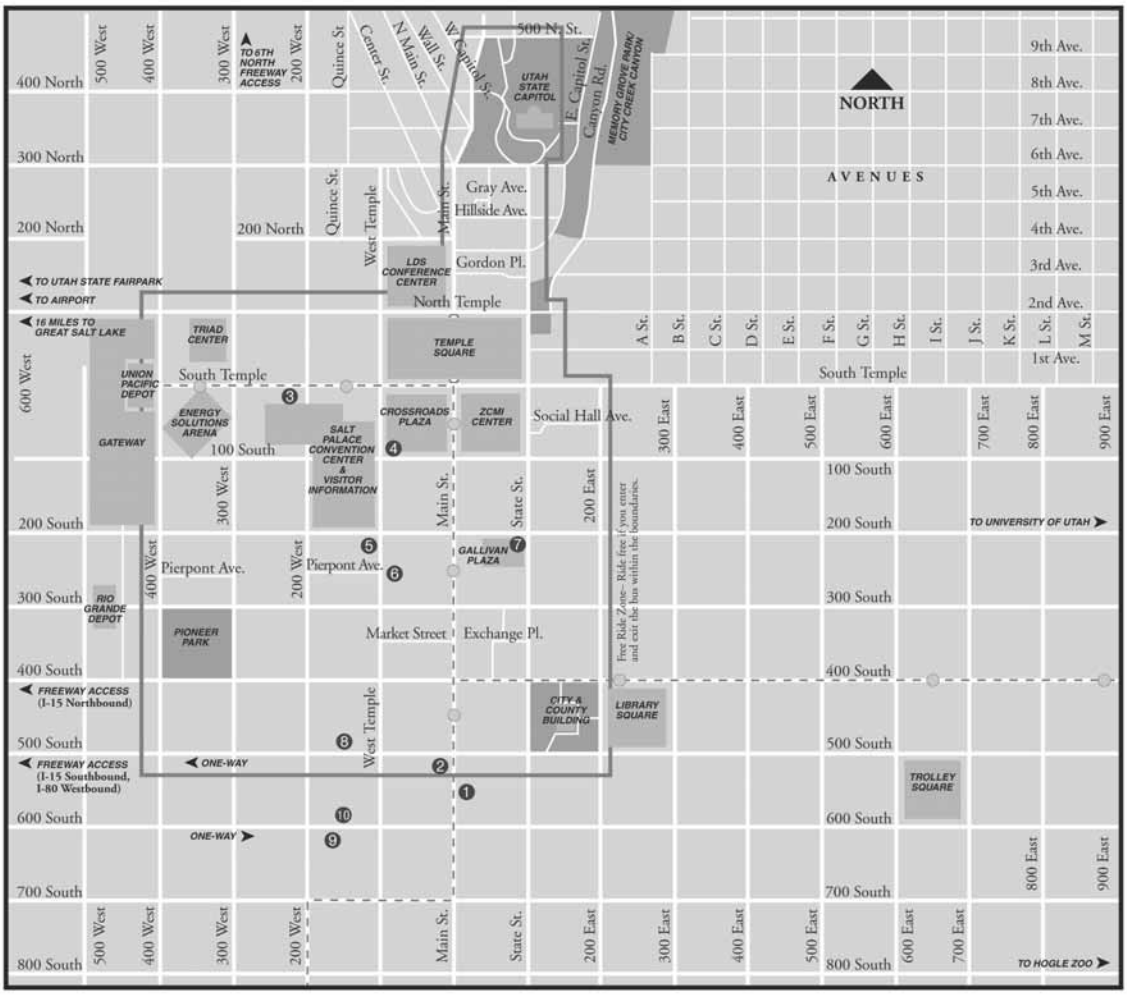


1 The Grand America Hotel
555 South Main Street
COC/COS, business/committee, and social activities

No Scheduled Activities

2 Little America Hotel
500 South Main Street

3 Radisson Hotel Salt Lake City Downtown
215 West South Temple

4 Salt Lake City Marriott Downtown
75 South West Temple

5 Shilo Inn Suites Hotel
206 South West Temple

6 Hilton Salt Lake City Center
255 South West Temple

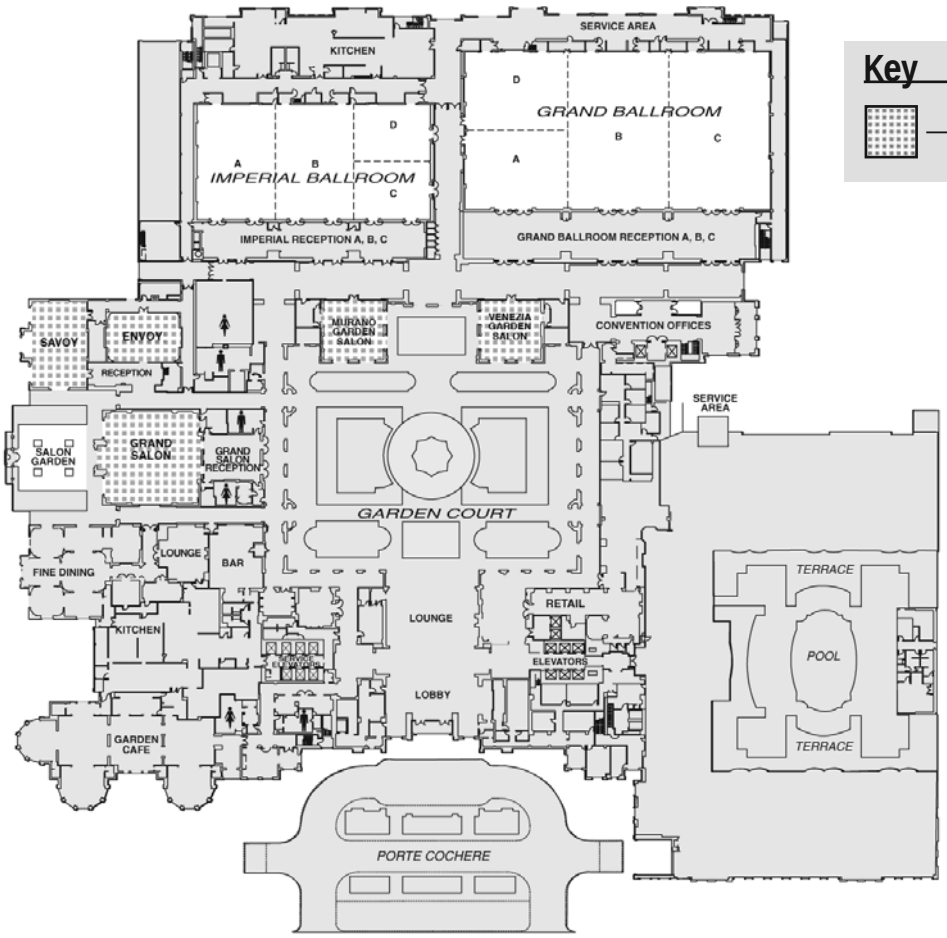
7 Salt Lake City Marriott City Center
220 South State Street

8 Sheraton City Centre Salt Lake City
150 West 500 South

9 Red Lion Salt Lake Downtown
161 West 600 South

10 Best Western Garden Inn
154 West 600 South

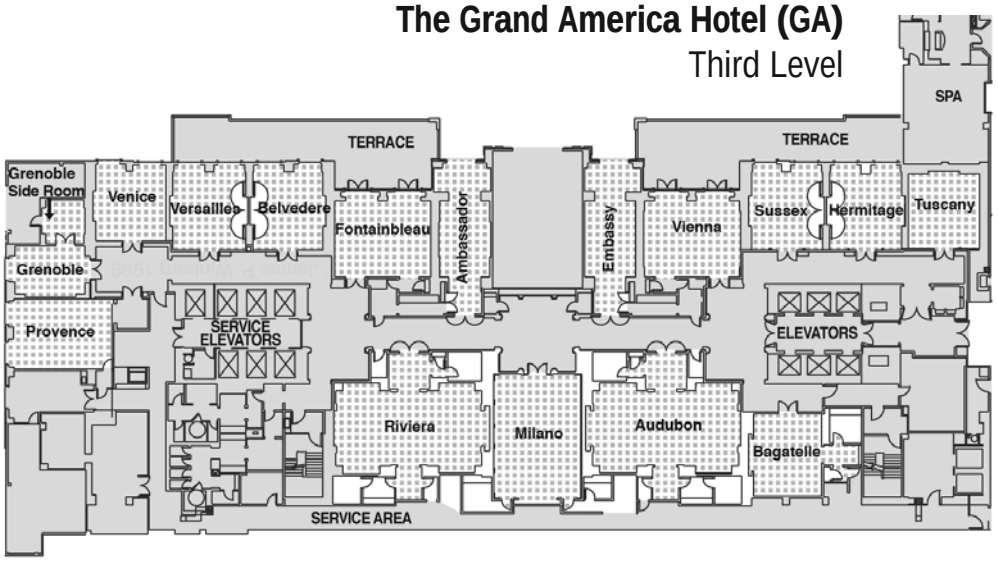
The Grand America Hotel (GA)
First Level



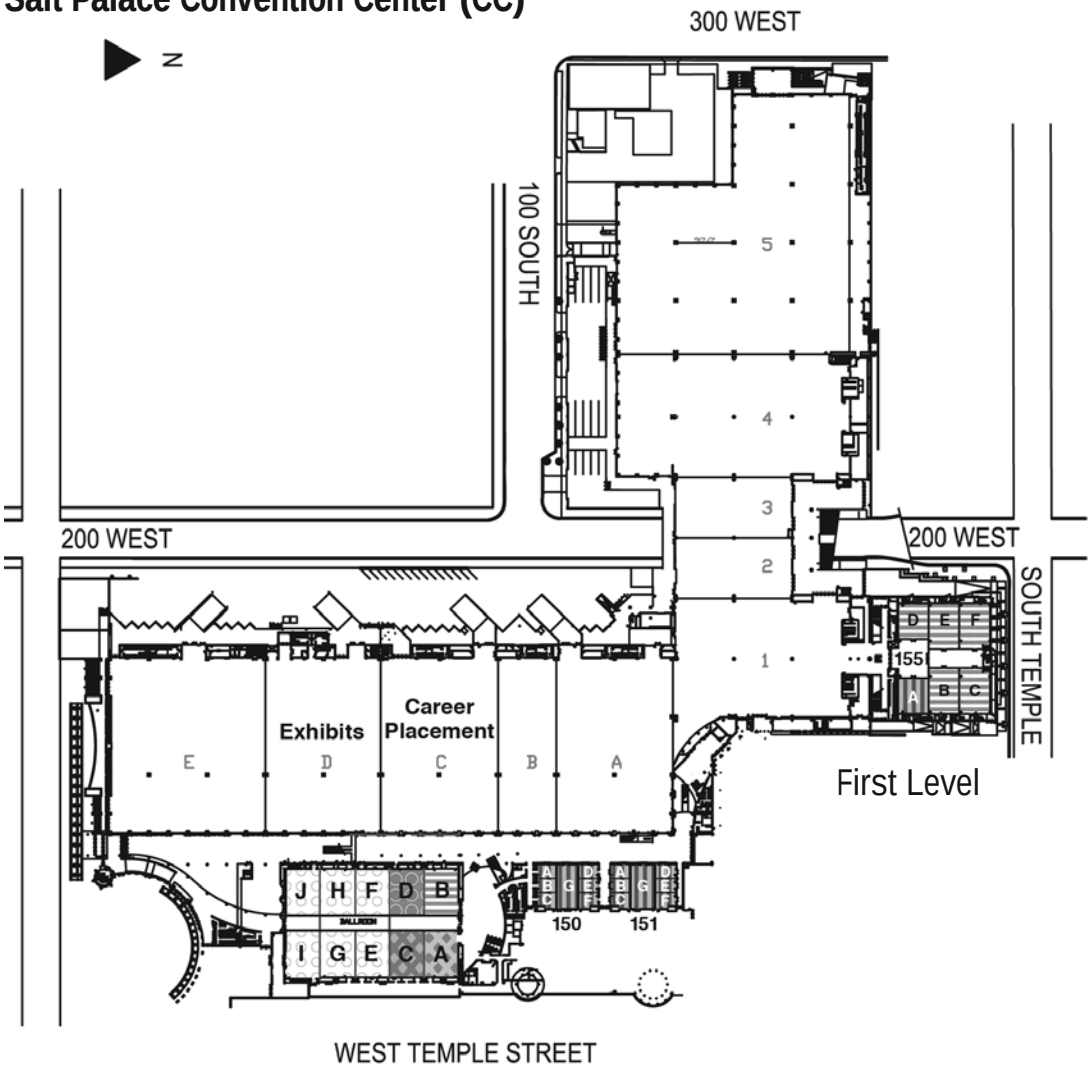
Key

—Business and Committee Meetings

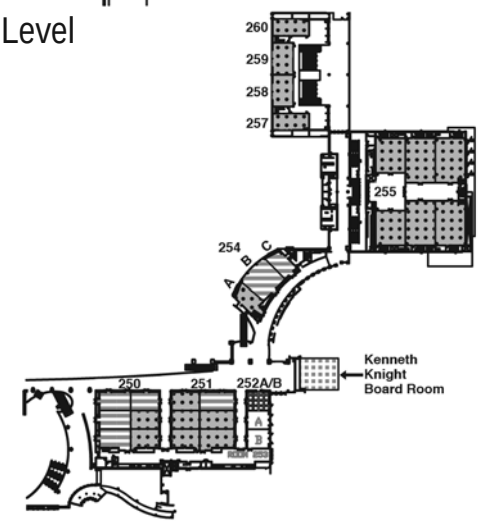
The Grand America Hotel (GA)
Third Level



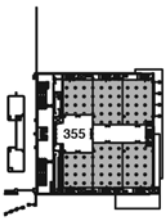
Salt Palace Convention Center (CC)



First Level



Second Level



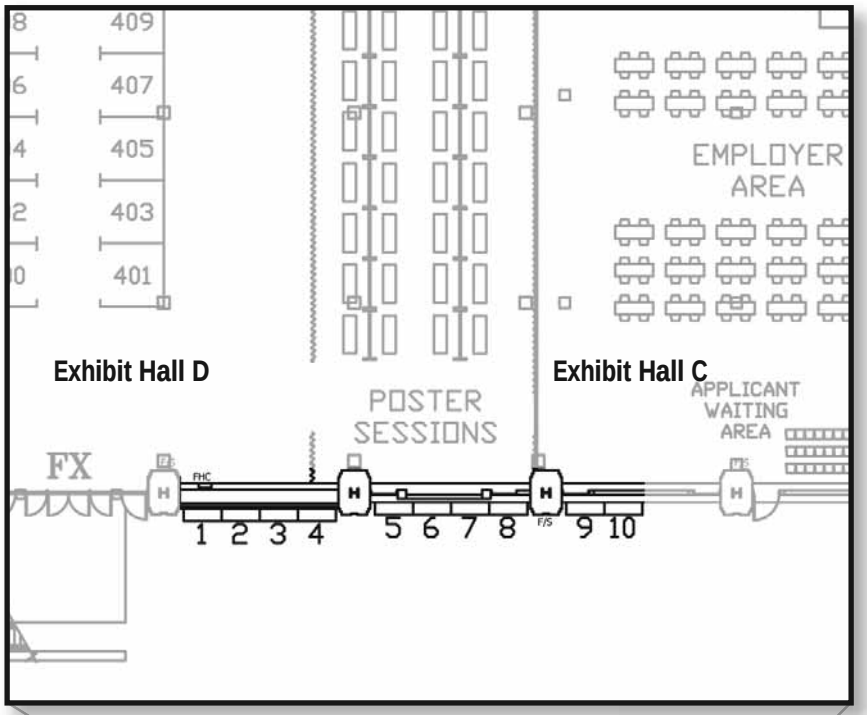
Third Level

Key

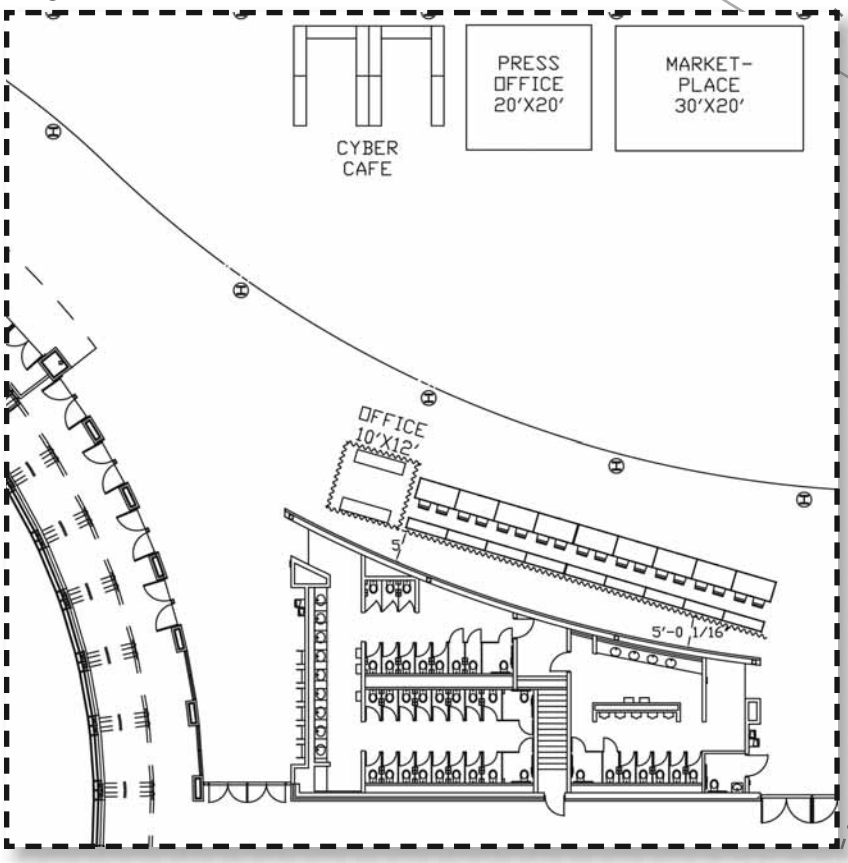
- —Business and Committee Meetings
- —Technical Sessions
- —Technical Sessions and Business and Committee Meetings
- —Technical Sessions, Business and Committee Meetings and CE Course Rooms
- —Speaker Workrooms
- —Opening Mixer and Plenary Sessions
- —Roundtables with Coffee and Speaker with Lunch
- —Roundtables with Lunch, Business and Committee Meetings, and Informal Dance Party
- —Roundtables with Lunch, Business and Committee Meetings, Informal Dance Party, and Opening Mixer

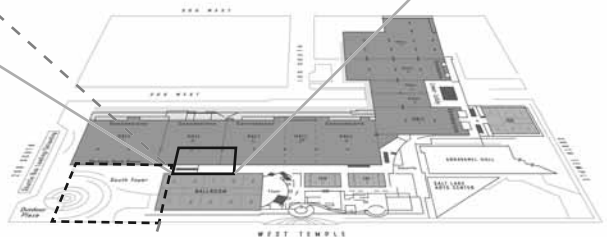
Committee and Society Tables

1. ASA Career Development Committee
2. ASA Council of Chapters
3. ASA Statistical Education
4. Caucus for Women in Statistics
5. Federal Committee on Statistical Methodology (FCSM)
6. Gay and Lesbian Concerns in Statistics
7 International Chinese Statistical Association (ICSA)
8 International Indian Statistical Association (IISA)
9. Christian Statisticians
10. International Statistical Institute (ISI)



Registration Area





Salt Palace Convention Center First Level

Emergency Telephone Messages

The general conference telephone number is **(801) 534-4750**. This will connect you to the JSM Special Assistance Desk and should only be used for emergency purposes. Emergency messages will be posted in the Cyber Center, located in the registration area. All other calls or messages should be left in the attendee's guestroom on his/her voice mail.

Convention Hotels

The main phone numbers for the convention hotels are:

The Grand America Hotel	**(801) 258-6000**
Little America Hotel	**(801) 596-5700**
Radisson Hotel Salt Lake City Downtown	**(801) 531-7500**
Salt Lake City Marriott Downtown	**(801) 531-0800**
Shilo Inn Hotel	**(801) 521-9500**
Hilton Salt Lake City Center	**(801) 328-2000**
Salt Lake City Marriott City Center	**(801) 961-8700**
Sheraton City Centre Hotel Salt Lake City	**(801) 401-2000**
Red Lion Salt Lake Downtown	**(801) 521-7373**
Best Western Garden Inn	**(801) 521-2930**

Assistance for Those with Disabilities

If you have a disability that may impede your participation, please contact a staff member at the Special Assistance Desk in the registration area of the Salt Palace Convention Center.

Child Care

Child care services may be organized through Guardian Angels. Providers will come to your hotel room. The rate is $60 for a minimum of four hours of service for the first child, with an additional $1 per hour for each additional child. The fee for families that want to share a sitter is $2 more per hour for each family, or $5 more per hour for each family when children in diapers are involved. A $10 transportation fee is added to the total each time a sitter is called. Fore more information, call **(206) 325-2327** or visit ***www.guardianangelbaby.com.***

The Caucus for Women in Statistics will provide a subsidy toward four hours of babysitting per family for up to 14 families. If you are interested, contact Tena I. Katsaounis at ***katsaounis.1@osu.edu***.

Electronic Devices

All cell phones, pagers, and other electronic devices must be turned off before attending any JSM session. These devices cause interference with the audiovisual equipment and are a distraction to the session speaker and attendees.

Smoking Policy

Smoking is not permitted at any JSM function, unless the event is outside.

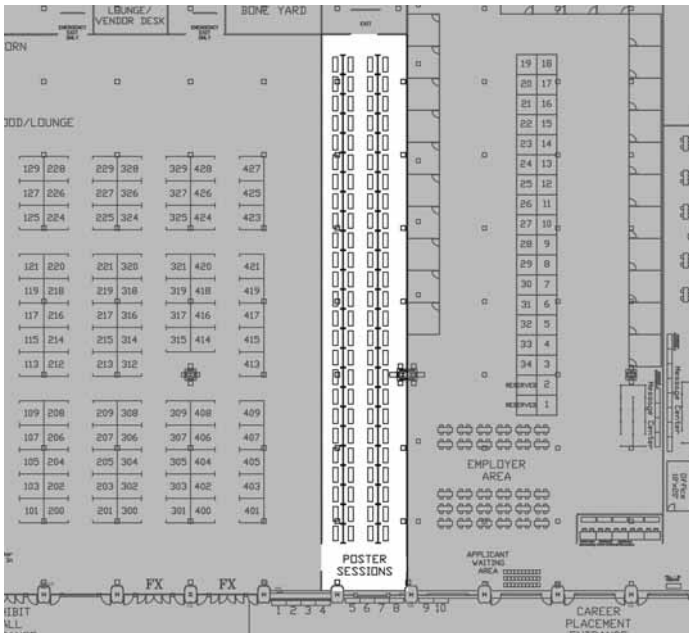
Photographs and Videotaping

Taking photographs or using video equipment in any session or at any JSM event is prohibited, and violators will be asked to leave. Only the official JSM photographer will be authorized to take photographs.

Recycling

You can help by making use of the paper, plastic, and aluminum trash containers located throughout the Salt Palace Convention Center. Also, participating in the towel and linen programs at area hotels significantly reduces the amount of energy and water used. You also can print sparingly and use the paper recycling containers available at the Cyber Center.

Poster Sessions – New Format This Year!



CC – Exhibit Hall D
Designed for the display of graphic materials, rather than the text of a paper, these sessions provide authors an assigned poster board that corresponds with the number listed in this program. Though speakers will only be present at their posters during their allotted session time, the posters will be displayed on Monday and Tuesday from 8:00 a.m. to 6:00 p.m., allowing attendees to view them throughout the day.

Introductory Overview Lectures

Introductory Overview Lectures make up a series of talks on a variety of topics. No preregistration is necessary, and they are open to all registrants.

Sunday, July 29, 4:00 p.m.–5:50 p.m. CC – 255E
Session 37: Adaptive Designs and Other Emerging Issues in Clinical Trials

Monday, July 30, 8:30 a.m.–10:20 a.m. CC – Ballroom B
Session 80: Statistical Machine Learning and Its Applications in Bioinformatics

Tuesday, July 31, 8:30 a.m.–10:20 a.m. CC – Ballroom B
Session 219: Improving Statistical Presentations and Posters

Wednesday, August 1, 8:30 a.m.–10:20 a.m. CC – Ballroom B
Session 353: How Scientists Can Work Effectively with the Media

Late-Breaking Sessions

Two additional sessions for invited Late-Breaking Sessions were approved to cover important topics emerging close in time to JSM. These are exciting additions to the JSM program, most of which is organized well in advance.

Monday, July 30, 2:00 p.m.–3:50 p.m. CC – Ballroom B
Session 171: Statistical Analysis of an Archeological Find

Wednesday, August 1, 2:00 p.m.–3:50 p.m. CC – Ballroom B
Session 443: War and Death in Iraq

Business and Committee Meetings

All meetings are open unless shown as "closed" or "by invitation only." Section business meetings provide the opportunity to give suggestions on Section business, and members are urged to attend.

Opening Mixer **CC – Ballrooms C–J**
Don't miss your chance to get JSM 2007 off to a great start and enjoy refreshments with your colleagues. Attend the Opening Mixer Sunday, July 29, from 8:00 p.m. to 10:30 p.m.

Student Mixer **GA – Venezia Garden Salon**
Student registrants can enjoy refreshments, meet their peers, and make plans for local events and outings at the Student Mixer, Monday, July 30, from 6:00 p.m. to 7:30 p.m. The mixer is sponsored by the ASA Committee on Membership Retention and Recruitment, and a number of door prizes will be given.

Society Business Meetings

You are encouraged to attend your society business meetings, if held during JSM. This is your chance to give input to officers and other members of your society.

American Statistical Association
Sunday, July 29, 6:00 p.m.–7:30 p.m. CC – 251 D

Statistical Society of Canada Reception
Monday, July 30, 5:00 p.m.–7:00 p.m. GA – Fontainbleau

IMS Presidential Address Reception
Monday, July 30, 9:30 p.m.–11:00 p.m. CC – Ballroom A

IMS Business Meeting
Tuesday, July 31, 12:30 p.m.–1:30 p.m. CC – 250 A

International Biometric Society, ENAR Business Meeting
Tuesday, July 31, 5:30 p.m.–6:30 p.m. CC – 250 A

IMS New Member and Student Reception
Tuesday, July 31, 5:30 p.m.–7:00 p.m. GA – Audubon

Recycling Badge Holders

Please place JSM badges and badge holders that you will not reuse in a designated bin in the registration area.

2007 JSM Proceedings

Instructions for JSM 2007 presenters are available at ***www.amstat.org/meetings/jsm/2007***; click the "**Program**" tab and select "**Proceedings**." The submission site will open August 1, 2007.

JSM 2008

The 2008 Joint Statistical Meetings will be held in Denver, Colorado, August 3–7, at the Denver Convention Center. Preliminary information about JSM 2008 can be found at Booth #107 in the exhibit hall. The complete listing of the 2008 Program Committee and instructions for submitting contributed papers is at ***www.amstat.org/meetings/jsm/2008***.

If You Are Not a Member...

Information about the ASA, ENAR, WNAR, IMS, and SSC is available at the society booths located in the registration area and exhibit hall of the Salt Palace Convention Center. Each society provides a variety of publications and activities, and student membership is offered at substantially reduced rates.

If you are not a member of the ASA, join now and receive a discount on your first year. Join at the ASA Membership Booth in the registration area by Thursday, August 2, at 10:00 a.m. to receive this special JSM discount. The discount is valid for regular membership only. Ask about other memberships for students, postgraduates, retirees, and developing country residents.

Registration

Everyone attending JSM, including participants in the program, is required to register. Materials for those who registered in advance are available at the JSM Registration Desk, located on the lower level, South Foyer, of the Salt Palace Convention Center. At the Registration Desk, you also may add Continuing Education courses, the Career Placement Service, tours, guest badges, luncheons, and roundtables. Hours of operation:

Saturday, July 28	7:00 a.m.–6:00 p.m.
Sunday, July 29	7:00 a.m.–8:30 p.m.
Monday, July 30	7:30 a.m.–6:00 p.m.
Tuesday, July 31	7:30 a.m.–4:30 p.m.
Wednesday, August 1	7:30 a.m.–4:30 p.m.
Thursday, August 2	7:30 a.m.–10:30 a.m.

JSM registration includes the Program Book and Abstract Book or CD-ROM; access to EXPO 2007; and admission to the Sunday night Opening Mixer, the Monday evening Student Mixer (students only), and the Informal Dance Party on Tuesday evening.

If you did not purchase speaker with lunch or roundtable tickets with your advance registration, ask at the JSM Registration Desk for availability. Limited seating is still available for some luncheons and roundtables. Tickets will be sold until 2 p.m. on the day prior to the event. NOTE: No onsite kosher or heart healthy meal tickets are available.

ASA Continuing Education Courses

Courses will be held in rooms on Level 1 of the Salt Palace Convention Center. For room assignments, review the general program or visit the Special Assistance Desk in the South Foyer of the Salt Palace Convention Center. To register onsite for a course, visit the JSM Registration Desk, also located in the South Foyer. Availability may be limited, and text books are not available.

Speaker Work Rooms — CC – 252 A&B

The speaker work rooms are available for all presenters. There will be practice equipment available consisting of an overhead projector and screen and a data projector and screen. To accommodate more than 3,200 presenters, **each speaker will be limited to 10 minutes to test the equipment**. Rehearse your verbal presentation in your hotel room to ensure everyone has a chance to test the equipment.

Presenters using laptops are encouraged to report to the speaker work room for training on how to connect to the data projector. Audiovisual technicians will be available to assist with questions or problems.

Hours of operation:

Saturday, July 28	7:00 a.m.–6:00 p.m.
Sunday, July 29	7:00 a.m.–6:00 p.m.
Monday, July 30	7:00 a.m.–6:00 p.m.
Tuesday, July 31	7:00 a.m.–6:00 p.m.
Wednesday, August 1	7:00 a.m.–6:00 p.m.
Thursday, August 2	7:00 a.m.–10:30 a.m.

Do You Need a Break?

GfK

Have a cup of coffee courtesy of GfK. Coffee will be available outside technical sessions rooms on all convention center levels **Monday** between 10:15 a.m. and 10:45 a.m. Enjoy a refreshing cup of coffee between your morning sessions.

Thank you GfK!

Career Placement Service — CC – Exhibit Hall C

Hours of operation:

Saturday, July 28 (job posting and résumé submission only)	9:00 a.m.–5:00 p.m.
Sunday, July 29	1:00 p.m.–6:00 p.m.
Monday, July 30	8:00 a.m.–6:00 p.m.
Tuesday, July 31	8:00 a.m.–6:00 p.m.
Wednesday, August 1 (onsite registration closes at noon)	8:00 a.m.–4:30 p.m.

EXPO 2007 — CC – Exhibit Hall D

Visit publishers, software companies, and recruiters, and see state-of-the-art products designed for the statistical community. Also, stop by the **ASA Booth, #101,** open during the show hours listed below.

Exhibitor Move In and Out

Saturday, July 28 (move in only)	8:00 a.m.–5:00 p.m.
Sunday, July 29 (move in only)	8:00 a.m.–12:00 p.m.
Wednesday, August 1 (move out only)	2:00 p.m.–8:00 p.m.

Show Hours

Sunday, July 29	1:00 p.m.–6:00 p.m.
Monday, July 30	9:00 a.m.–6:00 p.m.
Tuesday, July 31	9:00 a.m.–6:00 p.m.
Wednesday, August 1	9:00 a.m.–2:00 p.m.

Cyber Center — CC – Level 1, South Foyer

There are 20 terminals with internet access and three printers available in the Cyber Center for registered JSM attendees. Hours of operation:

Saturday, July 28	7:00 a.m.–7:00 p.m.
Sunday, July 29	7:00 a.m.–10:30 p.m.
Monday, July 30	7:00 a.m.–11:00 p.m.
Tuesday, July 31	7:00 a.m.–11:00 p.m.
Wednesday, August 1	7:00 a.m.–9:00 p.m.
Thursday, August 2	7:00 a.m.–10:30 a.m.

Wireless Internet Access

The Salt Palace Convention Center has wireless internet access throughout the building for $15 per day.

ASA Marketplace — CC – Level 1, South Foyer

The ASA Marketplace is the place for JSM and ASA souvenirs. Purchase your official JSM 2007 T-shirt, new shirt designs, great new gifts, and clearance items. Hours of operation:

Saturday, July 28	12:00 p.m.–5:00 p.m.
Sunday, July 29	9:00 a.m.–5:00 p.m.
Monday, July 30	9:00 a.m.–5:00 p.m.
Tuesday, July 31	9:00 a.m.–5:00 p.m.
Wednesday, August 1	9:00 a.m.–5:00 p.m.
Thursday, August 2	8:00 a.m.–10:30 a.m.

ASA Membership/ Special Assistance Desk — CC – Level 1, South Foyer

Information about Salt Lake City activities, restaurants, attractions, and organized tours, as well as a local map, is available at the Special Assistance Desk. Hours of operation:

Saturday, July 28	7:00 a.m.–6:00 p.m.
Sunday, July 29	7:00 a.m.–8:30 p.m.
Monday, July 30	7:30 a.m.–6:00 p.m.
Tuesday, July 31	7:30 a.m.–4:30 p.m.
Wednesday, August 1	7:30 a.m.–4:30 p.m.
Thursday, August 2	7:30 a.m.–10:30 a.m.

Salt Lake City Visitors Information Center — CC – Level 1

The Salt Lake City Visitors Information Center is operated by the Salt Palace Convention Bureau and provides extensive information and referrals for restaurants, tours, and sightseeing, along with up-to-date maps and travel information. The center is located in the main lobby area on Level 2 of the convention center. Hours of operation:

Saturday, July 28	9:00 a.m.–5:00 p.m.
Sunday, July 29	9:00 a.m.–5:00 p.m.
Monday, July 30	8:00 a.m.–6:00 p.m.
Tuesday, July 31	8:00 a.m.–6:00 p.m.
Wednesday, August 1	8:00 a.m.–6:00 p.m.
Thursday, August 2	8:00 a.m.–6:00 p.m.

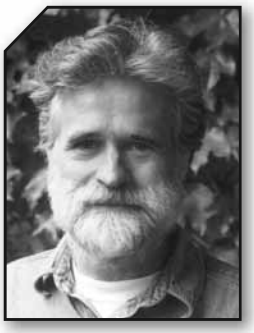
President's Invited Address Monday, July 30, 4:00 p.m.

"Regularization Methods in Statistical Model-Building: Statisticians, Computer Scientists, Classification, and Machine Learning"

Grace Wahba is the I. J. Schoenberg-Hilldale Professor of Statistics at the University of Wisconsin-Madison as well as a member of the Computer Sciences Department and Department of Biostatistics and Medical Informatics. She is a member of the National Academy of Sciences and American Academy of Arts and Sciences. She also is a Fellow of the IMS, ASA, and American Association for the Advancement of Science. Since the early 70s, beginning with smoothing splines, she has been interested in regularization methods for nonparametric statistical model building. Her recent research involves analysis of datasets where only noisy, incomplete dissimilarity information is available and looking for important patterns or clusters of interacting variables.

IMS Presidential Address Monday, July 30, 8:00 p.m.

"Open Access to Professional Information"



Jim Pitman is IMS president and professor of statistics and mathematics at the University of California, Berkeley. He has worked toward improving the quality and quantity of open-access content in the mathematical sciences by promoting and launching open-access journals for expository and survey material and developing open-source bibliographic software to encourage distributed alternatives to centrally controlled indexing systems. Recent projects include launching open-access expository journals *Probability Surveys* and *Statistics Surveys* and constructing open systems for navigation of online resources in the mathematical sciences.

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

"A Modern Framework for Enterprise Excellence"

Douglas C. Montgomery is professor of industrial and management systems engineering at Arizona State University. He is a Fellow of the American Society for Quality Control, ASA, and Institute of Industrial Engineers. He is a member of the honorary societies Phi Kappa Phi, Sigma Xi, Mu Sigma Rho, and Alpha Pi Mu. Montgomery's professional interests include design of experiments, time series analysis and forecasting, and applications of linear models. He also is interested in operations research and statistical methods applied to modeling and analyzing manufacturing systems.

Wald Lecture I Tuesday, July 31, 4:00 p.m.

"A Review of Some Surprises Encountered in Bayesian Model Selection"

Wald Lecture II Wednesday, August 1, 10:30 a.m.

"Model Selection: Approximations and Multiplicities"

Wald Lecture III Thursday, August 2, 10:30 a.m.

"Working with Inexact Models: The World of Computer Modeling"

Jim Berger earned his PhD from Cornell University in 1974. He has served as president of the IMS, chair of the ASA's Section on Bayesian Statistical Science, and president of the International Society for Bayesian Analysis. He also was awarded Guggenheim and Sloan Fellowships, the COPSS Presidents' Award, and the Sigma Xi Research Award. Berger's research has been in primarily Bayesian statistics, foundations of statistics, statistical decision theory, simulation, and model selection.

ASA Presidential Address Tuesday, July 31, 8:00 p.m.

"Statistics: Harnessing the Power of Information"

Mary Ellen Bock is professor and head of the Department of Statistics at Purdue University in West Lafayette, Indiana. She is Fellow and president of the ASA and Fellow of the American Association for the Advancement of Science and IMS. Her areas of statistical research include applications in computational biology, bioinformatics, econometrics, and mathematical statistics.

COPSS Fisher Lecture Wednesday, August 1, 4:00 p.m.

"R. A. Fisher, Randomization, and Current Practice in Multicenter Clinical Trials"

Marvin Zelen, dubbed "Father of Biostatistics," is professor of statistical science at Harvard School of Public Health. He is recognized as one of the pioneers of using Kronecker products and orthogonal projection operators in experimental design problems involving factorial and unbalanced designs. He also is known for his "play the winner rule" in randomized clinical trials, and his methods are still used in designing cutting-edge, multicenter clinical trials. Zelen is a Fellow of the ASA, American Association for the Advancement of Science, IMS, and International Statistical Institute and an elected member of the International Statistical Institute and American Academy of Arts and Sciences.

IMS Special Lectures

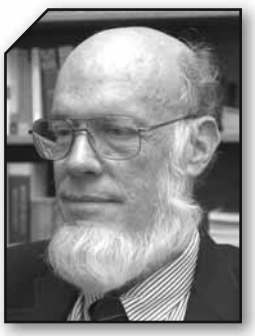
Medallion Lecture I Sunday, July 29, 2:00 p.m.

"Modeling Genes: Statistical Challenges in Modern Genetics"

Peter Donnelly is professor of statistical science at the University of Oxford. He is a Fellow of the IMS and Royal Statistical Society, a member of the International Statistical Institute, and an Honorary Fellow of the Institute of Actuaries. He has been awarded the Mitchell Prize of the ASA and International Society for Bayesian Analysis and the Guy Medal in Silver of the Royal Statistical Society. Donnelly's early work was in applied probability, particularly stochastic models in genetics, but, for some years, his research has focused on genetics. He played a major role in the HapMap project, an international collaboration that followed the Human Genome Project in studying genetic diversity in worldwide populations. He currently chairs a collaboration of 25 UK research groups studying 12 common human diseases.

Rietz Lecture Sunday, July 29, 4:00 p.m.

"Statistical Problems of Gene Mapping"



For the last 10 years, **David Siegmund** has concentrated on statistical aspects of gene mapping. As a statistician also interested in probability theory, his research concentrates on statistical problems that arise in scientific applications and require novel probability theory for their resolution. Before 1985, his research concentrated on sequential analysis, with a primary focus on the design and analysis of sequential clinical trials.

photo courtesy of Dawn Villella/AP, ©HHMI

Medallion Lecture II Monday, July 30, 10:30 a.m.

"Understanding Ecological Communities"

Claudia Neuhauser is HHMI professor and head of the Department of Ecology, Evolution, and Behavior at the University of Minnesota, Twin Cities. Her work is at the interface of ecology and evolution, as she investigates effects of spatial structure on community dynamics, in particular, the effect of competition on the spatial structure of competitors and the effect of symbionts on the spatial distribution of their hosts. In addition, her research in population genetics has resulted in the development of statistical tools for random samples of genes. She is currently director of an NSF-funded grant on nonequilibrium dynamics across space and time, which provides interdisciplinary education and training to graduate students from ecology, geology, civil engineering, and computer science.

Medallion Lecture III Tuesday, July 31, 8:30 a.m.

"Functional Regression Analysis: Models, Methods, and Applications"

Hans-Georg Müller is professor of statistics at the University of California, Davis. Among his current research interests are the theory and methodology of high-dimensional and functional data analysis and applications in biodemography, genomics, and finance. He is a member of the International Statistical Institute and a Fellow of the ASA, IMS, and American Association for the Advancement of Science.

Medallion Lecture IV Wednesday, August 1, 8:30 a.m.

"Quantile Regression under Censorship"

Xuming He is professor of statistics at the University of Illinois, Urbana-Champaign. He is a Fellow of the ASA and IMS. His primary research interests in statistics include robust methods, semi/nonparametric modeling, large-sample theory, quantile regression, dimension reduction, and resampling methods. His interdisciplinary research spans genomics, epidemiology, educational testing, dysphagia research, and atmospheric studies. He is currently the *IMS Bulletin* editor and serves on the editorial boards of *Annals of Statistics* and *JASA*.

Medallion Lecture V Wednesday, August 1, 2:00 p.m.

"Joint Modeling of Longitudinal and Survival Data"

Jane-Ling Wang is professor of statistics and graduate adviser of the biostatistics program at the University of California, Davis. She has served on various committees for the ASA, International Chinese Statistical Association, IMS, and the Bernoulli Society. She is currently president-elect of the International Chinese Statistical Association. Wang's research areas include aging and longevity, biodemography, dimension reduction methods, functional and longitudinal data analysis, joint modeling of longitudinal and survival data, and survival analysis. She is a Fellow of the ASA and IMS and an Elected Member of the International Statistical Institute.

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The Wharton School
University of Pennsylvania

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Tony Cai
The Wharton School
University of Pennsylvania

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Oregon Health & Science University

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Biometrics Section, ASA
Runze Li
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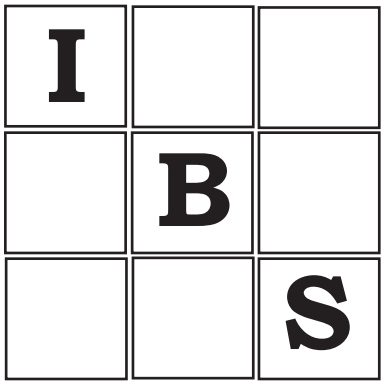
International Biometric Society—Eastern North American Region

January – December 2007



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2008 Spring Meeting
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International Biometric Society
12100 Sunset Hills Road, Suite 130
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Fax: (703) 435-4390
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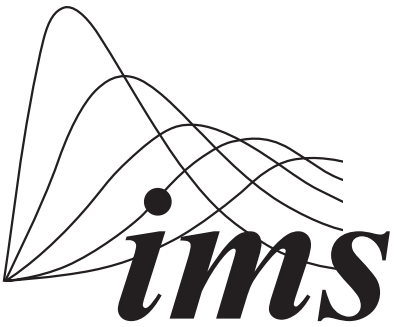

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P.O. Box 22718
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Fax: (216) 295-5661
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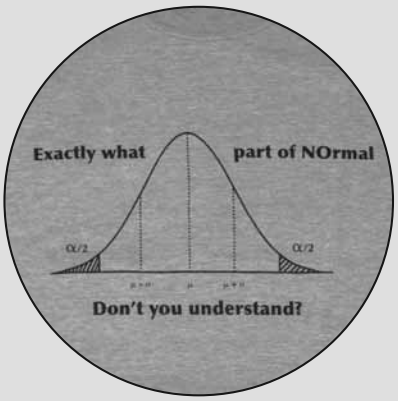
Continuing Education *at a Glance*

TIME	COURSE	INSTRUCTOR(S)	COURSE TITLE
Saturday, July 28			
8:30 a.m.–5:00 p.m.	CE_01C	David Spiegelhalter	Bayesian Modeling in Practice
8:30 a.m.–5:00 p.m.	CE_02C	Garrett Fitzmaurice	Applied Longitudinal Analysis %
8:30 a.m.–5:00 p.m.	CE_03C	Dallas E. Johnson	Design and Analysis of Crossover Experiments
8:30 a.m.–5:00 p.m.	CE_04C	Paul Biemer	Latent Class Analysis of Survey Error
8:30 a.m.–5:00 p.m.	CE_05C	Richard Cook/Jerry Lawless	Statistical Methods for the Analysis of Recurrent Events
8:30 a.m.–5:00 p.m.	CE_06C	Kimberly Crimin/Thomas Vidmar	Nonclinical Statistics for Drug Discovery
8:30 a.m.–5:00 p.m.	CE_07C	Antony Unwin/Heike Hofmann	Graphics of Large Datasets
Sunday, July 29			
8:30 a.m.–5:00 p.m.	CE_01C	David Spiegelhalter	Bayesian Modeling in Practice
8:00 a.m.–12:00 p.m.	CE_08C	Naitee Ting/James MacDougall	Dose-Finding in Drug Development
8:30 a.m.–5:00 p.m.	CE_09C	Oliver Schabenberger	Generalized Linear Mixed Models: Theory and Applications
8:30 a.m.–5:00 p.m.	CE_10C	Margaret S. Pepe/Holly Janes/ Todd Alonzo	Statistical Evaluation of Medical Tests and Biomarkers for Classification
8:30 a.m.–5:00 p.m.	CE_11C	Jay Breidt/Jean Opsomer	Modeling and Data Analysis for Complex Surveys
8:30 a.m.–5:00 p.m.	CE_12C	Jerome Sacks/William J. Welch	A Practical Guide for the Design and Analysis of Virtual (Computer Model) Experiments
8:30 a.m.–5:00 p.m.	CE_13C	Thomas Herzog/Fritz Scheuren/ William Winkler	Data Quality and Record Linkage Techniques
1:00 p.m.–5:00 p.m.	CE_14C	Christopher S. Coffey/Brenda Gaydos/José Pinheiro	Adaptive Dose-Response Studies
Monday, July 30			
8:00 a.m.–12:00 p.m.	CE_15C	Charles S. Davis	Categorical Data Analysis
8:30 a.m.–5:00 p.m.	CE_16C	Peter H. Westfall	Multiple Comparisons and Multiple Tests
8:30 a.m.–5:00 p.m.	CE_17C	Christy Chuang-Stein/Alex Dmitrienko/Geert Molenberghs	Analysis of Clinical Trials: Theory and Applications
8:30 a.m.–5:00 p.m.	CE_18C	Howard S. Burkom/David Banks	Temporal Alerting Algorithms for Biosurveillance
8:30 a.m.–5:00 p.m.	CE_19C	Peter F. Thall	Practical Bayesian Clinical Trial Design
8:30 a.m.–5:00 p.m.	CE_20C	Wei-Yin Loh	Classification and Regression Trees
1:00 p.m.–5:00 p.m.	CE_21C	Ingram Olkin	Meta-analysis: Statistical Methods for Combining the Results of Independent Studies
Tuesday, July 31			
8:00 a.m.–12:00 p.m.	CE_22C	Tamraparni Dasu/Simon Urbanek	Harnessing Data Streams through Statistical Computing
8:30 a.m.–5:00 p.m.	CE_23C	Michael Proschan	Statistical Monitoring of Clinical Trials: a Unified Approach
8:30 a.m.–5:00 p.m.	CE_24C	Michael J. Daniels/Joe Hogan	Dropout in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity
8:30 a.m.–5:00 p.m.	CE_25C	Kenneth Lange/Janet Sinsheimer/ Eric Sobel	Statistical Genetics
8:30 a.m.–5:00 p.m.	CE_26C	Marina Vanucci/Brani Vidakovic	Wavelets and Statistical Applications
8:30 a.m.–5:00 p.m.	CE_27C	Danyu Lin	Analysis of Censored Data
1:00 p.m.–5:00 p.m.	CE_28C	Tim Hesterberg	Bootstrap Methods and Permutation Tests for Doing and Teaching Statistics

% = Excellence in CE course



American Statistical Association

MARKET PLACE

LOCATED IN THE MAIN REGISTRATION AREA

Saturday, July 28
noon–5:00 p.m.

Sunday – Wednesday
July 29–August 1
9:00 a.m.–5:00 p.m.

Thursday, August 2
8:00 a.m.–10:30 a.m.

Mugs, hats, ASA apparel, children's shirts, JSM shirts, pens, and more!

Wednesday, August 1

Fee: **$50 each**

Computer Technology Workshops *at a Glance*

TIME	COURSE	INSTRUCTOR(S)	TITLE
8:00 a.m.–9:45 a.m.	CE_29T	Mikhail Golovnya	Introduction to CART: Data Mining with Decision Trees
8:00 a.m.–9:45 a.m.	CE_30T	Angela Pitts/ G. Gordon Brown	New Features for Clustered and Survey Data Analysis in SUDAAN® Release 9.0.3
8:00 a.m.–9:45 a.m.	CE_31T	Robert Cohen	Modern Regression Analysis in SAS Software
8:00 a.m.–9:45 a.m.	CE_32T	Michael Borenstein/ Hannah Rothstein	Power Analysis: a Simple and Effective Approach
8:00 a.m.–9:45 a.m.	CE_33T	Cyrus R. Mehta	East® 5: a Comprehensive Package for Adaptive and Group Sequential Design, Interim Monitoring, and Simulation
10:00 a.m.–11:45 a.m.	CE_34T	Mikhail Golovnya	Introduction to MARS: Predictive Modeling with Nonlinear Automated Regression Tools
10:00 a.m.–11:45 a.m.	CE_35T	Shawn Harahush	From Software to Solutions in Statistics and Risk Analysis
10:00 a.m.–11:45 a.m.	CE_36T	Sharad Prabhu/ José G. Ramírez	Design and Analysis of Split-Plot Experiments Using the SAS ADX Interface
10:00 a.m.–11:45 a.m.	CE_37T	Michael Borenstein/ Hannah Rothstein	Meta-analysis: Concepts and Applications
10:00 a.m.–11:45 a.m.	CE_38T	Weicai Zhong	Generalized Linear Modeling in SPSS
1:00 p.m.–2:45 p.m.	CE_39T	Mikhail Golovnya	Advances in Data Mining: Jerome Friedman's TreeNet/MART and Leo Breiman's Random Forests
1:00 p.m.–2:45 p.m.	CE_40T	Colin (Lin) Chen	Quantile Regression Using the SAS QUANTREG Procedure

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Salt Lake City, UT
July 29–August 1

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Are you an experienced statistics professional interested in career information?

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VISIBILITY TO EMPLOYERS—applicants who register by July 12, 2007, will have their information and résumés included in the advance applicant access database, available to employers prior to the meeting. Employers often contact applicants in the database prior to JSM to schedule interviews.

COMPUTERIZED MESSAGE CENTER—allows applicants and employers to communicate throughout the meeting.

ONLINE ACCESS TO JOB POSTINGS—this year, included with ALL Career Placement Service registrations.

Register at the registration desk, and bring your résumé to Hall C!

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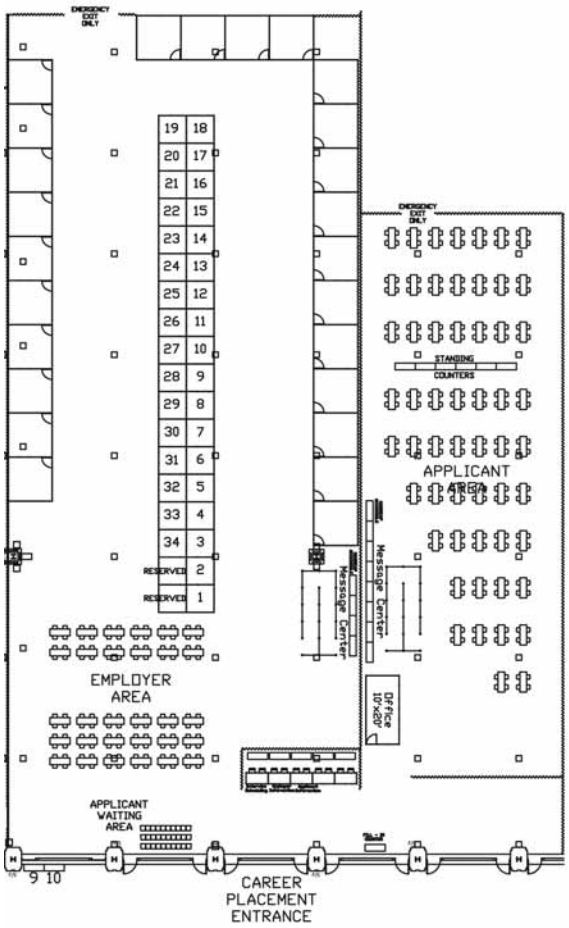

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Westat

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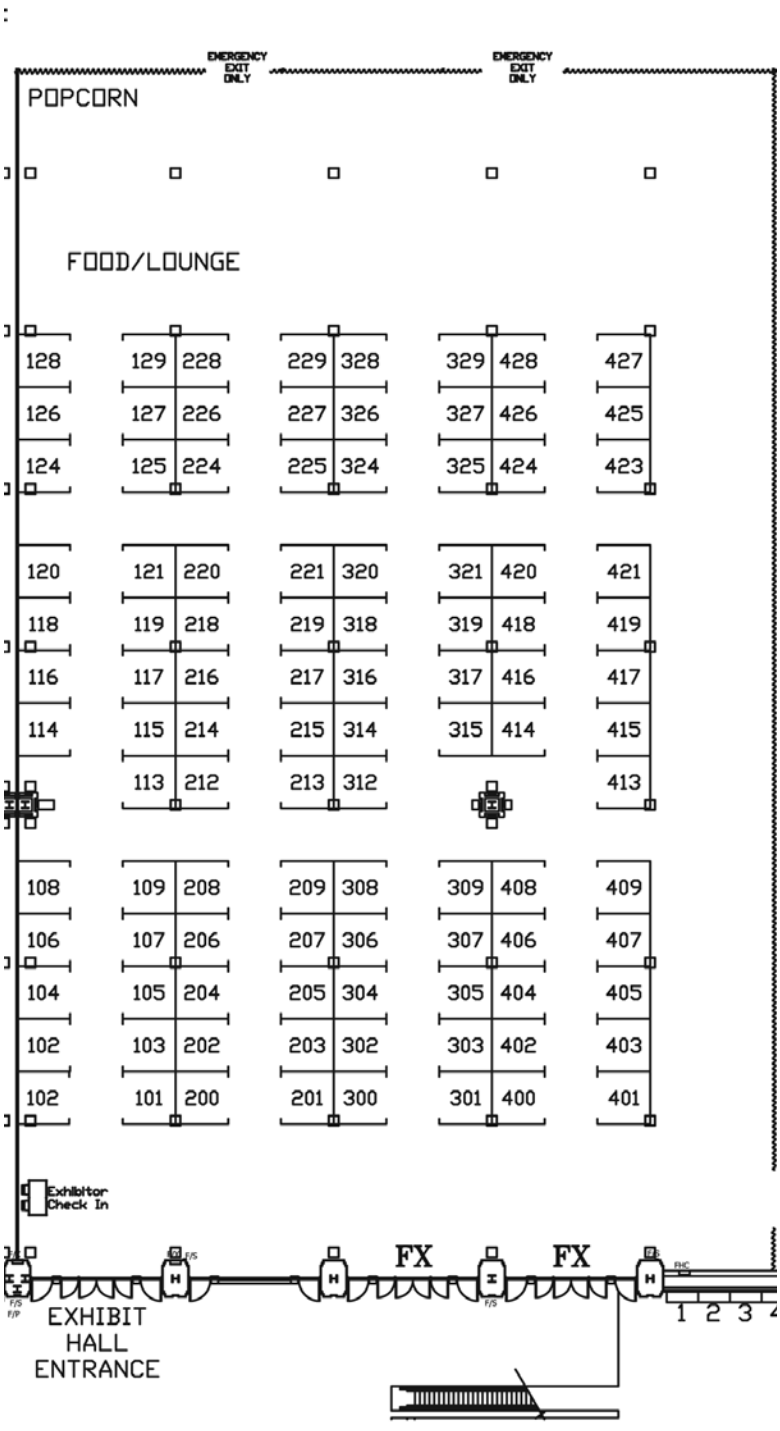

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Booth Number	Exhibitor Name
100	Institute of Mathematical Statistics
101, 103, 105	American Statistical Association
102	Statistical Society of Canada
104	ASA-SIAM Series
106	SIAM: Society for Industrial and Applied Mathematics
107	JSM 2008 Denver
108	Bureau of Labor Statistics
109	Bureau of Economic Analysis
113	StatPoint, Inc.
114, 116	Minitab Inc.
115	The Cambridge Group LTD
117, 119, 121, 216, 218, 220	CRC Press-Taylor & Francis Group
118, 120	Duxbury, Thomson
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125	Kforce Clinical Research Staffing
126, 128	StatSoft, Inc.
127, 129	Cambridge University Press
200, 202	JMP, a business unit of SAS
201, 203, 205	SAS Application
204, 206, 208	SAS Publishing
207, 209	SAS Institute, Education Division
212	Capital One
213, 312	RTI International
214	COMSYS
215, 217	Oxford University Press
219	MacKichan Software
221	Hawkes Learning Systems
224	Salford Systems
225	SYSTAT Software, Inc.
226, 228	Elsevier
227, 229	XLSolutions Corporation
300, 302	W.H. Freeman & Company
301	NCSS
303	Eli Lilly and Company
304	U.S. Department of Education/IES

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306, 308	SPSS, Inc.
307, 309, 406, 408	Springer
307	Birkhäuser
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315, 317, 319	John Wiley & Sons
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415	Internal Revenue Service, Statistics of Income Division
416	ASG, Inc.
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Who's Who in the Exhibit Hall

●—Pinnacle Partner ★—Gold Partner ■—Silver Partner

ASG, Inc. 416

Cary, North Carolina

ASG is a global outsourcing and specialty staffing organization. By working with companies in the clinical trial arena, we help provide a better quality of life for individuals dependent on the health care community. We help improve or save lives by providing cost-effective, functional outsourcing and staffing services to pharmaceutical, CRO, biotechnology, and medical device sectors in the business of discovering therapies.

ASA-SIAM Series 104

Alexandria, Virginia

The ASA-SIAM Series on Statistics and Applied Probability is published jointly by the American Statistical Association and the Society for Industrial and Applied Mathematics. The series consists of a broad spectrum of books on topics in statistics and applied probability and provides inexpensive, quality publications of interest to the societies' intersecting membership.

Addison-Wesley 400

Boston, Massachusetts

Please visit Addison-Wesley in Booth 400. Stop by, meet our authors, and explore a full display of our statistics titles, including DeVeaux/Velleman/Bock's Stats: Data and Models, 2/e, Weiss Introductory Statistics, 8/e, and Triola Essentials of Statistics, 3/e, as well as our texts in biostatistics, probability, and time series. Also, try out some of our new and exciting technology, including MyStatLab and ActivStats.

Allergan, Inc. 423

Irvine, California

Allergan, Inc., is a premier, global specialty pharmaceutical and medical device company that discovers, develops, and commercializes innovative products for ophthalmology, neurosciences, medical dermatology, medical aesthetics, and other specialty markets. The company is dedicated to delivering value to its customers, satisfying unmet medical needs, and improving lives.

American Statistical Association 101, 103, 105

Alexandria, Virginia

Since 1839, the ASA has been the world's leading professional association for statisticians. The ASA serves as a forum for sharing ideas, experiences, innovations, and accomplishments. Members are involved in medicine, computer applications, quality management, analytical research, setting standards for statistics, and promoting statistical education.

Biostat, Inc. 325

Englewood, New Jersey

Software for meta-analysis and statistical power analysis. Stop by our booth for your free evaluation CD and to register for computer workshops. Visit us online at *www.Meta-Analysis.com* and *www.Power-Analysis.com*.

Birkhäuser 307

New York, New York

Save 20% on all books at the Birkhäuser booth. Browse Birkhäuser's selection of first-rate titles in a variety of statistical areas and applied probability. Check out best-selling, new, and forthcoming titles, such as P. Good's *Resampling Methods, 3/e*, W. Woyczynski's *A First Course in Statistics for Signal Analysis*, T. Ogden's *Essential Wavelets for Data Analysis*, and G. Schay's *Introduction to Probability with Statistical Applications*. Also on display will be books from the Statistics in Industry and Technology Series and Probability and Its Applications Series.

Blackwell Publishing 321

Hoboken, New Jersey

Blackwell Publishing is a leading international publisher in all areas of statistics, science, technology, and medicine. Please stop by our booth for complimentary copies of our journals, and visit our web site at *www.blackwellpublishing.com* for information about all our publications.

Bureau of Economic Analysis 109

Baltimore, Maryland

The Bureau of Economic Analysis (BEA) promotes a better understanding of the U.S. economy by providing the timeliest, relevant, and accurate economic accounts data in an objective and cost-effective manner.

Bureau of Labor Statistics 108

Washington, DC

The Bureau of Labor Statistics is the principal fact-finding agency for the federal government that provides statistical data online at *www.bls.gov* and in various publications.

CDC/ATSDR 413

Atlanta, Georgia

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.

COMSYS 214

Portage, Michigan

COMSYS is the leading provider of SAS, statistics, and clinical services to companies nationwide. We enable statisticians and programmers to support their customers more efficiently through innovative analytical applications and overflow support. COMSYS is a SAS Alliance Gold Partner with more than 40 offices in the United States and Canada.

★CRC Press-Taylor & Francis Group 117, 119, 121, 216, 218, 220

Boca Raton, Florida

CRC Press, a member of the Taylor & Francis Group, is a premier publisher of scientific and technical books, journals, and electronic databases. Please visit our booth during the show to peruse our titles, pick up a sample journal, and purchase books while taking advantage of show discounts.

Cambridge University Press 127, 129

New York, New York

Cambridge's new titles in statistics, biostatistics, econometrics, and mathematical finance are available at a 20% discount. New books in the Cambridge Series in Statistical and Probabilistic Mathematics include *Statistical Mechanics of Disordered Systems*, by Anton Bovier, and *The Coordinate-Free Approach to Linear Models,* by Michael J. Wichura.

● Capital One 212

Richmond, Virginia

Capital One is a Fortune 500 company providing access to credit for tens of millions worldwide. We also provide auto, home, and business loans, plus banking and other services. Statistical expertise is central to our success, which is why we seek superior applied statisticians at all career stages.

■ Cytel, Inc. 314, 316

Cambridge, Massachusetts

Celebrating its 20th year, Cytel, Inc., is a leading provider of clinical trial services and statistical software for biopharmaceutical development and general research applications. Cytel's East® is used at hundreds of biopharmaceutical sites worldwide to design adaptive, group sequential and traditional trials. StatXact®, LogXact®, and new CrossOver® comprise Cytel's renowned exact statistics packages.

■ Duxbury-Thomson 118, 120

Belmont, California

Visit Duxbury-Thomson Publishers at booths 118 and 120 to view our latest publications and technology innovations. With more than 30 years' experience publishing in statistics, Duxbury is the source of complete solutions for all teaching needs, from introductory to advanced statistics courses. Duxbury: A Tradition of Quality and Innovation.

★ Eli Lilly and Company 303

Indianapolis, Indiana

Eli Lilly is a leading, innovation-driven corporation committed to developing a growing portfolio of best-in-class and first-in-class pharmaceutical products that help people live longer, healthier, and more active lives. Lilly products treat depression, schizophrenia, attention-deficit hyperactivity disorder, diabetes, osteoporosis, and many other conditions. We are committed to providing answers that matter.

■ Elsevier 226, 228

New York, New York

Elsevier/Academic Press delivers world-class content to statisticians and mathematicians, from textbooks to corporate and clinical research references. Come see our new and bestselling books in all areas of statistics, from renowned authors Sheldon Ross, Robert Riffenbergh, C. R. Rao, and Ronald Forthofer. Conference discounts apply and sample journals are available.

Fforde Management 424

New York, New York

Fforde is a global executive search firm specializing in staffing solutions for the pharmaceutical, biotechnology, CRD, and medical devices industries. Fforde has offices located in the United States, Europe, and the UK, making us a truly global staffing solution.

GE Money 404

Stamford, Connecticut

GE Money is a leading provider of credit services to consumers, retailers, and auto dealers with more than 300,000 employees, $180 billion in assets, and businesses in 54 countries. We offer flexible work arrangements, a diverse environment, world-class leadership, comprehensive training, and "fast track" leadership programs to help you achieve your career goals.

Google 328

Mountain View, California

Google's innovative search technologies connect millions of people around the world with information every day. Founded in 1998 by Stanford PhD students Larry Page and Sergey Brin, Google is now a top web property in all major global markets. Google's targeted advertising program provides businesses of all sizes with measurable results, while enhancing the overall web experience for users. Google is headquartered in Silicon Valley, with offices throughout the Americas, Europe, and Asia. For more information, visit *www.google.com*.

Hawkes Learning Systems 221

Charleston, South Carolina

Discover the benefits of using interactive software to teach and learn mathematics. Hawkes Learning Systems promotes grade improvement and motivates students to learn by providing tutorials, unlimited practice, helpful feedback from artificial intelligence, and mastery-based homework. Come see a demonstration of our state-of-the-art test generator, online grade book, and student courseware.

INFORMS 428

Hanover, Maryland

The Institute for Operations Research and the Management Sciences (INFORMS) is a professional association with 10,000 members that publishes 12 journals used extensively in business and engineering schools. Have a membership question? Want a look at INFORMS' newest publications? Need advice on marketing the profession? Stop by the INFORMS booth to talk with the staff. For details, visit *www.informs.org*.

■ Insightful Corporation 418, 420

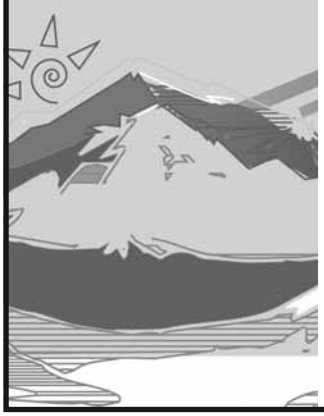
Seattle, Washington

Insightful Corporation is a provider of predictive analytics and reporting solutions that gives companies the knowledge to act™. Insightful products S-PLUS®, Insightful Miner™, S-PLUS® Server, and InFact® allow customers to perform sophisticated statistical data analysis and data mining and create high-quality graphics. For more information, visit *www.insightful.com*.

Institute of Mathematical Statistics 100

Beachwood, Ohio

The IMS is an international professional and scholarly society devoted to the development, dissemination, and application of statistics and probability. The IMS publishes five journals: Annals of Statistics, Annals of Applied Statistics, Annals of Probability, Annals of Applied Probability, and Statistics Science. IMS membership is free to students.



Bringing the ASA to Salt Lake City

Visit the **ASA BOOTH, #101,** at JSM and learn about the many programs available to you. Within the ASA Booth, you can hear about:

SECTIONS—Get information about 22 Sections that encompass several special interests in statistics

PUBLICATIONS—Flip through the ASA's journals and magazines or pick up brochures about various ASA programs

MEMBERSHIP—Ask an ASA staff member questions about the Association or member benefits

Discover the benefits of membership

Internal Revenue Service 415

Washington, DC

The Statistics of Income (SOI) Division of the IRS produces income data compiled from tax and information returns filed with the IRS. SOI data include financial information about individuals, business taxpayers, tax-exempt organizations, and more. Data are available through publications, electronic databases, Tax Stats (*www.irs.gov/taxstats*), and SOI's Statistical Information Services, (202) 874-0410.

JMP, a business unit of SAS 200, 202

Cary, North Carolina

JMP, a division of SAS, develops JMP® software, which brings comprehensive data analysis to the desktop, empowering users to interactively explore, visualize, and understand their data. Visit us at *www.jmp.com*.

JSM 2008 Denver 107

Alexandria, Virginia

Denver, Colorado, host of JSM 2008, welcomes you. Please stop by Booth #107 for visitor information and answers to your questions.

■ John Wiley & Sons 315, 317, 319

Hoboken, New Jersey

Wiley-Blackwell is a global publisher of print and electronic statistical information, including International Statistical Reviews: *Journal of the Royal Statistical Society Series A (Statistics in Society)*, *B (Statistical Methodology)*, and *C (Applied Statistics)*; *Biometrics*; *Statistics in Medicine*; *Scandinavian Journal of Statistics*; *Statistics Neerlandica*; *Biometrical Journal*; and *Statistical Analysis and Data Mining*. Visit us online at *www.wiley.com/statistics*.

■ Johnson & Johnson Family of Companies 417, 419

New Brunswick, New Jersey

Johnson & Johnson, through its operating companies, is the world's most comprehensive and broadly based manufacturer of health-care products and a provider of related services for the consumer, pharmaceutical, and medical devices and diagnostics markets.

Kforce Clinical Research Staffing 125

Tampa, Florida

Kforce Clinical Research provides a full range of outsourcing alternatives and traditional staffing services for the biopharmaceutical industries. Established in 1988, Kforce Clinical Research is a leader in hybrid solutions. Our expertise includes clinical trial monitoring and management, drug safety and surveillance, clinical data management, biostatistics, data entry, and clinical application development.

MacKichan Software 219

Poulsbo, Washington

Scientific WorkPlace 5.5 simplifies writing, sharing, and doing mathematics. A click of a button allows you to typeset in LaTeX. The integrated computer algebra system lets you solve and plot equations; animate 2D and 3D plots; rotate, move, and fly through 3D plots; create 3D implicit plots; and more.

MedFocus LLC 421

Chicago, Illinois

MedFocus offers clinical and scientific research contract outsourcing and staffing to the pharmaceutical, biotechnology, and medical device industries. MedFocus allows you to maintain consistency with high-quality consulting while managing variability in clinical work demand without headcount issues. For more information, visit *www.medfocus.com*.

★ Minitab Inc. 114, 116

State College, Pennsylvania

Minitab 15® is the leading software for statistics education worldwide. It is accurate, reliable, and easy to use, with powerful graphics abilities. Minitab integrates into curriculums seamlessly and affordably and is used at more than 4,000 colleges and universities. Visit *www.minitab.com/minitab* for a free trial version.

NCSS 301

Kaysville, Utah

We will be displaying our new NCSS 2007 data/statistical analysis software; PASS 2005, our popular power analysis and sample size software; and GESS 2006, our new microarray analysis software. Stop by and pick up a free trial CD while they last.

National Center for Health Statistics 409

Hyattsville, Maryland

The NCHS exhibit will showcase the various NCHS programmatic areas, with an emphasis on statistical research and methodology. The exhibit will allow attendees to view and acquire a host of publications, electronic products, and other promotional products.

■ National Security Agency 425, 427

Ft. Meade, Maryland

The Information Assurance mission provides the solutions, products, and services—and conducts defensive information operations—to achieve information assurance for the information infrastructures critical to U.S. national security interests. The foreign signals intelligence, or SIGINT, mission allows for an effective, unified organization and control of all the foreign signals collection and processing activities of the United States.

■ Oxford University Press 215, 217

New York, New York

Oxford University Press is a leading international publisher of books and journals in statistics and math. Visit booths 215 and 217 to see our latest titles, enter our raffle to win $100 worth of books, join our email list, and receive a 20% discount on all titles on display.

Palisade Corporation 124

Ithaca, New York

Palisade Corporation has been a leading provider of risk analysis, decision analysis, optimization, and data analysis software since 1984. Recently, Palisade released NeuralTools, a neural networks add-in for Microsoft Excel, and StatTools, a statistical analysis add-in for Microsoft Excel that replaces Excel's statistics functions with a robust and accurate set of statistical analysis procedures and routines.

Pfizer Global Research and Development 327

New London, Connecticut

Imagine a career that touches the lives of people everywhere. Imagine an opportunity to reach beyond your area of expertise to impact something greater than the bottom line. Imagine playing a key role in some of the most critical issues facing health care today. Relying on our scientific talent, a steady stream of breakthroughs ensures the best medicines for man and animals in years to come. This is your career at Pfizer: a career unlike any other.

Prentice Hall 401, 403

Upper Saddle River, New Jersey

Prentice Hall, a premier college textbook publisher, will display statistics textbooks ranging from the introductory level, such as Agresti/Franklin's Statistics: *The Art and Science of Learning from Data* and McClave/Sincich's *Statistics 10/e*, to more advanced and specialized course texts, such as Blair/Taylor's *Biostatistics for the Health Sciences* and Tanis/Hogg's *A Brief Course in Mathematical Statistics*.

Prosoft Software, Inc. 329

King of Prussia, Pennsylvania

Prosoft Software, Inc., is a contract research organization with expertise in biostatistics, data management, project management, and medical writing. Our experience spans all areas of drug and medical device development, including preclinical and clinical phases I–IV in such areas as cardiovascular, dermatology, respiratory, allergy, immunology, CNS, and oncology.

REvolution Computing 405, 407

New Haven, Connecticut

REvolution Computing is the leading commercial provider of software and support for the R statistical and business intelligence tools (www.revolution-computing.com). REvolution's solution for computational statistics is fully supported and easy to use. It includes commercial features and automatic parallel processing. The REvolution solution for computational statistics renders R practical for mainstream, commercial, and regulated use. REvolution Computing truly is R Evolved!

■ RTI International 213, 312

Durham, North Carolina

With a staff of more than 2,600 people, RTI International is an independent, nonprofit organization that offers innovative research and technical solutions to governments and businesses worldwide in the areas of health, epidemiology, and pharmaceuticals; advanced technology; surveys and statistics; education and training; economic and social development; and the environment.

SAGE Publications 324

Thousand Oaks, California

SAGE Publications—an independent international publisher in the social sciences, technology, and medicine—provides journals, books, and electronic media of the highest caliber. Researchers, students, and professionals have relied on our innovative resources for more than 40 years. Please stop by our booth or visit us at *www.sagepub.com*.

● SAS Application 201, 203, 205

Cary, North Carolina

SAS will exhibit its analytical software for statistics, data mining, econometrics, and statistical quality control. Please visit the SAS booth and learn about new directions in statistical graphics, as well as new downloadable software for Bayesian analysis.

● SAS Institute, Education Division 207, 209

Cary, North Carolina

SAS Education offers a broad curriculum of SAS, JMP, and statistical courses to support our users. The division administers the SAS Global Certification Program, where users can earn globally recognized credentials for their knowledge. The Higher Education Consulting Program supports institutions of higher learning incorporate SAS into their curricula.

● SAS Publishing 204, 206, 208

Cary, North Carolina

Visit the SAS Publishing booth to learn more about saving 20% on orders placed or mailed to us by August 31, new SAS product documentation titles, new SAS Press Series titles, and SAS® Learning Edition 4.1. SAS Publishing staff members are available to answer questions and assist you with your orders.

SIAM: Society for Industrial and Applied Mathematics 106

Philadelphia, Pennsylvania

Visit the SIAM booth to check out the titles in the ASA-SIAM Series on Statistics and Applied Probability, get recently published books and information, and see sample issues of SIAM's renowned journals. Membership applications also will be available. Don't forget to pick up a copy of SIAM News for the road.

● SPSS, Inc. 306, 308

Chicago, Illinois

SPSS Inc. is a leading global provider of predictive analytics software and solutions. More than 250,000 public sector, academic, and commercial customers rely on SPSS to help increase revenue, reduce costs, and detect fraud. Founded in 1968, SPSS is headquartered in Chicago, Illinois. For additional information, please visit *www.spss.com*.

■ SYSTAT Software, Inc. 225

San Jose, California

SYSTAT is a high-value, integrated desktop statistics and graphics software package for scientists, engineers, and statisticians that provides the most extensive selection of reliable statistics and high-quality, interactive graphics, enabling users to analyze their data, make meaningful discoveries, and present their results attractively and efficiently.

Salford Systems 224

San Diego, California

Salford Systems develops advanced statistical and data mining software, including the CART® decision tree, MARS® automated regression, TreeNet® boosted decision trees, and Random Forests®. Salford Systems strives to make the best academic research easily usable by the practicing data analyst and recently won several distinguished international honors.

Smith Hanley 320

New York, New York

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. Visit *www.smithhanley.com* or *www.smithhanley-consulting.com* for more information.

Space-Time Research 426

Victoria, Australia

Space-Time Research provides intuitive, easy-to-use business intelligence and statistical solutions. SuperSTAR technology provides statistical, analytical, and multiformat visualization; simple ad hoc reporting; and geospatial analysis. SuperSTAR uses service-oriented architecture technology to deliver client-based and true web applications. Data management features individual confidentially and data security.

■ Springer 307, 309, 406, 408

New York, New York

Springer is one of the largest international publishers of scientific literature (4,000 new books per year and more than 1,200 journals). Springer's statistics book program is world-renowned and has produced many best-selling textbooks, monographs, and reference works. Notable publications include the *Springer Series in Statistics*, *Statistics for Biology and Health*, and *Statistics and Computing*.

Stat-Ease, Inc. 305

Minneapolis, Minnesota

Stat-Ease, Inc., produces two easy-to-use Windows programs for design of experiments (DOE), including Design-Ease® software for finding breakthrough factors and Design-Expert® software 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.

■ StatPoint, Inc. 113

Herndon, Virginia

StatPoint Inc. develops the STATGRAPHICS® line of statistical analysis software products. Used for 25 years for data analysis

by Fortune 1000 companies and small enterprises worldwide, STATGRAPHICS® Centurion XV.II is available in four languages. StatPoint products include STATGRAPHICS® Mobile, STATBEANS® Java Library, and STATGRAPHICS® MultiLingual© (coming this summer), providing immediate interchangeability of input and output languages.

StatSoft, Inc. 126, 128

Tulsa, Oklahoma

StatSoft, Inc., creator of STATISTICA, is one of the largest developers worldwide of enterprise-wide and single-user software for data analysis, data mining, and quality control. STATISTICA has received the highest rating in every comparative review of statistics software since its first release (1993)—a record unmatched in the industry.

Statistical Society of Canada 102

Ottawa, Ontario

The Statistical Society of Canada's mission is to encourage the development and use of statistics and probability in Canada. It is the Canadian equivalent of the American Statistical Association. The Statistical Society of Canada also offers two levels of accreditation, the Professional Statistician (P.Stat.) and the Associate Statistician (A.Stat.).

The Cambridge Group LTD 115

Westport, Connecticut

The Cambridge Group LTD focuses on careers in biostatistics, clinical data management, clinical systems, and SAS programming. Opportunities range from entry level through executive posts, both permanent and contract, in the pharmaceutical and biotechnology industries.

U.S. Department of Education/IES 304

Washington, DC

IES is the research arm of the U.S. Department of Education. Its mission is to provide rigorous evidence on which to ground education practice and policy. This mission is accomplished through its four centers: National Center for Education Statistics, National Center for Education Research, National Center for Education Evaluation and Regional Assistance, and National Center for Special Education Research. Information about research and evaluation activities, funding opportunities, and reports may be found at ies.ed.gov.

USDA, NASS 414

Washington, DC

The National Agricultural Statistics Service is a world leader in sampling, data collection, and estimation procedures for economic, environmental, and agricultural surveys and censuses. The agency also creates a number of remote-sensing and geographic information system statistical products and conducts ongoing applied research on statistical methodology and estimation approaches. Plans are under way for the 2007 Census of Agriculture.

W.H. Freeman and Company 300, 302

New York, New York

W.H. Freeman and Company, publisher of high-quality textbooks and media, highlights current bestsellers, new titles, and the innovative learning management system, StatsPortal, in booths 300 and 302. Look for introductory best-selling books in the Moore series, as well as upper-level titles, and see a StatsPortal demo. Visit www.whfreeman.com/statsportal for more information.

Wolfram Research 402

Champaign, Illinois

Wolfram Research is the world's leading developer of computational software for science and technology, offering organization-wide computing solutions. Led by Mathematica, Wolfram's flagship product, the company's software is relied on today by several million enthusiastic users around the world and has been the recipient of many industry awards. Visit www.wolfram.com for more information.

World Scientific Publishing Company 326

Hackensack, New Jersey

World Scientific is an international, academic publisher with eight offices worldwide. Annually, the company publishes more than 400 books and 100 journals in various fields, including physics, mathematics, and engineering.

XLSolutions Corporation 227, 229

Seattle, Washington

XLSolutions Corporation—also known as the creator of R* (R-Star)—provides predictive analytics software and solutions. XLSolutions Consulting Group has provided statistical and mathematical modeling for data analysis and data mining since 1999. For more information, visit *www.xlsolutions-corp.com*. R u Ready?

statistics.com 318

Arlington, Virginia

Statistics.com is the leading provider of online professional development courses in statistics. Statistics.com also distributes the Excel add-ins Resampling Stats (resampling) and XLMiner (data mining, neural nets, decision trees, k-nearest neighbor, logistic regression, clustering, Bayes classification, association rules, partitioning, and time series).

✪ Themed Session ● Applied Session ❖ Presenter **CC**-Salt Palace Convention Center **GA**-The Grand America Hotel

Session Tag Descriptions

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

THEME ✪

Theme sessions are directly relevant to the 2007 JSM theme, "Statistics: Harnessing the Power of Information." These sessions highlight presentations and discussions on the role being played by the statistical sciences in the protection and development of people around the globe. Theme sessions are designed to expand the frontiers of statistical thought, emphasize new directions, and promote interdisciplinary collaborations and partnerships.

APPLIED ●

Applied sessions have real applications at the heart of their discussions and presentations. Because these sessions are grounded in applications across the many areas of science and engineering, they may involve interdisciplinary work and include presentations by nonstatisticians. Applied sessions range from presentations on state-of-the-art statistical methodology applied to real-world problems to tutorials. All statisticians should find these sessions appealing.

All sessions are open freely to registered attendees, except fee events or where noted.

THURSDAY, JULY 26

Committee/Business Meetings & Other Activities

5:00 p.m.–6:30 p.m. GA-Room 2473
ASA Management Review Committee (closed)
Chair(s): Mary Ellen Bock, Purdue University

7:00 p.m.–9:00 p.m. GA-Room 2473
ASA Board of Directors Executive Committee Working Dinner (closed)
Chair(s): Mary Ellen Bock, Purdue University

FRIDAY, JULY 27

Committee/Business Meetings & Other Activities

7:30 a.m.–8:30 a.m. GA-Sussex
ASA Board of Directors Breakfast (closed)
Chair(s): Mary Ellen Bock, Purdue University

8:00 a.m.–6:00 p.m. GA-Riviera
Academic Program Representatives Department Chairs Meeting Day 1 (closed)
Chair(s): Dalene Stangl, Duke University

8:30 a.m.–5:00 p.m. GA-Audubon
ASA Board of Directors Meeting (closed)
Chair(s): Mary Ellen Bock, Purdue University

12:00 p.m.–1:30 p.m. GA-Vienna
Academic Program Representatives Department Chairs Lunch (closed)
Chair(s): Dalene Stangl, Duke University

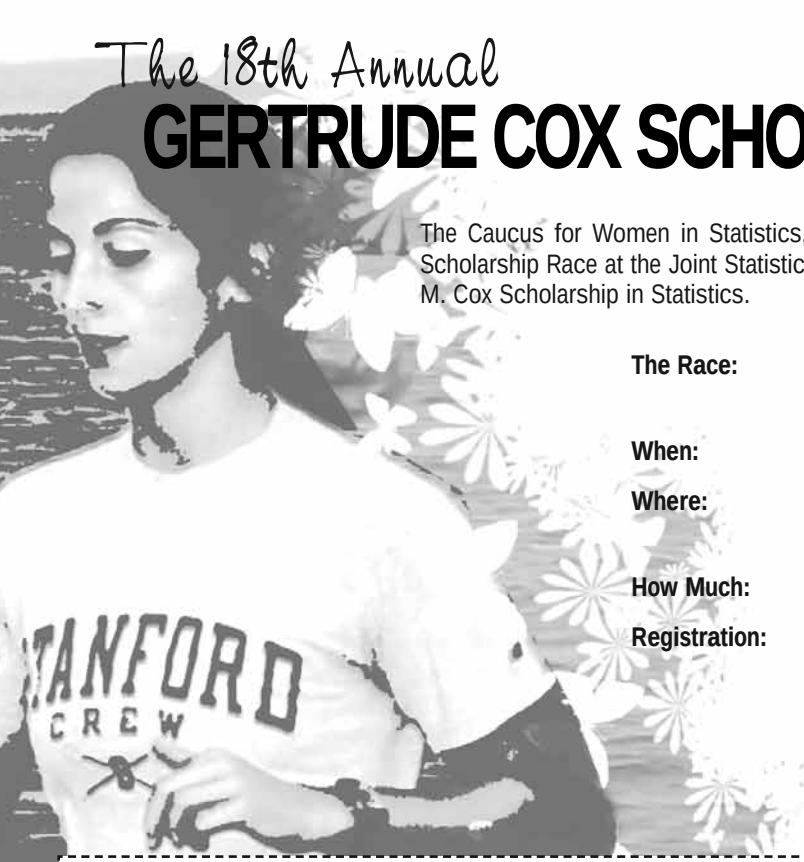
12:30 p.m.–1:30 p.m. GA-Sussex
ASA Board of Directors Lunch (closed)
Chair(s): Mary Ellen Bock, Purdue University

6:00 p.m.–9:00 p.m. GA-Fontainbleau
Academic Program Representatives Department Chairs Dinner (closed)
Chair(s): Darlene Stangl, Duke University

6:30 p.m.–7:30 p.m. GA-Room 2473
JSM Staff and ASA Board of Directors Reception (closed)
Chair(s): William B. Smith, American Statistical Association

The 18th Annual

GERTRUDE COX SCHOLARSHIP RACE



The Caucus for Women in Statistics, in conjunction with the ASA, presents the 18th annual Gertrude Cox Scholarship Race at the Joint Statistical Meetings in Salt Lake City, Utah. All proceeds will benefit the Gertrude M. Cox Scholarship in Statistics.

The Race: There will be two races running concurrently—a competitive 5K race and a 2.5K fun run/ walk.

When: Tuesday, **July 31, at 7:00 a.m.**

Where: Location and logistical information will be posted at the Caucus table at the Salt Palace Convention Center.

How Much: The entry fee is $20.00.

Registration: Those interested in participating are encouraged to register early. You may register during JSM at the hospitality table for the Caucus for Women in Statistics at the Salt Palace Convention Center, near the registration area. All participants must sign a registration form and waiver. T-shirts for all preregistered runners will be distributed at the race. If you have questions, please contact Karen Davis at *kedavis@cdc.gov.*

REGISTRATION FORM (each participant must complete and sign form)

_____

Name

_____

Address

_____

City, State/Province ZIP/Postal Code Phone

SEX: ❑ M ❑ F Age _____ *EVENT:* ❑ 5 K Race ❑ 2.5 K Fun Run/Walk *T-SHIRT SIZE:* ❑ S ❑ M ❑ L ❑ XL

THE FINE PRINT. I understand that running a road race is a potentially hazardous activity. I will not enter and run unless I am medically able and properly trained. I agree to abide by any decision of a race official relative to my ability to complete the run safely. I assume all risks associated with running in this event, including, but not limited to, falls; contact with other participants; and effects of weather, traffic, and course conditions. All such risks are known and appreciated by me. Having read this waiver, knowing these facts, and in consideration of your accepting my entry, I, for myself and anyone entitled to act on my behalf, waive and release the race directors, the race committee, and all sponsors from all claims of liabilities of any kind arising out of my participation in this event, even though such liability may arise as a result of negligence or carelessness on the part of the persons named in this waiver.

_____

Signature

_____

Date Parent or guardian (if under 18)

Make check payable to ***The Gertrude Cox Scholarship Fund.***

Please return this form along with your check to

Karen Davis, Race Organizer, National Center for Health Statistics, 3311 Toledo Road, Room 3213, Hyattsville, MD 20782.

SATURDAY, JULY 28

Tours

TR01 Salt Lake Bees Baseball Game
7:05 p.m.–10:30 p.m. Off Property-Franklin Covey Field

TR02 Real Salt Lake Soccer Game
7:30 p.m.–10:30 p.m. Off Property-Rice-Eccles Stadium

Committee/Business Meetings & Other Activities

7:00 a.m.–6:00 p.m. CC-South Foyer
JSM Main Registration and ASA Membership/Special Assistance Desk

7:00 a.m.–6:00 p.m. CC-252 A, CC-252B
Speaker Work Rooms

7:00 a.m.–7:00 p.m. CC-South Foyer
Cyber Center

7:30 a.m.–8:30 a.m. GA-Sussex
ASA Board of Directors Breakfast (closed)
Chair(s): Mary Ellen Bock, Purdue University

8:00 a.m.–4:00 p.m. GA-Riviera
Academic Program Representatives Department Chairs Meeting Day 2 (closed)
Chair(s): Dalene Stangl, Duke University

8:00 a.m.–5:00 p.m. CC-Exhibit Hall D
Exhibitor Move In and Lounge

8:30 a.m.–4:30 p.m. GA-Audubon
ASA Board of Directors Meeting (closed)
Chair(s): Mary Ellen Bock, Purdue University

9:00 a.m.–5:00 p.m. CC-Main Lobby, Level 2
Salt Lake City Visitors Information Center

9:00 a.m.–5:00 p.m. CC-Exhibit Hall C
Career Placement Service (job posting and resume submission only)

11:30 a.m.–12:30 p.m. GA-Vienna
Association of GCRC Statisticians Lunch (closed)
Organizer(s): Robert Oster, The University of Alabama at Birmingham

12:00 p.m.–1:00 p.m. GA-Sussex
ASA Board of Directors Lunch (closed)
Chair(s): Mary Ellen Bock, Purdue University

12:00 p.m.–1:30 p.m. GA-Fontainbleau
Academic Program Representatives Department Chairs Lunch (closed)
Chair(s): Dalene Stangl, Duke University

12:00 p.m.–5:00 p.m. CC-South Foyer
ASA Marketplace

12:30 p.m.–5:30 p.m. GA-Milano
Association of GCRC Statisticians Meeting (closed)
Organizer(s): Robert Oster, The University of Alabama at Birmingham

3:00 p.m.–6:00 p.m. GA-Envoy
NISS/SAMSI Affiliates Meeting (closed)
Organizer(s): Alan Karr, National Institute of Statistical Sciences

Continuing Education (Fee Events)

CE_01C
Bayesian Modeling in Practice
8:30 a.m.–5:00 p.m. CC-151 G
ASA
Instructor(s): David Spiegelhalter, MRC Biostatistics Unit

CE_02C %
Applied Longitudinal Analysis
8:30 a.m.–5:00 p.m. CC-150 G
ASA
Instructor(s): Garrett Fitzmaurice, Harvard University

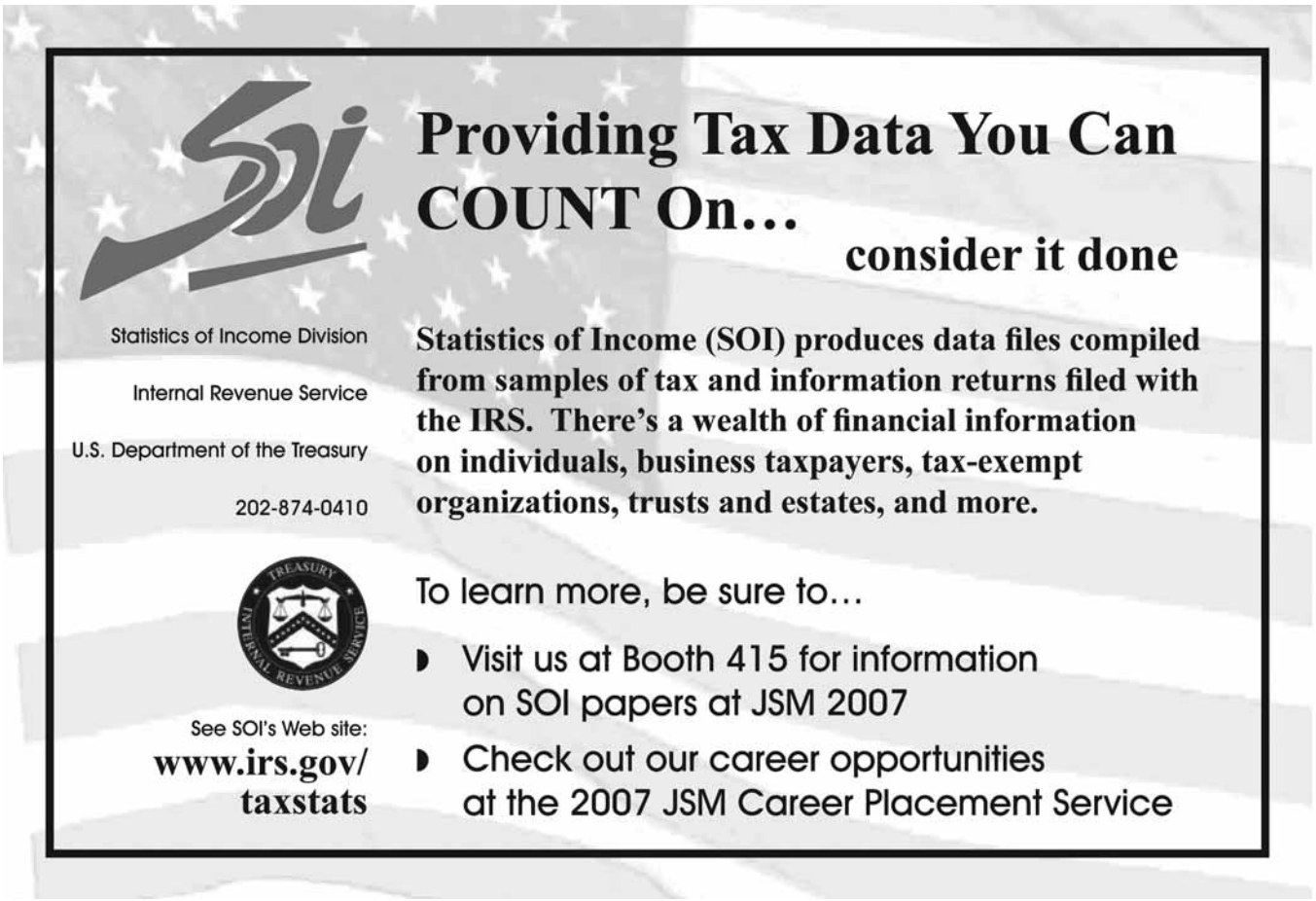
CE_03C
Design and Analysis of Crossover Experiments
8:30 a.m.–5:00 p.m. CC-150 A-C
Biopharmaceutical Section, ASA
Instructor(s): Dallas Johnson, Kansas State University

CE_04C
Latent Class Analysis of Survey Error
8:30 a.m.–5:00 p.m. CC-150 D-F
Section on Survey Research Methods, ASA
Instructor(s): Paul Biemer, RTI International/The University of North Carolina at Chapel Hill

CE_05C
Statistical Methods for the Analysis of Recurrent Events
8:30 a.m.–5:00 p.m. CC-151 A-C
ASA
Instructor(s): Richard J. Cook, University of Waterloo; Jerald F. Lawless, University of Waterloo

CE_06C
Nonclinical Statistics for Drug Discovery
8:30 a.m.–5:00 p.m. CC-151 DE
ASA
Instructor(s): Kimberly Crimin, Wyeth; Thomas Vidmar, Pfizer Inc.

CE_07C
Graphics of Large Datasets
8:30 a.m.–5:00 p.m. CC-151 F
Section on Statistical Graphics, ASA
Instructor(s): Antony Unwin, University of Augsburg; Heike Hofmann, Iowa State University



SUNDAY, JULY 29

Tours

TR03 Utah Gold & Silver
9:00 a.m.–5:00 p.m. CC-South Foyer (200 South Street)

TR04 Crossroads of the West City Tour
1:00 p.m.–4:00 p.m. CC-South Foyer (200 South Street)

Committee/Business Meetings & Other Activities

7:00 a.m.–8:00 a.m. GA-Vienna
Association of GCRC Statisticians Breakfast (closed)
Organizer(s): Robert Oster, The University of Alabama at Birmingham

7:00 a.m.–12:30 p.m. GA-Provence
Committee on Publications Meeting (closed)
Chair(s): Edward Wegman, George Mason University

7:00 a.m.–6:00 p.m. CC-252 A, CC-252B
Speaker Work Rooms

7:00 a.m.–8:30 p.m. CC-South Foyer
JSM Main Registration and ASA Membership/Special Assistance Desk

7:00 a.m.–10:30 p.m. CC-South Foyer
Cyber Center

7:30 a.m.–9:30 a.m. GA-Embassy
Committee on Women in Statistics Meeting (closed)
Chair(s): Teri Peterson, Idaho State University

8:00 a.m.–12:00 p.m. GA-Milano
Association of GCRC Statisticians Meeting (closed)
Organizer(s): Robert Oster, The University of Alabama at Birmingham

8:00 a.m.–12:00 p.m. GA-Tuscany
Advisory Committee on Teacher Enhancement Business Meeting
Chair(s): Mike Adams, The University of Alabama

8:00 a.m.–12:00 p.m. CC-Exhibit Hall D
Exhibitor Move In

8:00 a.m.–1:00 p.m. GA-Grenoble
IMS Executive Committee Meeting I (closed)
Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics

9:00 a.m.–12:00 p.m. GA-Ambassador
Council of Sections Governing Board Meeting (closed)
Chair(s): S. Lynne Stokes, Southern Methodist University

9:00 a.m.–5:00 p.m. CC-South Foyer
ASA Marketplace

9:00 a.m.–5:00 p.m. CC-Main Lobby, Level 2
Salt Lake City Visitors Information Center

10:00 a.m.–4:00 p.m. GA-Savoy
Writing Workshop (closed)
Chair(s): Nell Sedransk, National Institute of Statistical Sciences; Keith Crank, American Statistical Association

12:00 p.m.–1:00 p.m. GA-Vienna
Association of GCRC Statisticians Lunch (closed)
Organizer(s): Robert Oster, The University of Alabama at Birmingham

12:00 p.m.–2:00 p.m. GA-Riviera
***Statistica Sinica* Board Meeting (closed)**
Organizer(s): Xiao-li Meng, Harvard University

12:00 p.m.–2:00 p.m. GA-Embassy
***Journal of Statistics Education* Editorial Board Meeting (closed)**
Chair(s): William Notz, The Ohio State University

✪ Themed Session ● Applied Session ❖ Presenter **CC**-Salt Palace Convention Center **GA**-The Grand America Hotel

1:00 p.m.–2:30 p.m. GA-Tuscany
Committee on Committees Meeting (closed)
Chair(s): Susan Devlin, The Artemis Group

1:00 p.m.–6:00 p.m. CC-Exhibit Hall D
EXPO 2007

1:00 p.m.–6:00 p.m. CC-Exhibit Hall D
ASA Booth #101

1:00 p.m.–6:00 p.m. CC-Exhibit Hall C
Career Placement Service (full placement service open)

2:00 p.m.–4:30 p.m. GA-Murano Garden Salon
Council of Sections Annual Business Meeting (closed)
Chair(s): S. Lynne Stokes, Southern Methodist University

3:00 p.m.–4:30 p.m. GA-Venice
Caucus for Women in Statistics Executive Committee Meeting (closed)
Organizer(s): Tena Katsaounis, The Ohio State University

4:00 p.m.–5:30 p.m. GA-Versailles
2007 & 2008 ASA Committee Chairs Meeting (closed)
Chair(s): Susan Devlin, The Artemis Group

4:00 p.m.–6:00 p.m. GA-Envoy
Career Development Seminar: You Don't Need To Perish in Order To Publish (free and open to all attendees)
Chair(s): Janice Lent, Energy Information Administration

4:30 p.m.–8:00 p.m. GA-Tuscany
ENAR Executive Committee Meeting (closed)
Organizer(s): Kathy Hoskins, ENAR

5:00 p.m.–6:30 p.m. GA-Audubon
Council of Sections New Officer Orientation Meeting (closed)
Chair(s): Linda Gage, California Department of Finance

5:00 p.m.–8:00 p.m. GA-Vienna
International Chinese Statistical Association Board Meeting (closed)
Organizer(s): Ming-Hui Chen, University of Connecticut

5:30 p.m.–7:00 p.m. CC-151 A-C
Cancer Center Biostatistics Directors Annual Meeting
Organizer(s): Terry Hyslop, Thomas Jefferson University

5:30 p.m.–7:00 p.m. GA-Embassy
Committee on Scientific Freedom and Human Rights Meeting
Chair(s): Susan Hinkins, NORC at the University of Chicago

6:00 p.m.–7:30 p.m. CC-Ballrooms A-B
JSM First-Time Attendee Orientation and Reception (open to all first-time attendees, included in registration fee)
Chair(s): Tena Katsaounis, The Ohio State University

6:00 p.m.–7:30 p.m. GA-Milano
Section on Quality and Productivity Executive Committee Meeting (closed)
Chair(s): William Guthrie, National Institute of Standards and Technology

6:00 p.m.–7:30 p.m. CC-251 D
ASA Open Meeting (all welcome)
Chair(s): Mary Ellen Bock, Purdue University

6:00 p.m.–8:00 p.m. GA-Provence
Section on Statistics and the Environment Executive Committee Meeting (closed)
Chair(s): Mary Christman, University of Florida

6:00 p.m.–9:00 p.m. GA-Riviera
IMS Council Meeting I (closed)
Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics

6:00 p.m.–9:00 p.m. GA-Ambassador
Biometrics Section Executive Meeting (closed)
Chair(s): Thomas R. Tenhave, University of Pennsylvania

6:30 p.m.–8:30 p.m. Off Property
Section on Statistical Consulting Executive Committee Meeting (closed)
Chair(s): Stuart Gansky, University of California, San Francisco

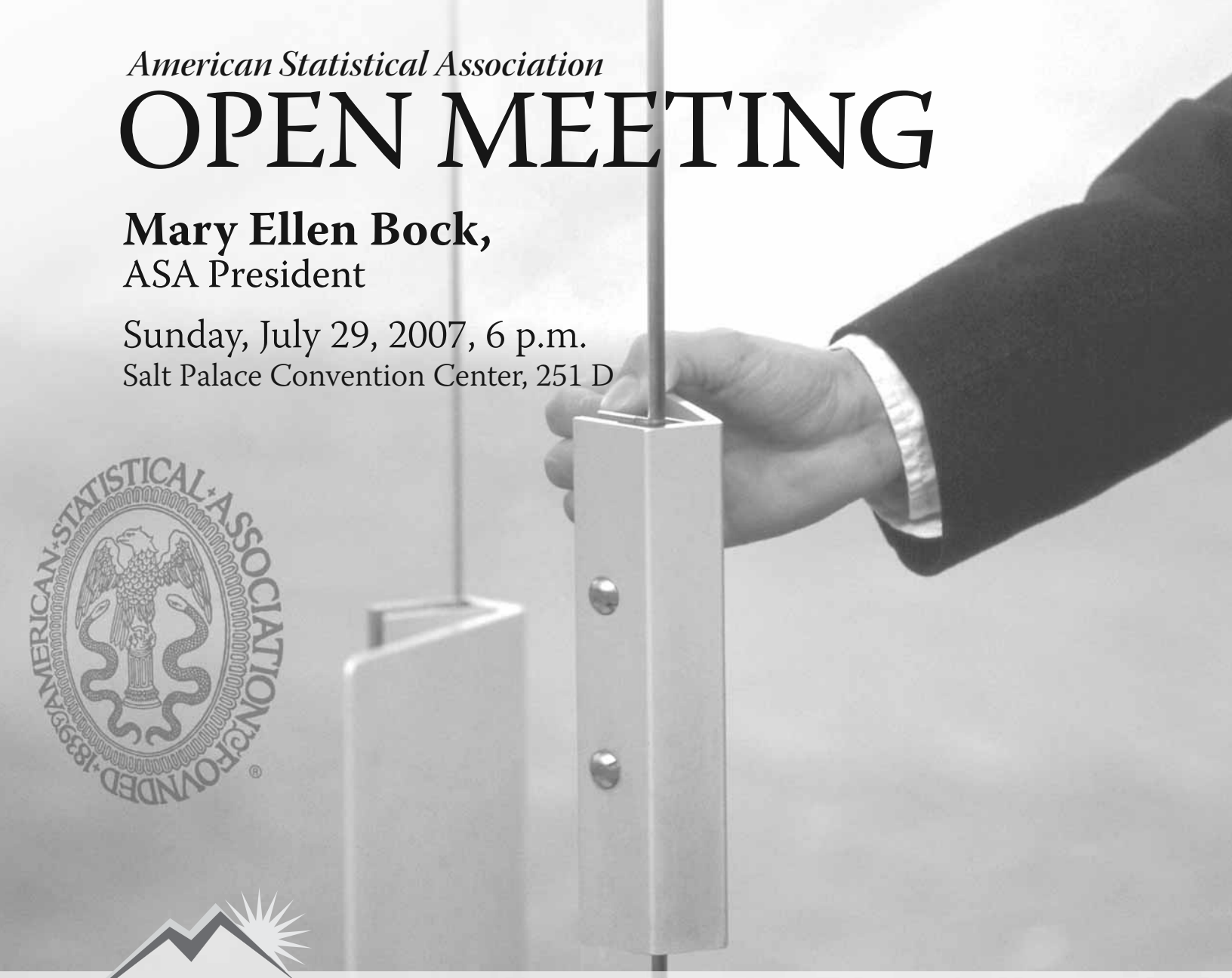
7:00 p.m.–8:00 p.m. CC-155 B
Advisory Committee on Continuing Education Presenter Social (closed)
Chair(s): Katherine Halvorsen, Smith College

American Statistical Association

OPEN MEETING

Mary Ellen Bock,
ASA President

Sunday, July 29, 2007, 6 p.m.
Salt Palace Convention Center, 251 D



FIND OUT WHAT YOUR ASSOCIATION IS DOING!

Come to the Open Meeting, meet your officers, hear about the following items, among others, and voice your opinions about the ASA:

- 2007 state of the Association – *Mary Ellen Bock*
- Update on ASA finances – *Sastry G. Pantula*
- Update from the Committee on Rewriting the ASA Strategic Plan – *Robert Rodriquez*
- Introduction of Ronald Wasserstein, the incoming ASA executive director – *William B. Smith*
- Summary of 2006 Board task forces – *Sallie Keller-McNulty*
- Questions from the floor – *Executive Committee*

Please plan to attend and lend your voice to the discussion of important issues affecting the future of the ASA.

7:00 p.m.–9:00 p.m. CC-150 G
Isolated Statisticians Meeting
Organizer(s): Ann Cannon, Cornell College

8:00 p.m.–10:30 p.m. CC-Ballrooms C-J
Opening Mixer (included in registration fee)

Continuing Education (Fee Events)

CE_01C
Bayesian Modeling in Practice
8:30 a.m.–5:00 p.m. CC-151 G
ASA
Instructor(s): David Spiegelhalter, MRC Biostatistics Unit

CE_08C
Dose Finding in Drug Development
8:00 a.m.–12:00 p.m. CC-151 D-F
Biopharmaceutical Section, ASA
Instructor(s): Naitee Ting, Pfizer Inc.; James MacDougall, Bristol-Myers Squibb Company

CE_09C
Generalized Linear Mixed Models: Theory and Applications
8:30 a.m.–5:00 p.m. CC-150 G
ASA
Instructor(s): Oliver Schabenberger, SAS Institute Inc.

CE_10C
Statistical Evaluation of Medical Tests and Biomarkers for Classification
8:30 a.m.–5:00 p.m. CC-150 A-C
Section on Statistics in Epidemiology, ASA
Instructor(s): Margaret Pepe, Fred Hutchinson Cancer Research Center; Holly Janes, The Johns Hopkins University; Todd Alonzo, University of Southern California

CE_11C
Modeling and Data Analysis for Complex Surveys
8:30 a.m.–5:00 p.m. CC-150 D-F
Section on Statistics and the Environment, Section on Survey Research Methods, ASA
Instructor(s): Jay Breidt, Colorado State University; Jean Opsomer, Iowa State University

CE_12C
A Practical Guide for the Design and Analysis of Virtual (Computer Model) Experiments
8:30 a.m.–5:00 p.m. CC-151 A-C
Section on Quality and Productivity, ASA
Instructor(s): Jerry Sacks, National Institute of Statistical Sciences; William J. Welch, University of British Columbia

CE_13C
Data Quality and Record Linkage Techniques
8:30 a.m.–5:00 p.m. CC-155 A
ASA
Instructor(s): Thomas Herzog, U.S. Department of Housing and Urban Development; Fritz Scheuren, NORC at the University of Chicago; William Winkler, U.S. Census Bureau

CE_14C
Adaptive Dose-Response Studies
1:00 p.m.–5:00 p.m. CC-151 D-F
ASA
Instructor(s): Christopher S. Coffey, The University of Alabama at Birmingham; Brenda Gaydos, Eli Lilly and Company; Jose Pinheiro, Novartis Pharmaceuticals

Invited Sessions 2:00 p.m.–3:50 p.m.

1 **CC-251 D**
✪ Bayesian Statistics and Random Matrices—Invited
Section on Bayesian Statistical Science
Organizer(s): Helene M. Massam, York University
Chair(s): Paul Speckman, University of Missouri-Columbia

2:05 p.m. **Covariance Selection and Bayes Classification via Modal Shrinkage Estimators—**❖Jingqin Luo, Washington University in St. Louis**;** Merlise A. Clyde, Duke University**;** Edwin Iversen, Duke University

2:30 p.m. **Discrete Hierarchical Model Search with Conjugate Priors for Log-Linear Parameters—**❖Adrian Dobra, University of Washington**;** Helene M. Massam, York University

2:55 p.m. **Local Graphical Model Search—**❖Liang Zhang, Duke University**;** Adrian Dobra, University of Washington**;** Mike West, Duke University

You are invited to the JSM

First-Time Attendee

orientation and reception

Salt Palace Convention Center, Ballrooms A-B
Sunday, July 29, 6:00 p.m.–7:30 p.m.

Learn more about how to get the most out of your first JSM experience, meet new people, and network.

Open to All First-Timers

(Dinner groups will form after the reception.)

AGENDA

- **Introduction:** Tena Katsaounis, President, The Caucus for Women in Statistics
- **Good Advice That I Ignored During My First JSM:** Monnie McGee, Southern Methodist University
- **Reception** *(light hors d'oeuvres to be served)*

This reception is sponsored by: ASA, ENAR, IMS, SSC, WNAR, The Caucus for Women in Statistics

3:20 p.m. **Flexible Priors for Covariance Matrices in Gaussian Graphical Models—**❖Bala Rajaratnam, Statistical and Applied Mathematical Sciences Institute**;** Carlos Carvalho, Duke University**;** Helene M. Massam, York University

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

2 CC-250 F

The Special Interest Group on Volunteerism: Two Years Out—Invited

Section on Statistical Education, Committee on Scientific Freedom and Human Rights, Section on Government Statistics

Organizer(s): David Banks, Duke University

Chair(s): Susan Hinkins, NORC at the University of Chicago

2:05 p.m. **Update on SIG on Volunteering Efforts—**❖Robert Starbuck, Wyeth

2:30 p.m. **Developing Graduate Degrees in Statistics at Universities in Vietnam—**❖Alicia Carriquiry, Iowa State University

2:55 p.m. **Discussion of the Special Interest Group on Statistical Volunteerism—**❖Jana Asher, Carnegie Mellon University

3:20 p.m. **Promoting Quantitative Literacy for School-Age Children—**❖Shail J. Butani, Bureau of Labor Statistics

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

3 CC-255 C

● ✪ Fundamental Statistical Questions Underlying Clinical Trials—Invited

Biopharmaceutical Section, ENAR, Biometrics Section, WNAR

Organizer(s): Alan Dorfman, Bureau of Labor Statistics

Chair(s): William G. Cumberland, University of California, Los Angeles

2:05 p.m. **Beyond Statistical Methods: Quality of Trial Issues—**❖Guoxing Soon, U.S. Food and Drug Administration

2:35 p.m. **On Criteria for a Measure of Statistical Evidence in Clinical Trials: What We Want and What We Don't—**❖Jeffrey D. Blume, Brown University

3:05 p.m. Disc: Alan Dorfman, Bureau of Labor Statistics

3:25 p.m. **Floor Discussion**

4 CC-250 B

● ✪ Some New Developments in Statistical Learning—Invited

Section on Statistical Computing, Section on Bayesian Statistical Science, Section on Teaching Statistics in the Health Sciences, Section on Nonparametric Statistics, Section on Physical and Engineering Sciences

Organizer(s): Ji Zhu, University of Michigan

Chair(s): Sijian Wang, University of Michigan

2:05 p.m. **The Adaptive Lasso and Its Oracle Properties—**❖Hui Zou, The University of Minnesota

2:35 p.m. **Robust Support Vector Machines—**❖Yufeng Liu, The University of North Carolina at Chapel Hill

3:05 p.m. **Bayesian Ensemble Active Learning—**❖Hugh Chipman, Acadia University**;** Edward I. George, University of Pennsylvania**;** Robert McCulloch, The University of Chicago Graduate School of Business

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

5 CC-355 A

● Time Series Studies of Air Pollution and Health—Invited

WNAR, ENAR, Section on Health Policy Statistics, Section on Risk Analysis, Biometrics Section, Section on Statistics and the Environment

Organizer(s): Paul Switzer, Stanford University

Chair(s): Paul Switzer, Stanford University

2:05 p.m. **Estimating the Distributed Lag between Air Pollution and Hospitalization Using a Bayesian Hierarchical Model—**❖Roger Peng, The Johns Hopkins University**;** Francesca Dominici, The Johns Hopkins University**;** Leah Welty, Northwestern University

2:35 p.m. **Reassessing the Relationship Between Ozone and Short-Term Mortality in U.S. Urban Communities—**❖Richard L. Smith, The University of North Carolina at Chapel Hill**;** Baowei Xu, The University of North Carolina at Chapel Hill**;** Allen S. Lefohn, A.S.L. & Associates**;** Paul Switzer, Stanford University

3:05 p.m. **Looking Through the Time Series Study Lens: Do We See Reality or Fiction?—**❖Elizabeth A. Sheppard, University of Washington

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

6 CC-250 C

✪ Threshold Estimation for Functions in Nonparametric and Semiparametric Problems—Invited

Section on Nonparametric Statistics

Organizer(s): Moulinath Banerjee, University of Michigan

Chair(s): Kerby Shedden, University of Michigan

2:05 p.m. **Asymptotically Optimal Tests Under Loss of Identifiability in Semiparametric Models**—Rui Song, The University of North Carolina at Chapel Hill; ❖Michael Kosorok, The University of North Carolina at Chapel Hill; Jason Fine, University of Wisconsin-Madison

2:30 p.m. **Trajectories as Predictors of Univariate Responses**—❖Ian McKeague, Columbia University

2:55 p.m. **Multistage Procedures for Change Point Estimation**—❖George Michailidis, The University of Michigan

3:20 p.m. Disc: Moulinath Banerjee, University of Michigan

3:40 p.m. **Floor Discussion**

7 CC-155 E

Medallion Lecture I—Invited

IMS, General Methodology, Biometrics Section

Organizer(s): Tony Cai, University of Pennsylvania

Chair(s): Brani Vidakovic, Georgia Institute of Technology

2:05 p.m. **Modeling Genes: Statistical Challenges in Modern Genetics**—❖Peter Donnelly, University of Oxford

3:30 p.m. **Floor Discussion**

8 CC-250 E

✪ Nonlinear and Nonstationary Time Series Analysis—Invited

International Indian Statistical Association

Organizer(s): Soumendra N. Lahiri, Texas A&M University

Chair(s): Soumendra N. Lahiri, Texas A&M University

2:05 p.m. **Multiple Local Whittle Estimation in Stationary Systems**—❖Peter M. Robinson, London School of Economics

2:30 p.m. **Generalized R-estimators Under Conditional Heteroscedasticity**—❖Kanchan Mukherjee, The University of Liverpool

2:55 p.m. **Conditions for the Propagation of Memory Parameter from Durations to Counts and Realized Volatility**—❖Clifford M. Hurvich, New York University

3:20 p.m. **Break Detection for a Class of Nonlinear Time Series Models**—❖Richard A. Davis, Colorado State University; Thomas C. M. Lee, The Chinese University of Hong Kong; Gabriel Rodriguez-Yam, Universidad Autonoma Chapingo

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

9 CC-251 A

● Propensity-Score Matching for Observational Studies: Recent Extensions and Refinements—Invited

IMS, Section on Statistics in Epidemiology, Section on Health Policy Statistics, Biometrics Section, WNAR

Organizer(s): Ben B. Hansen, University of Michigan

Chair(s): Jonathan Stroud, University of Pennsylvania

2:05 p.m. **Semiparametric Sequential Estimators for Dynamic Causal Models**—❖Michael H. Lechner, University of St. Gallen

2:30 p.m. **Propensity Score–Matching Design in Studies with Repeated Measures**—❖Bo Lu, The Ohio State University

2:55 p.m. **Matching with Propensity and Prognostic Scores**—❖Ben B. Hansen, University of Michigan

3:20 p.m. Disc: Donald B. Rubin, Harvard University

3:40 p.m. **Floor Discussion**

10 CC-260

● Inference for Multistate Data Under Complex Censoring Structures—Invited

ENAR, Biometrics Section, Section on Physical and Engineering Sciences

Organizer(s): Somnath Datta, University of Louisville

Chair(s): Susmita Datta, University of Louisville

2:05 p.m. **Statistical Analysis of Multivariate Interval-Censored Data**—❖Jianguo Sun, University of Missouri-Columbia; Manhua Chen, University of Missouri-Columbia; Xingwei Tong, Academia of Science

2:30 p.m. **Analysis of Longitudinal and Response/Failure Time Data from an Observational Study with Missing Observations**—❖Dianne M. Finkelstein, Harvard/MGH; Natasa Rajicic, Pfizer Inc.; David A. Schoenfeld, MGH/Harvard

2:55 p.m. **Multiply Robust Higher-Order U-Statistics Estimators for Continuous-Time Multistate Data Structures**—❖James Robins, Harvard School of Public Health

3:20 p.m. Disc: Somnath Datta, University of Louisville

3:40 p.m. **Floor Discussion**

11 CC-155 B

● ✪ Alzheimer's Disease Research in Utah: Analysis Methods for Early Detection, Epidemiology, and Clinical Trials—Invited

ASA, Utah Chapter, Council of Chapters, ENAR, Section on Statistics in Epidemiology, Biometrics Section

Organizer(s): Suzanne Hendrix, Myriad Pharmaceuticals

Chair(s): C. Shane Reese, Brigham Young University

2:05 p.m. **Cognitive Change as a Biomarker in the Early Detection of Alzheimer's Disease—**❖Gordon J. Chelune, The University of Utah

2:35 p.m. **Analyzing Repeated Neuropsychiatric, Cognitive, and Functional Measures in a Population-Based Study of Dementia—**❖Chris Corcoran, Utah State University; Carl F. Pieper, Duke University; Peter Zandi, The Johns Hopkins University

3:05 p.m. **Responder versus Means Analysis: Illustrated with Data from a Phase 2 Study of Tarenflurbil (MPC-7869) in Alzheimer's Disease (AD)—**❖Kenton Zavitz, Myriad Pharmaceuticals; Mark Laughlin, Myriad Pharmaceuticals; Edward Swabb, Myriad Pharmaceuticals

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

12 CC-355 F

● ✪ Measuring and Improving Data Quality: A Prerequisite to Harnessing the Power of Information—Invited

Social Statistics Section, Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Nancy Gordon, U.S. Census Bureau

Chair(s): Nancy Gordon, U.S. Census Bureau

2:05 p.m. **Assessing the Effectiveness of Using Panel Respondent Mode Preferences—**❖Thomas B. Hoffer, NORC at the University of Chicago; Karen Grigorian, NORC at the University of Chicago; Ron Fecso, National Science Foundation

2:30 p.m. **Look and Listen, But Don't Stop: Interviewers and Data Quality in the 2007 SCF—**❖Arthur B. Kennickell, Federal Reserve Board

2:55 p.m. **Survey Quality and Quality Metrics: An Economic Approach—**❖Julia Lane, NORC at the University of Chicago; Suzanne Bard, NORC at the University of Chicago; Judith Petty, NORC at the University of Chicago

3:20 p.m. Disc: Cheryl R. Landman, U.S. Census Bureau

3:40 p.m. **Floor Discussion**

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

13 CC-355 B

● 2007 Government Statistics, Social Statistics, and Survey Research Methods Student Paper Awards Session—Topic-Contributed

Section on Survey Research Methods, Social Statistics Section, Section on Government Statistics, SSC

Organizer(s): Roberta Sangster, Bureau of Labor Statistics

Chair(s): Steven Heeringa, Institute for Social Research

2:05 p.m. **Small-Area Estimation in Multivariate Surveys—**❖Hukum Chandra, University of Southampton; Ray Chambers, University of Wollongong

2:25 p.m. **Nonparametric Modeling of the Second Order Structure of Processes with Time-Varying Memory—**❖Georg Goerg, Vienna University of Technology; Dana Draghicescu, Hunter College

2:45 p.m. **Cosponsorship in the U.S. Senate: A Mixed Effects Approach to Detecting the Subtle Influence of Social Relational Factors on Legislative Behavior—**❖Justin Gross, Carnegie Mellon University; Stephen Fienberg, Carnegie Mellon University; Cosma Shalizi, Carnegie Mellon University; David Krackhardt, Carnegie Mellon University

3:05 p.m. **Imputing Missing Data in the FBI's Uniform Crime Reports—**❖Clint Roberts, The Ohio State University; Elizabeth A. Stasny, The Ohio State University; Michael D. Maltz, The Ohio State University

3:25 p.m. **Using the Multiple Imputation Technique To Correct for Measurement Error and Statistical Disclosure Control in Sensitive Count Data in a National Survey—**❖Mandi Yu, University of Michigan

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

14 CC-255 D

● ✪ Efficient Designs in Drug Development—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

Organizer(s): Michael Smith, Pfizer Inc.

2:05 p.m. **Bayesian Forecasting of Multicenter Enrollment—**❖Byron Jones, Pfizer Inc.

2:25 p.m. **A Bayesian Design and Analysis for Dose-Response Using Informative Prior Information—**❖Michael Smith, Pfizer Inc.**;** Scott Marshall, Pfizer Inc.

2:45 p.m. **Model-Based Trial Design in Depression Using Bayesian Monitoring and Bootstrap Trial Simulation—**❖Roberto Gomeni, GlaxoSmithKline

3:05 p.m. **Optimizing the Manufacturing of Phase III Material During Phase II Trials—**❖Nitin Patel, Cytel Inc.**;** Francoise Vandenhende, Eli Lilly and Company

3:25 p.m. **Accounting for Patient Heterogeneity in Phase II Clinical Trials—**❖J. Kyle Wathen, The University of Texas M. D. Anderson Cancer Center**;** Peter F. Thall, The University of Texas M. D. Anderson Cancer Center**;** John D. Cook, The University of Texas M. D. Anderson Cancer Center

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

15 CC-255 E

● ✪ Novel Analyses of Time-To-Event Data—Topic-Contributed

Biopharmaceutical Section, ENAR, Section on Risk Analysis

Organizer(s): Devan V. Mehrotra, Merck & Co., Inc.

Chair(s): Donna Kowalski, Astellas Pharma US

2:05 p.m. **Extensions of Cure Models for Clustered Time-to-Event Data—**❖Jeremy Taylor, University of Michigan**;** Yingwei Peng, Queen's University

2:25 p.m. **Constructing Approximate Confidence Bounds for the True Survival Curve Using the Kaplan-Meier Survival Function by Adding an Imaginary Failure or Eternal Survivor—**❖Craig B. Borkowf, Centers for Disease Control and Prevention (CDC)

2:45 p.m. **A Two-Stage Procedure for Comparing Hazard Rate Functions—**❖Peihua Qiu, The University of Minnesota

3:05 p.m. **Improved Hazard Ratio Estimation in Small Time-to-Event Trials—**❖Devan V. Mehrotra, Merck & Co., Inc.**;** Arthur Roth, Pfizer Inc.

3:25 p.m. Disc: David P. Harrington, Dana-Farber Cancer Institute

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

16 CC-259

● Design and Inference in Multinational Trials—Topic-Contributed

ENAR, Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Yoko Tanaka, Eli Lilly and Company

Chair(s): Ramon Littell, University of Florida

2:05 p.m. **Design of Multinational Study for Global Development—**❖Yoshiharu Horie, Nippon Boehringer Ingelheim Co. Ltd.**;** Masahiro Takeuchi, Kitasato University

2:25 p.m. **Sample Size Determination of Japanese Patients for Multiregional Clinical Trial in Oncology—**❖Risa Sekiguchi, Eli Lilly and Company**;** Sachio Ogawa, Eli Lilly and Company**;** Hiroyuki Uesaka, Eli Lilly and Company

2:45 p.m. **Issues in Design of Multiregional Trials—**❖Yoichi Ii, Pfizer Japan Inc.**;** Osamu Komiyama, Pfizer Japan Inc.**;** Kazuhiko Kuribayashi, Pfizer Japan Inc.

3:05 p.m. **Issues in Conducting Multiregional Trial: Experience in the PMDA Consultation Meetings—**❖Yuki Ando, Pharmaceuticals and Medical Devices Agency

3:25 p.m. Disc: Henry Hsu, U.S. Food and Drug Administration

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

17 CC-155 C

✪ Sufficient Dimension Reduction and High-Dimensional Data—Topic-Contributed

IMS, Section on Nonparametric Statistics

Organizer(s): Lexin Li, North Carolina State University

Chair(s): Wenbin Lu, North Carolina State University

2:05 p.m. **Generalized K-Means Inverse Regression Estimation—**❖Xuerong Wen, University of Missouri-Rolla

2:25 p.m. **A Novel Moment-Based Sufficient Dimension Reduction Approach in Multivariate Regression—**❖Jae Keun Yoo, University of Louisville

2:45 p.m. **Principal Components for Regression: A Conditional Point of View—**❖Liliana Forzani, The University of Minnesota

3:05 p.m. **Dimension Reduction in Time Series—**❖Jin-Hong Park, University of Georgia

3:25 p.m. **Model-Free Multivariate Reduced-Rank Model Regression with Categorical Predictor—**❖Messan C. Setodji, RAND Corporation**;** Lexin Li, North Carolina State University

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

18 CC-155 F

● ✪ Spatial Statistics Applied to Environment—Topic-Contributed

IMS, Section on Statistical Consulting, Section on Statistics and the Environment

Organizer(s): Tonglin Zhang, Purdue University

Chair(s): Michael Levine, Purdue University

2:05 p.m. **Block Bootstrap Procedures for Modeling Inhomogeneous Spatial Point Patterns—**❖Yongtao Guan, Yale University

2:25 p.m. **Assimilation of Current Measurements into a Circulation Model of Lake Michigan—**❖Zepu Zhang, The University of Chicago**;** Dmitry Beletsky, University of Michigan**;** David Schwab, National Oceanic and Atmospheric Administration**;** Michael Stein, The University of Chicago

2:45 p.m. **Spectrum Estimation for Isotropic Intrinsically Stationary Spatial Processes—**❖Chunfeng Huang, The Ohio State University**;** Tailen Hsing, The Ohio State University**;** Noel Cressie, The Ohio State University

3:05 p.m. **Taxonomy of Spatially Clustered Disease Data: Capturing and Explaining Spatial Clustering and Cluster—**❖Ge Lin, West Virginia University

3:25 p.m. **Space-Time Latent Structure Modeling for Small-Area Health Data—**❖Andrew B. Lawson, University of South Carolina

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

19 CC-254 B

● ✪ Bayesian Modeling of Longitudinal or Event-Time Data Subject to Nonresponse or Censoring—Topic-Contributed

Section on Bayesian Statistical Science, ENAR, Section on Health Policy Statistics

Organizer(s): Susan Paddock, RAND Corporation

Chair(s): Jamie Bigelow, Duke University

2:05 p.m. **Bayesian Variable Selection in Linear Mixed-Effects Models for Longitudinal Data with Missing Values—**❖Xiaowei Yang, University of California, Davis

2:25 p.m. **Bayesian Variable Selection for Analyzing Longitudinal Substance Abuse Treatment Data Subject to Informative Censoring—**❖Susan Paddock, RAND Corporation

2:45 p.m. **Approximate Bayesian Model Averaging for Latent Class Pattern Mixture Models with an Unknown Number of Classes—**❖Jason Roy, Geisinger Health System**;** Michael Daniels, University of Florida

3:05 p.m. **Institutionalization at Follow-Up: An Application of Principal Stratification to the Evaluation of Substance Abuse Treatment—**❖Daniel McCaffrey, RAND Corporation**;** Beth Ann Griffin, RAND Corporation

3:25 p.m. **Latent Class Modeling of Growth and Reproduction in Sublethal Toxicity Tests—**❖Michael Pennell, The Ohio State University**;** David B. Dunson, National Institute of Environmental Health Sciences

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

20 CC-254 A

● ✪ Section on Bayesian Statistics Student Paper Competition—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Merlise A. Clyde, Duke University

Chair(s): Abel Rodriguez, Duke University

2:05 p.m. **Bayesian Classification of Sleep States in Mice (Student Paper Competition)—**❖Chaitra Nagaraja, University of Pennsylvania**;** Shane T. Jensen, University of Pennsylvania**;** Abraham Wyner, University of Pennsylvania

2:25 p.m. **Path Sampling To Compute Bayes Factors: An Adaptive Approach—**❖Genevieve Lefebvre, McGill University**;** Russell Steele, McGill University**;** Alain C. Vandal, McGill University**;** Sridar Narayanan, McConnell Brain Imaging Centre**;** Douglas L. Arnold, McConnell Brain Imaging Centre

2:45 p.m. **Multivariate Developmental Trajectory Models To Identify Longitudinal Patterns of Disability in Seniors—**❖Jason Connor, Berry Consultants

3:05 p.m. **Analysis of Immunohistochemical Data Using Measurement Error Models—**❖Ronglai Shen, University of Michigan**;** Debashis Ghosh, University of Michigan**;** Jeremy Taylor, University of Michigan

3:25 p.m. **Floor Discussion**

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

21 CC-251 E

Identifying and Overcoming Barriers to Teaching a Reformed Introductory Course—Topic-Contributed

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

Organizer(s): Doug Zahn, Zahn and Associates

Chair(s): Doug Zahn, Zahn and Associates

Panelists: ❖Marjorie Bond, Monmouth College
❖Christine Kohnen, Saint Olaf College
❖Karen Kinard, Tallahassee Community College
❖Mary Parker, Austin Community College

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

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

22 CC-254 C

● ✪ Bayesian Time Series and Binary Data—Contributed

Section on Bayesian Statistical Science

Chair(s): Stephen B. Cohen, Agency for Healthcare Research and Quality

2:05 p.m. **Mixtures of State Space Models for Time Series with Structural Breaks—**❖Ori Rosen, University of Texas at El Paso**;** Sally Wood, University of New South Wales**;** Robert Kohn, University of New South Wales

2:20 p.m. **Bayesian Analysis and Applications of a Generalized Threshold Autoregressive Model—**❖Peng Sun, Merck & Co., Inc.

2:35 p.m. **Bayesian Clustering of Time Series with Change Points—**❖Garrick Wallstrom, University of Pittsburgh**;** William Hogan, University of Pittsburgh

2:50 p.m. **Estimating Kappa Coefficient and Tetrachoric Correlation for Clustered Binary Data—**❖Xiao Zhang, The University of Alabama at Birmingham**;** Gary Cutter, The University of Alabama at Birmingham

3:05 p.m. **Selected Bayesian Inference for Correlated Binary Data—**❖Patricia Bahnsen, Stephen F. Austin State University

3:20 p.m. **Bayesian Inference in 2 by 2 Tables—**❖Yong Chen, Johns Hopkins Bloomberg School of Public Health**;** Sining Chen, Johns Hopkins Bloomberg School of Public Health**;** Haitao Chu, Johns Hopkins Bloomberg School of Public Health

3:35 p.m. **Classification with Spectroscopic Data Using Bayesian Variable Selection—**❖Hongxiao Zhu, Rice University**;** Dennis D. Cox, Rice University

23 CC-255 B

● ✪ Recent Advances in Microarray Data Analysis IV—Contributed

Biometrics Section

Chair(s): Veera Baladandayuthapani, The University of Texas M. D. Anderson Cancer Center

2:05 p.m. **A Statistical Method for Selecting Differentially Expressed Genes—**❖Zhao Chen, Florida Gulf Coast University

2:20 p.m. **Inferring Genomic Copy Number from CGH Arrays—**❖Stephen Erickson, The University of Alabama at Birmingham

2:35 p.m. **A Ridge Penalized Principal-Components Approach Based on Heritability for High-Dimensional Data—**❖Yuanjia Wang, Columbia University**;** Yixin Fang, Columbia University**;** Man Jin, Columbia University

2:50 p.m. **Robustness of Cancer Risk Prediction Using Microarrays—**❖Chiang-Ching Huang, Northwestern University**;** Irene Helenowski, Northwestern University

3:05 p.m. **Incorporating Prior Knowledge of Predictors into Penalized Classifiers with Multiple Penalty Terms—**❖Feng Tai, The University of Minnesota**;** Wei Pan, The University of Minnesota

3:20 p.m. **Optimal Microarray Designs for cDNA Microarray Experiments—**❖Tathagata Bandyopadhyay, Indian Institute of Management Ahmedabad

3:35 p.m. **An Integrated Approach Using Nonparametric Local Correlation to Identify Critical Pathways in Disease—**❖Yian Chen, Texas A&M University**;** Marina Vannucci, Texas A&M University

24 CC-255 A

● ✪ Recent Advances in Longitudinal Data Analysis—Contributed

Biometrics Section, Biopharmaceutical Section

Chair(s): Kai Fun Yu, National Institutes of Health

2:05 p.m. **Self-Reported Behavior of High-Risk HIV+ Youth: Random Effects Models for Multivariate Longitudinal Discrete Data—**❖Lily Altstein, University of California, Los Angeles

2:20 p.m. **Longitudinal Analysis for Post-Transplant Serum Creatinine Data—**❖Zailong Wang, Novartis Pharmaceuticals**;** Luen Lee, Novartis Pharmaceuticals

2:35 p.m. **Giving Treatment to Controls: When Is It a Good Idea?—**❖Kimberly Walters, The Ohio State University

2:50 p.m. **Comparing the Correlation Coefficients Between the Random Effects in Multivariate Linear Mixed Models—**❖Yuxiao Tang, Rush University**;** Chengjie Xiong, Washington University in St. Louis

3:05 p.m. **Comparison of ICC and CCC for Assessing Agreement for Data Without and with Replications—**❖Chia-Cheng Chen, North Carolina State University

3:20 p.m. **A Local Sensitivity Analysis Approach to Longitudinal Binary Data with Nonignorable Dropout—**❖Hui Xie, University of Illinois at Chicago

3:35 p.m. **A Comparison of Mixed Effect Models and Cox Proportional Hazard Models for Unbalanced Longitudinal Data—**❖Wonsuk Yoo, Wayne State University**;** Dennis Tsilimingras, Wayne State University**;** John M. Flack, Wayne State University

25 CC-255 F

● ✪ Statistical Issues in Discovery and Nonclinical Development—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Martha E. Nunn, Boston University

2:05 p.m. **A New, Convolution-Based Approach to Developing a Level-A In Vitro In Vivo Correlation—**❖Roel Straetemans, Johnson & Johnson PRD**;** Tom Jacobs, University Hasselt**;** Geert Molenberghs, Hasselt University**;** Luc Bijnens, Johnson & Johnson PRD

2:20 p.m. **Application of Group Sequential Methodology to a Preclinical Model—**❖Lixin Han, Wyeth**;** Suzana Marusic, Wyeth

2:35 p.m. **Developing Statistical Methods for Setting Specification Limits—**❖Michelle Quinlan, University of Nebraska-Lincoln**;** Erin Blankenship, University of Nebraska-Lincoln**;** Walt Stroup, University of Nebraska-Lincoln**;** James Schwenke, Boehringer Ingelheim Pharmaceuticals, Inc.

2:50 p.m. **Statistical Consideration in the Evaluation of Red Blood Cell Products—**❖Jeongsook Kim, U.S. Food and Drug Administration**;** Tie-Hua Ng, U.S. Food and Drug Administration

3:05 p.m. **Optimization of Dilution Scheme—**❖Andrew Chen, MedImmune, Inc.**;** Harry Yang, MedImmune, Inc.**;** Iksung Cho, MedImmune, Inc.

3:20 p.m. **Statistical Analysis of Measurement Data with Values Below Detection Limits—**❖Donghui Zhang, sanofi-aventis**;** Cun-Hui Zhang, Rutgers University

3:35 p.m. **One-Sided Test for Gene-Gene Association—**❖Chaehyung Ahn, Rho, Inc.

26 CC-250 A

Generalized Distributions and Testing Methods—Contributed

General Methodology, Biopharmaceutical Section, IMS, Section on Physical and Engineering Sciences, SSC

Chair(s): Jing Zhao, Merck & Co., Inc.

2:05 p.m. **Iterative Modified Likelihood Ratio Test for Homogeneity—**❖Pengfei Li, University of Waterloo**;** Jiahua Chen, University of British Columbia

2:20 p.m. **The Equivalence Between Selecting and Hypothesis Testing—**❖Weixing Cai, Syracuse University**;** Pinyuen Chen, Syracuse University

2:35 p.m. **Small Sample Behavior of Resampling Methods—**❖Dongmei Li, The Ohio State University**;** Jason C. Hsu, The Ohio State University

2:50 p.m. **The Skew Generalized Secant Hyperbolic Distribution and Its Properties—**❖David Vaughan, Wilfrid Laurier University

3:05 p.m. **Generalized Exponentiated Beta Distribution—**❖Alfred A. Akinsete, Marshall University

3:20 p.m. **A Study of Robust Estimation Approach for Analysis of Variance When the Distribution of Error Terms Is Non-Normal—**❖Aysun Çetinyürek, Başkent University**;** Bridal Senoglue, Ankara Universities

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

27 CC-155 D

✪ Multiple Hypothesis Testing and Geomics—Contributed

IMS, Biometrics Section

Chair(s): John Emerson, Yale University

2:05 p.m. **Hierarchical Dependence in Meta-Analysis—**❖John R. Stevens, Utah State University**;** Alan M. Taylor, Brigham Young University-Idaho

2:20 p.m. **Sequential Hypothesis Testing in Sensor Networks—**❖Yajun Mei, Georgia Institute of Technology

2:35 p.m. **Modified Holm's Critical Values Using Correlation—**❖Zijiang Yang, Temple University; Sanat Sarkar, Temple University

2:50 p.m. **On the Probability of Correct Selection for Large k Populations with Application to Microarray Data—**❖Jason Wilson, University of California, Riverside; Xinping Cui, University of California, Riverside

3:05 p.m. **Alpha-Investing: A New Multiple Hypothesis Testing Procedure—**❖Robert Stine, University of Pennsylvania; Dean Foster, University of Pennsylvania

3:20 p.m. **Statistics on High-Dimensional Data Analysis—**❖Yingli Qin, Iowa State University; Song Xi Chen, Iowa State University

3:35 p.m. **Pseudo-ROC: Method Comparisons in the Absence of a 'Gold Standard'—**❖Richard Bourgon, European Bioinformatics Institute

28 CC-355 D

● ✪ Health Policy Interventions and Methods—Contributed

Section on Health Policy Statistics, WNAR

Chair(s): Arvind Jain, RAND Corporation

2:05 p.m. **Relationship Between Competitiveness of Colleges and Levels of Tobacco Use—**❖Joost Bottenbley, The Johns Hopkins University; Yasmin H. Said, George Mason University; Edward Wegman, George Mason University; Samer Ellahham, Innovative Medical Institute/Paragon Cardiovascular Foundation; David Anderson

2:20 p.m. **Restriction of Trans Fatty Acids in Washington, DC, Metropolitan Area: Health Benefits and Economic Impact—**Joost Bottenbley, The Johns Hopkins University; Samer Ellahham, Innovative Medical Institute/Paragon Cardiovascular Foundation; Yasmin H. Said, George Mason University; Edward Wegman, George Mason University; ❖Malda Bashi, Paragon Cardiovascular Foundation

2:35 p.m. **Price Indexes with a Health Insurance Component—**❖Ralph Bradley, Bureau of Labor Statistics

2:50 p.m. **Multiple Imputation of the Euroqol EQ-5D: Testing Different Approaches Using IVEWare—**❖Robert Gerzoff, Centers for Disease Control and Prevention; Theodore J. Thompson, Centers for Disease Control and Prevention

3:05 p.m. **A Choice of Prediction Rules in Logistic Regression Models—**❖Melvin Ott

3:20 p.m. **Nonparametric Confidence Intervals for the Mean of a Right-Skewed Distribution—**❖Kenny Shum, The Johns Hopkins University; Scott Zeger, The Johns Hopkins University

3:35 p.m. Floor Discussion

29 CC-251 C

● ✪ Data Analysis and Modeling—Contributed

Section on Physical and Engineering Sciences, Section on Quality and Productivity

Chair(s): Kristofer Jennings, Purdue University

2:05 p.m. **A New Statistical Approach for the Analysis of Uncertain Systems—**❖Xinjia Chen, Louisiana State University; Kemin Zhou, Louisiana State University; Jorge Aravena, Louisiana State University

2:20 p.m. **The Efficiency of Ridge Regression Estimators with Respect to Zellner's Balanced Loss Function—**❖Marvin Gruber, Rochester Institute of Technology

2:35 p.m. **Identification of Dispersion Effects in Replicated Experiments—**❖Cheryl Dingus, Battelle; Angela Dean, The Ohio State University; Bruce Ankenman, Northwestern University

2:50 p.m. **A Sequential Methodology for Change Point Estimation—**❖Yan Lan, University of Michigan; Moulinath Banerjee, University of Michigan; George Michailidis, The University of Michigan

3:05 p.m. **Inference for Multipiecewise Regression Using the Bootstrap—**❖Trevor Craney, Sikorsky

3:20 p.m. **Generalized Confidence Intervals for Proportion of Conformance—**❖Paul Patterson, USDA Forest Service

3:35 p.m. **Analysis of Probability of Detection and Probability of Alarm on Sonic IR Inspection Data Using the Mixed Effects Model and Bootstrapping—**❖Chunwang Gao, Iowa State University; William Meeker, Iowa State University; Donna Mayton, SAIC

30 CC-251 B

● ✪ Statistical Process Control and Other Related Topics in Quality—Contributed

Section on Quality and Productivity

Chair(s): William Guthrie, National Institute of Standards and Technology

2:05 p.m. **Multivariate Process Control for Improved Detection of Changes in Process Location—** ❖Amitava Mitra, Auburn University

2:20 p.m. **Monitoring the Slopes of Linear Profiles—**❖Junjia Zhu, The Pennsylvania State University

2:35 p.m. **Monitoring of Hazard Rates for Dynamically Changing Observations—**❖Emmanuel Yashchin, IBM T.J. Watson Research Center

2:50 p.m. **Benefits of Integrating Operational Profiles with Classical Acceptance Sampling in the 2010 U.S. Census—**❖Thomas George, Evolver, Inc.

3:05 p.m. **Sampling Procedures for Extending the Use of the Fishbone Diagram—**❖Frank Matejcik, South Dakota School of Mines

3:20 p.m. **Floor Discussion**

31 CC-251 F

Interesting Statistical Applications—Contributed

Section on Statistical Education, General Methodology, Section on Teaching Statistics in the Health Sciences

Chair(s): James Cochran, Louisiana Tech University

2:05 p.m. **Regression Through the Origin: Models and Methods—**❖Patrick Johnston, Children's Hospital Boston

2:20 p.m. **Testing the Score Invariance of State Performance Tests Over Time—**❖Jiahe Qian, Educational Testing Service

2:35 p.m. **Inference for Normal Mixture Model, Univariate or Multivariate, in Both Mean, and Variance—** ❖Xianming Tan, Queens University; Jiahua Chen, University of British Columbia

2:50 p.m. **Measurement Error in Factor Analysis: The Question of Structural Validity—**❖Michael K. Lauritzen, Brigham Young University; Landon Poppleton, Brigham Young University; Mitchell Harris, Brigham Young University; Naomi Hunsaker, Brigham Young University; Robert Bubb, Brigham Young University; Bruce Brown, Brigham Young University

3:05 p.m. **The Central Limit Theorem and Structural Validity in Factor Analysis—**❖Landon Poppleton, Brigham Young University; Mitchell Harris, Brigham Young University; Michael K. Lauritzen, Brigham Young University; Robert Bubb, Brigham Young University; Bruce Brown, Brigham Young University

3:20 p.m. **Determining a Minimum Number of Observations in Factor Analytic Studies—**❖Robert Bubb, Brigham Young University; Bruce Brown, Brigham Young University

3:35 p.m. **A Meta-Analysis of the Content and Effectiveness of Training Programs for Federal and State Transportation Employees—**John Aleong, University of Vermont; ❖Chandra Aleong, Delaware State University

32 CC-250 D

● Water-Related Issues and Methodology—Contributed

Section on Statistics and the Environment, Biometrics Section

Chair(s): Annie Chu, University of California, Los Angeles

2:05 p.m. **Functional Linear Models for Daily and Yearly Streamflow Measures—**❖Mark Greenwood, Montana State University; Johnnie N. Moore, University of Montana; Joel T. Harper, University of Montana

2:20 p.m. **Modeling Shark Bycatch: The Zero-Inflated Negative Binomial Regression Model with Smoothing—**❖Mihoko Minami, Institute of Statistical Mathematics

2:35 p.m. **A Distance-Based Classifier with Application to Microbial Source Tracking—**❖Jayson Wilbur, Worcester Polytechnic Institute

2:50 p.m. **Grain Size Distributions in Modern and Ancient Fluvial Systems—**❖Snehalata Huzurbazar, University of Wyoming

3:05 p.m. **Spatial Modeling for Groundwater Arsenic Levels in North Carolina—**❖Dohyeong Kim, Duke University; Marie Lynn Miranda, Duke University; Joshua Tootoo, Duke University; Alan E. Gelfand, Duke University

3:20 p.m. **Change Point Analysis for Water Pressure Data—** Snehalata Huzurbazar, University of Wyoming; ❖Arunendu Chatterjee, University of Wyoming

3:35 p.m. **Weibull Prediction Limits with Retesting—**❖Kirk Cameron, MacStat Consulting, Ltd.

33 CC-258

● Modeling and Estimation in Environmental and Occupational Health—Contributed

Section on Statistics in Epidemiology, Section on Health Policy Statistics

Chair(s): Dirk Moore, University of Medicine and Dentistry of New Jersey

2:05 p.m. **A Comparative Analysis of the Chronic Effects of Fine Particulate Matter—**❖Sorina Eftim, The Johns Hopkins University**;** Holly Janes, The Johns Hopkins University**;** Aidan McDermott, The Johns Hopkins University**;** Jonathan Samet, The Johns Hopkins University**;** Francesca Dominici, The Johns Hopkins University

2:20 p.m. **The Effect of PM2.5 on Hospital Admissions Rates by Season and Region—**❖Keita Ebisu, Yale University**;** Michelle Bell, Yale University**;** Roger Peng, The Johns Hopkins University**;** Francesca Dominici, The Johns Hopkins University

2:35 p.m. **Statistical Issues in Health Effects of Air Pollution—**❖Donna Stroup, Klemm Analysis Group, Inc.**;** Rebecca Klemm, Klemm Analysis Group, Inc.

2:50 p.m. **Exposure-Response Assessment of Airborne Indoor Allergen Immunoassay—**❖Juan Liang, University of Cincinnati**;** Linda Levin, University of Cincinnati**;** Tiina Reponen, University of Cincinnati**;** Grace LeMasters, University of Cincinnati**;** David Bernstein, University of Cincinnati**;** Rolanda Olds, University of Cincinnati**;** Zana Lummus, University of Cincinnati

3:05 p.m. **Correcting for Shared Measurement Error in Complex Dosimetry Systems—**❖Terri K. Johnson, University of Southern California**;** Daniel Stram, University of Southern California

3:20 p.m. **The Comparison of Fitted Nonlinear Exposure-Response Relationships in Cox Models Using Smoothing Methods Through Simulations—**❖Usha Govindarajulu, Yale University**;** Betty Malloy, American University**;** Bhaswati Ganguli, University of Calcutta**;** Donna Spiegelman, Harvard School of Public Health**;** Ellen Eisen, Harvard School of Public Health

3:35 p.m. **Recovering the Estimated Slope of an Unobservable Predictor in a Simple Regression—**❖Wenyaw Chan, The University of Texas at Houston**;** Hung-Wen Yeh, The University of Kansas Medical Center**;** Elaine Symanski, University of Texas at Houston

34 CC-257

● Modeling and Estimation of Disease Prevalence, Incidence, and Spread—Contributed

Section on Statistics in Epidemiology, Section on Health Policy Statistics, Section on Teaching Statistics in the Health Sciences

Chair(s): Leann Myers, Tulane University

2:05 p.m. **Informative Allocation To Stabilize MLE in Finite Mixture Models—**❖Nong Shang, Centers for Disease Control and Prevention

2:20 p.m. **An Incidence Model for Capture Recapture—**❖Lawrence Lessner, State University of New York at Albany

2:35 p.m. **Spatial Analysis of Breast Cancer Incidence in Rockland County, New York County, and Western Queens County—**❖Heather Watson, New York University**;** Mengling Liu, New York University**;** Judith D. Goldberg, New York University

2:50 p.m. **Hills, Valleys, and Rivers: The Transmission of Raccoon Rabies over an Uneven Landscape—**❖David Wheeler, Emory University**;** Lance Waller, Emory University

3:05 p.m. **A Simulation Model for Testing the Effect of Interventions During a Pandemic Influenza Outbreak—**❖Xiaoping Jin, Centers for Disease Control and Prevention**;** Hong Zhou, Centers for Disease Control and Prevention**;** William W. Thompson, Centers for Disease Control and Prevention**;** Po-Yung Cheng, Centers for Disease Control and Prevention**;** David K. Shay, Centers for Disease Control and Prevention**;** Michael Haber, Emory University

3:20 p.m. **Floor Discussion**

35 CC-355 C

● Imputation of Missing Data: Applications and Methods—Contributed

Section on Survey Research Methods, Section on Health Policy Statistics, Biometrics Section

Chair(s): Meena Khare, National Center for Health Statistics

2:05 p.m. **Adjusting the German Labor Force Survey for Under-Reporting by Means of Calibrated Imputation—**❖Hans Kiesl, Institute for Employment Research**;** Susanne Rässler, Institute for Employment Research

2:20 p.m. **Not Just Another Multiple Imputation: Practical Aspects for Highly Correlated Data—**❖Lester Curtin, Centers for Disease Control and Prevention; Nathaniel Schenker, National Center for Health Statistics; Jeffrey Hughes, Centers for Disease Control and Prevention; Lori Borrund, Centers for Disease Control and Prevention

2:35 p.m. **Data Imputation Models for Nontrended Price Data—**❖Kennon Copeland, IMS Health; Boris Brodsky, IMS Health

2:50 p.m. **Weight Adjustments for Fractional Regression Hot Deck Imputation—**❖Min Hui Paik, Iowa State University; Michael D. Larsen, Iowa State University

3:05 p.m. **Robust Sequential Regression Imputation Method—**❖Irina Bondarenko, University of Michigan; Trivellore E. Raghunathan, University of Michigan

3:20 p.m. **Imputation of Rental Equivalence in the Consumer Expenditure Interview Survey—**❖Barry Steinberg, Bureau of Labor Statistics; Eric Keil, Bureau of Labor Statistics; David Swanson, Bureau of Labor Statistics; Shirley Tsai, Bureau of Labor Statistics; Garner Thesia, Bureau of Labor Statistics

3:35 p.m. Floor Discussion

36 CC-355 E

● Sampling Design: Methods, Adaptation, Redesign—Contributed

Section on Survey Research Methods

Chair(s): Vincent G. Iannacchione, RTI International

2:05 p.m. **Multiple Matrix Sampling: A Review—**❖Jeffrey Gonzalez, Bureau of Labor Statistics; John L. Eltinge, Bureau of Labor Statistics

2:20 p.m. **Estimating Population Proportions Using Link-Tracing Sampling Designs with Subsampling and Partial Knowledge on Degree Distribution—**❖Mike Kwanisai, NORC at the University of Chicago

2:35 p.m. **Some Statistical Issues in Adapting Sample Designs for Surveys Requiring Rapid Response—**❖Allison Deal, The University of North Carolina at Chapel Hill; William D. Kalsbeek, The University of North Carolina at Chapel Hill

2:50 p.m. **Optimal 2-Stage Sampling Theory for Business Customer Satisfaction Surveys—**❖John Rotondo, AT&T Labs - Research

3:05 p.m. **An Automated Procedure for Forming Contiguous Sampling Units for Area Probability Samples—**❖Bryce Johnson, Westat; Jill M. Montaquila, Westat; Andrew Heller, Westat

3:20 p.m. **Selection of Small and Large Schools in State and County School Surveys—**❖Tonja M. Kyle, Macro International; Pedro J. Saavedra, Macro International; James G. Ross, Macro International

3:35 p.m. **Reduction of Sample Areas in the Consumer Price Index and Consumer Expenditure Survey Designs—**❖Lawrence Ernst, Bureau of Labor Statistics; William H. Johnson, Bureau of Labor Statistics; William E. Larson, Bureau of Labor Statistics

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

37 CC-255 E

Introductory Overview Lecture 1: Adaptive Designs and Other Emerging Issues in Clinical Trials—Other

ASA, ENAR, WNAR, IMS, SSC, Committee on Applied Statisticians

Organizer(s): Mani Y. Lakshminarayanan, Pfizer Inc.

Chair(s): Inna Perevozskaya, Merck & Co., Inc.

4:05 p.m. **Designing Clinical Trials To Evaluate Dynamic Treatment Regimes—**❖Peter F. Thall, The University of Texas M. D. Anderson Cancer Center

4:50 p.m. **When Would I Consider Adaptive Design for Late-Stage Development?—**❖Keaven M. Anderson, Merck & Co., Inc.

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

Invited Sessions 4:00 p.m.–5:50 p.m.

38 CC-250 E

● ✪ Curve Forecasting in Modern Business—Invited

Business and Economics Statistics Section

Organizer(s): Haipeng Shen, The University of North Carolina at Chapel Hill

Chair(s): Hui Zhi, GlaxoSmithKline

4:05 p.m. **Bayesian Forecasting of an Inhomogeneous Poisson Process with Applications to Call Center Data—**❖Jonathan Stroud, University of Pennsylvania; Jonathan Weinberg, University of Pennsylvania; Lawrence D. Brown, University of Pennsylvania

4:30 p.m. **Interday Forecasting and Intraday Updating of Call Center Arrivals—**❖Haipeng Shen, The University of North Carolina at Chapel Hill**;** Jianhua Z. Huang, Texas A&M University

4:55 p.m. **Bayesian Modeling and Forecasting of Intraday Electricity Load and Spot Prices—**❖Michael S. Smith, University of Melbourne

5:20 p.m. Disc: J. Stephen Marron, The University of North Carolina at Chapel Hill

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

39 CC-355 B

● ✪ Design and Analysis for Genome-Wide Association Studies—Invited

ENAR, Section on Statistics in Epidemiology, Biometrics Section, WNAR

Organizer(s): Colin O. Wu, National Heart, Lung, and Blood Institute

Chair(s): Jungnam Joo, National Heart, Lung, and Blood Institute

4:05 p.m. **Statistical Issues Arising from Analysis of Genome-Wide Case-Control Association Studies—**❖Gang Zheng, National Heart, Lung, and Blood Institute**;** Jungnam Joo, National Heart, Lung, and Blood Institute**;** Colin O. Wu, National Heart, Lung, and Blood Institute**;** Nancy L. Geller, National Heart, Lung, and Blood Institute

4:30 p.m. **Multistage Sampling for Genetic Studies—**❖Robert C. Elston, Case Western Reserve University

4:55 p.m. **Testing Strategies for Genome-Wide Association Studies: Using the Same Dataset for Screening and Replication—**❖Christoph Lange, Harvard School of Public Health

5:20 p.m. **Interactions in Whole-Genome Association Studies—**❖Josephine Hoh, Yale University

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

40 CC-155 F

● ✪ First Hitting Time Models and Threshold Regression—Invited

SSC, Biometrics Section

Organizer(s): George A. Whitmore, McGill University

Chair(s): George A. Whitmore, McGill University

4:05 p.m. **What Hides Behind the Data?—**❖Odd O. Aalen, University of Oslo

4:35 p.m. **A Class of Simple Lifetime Regression Models Resulting from First-Hitting Times—**❖Thierry Duchesne, Laval University

5:05 p.m. **Longitudinal Data in Threshold Regression: Implementation and Relation to Cox Regression with Time-Varying Covariates—**❖Mei-Ling Ting Lee, The Ohio State University**;** George A. Whitmore, McGill University

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

41 CC-255 D

● The Role of Statistical Standards in Federal Surveys—Invited

Section on Survey Research Methods, Section on Government Statistics, Social Statistics Section

Organizer(s): Pamela D. McGovern, U.S. Census Bureau

Chair(s): Jennifer Madans, National Center for Health Statistics

4:05 p.m. **Evaluation of Prospective Costs and Benefits of Standards for Statistical Programs—**❖John L. Eltinge, Bureau of Labor Statistics

4:30 p.m. **Developing and Implementing Data Quality Standards at the U.S. Census Bureau—**Pamela D. McGovern, U.S. Census Bureau**;** ❖David C. Whitford, U.S. Census Bureau**;** John M. Bushery, U.S. Census Bureau

4:55 p.m. **Lessons Learned Using Statistical Standards To Improve/Ensure Data Quality—**❖Marilyn Seastrom, National Center for Education Statistics

5:20 p.m. Disc: Brian Harris-Kojetin, Office of Management and Budget

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

42 CC-250 F

● Collaboration Between Academia, Industry, and Government in Statistical Sciences—Invited

SPAIG Committee, Section on Statisticians in Defense and National Security, ENAR

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

Chair(s): George Williams, Amgen Inc.

4:05 p.m. **The 2007 SPAIG Salary Survey—**❖Michael D. Larsen, Iowa State University**;** Dianne Anderson, Iowa State University**;** Janice Larson, Iowa State University

4:30 p.m. **Student Recruitment Database—**❖Robert G. Wilkinson, The Lubrizol Corporation

4:55 p.m. **The WPI-NCHS Partnership—**❖Balgobin Nandram, Worcester Polytechnic Institute

5:20 p.m. **How to Compete for the Academe, Industry, and Government (SPAIG) Award?—**❖Jai W. Choi, National Center for Health Statistics**;** Robert Starbuck, Wyeth

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

43 CC-255 B
Rietz Lecture—Invited

IMS

Organizer(s): Tony Cai, University of Pennsylvania

Chair(s): Tze Leung Lai, Stanford University

4:05 p.m. **Statistical Problems of Gene Mapping—**❖David Siegmund, Stanford University

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

44 CC-255 C
● ✪ Challenge Issues on Longitudinal Biomedical Data Analysis—Invited

Biometrics Section, ENAR, Section on Statistics in Epidemiology, Section on Health Policy Statistics, WNAR

Organizer(s): Annie Qu, Oregon State University

Chair(s): Annie Qu, Oregon State University

4:05 p.m. **Does Mis-specification of the Random Effects Distribution Affect Predictions of Random Effects?—**❖Charles E. McCulloch, University of California, San Francisco**;** John Neuhaus, University of California, San Francisco

4:30 p.m. **Modeling of Mean-Covariance Structures in Generalized Estimating Equations for Longitudinal Data—**❖Jianxin Pan, University of Manchester

4:55 p.m. **Finite Sample Bias Corrections to Sandwich Covariance Estimators for Longitudinal and Clustered Data—**❖John Preisser, The University of North Carolina at Chapel Hill**;** Bing Lu, Brown University**;** Bahjat Qaqish, The University of North Carolina at Chapel Hill

5:20 p.m. **Analysis of Clustered Longitudinal Data with Applications to Clinical Dental Research—**❖Brian G. Leroux, University of Washington

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

45 CC-251 A
Probing the Universe with Nonparametric Methods—Invited

IMS, Biometrics Section, Section on Nonparametric Statistics

Organizer(s): Christopher Genovese, Carnegie Mellon University

Chair(s): Xu Han, University of Pennsylvania

4:05 p.m. **Statistical Issues in Detecting Gamma-Ray Pulsars—**❖John Rice, University of California, Berkeley

4:35 p.m. **Semiparametric Bivariate Density Estimation with Irregularly Truncated Data—**❖Chad Schafer, Carnegie Mellon University

5:05 p.m. **Clustering of Absorption Systems—**❖Ji Meng Loh, Columbia University

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

46 CC-155 B
● ✪ Gerontologic Biostatistics—Invited

Section on Statistics in Epidemiology, Biometrics Section, WNAR

Organizer(s): Heather G. Allore, Yale University

Chair(s): Heather G. Allore, Yale University

4:05 p.m. **Integrating Qualitative and Quantitative Information in Clinical Epidemiologic Research with Older Populations—**❖Peter H. Van Ness, Yale University

4:25 p.m. **Meta-Analysis at the Individual Level: Synthesis of Inferences Across Multiple Gerontological Databases—**❖Karen Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health

4:45 p.m. **Multiple Trajectories in Aging Research—**❖Carl F. Pieper, Duke University

5:05 p.m. Disc: Christina Wolfson, McGill University

5:25 p.m. Disc: Brenda F. Kurland, Fred Hutchinson Cancer Research Center

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

47 CC-251 F
● ✪ Land Grant University Ethics (LANGURE): The Ethical Use of Statistics in Research—Invited

Section on Statistical Consulting, Section on Statistical Education

Organizer(s): Marcia Gumpertz, North Carolina State University

Chair(s): Don Edwards, University of South Carolina

4:05 p.m. **The Ethical Use of Statistics in Research—**❖George P. McCabe, Purdue University

4:30 p.m. **Training University Students in Ethical Use of Statistics as Part of the LANGURE Project—**❖Larry A. Nelson, North Carolina State University

4:55 p.m. **Land Grant University Ethics (LANGURE): The Ethical Use of Statistics in Research—**❖Michael Crotty, SAS Institute Inc.

5:20 p.m. Disc: John Gardenier, Retired

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

48 CC-251 B

● Design- and Model-Based Sampling and Inference—Invited

Section on Statistics and the Environment, Section on Statistics in Epidemiology, Biometrics Section, General Methodology, Section on Survey Research Methods

Organizer(s): Ronald E. McRoberts, USDA Forest Service

Chair(s): Gretchen G. Moisen, USDA Forest Service

4:05 p.m. **Design-Based, Model-Based, and Model-Assisted Sampling, and Inference in Natural Resources—**❖Mary Christman, University of Florida

4:30 p.m. **Optimal Spatial Sampling: Probability-Based or Model-Based?—**❖Don L. Stevens, Jr., Oregon State University

4:55 p.m. **Design-Based and Model-Based Issues in Natural Resource Inventories—**❖Ronald E. McRoberts, USDA Forest Service

5:20 p.m. Disc: Timothy Gregoire, Yale University

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

49 CC-259

● Missing Information in Health-Related Quality-of-Life Data—Invited

Section on Health Policy Statistics, ENAR, Biometrics Section, WNAR

Organizer(s): Shannon E. Allen, Merck & Co., Inc.

Chair(s): Shannon E. Allen, Merck & Co., Inc.

4:05 p.m. **Bivariate Normal Frailty Models for Multiple QOL Outcomes—**❖Andrea B. Troxel, University of Pennsylvania**;** Denise A. Esserman, The University of North Carolina at Chapel Hill

4:35 p.m. **The Analysis of Questionnaire Submission Rates in Longitudinal HRQOL Assessment—**❖Stephanie R. Land, University of Pittsburgh**;** Marcie W. Ritter, University of Pittsburgh**;** Sarah Haile, University of Pittsburgh

5:05 p.m. **The Value of Ancillary Data in Longitudinal Studies of Health-Related Quality of Life with Informative Dropout—**❖Diane Fairclough, University of Colorado at Denver and Health Services Center**;** Mark Jaros, University of Colorado at Denver and Health Services Center

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

Invited Panels 4:00 p.m.–5:50 p.m.

50 CC-251 E

Issues in Conducting Experiments in Statistical Education—Invited

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

Organizer(s): Patti Collings, Brigham Young University

Chair(s): Patti Collings, Brigham Young University

Panelists:
- ❖ William Harkness, The Pennsylvania State University
- ❖ G. Bruce Schaalje, Brigham Young University
- ❖ Dennis K. Pearl, The Ohio State University
- ❖ John P. Holcomb, Cleveland State University

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

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

51 CC-355 E

● ✪ Ethnic Comparisons in Global Health Research—Topic-Contributed

Biopharmaceutical Section, Section on Health Policy Statistics

Organizer(s): Kyoungah See, Eli Lilly and Company

Chair(s): Yoko Tanaka, Eli Lilly and Company

4:05 p.m. **Assessment of Similarity in Dose Responses Between Two Ethnic Populations for Drug Development: A Resampling Approach—**❖Kyoungah See, Eli Lilly and Company

4:25 p.m. **The Application of Adaptive Design in R&D in Japan from a Statistical Point of View—**❖Hajime Uno, Kitasato University**;** Masahiro Takeuchi, Kitasato University**;** Fumiaki Takahashi, Kitasato University

4:45 p.m. **A Bayesian Approach to Evaluation of Bridging Evidence—**❖Hsiao-Hui Tsou, National Health Research Institutes**;** Chin-Fu Hsiao, National Health Research Institutes**;** Yu-Yi Hsu, Iowa State University**;** Jen-pei Liu, National Taiwan University

5:05 p.m. **Minority Differences in Cancer Survival on Cooperative Group Clinical Trials—**❖Beow Yong Yeap, Massachusetts General Hospital/Harvard Medical School**;** Marvin Zelen, Harvard School of Public Health

5:25 p.m. **Floor Discussion**

52 CC-250 C

✪ Ranked Set Sampling II—Topic-Contributed

Section on Nonparametric Statistics, Section on Survey Research Methods

Organizer(s): Omer Ozturk, The Ohio State University

Chair(s): Omer Ozturk, The Ohio State University

4:05 p.m. **Optimal Sign Test for One Sample Bivariate Location Model Using an Alternative Bivariate Ranked Set Sample—**❖Hani Samawi, Georgia Southern University

4:25 p.m. **Optimal Allocation for Unbalanced Stratified Ranked Set Sample—**❖Chris Sroka, The Ohio State University**;** Elizabeth A. Stasny, The Ohio State University**;** Douglas Wolfe, The Ohio State University

4:45 p.m. **Order-Restricted Randomized Designs for Linear Models Using L1 Norm—**❖Shannon Markiewicz, The Ohio State University**;** Omer Ozturk, The Ohio State University

5:05 p.m. **Optimal Allocation in the Presence of Missing Data—**❖Jessica Kohlschmidt, The Ohio State University**;** Elizabeth A. Stasny, The Ohio State University**;** Douglas Wolfe, The Ohio State University

5:25 p.m. **Rejective Sampling and Conditional Tests from Biased Samples for the Equality of Two Distributions—**❖Qing Kang, North Dakota State University**;** Paul I. Nelson, Kansas State University

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

53 CC-251 C

● ✪ Consumer Product Risk—Topic-Contributed

Section on Risk Analysis

Organizer(s): Rose Ray, Exponent, Inc.

Chair(s): Rose Ray, Exponent, Inc.

4:05 p.m. **Sex Differences: Rare Traffic Fatalities Support Nature over Nurture—**❖Leonard Evans, Science Serving Society

4:25 p.m. **Evaluation of the Effect of ABS in Truck Crashes Using LTCCS Data—**❖Wai Chan, Exponent, Inc.**;** Rose Ray, Exponent, Inc.**;** Bruce Ketcham, Exponent, Inc.

4:45 p.m. **National Estimates of Nonfatal Consumer Product Injuries: Surveillance Data from Hospital Emergency Departments, 1980–2005—**❖Madhu Iyer, Exponent, Inc.

5:05 p.m. **To Recall or Not To Recall? Statistical Assessment of Consumer Product Failure Risk—**❖Ke Zhao, Exponent, Inc.**;** Duane Steffey, Exponent, Inc.

5:25 p.m. Disc: Michael Orkin, Exponent, Inc.

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

54 CC-254 B

● Analyzing Time Series Data with Time-Varying Frequencies—Topic-Contributed

Section on Physical and Engineering Sciences, Section on Statistics and the Environment

Organizer(s): Wayne Woodward, Southern Methodist University

Chair(s): Henry L. Gray, Southern Methodist University

4:05 p.m. **The Application of the Kalman Filter to Nonstationary Time Series Through Time Deformation—**❖Zhu Wang, Fred Hutchinson Cancer Research Center

4:25 p.m. **Time-Frequency Analysis: G(lambda)-stationary Processes—**❖Huiping Jiang, Columbia University**;** Henry L. Gray, Southern Methodist University**;** Wayne Woodward, Southern Methodist University

4:45 p.m. **Filtering Analysis for Nonstationary Time Series by Time Deformation—**❖Mengyuan Xu, Southern Methodist University

5:05 p.m. **Generalization and Applications of Linear Chirp Stationary Processes—**❖Stephen Robertson, Southern Methodist University

5:25 p.m. **Time Transformation Methods for Analyzing Data with Time-Varying Frequencies, with Applications—**❖Wayne Woodward, Southern Methodist University**;** Henry L. Gray, Southern Methodist University

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

55 CC-255 A

✪ Spatial Statistics: Methods and Applications—Topic-Contributed

IMS, Section on Statistical Graphics, Section on Statistics and the Environment

Organizer(s): Zepu Zhang, The University of Chicago

Chair(s): Li Chen, The University of Chicago

4:05 p.m. **Exploratory Spatial Data Analysis Using APLE Statistics—**❖Hongfei Li, The Ohio State University**;** Catherine A. Calder, The Ohio State University**;** Noel Cressie, The Ohio State University

4:25 p.m. **Statistical Trend Detection of a Global Change Signal in Regional Climate**—❖Airong Cai, University of Illinois at Chicago; Katharine Hayhoe, Texas Tech University; George Tiao, The University of Chicago; Donald Wuebbles, University of Illinois at Urbana-Champaign

4:45 p.m. **Detection of the Significance of Cool Spot Clusters with Application to the Indiana Colorectal Cancer Study**—❖Tonglin Zhang, Purdue University

5:05 p.m. **Spatial Statistical Analysis of Doctors' Prescription Amounts by Region**—❖Lei Kang, The Ohio State University; Noel Cressie, The Ohio State University; Desheng Liu, The Ohio State University

5:25 p.m. **Mis-specified Maximum Likelihood Estimates and Spatial Error Models**—❖Jiehua Chen, Stanford University; Paul Switzer, Stanford University

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

56 CC-254 C

✪ Some Recent Advances in High-Dimensional Data Modeling—Topic-Contributed

IMS, Section on Nonparametric Statistics, Section on Physical and Engineering Sciences, WNAR

Organizer(s): Sijian Wang, University of Michigan

Chair(s): Jie Peng, University of California, Davis

4:05 p.m. **Local Multidimensional Scaling for Nonlinear Dimension Reduction, Graph Layout, and Approximity Analysis**—❖Lisha Chen, Yale University; Andreas Buja, University of Pennsylvania

4:25 p.m. **Model-Based Protein Summaries and Differential Label-Free Quantitative Proteomics**—❖Alan Dabney, Texas A&M University

4:45 p.m. **Kernel-Induced Classification Tree and Random Forest**—❖Guangzhe Fan, University of Waterloo

5:05 p.m. **A Statistical Perspective on Nonlinear Dimensionality Reduction and Manifold Learning**—❖Ann Lee, Carnegie Mellon University

5:25 p.m. **Some Recent Advances in High-Dimensional Data Modeling**—❖Wenbin Lu, North Carolina State University; Hao Zhang, North Carolina State University

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

57 CC-254 A

✪ Statistical Machine Learning and High-Dimensional Inference—Topic-Contributed

IMS, Section on Nonparametric Statistics

Organizer(s): Woncheol Jang, University of Georgia

Chair(s): Sayan Mukherjee, Duke University

4:05 p.m. **Nonparametric Density Estimation in High Dimensions Using the Rodeo**—❖Han Liu, Carnegie Mellon University; John Lafferty, Carnegie Mellon University; Larry Wasserman, Carnegie Mellon University

4:25 p.m. **Functional Data Analysis in Lipoprotein Profile Data**—❖Yehua Li, University of Georgia; Tailen Hsing, The Ohio State University

4:45 p.m. **Variable Selection Procedures for Generalized Linear Mixed Models in Longitudinal Data Analysis**—❖Hongmei Yang, North Carolina State University; Daowen Zhang, North Carolina State University; Hao Zhang, North Carolina State University

5:05 p.m. **Semiparametric Estimation of Covariance Matrices for Longitudinal Data**—❖Yichao Wu, Princeton University; Jianqing Fan, Princeton University

5:25 p.m. **Characterizing the Function Space for Bayesian Kernel Models**—❖Natesh Pillai, Duke University

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

58 CC-251 D

● ✪ Bayesian Hierarchical Modeling and Computation—Topic-Contributed

Section on Bayesian Statistical Science, WNAR

Organizer(s): Lei Qian, University of California, Los Angeles

Chair(s): Xiao-li Meng, Harvard University

4:05 p.m. **Latent Variable Model for Multiple Outcomes with Nonignorable Missing Data**—❖Xiaohong Yan, University of California, Los Angeles; W. John Boscardin, University of California, Los Angeles

4:25 p.m. **Modeling Common Effects of Predictors on Multiple Longitudinal Outcomes**—❖Juan Jia, University of California, Los Angeles; Robert E. Weiss, University of California, Los Angeles

4:45 p.m. **Using Incompatible Gibbs Samplers To Efficiently Fit Hierarchical Models**—❖Taeyoung Park, University of Pittsburgh; David van Dyk, University of California, Irvine

5:05 p.m. **Bayesian Mixtures for Modeling Correlation**—❖Lei Qian, University of California, Los Angeles; Robert E. Weiss, University of California, Los Angeles

5:25 p.m. Disc: Thomas Belin, University of California, Los Angeles

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

59 CC-250 D

● ✪ Section on Bayesian Statistics Student Paper Competition: New Developments in Bioinformatics and Genetics—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Merlise A. Clyde, Duke University

Chair(s): Donatello Telesca, University of Washington

4:05 p.m. **Hidden Markov Model for Jointly Modeling Probe Sequences and ChIP-Chip Microarray Data**—❖Jonathan Gelfond, The University of North Carolina at Chapel Hill; Mayetri Gupta, The University of North Carolina at Chapel Hill; Joseph G. Ibrahim, The University of North Carolina at Chapel Hill

4:25 p.m. **On Detecting Stabilizing or Divergent Selection Using Patterns of Variation at SNP Loci**—❖Feng Guo, University of Connecticut; Dipak Dey, University of Connecticut; Kent Holsinger, University of Connecticut

4:45 p.m. **A Bayesian Integrated Approach for Learning About Renal Clear**—❖David Gold, Texas A&M University; Loleta Harris, The University of Texas M. D. Anderson Cancer Center; Kevin Coombes, The University of Texas M. D. Anderson Cancer Center; Bani Mallick, Texas A&M University

5:05 p.m. **Using Evolutionary Relationships to Model Correlation in Mixed Effects Models**—❖Hua Guo, University of California, Los Angeles; Robert E. Weiss, University of California, Los Angeles; Marc A. Suchard, University of California, Los Angeles

5:25 p.m. **Bayesian Multivariate Spatial Models for Association Mapping in Structured Samples**—❖Meijuan Li, The University of Minnesota; Brad Carlin, The University of Minnesota; Cavan Reilly, The University of Minnesota

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

60 CC-250 A

● Statistical Computing and Statistical Graphics Paper Competition—Topic-Contributed

Section on Statistical Computing, Section on Statistical Graphics

Organizer(s): John R. Lockwood, RAND Corporation

Chair(s): John R. Lockwood, RAND Corporation

4:05 p.m. **Improved Centroids Estimation for the Nearest Shrunken Centroid Classifier**—❖Sijian Wang, University of Michigan; Ji Zhu, University of Michigan

4:25 p.m. **Exploratory Model Analysis with R and GGobi**—❖Hadley Wickham, Iowa State University

4:45 p.m. **spBayes: An R Package for Univariate and Multivariate Hierarchical Point-Referenced Spatial Models**—❖Andrew Finley, The University of Minnesota; Sudipto Banerjee, The University of Minnesota; Brad Carlin, The University of Minnesota

5:05 p.m. **A Flexible Variable Selection Algorithm for the Cox Model with High-Dimensional Data**—❖Alexander Pearson, University of Rochester; Derick R. Peterson, University of Rochester

5:25 p.m. **Floor Discussion**

61 CC-155 D

Open-Ended Questions in Mail, Web, and Telephone Surveys—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics, SSC, WNAR, Social Statistics Section

Organizer(s): Don Dillman, Washington State University

Chair(s): Roberta Sangster, Bureau of Labor Statistics

4:05 p.m. **Effects of Answer Space Size on Responses to Open-Ended Questions in Mail Surveys**—❖Glenn Israel, University of Florida

4:25 p.m. **Improving the Quality of Open-End Questions in Mail, Web, and Telephone Surveys**—❖Don Dillman, Washington State University; Jolene Smyth, Washington State University; Leah M. Christian, The University of Georgia

4:45 p.m. **Impact of Presentation Format of Open-Ended Survey Questions on Response Quality**—❖Steven Swinford, Montana State University

5:05 p.m. **The Influence of Color and Space Constraints on Responses to Open-Ended Questions in Paper Questionnaires**—❖Virginia Lesser, Oregon State University; Lydia Newton, Oregon State University

5:25 p.m. Disc: Fred Lorenz, Iowa State University

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

62 CC-355 A

● ✪ Statistical Methods for Chronic Inflammatory Diseases—Topic-Contributed

WNAR, ENAR, Section on Health Policy Statistics

Organizer(s): Grace Park, University of California, Los Angeles

Chair(s): Bin Zhang, Boston University

4:05 p.m. **Some Statistical Issues in Rheumatology—** ❖Charlie Goldsmith, McMaster University

4:25 p.m. **Meta-Analysis of Clinical Trial Safety Data in Rheumatoid Arthritis (RA) and Other Inflammatory Disease—**❖Yun Chon, Amgen Inc.; Hong A. Xia, Amgen Inc.

4:45 p.m. **Predicting Trends of Radiographic Outcomes Using Baseline Data—**❖Grace Park, University of California, Los Angeles; Weng-Kee Wong, University of California, Los Angeles; Abdelmonem A. Afifi, University of California, Los Angeles; David A. Elashoff, University of California, Los Angeles; Dinesh Khanna, University of Cincinnati; John T. Sharp, University of Washington; Richard H. Gold, University of California, Los Angeles; Harold E. Paulus, University of California, Los Angeles

5:05 p.m. **Estimating the Effect of Treatment on Rates of Unintended Events in Rheumatoid Arthritis: A Case History with Caveats—**❖Mark Lunt, University of Manchester; Daniel H. Solomon, Brigham and Women's Hospital; Deborah P. M. Symmons, University of Manchester; Til Stürmer, Brigham and Women's Hospital

5:25 p.m. Disc: Marlene Egger, University of Utah

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

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

63 CC-355 D

● ✪ Recent Advances in Microarray Data Analysis VI—Contributed

Biometrics Section

Chair(s): James L. Rosenberger, The Pennsylvania State University

4:05 p.m. **Smoothing Spline Mixed Effects Modeling of Multifactorial Gene Expression Profiles—** ❖Brandon Smith, University of Illinois; Sandra Rodriguez-Zas, University of Illinois at Urbana-Champaign; Bruce Southey, University of Illinois at Urbana-Champaign

4:20 p.m. **Estimating Absolute Transcript Concentration for Microarrays Using Langmuir Adsorption Theory—** ❖Min Mo, University of Texas at Arlington

4:35 p.m. **Positive and Negative Association Rules of Gene Coexpression Patterns—**❖Sandra Rodriguez-Zas, University of Illinois at Urbana-Champaign; Bruce Southey, University of Illinois at Urbana-Champaign; Younhee Ko, University of Illinois at Urbana-Champaign; Chengxiang Zhai, University of Illinois at Urbana-Champaign

4:50 p.m. **Model-Based Background Correction for Illumina Microarray Data—**❖Yang Xie, The University of Texas Southwestern Medical Center at Dallas; Lianghao Ding, The University of Texas Southwestern Medical Center at Dallas; Michael Story, The University of Texas Southwestern Medical Center at Dallas; Guanghua Xiao, The University of Texas Southwestern Medical Center at Dallas

5:05 p.m. **An Efficient Mixture Model Approach To Characterize Gene Pathways Using Bayesian Networks—**❖Younhee Ko, University of Illinois at Urbana-Champaign; Sandra Rodriguez-Zas, University of Illinois at Urbana-Champaign; Chengxiang Zhai, University of Illinois at Urbana-Champaign

5:20 p.m. **Penalties Paid for Ignoring the Correlation Between Intensity Channels in Gene-Expression Analysis—** ❖Sang-Hoon Cho, University of Wisconsin-Madison; Michael Kosorok, The University of North Carolina at Chapel Hill; Richard A. Johnson, University of Wisconsin-Madison

5:35 p.m. **ANCOVA-Based Normalization Method for cDNA Microarrays—**❖Natalia Tchetcherina, The Pennsylvania State University; James L. Rosenberger, The Pennsylvania State University

64 CC-155 C

● ✪ Longitudinal Data Analysis—Contributed

Biometrics Section, Biopharmaceutical Section, Section on Health Policy Statistics

Chair(s): LeAnna G. Stork, Monsanto Company

4:05 p.m. **Inference for Intraclass Correlation Models with Missing Responses at Random—**❖Kai Fun Yu, National Institutes of Health; Mixia Wu, National Institutes of Health; Aiyi Liu, National Institutes of Health

4:20 p.m. **Comparing Approaches for Predicting Prostate Cancer from Longitudinal Data—**❖Christopher Morrell, Loyola College in Maryland**;** Larry J. Brant, National Institute on Aging**;** Shan L. Sheng, National Institute on Aging

4:35 p.m. **Improving the Efficiency of Estimators for Treatment Effect in Two-Arm Randomized Trials Using Auxiliary Covariates—**❖Min Zhang, North Carolina State University

4:50 p.m. **Moving Block Bootstrap for Analyzing Longitudinal Data—**❖Hyunsu Ju, The University of Texas Medical Branch**;** Suojin Wang, Texas A&M University

5:05 p.m. **Comparison of Design-Based and Model-Based Methods to Estimate the Cluster Effect Using National Population Health Survey Data (1994–2003)—**❖Sunita Ghosh, University of Saskatchewan**;** Punam Pahwa, University of Saskatchewan

5:20 p.m. **Highly Efficient Longitudinal Designs That Are Robust Against Mis-specification of the Model—**❖Shirley Ortega Azurduy, Maastricht University**;** Frans Tan, Maastricht University**;** Martijn P. F. Berger, University of Maastricht

5:35 p.m. **Solving Structured Maximum Likelihood Estimating Equations for Nested Marginal Discrete Longitudinal Models—**❖Arunava Chakravartty, University of California, Riverside

65 CC-255 F

● ✪ Statistical Issues Related to Categorical Data in Clinical Trials—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Richard McNally, Pharmion Corp.

4:05 p.m. **Sample Size Determination for Binomial Endpoints Based on the Width of the Confidence Interval in Phase IIA Clinical Trials—**❖Tai-Tsang Chen, Bristol-Myers Squibb Company**;** Vishwanath Iyer, Novartis Healthcare Pvt. Ltd**;** Aparna B. Anderson, Bristol-Myers Squibb Company

4:20 p.m. **Sample Size Estimation for the Phase III Confirmatory Clinical Trials Considering the Uncertainty of the Effect Size—**❖Zhe Shang, Novartis Pharmaceuticals**;** Yawei Zhang, University of Pennsylvania

4:35 p.m. **Small-Sample Tests for Efficacy in Fixed-Dose Drug Combination Studies—**❖Melinda M. Holt, Sam Houston State University**;** Jesse Linder, Southeastern Louisiana University**;** Ferry Butar Butar, Sam Houston State University

4:50 p.m. **Extension of the Rank Sum Test for Clustered Data in Vision Clinical Trials—**❖Ratna Ramaswamy, Johnson & Johnson PRD**;** Gary Koch, The University of North Carolina at Chapel Hill**;** Ram Ganeshan, Statistical Consultant

5:05 p.m. **Estimation of Diagnostic Accuracy Measures for a Binocular Test—**❖Daniel Bonzo, Altus Pharmaceuticals, Inc.**;** Alexander R. de Leon, University of Calgary

5:20 p.m. **Exposure Adjusted Incidence and Event Rates in Safety Analysis—**❖Li Chen, Amgen Inc.**;** Xin He, University of Missouri-Columbia**;** Lei Lei, Amgen Inc.**;** Hong A. Xia, Amgen Inc.

5:35 p.m. **Conditional Confidence Intervals for p1-p2 and p1/p2 Using a Generalized Fisher's Exact Test—** Devan V. Mehrotra, Merck & Co., Inc.**;** ❖Arthur Roth, Pfizer Inc.

66 CC-355 F

● ✪ Use of Bayesian Statistics in Phase-I Clinical Studies—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Afisi S. Ismaila, McMaster University

4:05 p.m. **Maximum Likelihood Methods for Optimal Treatment Schedule-Finding in Clinical Trials—**❖Changying Liu, University of Michigan**;** Thomas M. Braun, University of Michigan

4:20 p.m. **Power and Sample Size for Dose Proportionality Studies—**❖Ilsung Chang, Johnson & Johnson PRD**;** Jaya Natarajan, Johnson & Johnson PRD

4:35 p.m. **Elicitation of Expert Opinion and Bayesian Fitting of a Logistic Dose-Response Curve—**❖Les Huson, GNB Limited**;** Nelson Kinnersley, Roche Products Limited

4:50 p.m. **A Discussion on Operational Characteristics in Bayesian Clinical Trials—**❖Xin Zhao, Merck & Co., Inc.

5:05 p.m. **EWOC Online: An Interactive Web Tool for Dose Escalation in Cancer Phase I Clinical Trials—**❖Zhiheng Xu, Emory University**;** Haibin Wang, Emory University**;** Mourad Tighiouart, Emory University**;** André Rogatko, Emory University

5:20 p.m. **Semiparametric Mixed Analysis on PK/PD Models Using Differential Equations—**❖Yi Wang, University of Nebraska-Lincoln**;** Kent Eskridge, University of Nebraska-Lincoln**;** Shunpu Zhang, University of Nebraska-Lincoln

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

67 CC-355 C

● Longitudinal Data Analysis—Contributed

ENAR, Section on Health Policy Statistics, Biometrics Section

Chair(s): Nathan Tintle, Hope College

4:05 p.m. **Pool-Testing Samples with Random Intercept—**❖Peng Chen, University of South Carolina**;** Joshua M. Tebbs, University of South Carolina

4:20 p.m. **Multiple Parameter Combination of Between-Cluster and Within-Cluster Regression Coefficient Estimates—**❖Julie A. Stoner, University of Nebraska Medical Center**;** Brian G. Leroux, University of Washington

4:35 p.m. **Combined Linkage and Association Mapping of Quantitative Trait Loci with Missing Genotype Data—**Ruzong Fan, Texas A&M University**;** ❖Lian Liu, Texas A&M University**;** Jeesun Jung, Indiana University**;** Ming Zhong, Texas A&M University

4:50 p.m. **Analyzing Correlated Data with Partial and Small Clusters—**❖Xianqun Luan, The Children's Hospital of Philadelphia**;** Avital Cnaan, The Children's Hospital of Philadelphia

5:05 p.m. **Using the Power of an F-Test To Compare Designs for Response Surface Models with Random Block Effects—**❖Sourish Saha, University of Florida**;** Andre I. Khuri, University of Florida

5:20 p.m. **Minimum Hellinger Distance Estimation of Finite Mixtures of Generalized Linear Models—**❖Jing Shen, IBM T.J. Watson Research Center**;** Daniel Hall, University of Georgia**;** Chenhua Zhang, University of Georgia

5:35 p.m. **Design and Analysis of Multiple Control Arm Studies—**❖Laura Johnson, National Institutes of Health**;** Catherine M. Stoney, National Institutes of Health

68 CC-250 B

● ✪ Hardware, Software, and Algorithms—Contributed

Section on Statistical Computing, Section on Statistical Graphics

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

4:05 p.m. **WISDOM for µStat: Web-Based Support for the Analysis of Multivariate Hierarchical Data—**❖Knut M. Wittkowski, The Rockefeller University

4:20 p.m. **Creating Statistical Web Services Using ASP.NET—**❖Neil Polhemus, StatPoint, Inc.

4:35 p.m. **Grid Computing—**❖Abdullah Alnoshan, George Washington University**;** Shmuel Rotenstreich, George Washington University**;** Yasmin H. Said, George Mason University**;** Edward Wegman, George Mason University**;** Adil Rajput, BearingPoint

4:50 p.m. **Access Control Model for E-Learning System—**❖Fahad Bin Muhaya, Imam University**;** Yasmin H. Said, George Mason University

5:05 p.m. **A Web-Based Program for Computing Percentage Points of Pearson Distributions—**❖Wei Pan, University of Cincinnati**;** Haiyan Bai, University of Central Florida**;** Shengbao Chen, JMW Truss & Components

5:20 p.m. **minSpline: An R Package for Fitting Splines—**❖Sundar Dorai-Raj, PDF Solutions, Inc.**;** Spencer Graves, PDF Solutions, Inc.

5:35 p.m. **Calculating the Interatomic Distance Distribution from Small-Angle X-Ray Scattering via Curve Averaging—**❖Lanqing Hua, Purdue University**;** Alan Friedman, Purdue University**;** Chris Bailey-Kellogg, Dartmouth University**;** Bruce Craig, Purdue University

69 CC-155 E

● Section on Statistics in Sports Contributed—Contributed

Section on Statistics in Sports

Chair(s): Michael S. Anderson, Battelle

4:05 p.m. **The Distribution and Simulation of Baseball Winning Percentages—**❖Richard Auer, Loyola College in Maryland

4:20 p.m. **Assessing Pitcher and Catcher Influences on Base Stealing in Major League Baseball—**❖Thomas M. Loughin, Simon Fraser University**;** Jason Bargen, Sprint Nextel

4:35 p.m. **Sorting Algorithms and Sport Tournaments—**❖Hans Block, KTH, Stockholm, Sweden

4:50 p.m. **Batter-Pitcher Matchups in Baseball—**❖Hal Stern, University of California, Irvine**;** Adam Sugano, University of California, Los Angeles

5:05 p.m. **Statistical Analysis in One-Day Cricket—**❖Wathurawa A. Bandulasiri, Sam Houston State University**;** Ferry Butar Butar, Sam Houston State University

5:20 p.m. **A Bayesian Approach to Ranking Women's College Hockey Teams—**❖Michael Rutter, The Pennsylvania State University, Erie

5:35 p.m. **Bivariate Score Plots—**❖Rafe Donahue, Vanderbilt University**;** Tatsuki Koyama, Vanderbilt University**;** Jeff Horner, Vanderbilt University**;** Cole Beck, Vanderbilt University

70 CC-257

● ✪ Small Area Estimation: Techniques and Applications—Contributed

Section on Survey Research Methods, Social Statistics Section

Chair(s): James Knaub, Energy Information Administration

4:05 p.m. **Hierarchical Bayes Small-Area Estimates of Adult Literacy Using Unmatched Sampling and Linking Models—**❖Leyla Mohadjer, Westat**;** J. N. K. Rao, Carleton University**;** Benmei Liu, Westat**;** Thomas Krenzke, Westat**;** Wendy VanDeKerckhove, Westat

4:20 p.m. **Hierarchical Bayes Modeling of Survey-Weighted, Small-Area Proportions—**❖Benmei Liu, Westat**;** Graham Kalton, Westat**;** Partha Lahiri, University of Maryland

4:35 p.m. **A Simple Computational Method for Estimating Mean Squared Prediction Error in General Small-Area Model—**❖Snigdhansu Chatterjee, The University of Minnesota**;** Partha Lahiri, University of Maryland

4:50 p.m. **On Comparison of Different MSE Estimators in Small-Area Estimation—**❖En-Tzu Tang, University of California, Davis**;** Jiming Jiang, University of California, Davis

5:05 p.m. **The Cumulative Distribution Function (CDF) Adjustment Method Applied to Small-Area Estimates of Serious Psychological Distress in the National Survey on Drug Use and Health (NSDUH)—**❖Jeremy Aldworth, RTI International**;** Neeraja Sathe, RTI International**;** Misty Foster, RTI International

5:20 p.m. **Expedient Small-Area Estimation via Proportional Odds Ratio Log-Linear Models—**❖Lei Li, RTI International**;** Paul S. Levy, RTI International

5:35 p.m. **Small-Area Estimation for a Survey of High School Students in Iowa—**❖Lu Lu, Iowa State University**;** Michael D. Larsen, Iowa State University

71 CC-260

● ✪ Ancillary Data in Survey Design and Estimation—Contributed

Section on Survey Research Methods, Social Statistics Section

Chair(s): David R. Judkins, Westat

4:05 p.m. **Handling Imperfect Overlap Identification in a Dual-Frame Survey—**❖Jay Clark, Westat**;** Marianne Winglee, Westat**;** Benmei Liu, Westat

4:20 p.m. **Using the Statistics of Income Division's Sample Data To Reduce Measurement and Processing Errors in Small-Area Estimates Produced from Administrative Tax Records—**❖Kimberly A. Henry, Internal Revenue Service**;** Robin Fisher, U.S. Department of the Treasury**;** Partha Lahiri, University of Maryland

4:35 p.m. **An Empirical Evaluation of Various Direct, Synthetic, and Traditional Composite Small-Area Estimators—**❖William Chen, Internal Revenue Service**;** Kimberly A. Henry, Internal Revenue Service**;** Michael Strudler, Internal Revenue Service

4:50 p.m. **Using Administrative Records To Avoid Survey Data Capture Errors—**❖Tim Withum, Lockheed Martin Corporation

5:05 p.m. **Optimal Estimators for Two-Phase Sample Designs—**❖Stephen Ash, U.S. Census Bureau

5:20 p.m. Floor Discussion

72 CC-258

● ✪ Advances and Applications in Causal Inference and Multi-Level Modeling—Contributed

Social Statistics Section

Chair(s): Donsig Jang, Mathematica Policy Research, Inc.

4:05 p.m. **Alternative Balance Metrics for Bias Reduction in Matching Methods for Causal Inference—**❖Jasjeet Sekhon, University of California, Berkeley

4:20 p.m. **Causal Inference in Spatial Settings: A Case Study of Community Policing Programs in Chicago—**❖Natalya Verbitsky, University of Michigan**;** Stephen Raudenbush, The University of Chicago

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4:35 p.m. **Can Results from an Observational Study Be Generalized to a Larger Population? A Study of Pathways from Divorce to Illness—**❖Bridget Lavelle, Iowa State University**;** Fred Lorenz, Iowa State University**;** Jean Opsomer, Iowa State University

4:50 p.m. **Students, Teachers, Schools, and ACT Scores—**❖Stephen Ponisciak, Consortium on Chicago School Research

5:05 p.m. **How Well Do Postsecondary Enrichment Programs Prepare High School Students for College? A Multilevel Models Approach—**❖Mack Shelley, Iowa State University**;** Florence Hamrick, Iowa State University**;** Robyn Johnson, Iowa State University

5:20 p.m. **Multilevel Mixture Modeling Applications—** Tihomir Asparouhov, Muthén & Muthén**;** Bengt Muthén, University of California, Los Angeles**;** ❖Shaunna Clark, University of California, Los Angeles

5:35 p.m. **Analyzing the Changes in Repeated Measures Responses in Financial Literacy Education—**❖Xin Shi, University of Manchester**;** Pauline Davis, University of Manchester; Sue Ralph, University of Manchester**;** Valerie Farnsworth, University of Manchester**;** Laura Black, University of Manchester; Afroditi Kalambouka, University of Manchester

Opening Mixer

Sunday, July 29
8:00 p.m.–10:30 p.m.
Salt Palace Convention Center, Ballrooms C-J

✪ Themed Session ● Applied Session ❖ Presenter **CC**-Salt Palace Convention Center **GA**-The Grand America Hotel

MONDAY, JULY 30

Tours

TR05 Crossroads of the West City Tour
9:00 a.m.–12:00 p.m. CC-South Foyer (200 South Street)

TR06 Kennecott Copper Mine and Great Salt Lake
1:00 p.m.–5:00 p.m. CC-South Foyer (200 South Street)

Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. GA-Vienna
***Technometrics* Management Committee (closed)**
Chair(s): Randy R. Sitter, Simon Fraser University

7:00 a.m.–8:30 a.m. GA-Ambassador
SPAIG Committee Meeting (closed)
Chair(s): George Williams, Amgen Inc.

7:00 a.m.–8:30 a.m. GA-Bagatelle
Section on Health Policy Statistics Executive Committee Meeting (closed)
Chair(s): Therese Stukel, Institute for Clinical Evaluative Sciences

7:00 a.m.–8:30 a.m. CC-Kenneth Knight Board Room
Committee on Membership Retention and Recruitment Meeting (closed)
Chair(s): Dayanand Naik, Old Dominion University

7:00 a.m.–8:30 a.m. GA-Sussex
ASA Science Policy Task Force Business Meeting
Chair(s): Virginia A. de Wolf, Consultant

7:00 a.m.–8:30 a.m. GA-Embassy
Section on Government Statistics Executive Committee Meeting (closed)
Chair(s): Steve H. Cohen, National Science Foundation

7:00 a.m.–8:30 a.m. GA-Milano
Survey Review Committee Annual Meeting
Chair(s): Virginia Lesser, Oregon State University

7:00 a.m.–8:30 a.m. GA-Fontainbleau
Section on Statistical Graphics Executive Committee (closed)
Chair(s): Jeffrey Solka, Naval Surface Warfare Center

7:00 a.m.–8:30 a.m. GA-Venice
ASA-MAA Joint Committee on Undergraduate Statistics Meeting
Chair(s): Robin Lock, St. Lawrence University

7:00 a.m.–8:30 a.m. GA-Tuscany
Section on Teaching Statistics in the Health Sciences Executive Committee Meeting (closed)
Chair(s): Marlene Egger, University of Utah

7:00 a.m.–9:00 a.m. GA-Versailles
ASA/SIAM Book Series Editorial Board Meeting (closed)
Chair(s): Sara Murphy, Society for Industrial and Applied Mathematics

7:00 a.m.–9:00 a.m. GA-Provence
Social Statistics Section Executive Board Meeting (closed)
Chair(s): Jennifer Madans, National Center for Health Statistics

7:00 a.m.–6:00 p.m. CC-252 A, CC-252B
Speaker Work Rooms

7:00 a.m.–11:00 p.m. CC-South Foyer
Cyber Center

7:30 a.m.–8:30 a.m. GA-Grenoble
Council of Chapters International Science and Engineering Fair (ISEF) Breakfast Meeting (closed)
Chair(s): S. Lynne Stokes, Southern Methodist University

✪ Themed Session ● Applied Session ❖ Presenter **CC**-Salt Palace Convention Center **GA**-The Grand America Hotel

7:30 a.m.–8:30 a.m. GA-Belvedere
Deming Lectureship Committee Business Meeting (closed)
Chair(s): William H. Woodall, Virginia Polytechnic Institute and State University; Nicholas I. Fisher, University of Sydney

7:30 a.m.–9:00 a.m. GA-Murano Garden Salon
Carnegie Mellon Alumni and Faculty Breakfast (closed)
Organizer(s): Margie Smykla, Carnegie Mellon University

7:30 a.m.–12:00 p.m. GA-Riviera
Biopharmaceutical Section Executive Committee Meeting (closed)
Chair(s): Brian L. Wiens, Gilead Colorado

7:30 a.m.–6:00 p.m. CC-South Foyer
JSM Main Registration and ASA Membership/Special Assistance Desk

8:00 a.m.–9:30 a.m. GA-Audubon
Committee on Applied Statisticians Annual Business Meeting
Chair(s): Mani Y. Lakshminarayanan, Pfizer Inc.

8:00 a.m.–6:00 p.m. CC-Main Lobby, Level 2
Salt Lake City Visitors Information Center

8:00 a.m.–6:00 p.m. CC-Exhibit Hall C
Career Placement Service

8:00 a.m.–6:00 p.m. CC-Exhibit Hall D
Exhibitor Lounge

8:00 a.m.–9:00 p.m. GA-Envoy
Meeting Within a Meeting (closed, separate registration required)
Chair(s): Martha Aliaga, American Statistical Association

8:30 a.m.–9:30 a.m. GA-Grenoble
Council of Chapters Governing Board Planning and Executive Committee Meeting (closed)
Chair(s): J. Lynn Palmer, The University of Texas M. D. Anderson Cancer Center

8:30 a.m.–9:30 a.m. GA-Grenoble Side Room
Council of Chapters Chapter Status Meeting (closed)
Chair(s): June Morita, University of Washington

9:00 a.m.–10:00 a.m. GA-Milano
Transportation Statistics Interest Group Meeting
Organizer(s): Promod Chandhok, Bureau of Transportation Statistics

9:00 a.m.–10:30 a.m. GA-Sussex
***JASA* Editors Meeting (closed)**
Chair(s): Lisa Hisel, American Statistical Association

9:00 a.m.–5:00 p.m. CC-South Foyer
ASA Marketplace

9:00 a.m.–6:00 p.m. CC-Exhibit Hall D
EXPO 2007

9:00 a.m.–6:00 p.m. CC-Exhibit Hall D
ASA Booth #101

9:30 a.m.–2:00 p.m. GA-Provence
Council of Chapters Governing Board Meeting (closed)
Chair(s): J. Lynn Palmer, The University of Texas M. D. Anderson Cancer Center

10:00 a.m.–11:30 a.m. GA-Savoy
ASA Caucus of Academic Representatives Meeting
Chair(s): Kenneth Koehler, Iowa State University

10:15 a.m.–10:45 a.m. CC-Various Locations
JSM Coffee Break Sponsored by GfK

10:30 a.m.–1:45 p.m. GA-Versailles
JSM 2008 Program Committee Meeting
Chair(s): Russell Lenth, The University of Iowa

12:00 p.m.–2:00 p.m. GA-Vienna
IMS Editors Meeting I (closed)
Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics

12:00 p.m.–2:00 p.m. GA-Fontainbleau
IMS Editors Meeting II (closed)
Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics

12:30 p.m.–2:00 p.m. GA-Belvedere
Section on Statistical Computing Executive Committee Meeting (closed)
Chair(s): John F. Monahan, North Carolina State University

✪ Themed Session ● Applied Session ❖ Presenter **CC**-Salt Palace Convention Center **GA**-The Grand America Hotel

12:30 p.m.–2:00 p.m. GA-Embassy
Committee on Gay and Lesbian Concerns in Statistics Business Meeting
Chair(s): Barry Johnson, Internal Revenue Service

12:30 p.m.–2:00 p.m. GA-Sussex
Section on Bayesian Statistical Science Executive Business Meeting (closed)
Chair(s): Dipak Dey, University of Connecticut

12:30 p.m.–2:00 p.m. GA-Tuscany
University of Missouri-Columbia Statistics Luncheon ($20 fee required at the door)
Organizer(s): Nancy Flournoy, University of Missouri-Columbia

12:30 p.m.–2:00 p.m. GA-Audubon
***Statistics in Medicine* Editorial Board Meeting and Luncheon (closed)**
Organizer(s): Ralph B. D'Agostino, Sr., Boston University

12:30 p.m.–2:00 p.m. GA-Grenoble
***Journal of Computational and Graphical Statistics* Management Committee Meeting (closed)**
Chair(s): Dianne Cook, Iowa State University

2:30 p.m.–4:00 p.m. CC-Kenneth Knight Board Room
Current Index to Statistics Management Committee Meeting (closed)
Chair(s): Duncan Murdoch, University of Western Ontario

3:40 p.m.–4:00 p.m. CC-254 C
Presentation of 2007 Roger Herriot Award with Reception (open)
Chair(s): Daniel H. Weinberg, U.S. Census Bureau

4:00 p.m.–6:00 p.m. CC-155 C
CAUSE Activists Meeting (closed)
Organizer(s): Dennis K. Pearl, The Ohio State University

4:30 p.m.–6:00 p.m. GA-Belvedere
Section on Nonparametric Statistics Executive Committee Meeting (closed)
Chair(s): Pranab K. Sen, The University of North Carolina at Chapel Hill

5:00 p.m.–6:00 p.m. CC-250 C
Medical Devices Statistics Group Annual Meeting
Organizer(s): Estelle Russek-Cohen, U.S. Food and Drug Administration

5:00 p.m.–6:30 p.m. CC-Kenneth Knight Board Room
Section on Risk Analysis Business Meeting
Chair(s): Robert Stine, University of Pennsylvania

5:00 p.m.–6:30 p.m. GA-Milano
***Journal of Quality Technology* Editorial Review Board Meeting (closed)**
Organizer(s): Enrique del Castillo, The Pennsylvania State University

5:00 p.m.–7:00 p.m. GA-Fontainbleau
Statistical Society of Canada Reception (all are welcome)
Organizer(s): Christian Genest, Université Laval

5:00 p.m.–7:00 p.m. GA-Savoy
NISS/SAMSI Reception
Organizer(s): Alan Karr, National Institute of Statistical Sciences

5:00 p.m.–8:00 p.m. GA-Tuscany
Texas A&M University Aggie Reunion (closed)
Organizer(s): Simon Sheather, Texas A&M University

5:30 p.m.–7:00 p.m. GA-Audubon
Caucus for Women in Statistics Reception
Organizer(s): Tena Katsaounis, The Ohio State University

5:30 p.m.–7:00 p.m. Off Property-Squatters Pub Brewery
Section on Health Policy Statistics Business Meeting/ Mixer
Chair(s): Therese Stukel, Institute for Clinical Evaluative Sciences

5:30 p.m.–7:00 p.m. GA-Provence
Christian Statisticians Informal Discussion
Organizer(s): Robert W. Mee, University of Tennessee

5:30 p.m.–7:00 p.m. GA-Embassy
Section on Statistics in Epidemiology Executive Committee Meeting (closed)
Chair(s): Lisa M. Sullivan, Boston University

5:30 p.m.–7:00 p.m. CC-155 B
Biometrics Section Business Meeting
Chair(s): Thomas R. Tenhave, University of Pennsylvania

5:30 p.m.–7:00 p.m. CC-Ballroom A
The University of North Carolina at Chapel Hill Department of Biostatistics Alumni and Current Faculty and Student Reception
Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill

5:30 p.m.–7:00 p.m. CC-150 A-C
Section on Statistics in Sports Business Meeting
Chair(s): Scott Evans, Harvard University

5:30 p.m.–7:00 p.m. GA-Venice
Section on Teaching Statistics in the Health Sciences Business Meeting/Mixer
Chair(s): Marlene Egger, University of Utah

5:30 p.m.–7:30 p.m. GA-Riviera
Section on Quality and Productivity Strategic Planning Meeting (closed)
Chair(s): William Guthrie, National Institute of Standards and Technology

5:30 p.m.–7:30 p.m. GA-Vienna
Social Statistics Section Business Meeting and Social
Chair(s): Jennifer Madans, National Center for Health Statistics

5:45 p.m.–6:45 p.m. CC-Ballroom D
ASA President's Invited Speaker Reception (closed, by invitation only)
Chair(s): Mary Ellen Bock, Purdue University

6:00 p.m.–7:30 p.m. GA-Grand Salon
Google Reception
Organizer(s): Kate Macevicz, Google

6:00 p.m.–7:30 p.m. GA-Venezia Garden Salon
JSM Student Mixer (students only, included in registration fee)
Chair(s): Dayanand Naik, Old Dominion University

6:00 p.m.–7:30 p.m. CC-151 A-C
CDC & ATSDR Statisticians Open Meeting
Organizer(s): Timothy Green, Centers for Disease Control and Prevention

6:00 p.m.–8:00 p.m. GA-Ambassador
Section on Survey Research Methods Executive Committee Meeting (closed)
Chair(s): William D. Kalsbeek, The University of North Carolina at Chapel Hill

6:00 p.m.–8:00 p.m. CC-151 D-F
Korean Statisticians Annual Meeting (closed)
Organizer(s): Sin-Ho Jung, Duke University

6:00 p.m.–8:00 p.m. GA-Sussex
Eli Lilly Faculty Reception (closed, by invitation only)
Organizer(s): Todd Sanger, Eli Lilly and Company

6:30 p.m.–7:00 p.m. CC-Kenneth Knight Boardroom
Section on Risk Analysis Executive Committee Meeting
Chair(s): Robert Stine, University of Pennsylvania

6:30 p.m.–7:30 p.m. GA-Murano Garden Salon
ASA Long-Time Member Reception (closed, by invitation only)
Chair(s): Dayanand Naik, Old Dominion University

6:30 p.m.–8:30 p.m. GA-Versailles
University of Washington Alumni Reception
Organizer(s): Xiao-Hua (Andrew) Zhou, University of Washington

6:30 p.m.–9:00 p.m. GA-Bagatelle
Southern Methodist University Alumni Social (closed)
Organizer(s): Wayne Woodward, Southern Methodist University

7:00 p.m.–9:00 p.m. CC-254 B
Careers at Merck Research Laboratories (closed, by invitation only)
Organizer(s): Beverly Jacobsen, Merck & Co., Inc.

7:30 p.m.–10:00 p.m. CC-Ballroom C
Joint Sections on Statistical Computing and Graphics Business Meeting and Mixer
Chair(s): John F. Monahan, North Carolina State University; Jeffrey Solka, Naval Surface Warfare Center

9:30 p.m.–11:00 p.m. CC-Ballroom A

IMS Presidential Address Reception

Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics

Continuing Education (Fee Events)

CE_15C

Categorical Data Analysis

8:00 a.m.–12:00 p.m. CC-151 D-F

ASA

Instructor(s): Charles S. Davis, CSD Biostatistics

CE_16C

Multiple Comparisons and Multiple Tests

8:30 a.m.–5:00 p.m. CC-151 G

ASA

Instructor(s): Peter Westfall, Texas Tech University

CE_17C

Analysis of Clinical Trials: Theory and Applications

8:30 a.m.–5:00 p.m. CC-150 G

Biopharmaceutical Section, ASA

Instructor(s): Christy Chuang-Stein, Pfizer Inc.; Alex Dmitrienko, Eli Lilly and Company; Geert Molenberghs, Hasselt University

CE_18C

Temporal Alerting Algorithms for Biosurveillance

8:30 a.m.–5:00 p.m. CC-150 A-C

Section on Statisticians in Defense and National Security, Section on Risk Analysis, Section on Quality and Productivity, ASA

Instructor(s): Howard S. Burkom, The Johns Hopkins University; David Banks, Duke University

CE_19C

Practical Bayesian Clinical Trial Design

8:30 a.m.–5:00 p.m. CC-150 D-F

Section on Bayesian Statistical Science, ASA

Instructor(s): Peter F. Thall, The University of Texas M. D. Anderson Cancer Center

CE_20C

Classification and Regression Trees

8:30 a.m.–5:00 p.m. CC-151 A-C

ASA

Instructor(s): Wei-Yin Loh, University of Wisconsin-Madison

CE_21C

Meta-Analysis: Statistical Methods for Combining the Results of Independent Studies

1:00 p.m.–5:00 p.m. CC-151 D-F

ASA

Instructor(s): Ingram Olkin, Stanford University

Roundtables with Coffee 7:00 a.m.–8:15 a.m.

73 **CC-Ballroom D**

ASA Council of Chapters Roundtable with Coffee (fee event)

Council of Chapters

Organizer(s): V. A. Samaranayake, University of Missouri-Rolla

ML01 **Reaching Out to the K–12 Community—**❖Jerry Moreno, John Carroll University

74 **CC-Ballroom D**

Section on Statistical Education Roundtable with Coffee (fee event)

Section on Statistical Education

Organizer(s): Jacqueline Miller, The Ohio State University

ML02 **Successful Group Projects—**❖David Zeitler, Grand Valley State University

75 **CC-Ballroom D**

Section on Statistics and the Environment Roundtables with Coffee (fee event)

Section on Statistics and the Environment

Organizer(s): Andrew B. Lawson, University of South Carolina

ML03 **Hierarchical Spatial Models Bridging Ecology and Public Health—**❖Lance Waller, Emory University

ML04 **What's the Future for Point Process Modeling in Ecology?—**❖Philip Dixon, Iowa State University

76 **CC-Ballroom D**

Section on Statistics in Epidemiology Roundtable with Coffee (fee event)

Section on Statistics in Epidemiology

Organizer(s): William E. Barlow, Cancer Research and Biostatistics

ML05 **Building and Using Disease Prediction Models in the Real World—**❖Heejung Bang, Cornell University

77 CC-Ballroom D

Section on Statistics in Sports Roundtable with Coffee (fee event)

Section on Statistics in Sports

Organizer(s): Michael Schell, Moffitt Cancer Center

ML06 **Moneyball and the NFL: Can It work?—**❖Keith Schleicher, Capital One

78 CC-Ballroom D

Section on Survey Research Methods Statistics Roundtable with Coffee (fee event)

Section on Survey Research Methods

Organizer(s): David Marker, Westat

ML07 **Web Panels: The Future of Survey Research?—**❖Karol Krotki, RTI International

79 CC-Ballroom D

Section on Teaching Statistics in the Health Sciences Roundtable with Coffee (fee event)

Section on Teaching Statistics in the Health Sciences

Organizer(s): Jodi Lapidus, Oregon Health & Science University

ML08 **Teaching Community Collaborators To Understand Health Research Methods and Results—**❖Katrina Ramsey, Northwest Portland Area Indian Health Board

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

80 CC-Ballroom B

Introductory Overview Lecture 2: Statistical Machine Learning and Its Applications in Bioinformatics—Other

ASA, IMS, ENAR, WNAR, SSC, Section on Nonparametric Statistics, Section on Statisticians in Defense and National Security

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. **Some Recent Advances in Classification: A Statistical Perspective—**❖Ji Zhu, University of Michigan

9:20 a.m. **Applications of Statistical Machine-Learning to Modern Biological Datasets—**❖Jon D. McAuliffe, University of Pennsylvania

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

Invited Sessions 8:30 a.m.–10:20 a.m.

81 CC-255 B

● ✪ Statistical Methods for Gene Regulatory Networks—Invited

Biometrics Section, ENAR, Section on Statistics in Epidemiology

Organizer(s): Tian Zheng, Columbia University

Chair(s): Ying Wei, Columbia University

8:35 a.m. **Bayesian Error Analysis Model for Reconstructing Transcriptional Regulatory Networks—**❖Ning Sun, Yale University**;** Raymond J. Carroll, Texas A&M University**;** Hongyu Zhao, Yale University

9:00 a.m. **Studying Coregulation and Inter-regulation of Genes via eQTL Mapping—**❖Tian Zheng, Columbia University

9:25 a.m. **Self-Correcting Maps of Molecular Pathways—**❖Andrey Rzhetsky, Columbia University**;** Tian Zheng, Columbia University**;** Chani Weinreb, Columbia University

9:50 a.m. **Using Sequence Information to Predict Gene Regulation—**❖Jun S. Liu, Harvard University**;** Qing Zhou, University of California, Los Angeles

10:15 a.m. **Floor Discussion**

82 CC-250 D

● ✪ Administrative Records and Data Integration—Invited

Section on Government Statistics, Section on Survey Research Methods, Social Statistics Section

Organizer(s): Jeremy Wu, U.S. Census Bureau

Chair(s): Donald B. Rubin, Harvard University

8:35 a.m. **Maintaining Confidentiality in Administrative and Integrated Databases—**Jerome P. Reiter, Duke University**;** ❖Satkartar Kinney, Duke University

9:00 a.m. **Synthetic Data for Administrative Record Applications at LEHD—**❖Jeremy Wu, U.S. Census Bureau**;** John Abowd, Cornell University

9:25 a.m. **Synthetic Data Disclosure Control for American Community Survey Group Quarters—**❖Rolando Rodríguez, U.S. Census Bureau**;** Robert H. Creecy, U.S. Census Bureau

9:50 a.m. Disc: Alan R. Tupek, U.S. Census Bureau

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

83 CC-258

Recent Advances in Survival Analysis Beyond Cox Model—Invited

IMS, ENAR, Section on Statistics in Epidemiology, Section on Risk Analysis, Biometrics Section, Biopharmaceutical Section, Section on Physical and Engineering Sciences, WNAR

Organizer(s): Lu Tian, Northwestern University

Chair(s): Lu Tian, Northwestern University

8:35 a.m. **Nonproportional Hazards Models for Censored Data—**❖Zhezhen Jin, Columbia University

9:00 a.m. **Semiparametric Accelerated Failure Time Model with Missing Data—**❖Menggang Yu, Indiana University Purdue University Indianapolis

9:25 a.m. **Rank Regression, Accelerated Failure Time Model, and Empirical Likelihood—**❖Mai Zhou, University of Kentucky

9:50 a.m. **Varying Coefficient Cox Model with Nonparametric Longitudinal Covariates—**❖Jimin Ding, Washington University in St. Louis**;** Jane-Ling Wang, University of California, Davis

10:15 a.m. **Floor Discussion**

84 CC-260

● ✪ Accreditation of Professional Statisticians—Invited

Section on Statistical Consulting, SSC

Organizer(s): Judith-Anne W. Chapman, Queen's University

Chair(s): Ralph G. O'Brien, The Cleveland Clinic

8:35 a.m. **SSC Accreditation: The Canadian Model—**❖Judith-Anne W. Chapman, Queen's University

9:00 a.m. **Academia and the Professional Statistician Community—**❖Mary E. Thompson, University of Waterloo

9:25 a.m. **The ASA Consideration of Accreditation—**❖Mary Batcher, Ernst & Young

9:50 a.m. Disc: Fritz Scheuren, NORC at the University of Chicago

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

85 CC-355 E

● *Biometrics* Editor Invited Session—Invited

WNAR, ENAR, Biometrics Section

Organizer(s): Laurance Freedman, Bar Ilan University; Mike Kenward, London School of Hygiene and Tropical Medicine; Naisyin Wang, Texas A&M University

Chair(s): Geert Molenberghs, Hasselt University

8:35 a.m. **Multilist Population Estimation with Incomplete and Partial Stratification—**❖Jason M. Sutherland, Indiana University Purdue University Indianapolis

9:05 a.m. **Bayesian Hierarchical Spatially Correlated Functional Data Analysis with Application to Colon Carcinogenesis—**❖Veera Baladandayuthapani, The University of Texas M. D. Anderson Cancer Center**;** Bani Mallick, Texas A&M University**;** Raymond J. Carroll, Texas A&M University**;** Mee Young Hong, University of California, Los Angeles**;** Nancy D. Turner, Texas A&M University**;** Joanne R. Lupton, Texas A&M University

9:35 a.m. **Bayesian Methods for Predicting Interacting Protein Pairs Using Domain Information—**Inyoung Kim, Yale University**;** Yin Liu, Yale University**;** ❖Hongyu Zhao, Yale University

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

86 CC-250 EF

● ✪ Exploring Models Interactively—Invited

Section on Statistical Graphics, Section on Teaching Statistics in the Health Sciences, Section on Statistical Consulting

Organizer(s): Antony Unwin, University of Augsburg

Chair(s): Antony Unwin, University of Augsburg

8:35 a.m. **Bayesian Information Analysis—**❖Aleks Jakulin, Columbia University**;** Andrew Gelman, Columbia University

9:00 a.m. **Exploratory Model Analysis: Interactive Graphical Methods for Model Selection and Comparison—**❖Simon Urbanek, AT&T Labs - Research

9:25 a.m. **Grammatical Visualization of Statistical Models—**Graham Wills, SPSS Inc.**;** ❖Chunling Zhang, SPSS Inc.

9:50 a.m. **Exploring Models for Clustering Data—**❖Dianne Cook, Iowa State University

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

87 CC-155 E

● ✪ Under the Microscope: Statistical Methods for Molecular Biology—Invited

General Methodology, Biometrics Section, Section on Statistics in Epidemiology, Section on Statistical Computing, Biopharmaceutical Section

Organizer(s): Elizabeth H. Slate, Medical University of South Carolina

Chair(s): Elizabeth H. Slate, Medical University of South Carolina

8:35 a.m. **Efficient Design and Analysis of Genome-Wide Association Studies—**❖Michael Boehnke, University of Michigan

Monday

9:00 a.m. **Stochastic Search Gene Suggestion: Bayesians and Biology Meet Again!**—❖Michael D. Swartz, The University of Texas M. D. Anderson Cancer Center

9:25 a.m. **Statistical Models of Global Transcription Regulatory Mechanisms in Cancer**—❖Wei Li, Harvard School of Public Health; ❖Xiaole S. Liu, Dana-Farber Cancer Institute

9:50 a.m. **Scale-Based Methods in the Analysis of Proteomic Data**—❖Timothy Randolph, Fred Hutchinson Cancer Research Center

10:15 a.m. **Floor Discussion**

88 CC-155 F

● ✪ Recent Development in Econometric Time Series—Invited

Business and Economics Statistics Section

Organizer(s): Sung K. Ahn, Washington State University

Chair(s): Sung K. Ahn, Washington State University

8:35 a.m. **Cointegration Analysis with Mixed Frequency Data**—❖Byeongchan Seong, Chung-Ang University; Sung K. Ahn, Washington State University; Peter Zadrozny, Bureau of Labor Statistics

9:00 a.m. **Studying Interactions Without Multivariate Modeling**—❖Alain Hecq, University of Maastricht; Gianluca Cubadda, University of Tor Vergata; Franz Palm, University of Maastricht

9:25 a.m. **Bayesian Change Point Model for Time Series**—❖Sinsup Cho, Seoul National University; Juwon Kim, Seoul National University; Seungmin Nam, Samsung Fire & Marine Insurance Co., LTD

9:50 a.m. **A Unifying Framework for Analyzing Common Cyclical Features in Cointegrated Time Series**—❖Gianluca Cubadda, University of Tor Vergata

10:15 a.m. **Floor Discussion**

89 CC-255 E

Causal Effects of Individualized Treatment Rules—Invited

IMS, Biometrics Section, WNAR

Organizer(s): Mark J. van der Laan, University of California, Berkeley

Chair(s): Mark J. van der Laan, University of California, Berkeley

8:35 a.m. **Causal Inference in Sequentially Randomized Trials Based on Realistic Individualized Treatment Rules**—❖Oliver Bembom, University of California, Berkeley

9:00 a.m. **Optimal Start of Treatment Based on Time-Dependent Covariates**—❖Judith J. Lok, Harvard School of Public Health; James Robins, Harvard School of Public Health; Miguel A. Hernan, Harvard School of Public Health

9:25 a.m. **Estimation of the Effect of Dynamic Treatment Regimes Under Flexible Dynamic Visit Regimes**—❖Andrea Rotnitzky, Universidad Torcuato Di Tella; Liliana Orellana, Universidad de Buenos Aire

9:50 a.m. Disc: James Robins, Harvard School of Public Health

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

90 CC-251 D

The Importance of Statistical Reasoning in Law and Legal Science—Invited

Committee on Law and Justice Statistics, Section on Nonparametric Statistics, Section on Statistical Consulting

Organizer(s): Joseph L. Gastwirth, George Washington University

Chair(s): Weiwen Miao, Macalester College

8:35 a.m. **Doctrine, District Courts, and Docketology**—❖Alan J. Izenman, Temple University; David Hoffman, Temple University

9:00 a.m. **Two Percentiles in Court: The Zuni School District Case**—❖Joseph L. Gastwirth, George Washington University

9:25 a.m. **Verdict on Verdicts: Statistical Measurement of the Accuracy of Jury Verdicts**—❖Bruce D. Spencer, Northwestern University

9:50 a.m. **The Effect of Serial Correlation on Statistical Evidence in Legal Cases**—❖Yulia R. Gel, University of Waterloo; Weiwen Miao, Macalester College; Joseph L. Gastwirth, George Washington University

10:15 a.m. **Floor Discussion**

Invited Panels 8:30 a.m.–10:20 a.m.

91 CC-251 E

Implementing GAISE in Our Classrooms—Invited

Section on Statistical Education

Organizer(s): Patti Collings, Brigham Young University

Chair(s): Christine Franklin, University of Georgia

Panelists:
- ❖ Carolyn P. Dobler, Gustavus Adolphus College
- ❖ Carolyn K. Cuff, Westminster College
- ❖ E. Jacquelin Dietz, Meredith College

❖ Gary Kader, Appalachian State University
❖ Dexter C. Whittinghill, Rowan University

10:15 a.m. **Floor Discussion**

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

92 CC-251 A

● ✪ Section on Health Policy Statistics Student Award Winners—Topic-Contributed

Section on Health Policy Statistics

Organizer(s): Anirban Basu, The University of Chicago

Chair(s): Bonnie Ghosh-Dastidar, RAND Corporation

8:35 a.m. **Evaluating Bias Correction in Weighted Proportional Hazards Regression—**❖Qing Pan, University of Michigan**;** Douglas Schaubel, University of Michigan

8:55 a.m. **Analysis of Longitudinal Data To Evaluate a Policy Change—**❖Benjamin French, University of Washington**;** Patrick J. Heagerty, University of Washington

9:15 a.m. **Testing for Trends in a Two-State Markov Model with Applications in Smoking Cessation Studies—**❖Charles Minard, The University of Texas M. D. Anderson Cancer Center**;** Wenyaw Chan, The University of Texas at Houston**;** Carol J. Etzel, The University of Texas M. D. Anderson Cancer Center**;** David Wetter, The University of Texas M. D. Anderson Cancer Center

9:35 a.m. **Is Newer Always Better? Re-evaluating the Benefits of Newer Pharmaceuticals—**❖Michael Law, Harvard Medical School/Harvard Pilgrim HealthCare**;** Karen Grépin, Harvard University

9:55 a.m. **Evaluating Predictive Capacity of Continuous Biomarkers—**❖Ying Huang, University of Washington**;** Margaret Pepe, Fred Hutchinson Cancer Research Center**;** Ziding Feng, Fred Hutchinson Cancer Research Center

10:15 a.m. **Floor Discussion**

93 CC-155 A

● ✪ Design and Analysis of Method Transfer Studies in Nonclinical Pharmaceutical Development—Topic-Contributed

Biopharmaceutical Section

Organizer(s): James Schwenke, Boehringer Ingelheim Pharmaceuticals, Inc.

Chair(s): James Colaianne, J&JPRD

8:35 a.m. **Design and Analysis of Analytical Method Transfer Studies—**❖James Schwenke, Boehringer Ingelheim Pharmaceuticals, Inc.

8:55 a.m. **Design and Analysis of Method Transfer Studies in Nonclinical Pharmaceutical Development—**❖Jinglin Zhong, U.S. Food and Drug Administration**;** Yi Tsong, U.S. Food and Drug Administration

9:15 a.m. **Some Useful Experimental Designs in Method Transfer Experiments—**❖Jyh-Ming Shoung, J&JPRD**;** Stan Altan, J&JPRD

9:35 a.m. **Total Error-Based Criterion for Analytical Method Transfer Analyses—**❖Eric Rozet, University of Liege**;** Walthère Dewe, GlaxoSmithKline

9:55 a.m. **Approach To Assess the Equivalence Range for an Analytical Methods Transfer—**❖Rene Kubiak, Boehringer Ingelheim

10:15 a.m. **Floor Discussion**

94 CC-155 C

● ✪ Practical Considerations for Adjustment of Baseline Covariate and Center Effects in Multicenter Clinical Trials—Topic-Contributed

Biopharmaceutical Section, ENAR, WNAR

Organizer(s): Abdul Sankoh, sanofi-aventis

Chair(s): Abdul Sankoh, sanofi-aventis

8:35 a.m. **Exploration of a Treatment-by-Region Interaction in a Clinical Trial Setting: Can the Interaction Be Explained by Clinical Factors?—**❖Cristiana Gassmann-Mayer, Johnson & Johnson PRD**;** Rachel B. Weinstein, Johnson & Johnson PRD**;** Jesse A. Berlin, Johnson & Johnson PRD

8:55 a.m. **Modeling Response, Interaction, and Subgroup Analyses: Some Practical Issues—**❖Mohammad Huque, U.S. Food and Drug Administration**;** Mohamed Alosh, U.S. Food and Drug Administration

9:15 a.m. **Adjusting for Center in the Analysis of Multicenter Clinical Trials—**❖Valerie Durkalski, Medical University of South Carolina

9:35 a.m. **A Simulation Study on Covariate Adjusted Models—**❖Xiaohong Huang, sanofi-aventis**;** Abdul Sankoh, sanofi-aventis

9:55 a.m. **Modeling Longitudinal Count Data with Possibility of Dropouts—**❖Mohamed Alosh, U.S. Food and Drug Administration

10:15 a.m. **Floor Discussion**

95 CC-355 C

● ✪ Analysis of Recurrent Events Data—Topic-Contributed

ENAR, Biometrics Section, Section on Physical and Engineering Sciences, Section on Risk Analysis, WNAR, Section on Statistics in Epidemiology

Organizer(s): Lei Liu, University of Virginia

Chair(s): Xuelin Huang, The University of Texas M. D. Anderson Cancer Center

8:35 a.m. **Semiparametric Analysis of Correlated Recurrent and Terminal Events—**❖Yining Ye, Amgen Inc.; John D. Kalbfleisch, University of Michigan; Douglas Schaubel, University of Michigan

8:55 a.m. **Some Aspects of Recurrent Event Modeling—**❖Edsel A. Pena, University of South Carolina; Akim Adekpedjou, University of South Carolina; Jonathan Quiton, University of South Carolina

9:15 a.m. **A Novel Estimation Method in the Joint Frailty Models of Correlated Survival Data with Informative Censoring—**❖Lei Liu, University of Virginia; Xuelin Huang, The University of Texas M. D. Anderson Cancer Center

9:35 a.m. **General Transformation Models for Joint Analysis of Recurrent Events and Terminal Event—**❖Donglin Zeng, The University of North Carolina at Chapel Hill; Danyu Lin, The University of North Carolina at Chapel Hill

9:55 a.m. **Methods for Modeling the Recurrent Event Mean in the Presence of Time-Varying Covariates and Time-Dependent Effects—**❖Douglas Schaubel, University of Michigan

10:15 a.m. **Floor Discussion**

96 CC-355 F

● ✪ Recent Developments in Bayesian Variable Selection Methods—Topic-Contributed

Section on Bayesian Statistical Science, ENAR, WNAR

Organizer(s): Sujit Ghosh, North Carolina State University

Chair(s): Dipak Dey, University of Connecticut

8:35 a.m. **Bayesian Variable Selection in Gaussian Process for Cox Models—**❖Naijun Sha, University of Texas at El Paso; Marina Vannucci, Texas A&M University; Mahlet G. Tadesse, University of Pennsylvania

8:55 a.m. **Bayesian Variable Selection in Proportional Hazards Models with Frailties—**❖Zhen Chen, University of Pennsylvania

9:15 a.m. **Nonparametric Bayes Local Regression and Variable Selection—**❖Yeonseung Chung, The University of North Carolina at Chapel Hill; David B. Dunson, National Institute of Environmental Health Sciences

9:35 a.m. **A Variable Selection Method for Linear Models Using Modified Zellner's Prior—**❖Arun Krishna, North Carolina State University; Sujit Ghosh, North Carolina State University; Howard D. Bondell, North Carolina State University

9:55 a.m. **A Decision-Theoretic Approach to the Variable Selection Problem—**❖Dhruv Sharma, North Carolina State University; Sujit Ghosh, North Carolina State University

10:15 a.m. **Floor Discussion**

97 CC-254 C

● ✪ Section on Bayesian Statistics Student Paper Competition: New Developments in Bayesian Nonparametrics—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Merlise A. Clyde, Duke University

Chair(s): Taeyoung Park, University of Pittsburgh

8:35 a.m. **Bayesian Inference for Directional Conditionally Autoregressive Models—**❖Minjung Kyung, North Carolina State University

8:55 a.m. **Pattern Search Optimization with a Treed Gaussian Process Oracle—**❖Matthew Taddy, University of California, Santa Cruz; Genetha A. Gray, Sandia National Laboratories; Herbert Lee, University of California, Santa Cruz; Robert Gramacy, University of Cambridge; Monica Martinez-Canales, Sandia National Laboratories

9:15 a.m. **Mixtures of Polya Trees for Flexible Spatial Frailty Survival Modeling—**❖Luping Zhao, The University of Minnesota; Timothy E. Hanson, The University of Minnesota; Brad Carlin, The University of Minnesota

9:35 a.m. **The Nested Dirichlet Process—**❖Abel Rodriguez, Duke University; Alan E. Gelfand, Duke University; David B. Dunson, National Institute of Environmental Health Sciences

9:55 a.m. **Weak Consistency of General Bayesian Kernel Mixture in Density Estimation—**❖Yuefeng Wu, North Carolina State University; Subhashis Ghoshal, North Carolina State University

10:15 a.m. **Floor Discussion**

JSM 2007

IMS

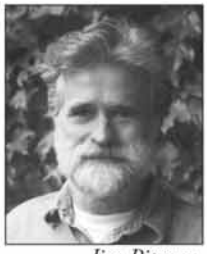
Presidential Address

Monday
July 30, 2007

8:00pm

Convention Center:
Ballroom B

IMS President 2006–07, Jim Pitman, will deliver the 2007 Presidential Address on *"Open access to professional information"*.



Jim Pitman, UC Berkeley

Also this evening:

- Presentation of the 2007 H C Carver Award Medal
- Presentation of New IMS Fellows
- Announcement of 2008 Special Invited Lectures
- Announcement of Laha Award Recipients

Reception immediately following: everyone is welcome

JSM 2007

IMS

Student Mixer

Tuesday
July 31, 2007

5:15–6:45pm

Grand America:
Audubon Room

New Members, New Graduates and Students

All members who have joined the IMS during the past two years, all IMS New Graduate members and all IMS student members are encouraged to attend. Appetizers and an open bar will be available.

If you wish to join the IMS but haven't, please come by the reception where we will have applications available, or you can join online at www.imstat.org.

IMS Membership is ***free*** for students.

A previous New Members' Reception, at JSM Minneapolis

98 CC-255 F

● ✪ Applications of Machine Learning and Network Tomography in Statistics—Topic-Contributed

Section on Physical and Engineering Sciences

Organizer(s): David Mease, San Jose State University

Chair(s): Marvin Gruber, Rochester Institute of Technology

8:35 a.m. **Making the Best Use of Available Data: The Presence-Only Problem in Ecology—**❖Gillian Ward, Stanford University**;** Trevor Hastie, Stanford University

8:55 a.m. **An Iterative Algorithm for Extending Learners to a Semisupervised Setting—**❖Mark Culp, University of Michigan**;** George Michailidis, The University of Michigan

9:15 a.m. **Evidence Contrary to the Statistical View of Boosting—**❖David Mease, San Jose State University

9:35 a.m. **Adversarial Classification—**❖Bowei Xi, Purdue University**;** Murat Kantarcioglu, The University of Texas at Dallas**;** Christopher Clifton, Purdue University

9:55 a.m. **A Somewhat General Framework for Active Network Tomography—**❖Earl Lawrence, Los Alamos National Laboratory

12:15 p.m. **Floor Discussion**

99 CC-250 C

ACS Multi-Year Estimates Methodology and Results—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics, Social Statistics Section, SSC

Organizer(s): Anthony Tersine, U.S. Census Bureau

Chair(s): David C. Whitford, U.S. Census Bureau

8:35 a.m. **Methodology for the Production of American Community Survey Multiyear Estimates—**❖Anthony Tersine, Jr., U.S. Census Bureau**;** Mark Asiala, U.S. Census Bureau

8:55 a.m. **Imbedding Model-Assisted Estimation into ACS Estimation—**❖Robert Fay, U.S. Census Bureau

9:15 a.m. **Analysis of Variance Estimates from American Community Survey Multiyear Estimates—**❖Michael Starsinic, U.S. Census Bureau**;** Anthony Tersine, Jr., U.S. Census Bureau

9:35 a.m. **Statistical Issues and Interpretation of the American Community Survey's One-, Three-, and Five-Year Period Estimates—**❖Michael Beaghen, U.S. Census Bureau

9:55 a.m. Disc: John Thompson, NORC at the University of Chicago

10:15 a.m. **Floor Discussion**

100 CC-355 D

● ✪ Recent Developments in Statistical Methodology for Diagnostic Medicine—Topic-Contributed

WNAR, Biometrics Section, ENAR, Section on Health Policy Statistics

Organizer(s): Jialiang Li, National University of Singapore

Chair(s): Jialiang Li, National University of Singapore

8:35 a.m. **Noniterative, Semiparametric, Least-Squared Method of ROC Curve Estimation—**❖Xiao-Hua (Andrew) Zhou, University of Washington**;** Liansheng Tang, University of Washington

8:55 a.m. **Statistical Methods for Differential Diagnosis of Second Primary Cancers from Metastases—**❖Colin B. Begg, Memorial Sloan-Kettering Cancer Center

9:15 a.m. **Design of Diagnostic Accuracy Studies for PPV and NPV—**❖Jason Fine, University of Wisconsin-Madison**;** David Steinberg, Tel-Aviv University**;** Richard Chappell, University of Wisconsin-Madison

9:35 a.m. **A Unified Approach to Nonparametric Comparison of Receiver Operating Characteristic Curves for Longitudinal and Clustered Data—**Gang Li, University of California, Los Angeles**;** ❖Kefei Zhou, Amgen Inc.

9:55 a.m. Disc: Zhidong Bai, National University of Singapore

10:15 a.m. **Floor Discussion**

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

101 CC-254 A

● Harnessing the Power of the ASA Archives: Preserving and Accessing ASA's Institutional Documentary Heritage—Topic-Contributed

Committee on ASA Archives and Historical Materials, Committee on Committees, Section on Statistical Education, Section on Teaching Statistics in the Health Sciences

Organizer(s): John P. Deley, Energy Information Administration

Chair(s): Carol J. Lancaster, Medical University of South Carolina

Panelists: ❖ Frank J. Potter, Mathematica Policy Research, Inc.

❖ Melissa Gottwald, Iowa State University

❖ John P. Deley, Energy Information Administration

❖ Ken Williams, Utah State Archives and Records Service

10:15 a.m. **Floor Discussion**

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

102 CC-255 C

● ✪ Recent Advances in Microarray Data Analysis V—Contributed

Biometrics Section

Chair(s): Naomi Altman, The Pennsylvania State University

8:35 a.m. **Microarray Gene Expression Analysis of Soybean Genome Using R-Bioconductor—**❖Jean Roayaei, National Institutes of Health

8:50 a.m. **Conjugate Hierarchical Modeling of the Error Variance in Tests for Differential Gene Expression—**❖Jason Obsorne, North Carolina State University

9:05 a.m. **False Discovery Rate in Microarray Studies—**❖Moonsu Kang, The University of North Carolina at Chapel Hill

9:20 a.m. **Sparse Partial Least Squares Regression with an Application to the Genome Scale Transcription Factor Activity Analysis—**❖Hyonho Chun, University of Wisconsin-Madison; Sunduz Keles, University of Wisconsin-Madison

9:35 a.m. **Conservatively Optimal Multiple Testing for Comparative Microarray Experiments—**❖James Signorovitch, Harvard University

9:50 a.m. **Improved Significance of Microarrays—**❖Shunpu Zhang, University of Nebraska-Lincoln

10:05 a.m. **Comparison of Meta-Analytical Approaches for Gene Expression Profiling—**❖Heather Adams, University of Illinois at Urbana-Champaign; Sandra Rodriguez-Zas, University of Illinois at Urbana-Champaign; Bruce Southey, University of Illinois at Urbana-Champaign

103 CC-155 D

● ✪ Analysis of Censored Data and Cox's Model—Contributed

Biometrics Section

Chair(s): Jian-Lun Xu, National Cancer Institute

8:35 a.m. **Minimum Distance Estimation in Two-Sample Scale Problem Under the Partial Koziol-Green Model—**❖Ke Wu, California State University, Fresno

8:50 a.m. **Sensitivity of Cox Regression to Nonignorable Censoring—**❖Tao Liu, Brown University; Daniel F. Heitjan, University of Pennsylvania

9:05 a.m. **Dealing with Tied Observation in Estimating Survival Function—**❖Jiantian Wang, Kean University

9:20 a.m. **Test of Fit to a Semiparametric Bivariate Family with Censored Data—**❖Shulamith Gross, Baruch College/CUNY

9:35 a.m. **Quantile Regression for Censored Point Processes—**❖Rajeshwari Sundaram, National Institute of Child Health and Human Development; Subhashis Ghoshal, North Carolina State University

9:50 a.m. **Multivariate Rank-Order Two-Sample Test for Censored Data: More Intuitive Expression of the Treatment Effect—**❖Edward Mascha, The Cleveland Clinic

10:05 a.m. **CUSUMs Based on the Cox Model To Monitor Outcomes at Multicenter Studies—**❖Pinaki Biswas, University of Michigan; John D. Kalbfleisch, University of Michigan

104 CC-255 A

● ✪ Longitudinal Data and Survival Data Modeling—Contributed

Biometrics Section, Section on Health Policy Statistics

Chair(s): Zonghui Hu, National Institutes of Health

8:35 a.m. **Joint Modeling of Longitudinal and Survival Data Using Penalized Corrected Likelihood—**❖Bo Hu, The Cleveland Clinic; Liang Li, The Cleveland Clinic; Tom Greene, The Cleveland Clinic

8:50 a.m. **Analysis of Longitudinally Measured Multivariate Biomarkers and Left-Censored Data—**❖Ghideon S. Ghebregiorgis, University of Pittsburgh; Lisa Weissfeld, University of Pittsburgh

9:05 a.m. **Modeling Longitudinal Biomarker Data with Multiple Assays That Have Different Known Detection Limits—**❖Paul Albert, National Cancer Institute

9:20 a.m. **Regression Analysis of Multivariate Recurrent Event Data with Time-Varying Covariate Effects—**❖Liang Zhu, University of Missouri-Columbia

9:35 a.m. **Analysis of Longitudinally Measured, Left-Censored Biomarkers of Severe Sepsis with Dropout, and Death—**❖M. Abdus Sattar, University of Pittsburgh; Lisa Weissfeld, University of Pittsburgh

9:50 a.m. **Semiparametric Joint Modeling of Longitudinal and Time-to-Event Data Using P-Spline: A Penalized Likelihood Approach—**❖Wen Ye, University of Michigan**;** Xihong Lin, Harvard School of Public Health**;** Jeremy Taylor, University of Michigan

10:05 a.m. **Joint Analysis of Multiple Longitudinal Outcomes and a Time-to-Event Using a Nonlinear Latent Class Approach—**❖Cecile Proust-Lima, University of Michigan**;** Helene Jacqmin-Gadda, INSERM, U875**;** Jeremy Taylor, University of Michigan

105 CC-155 B

● Statistical Issues in Oncology Trials—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Dennis Cosmatos, Wyeth

8:35 a.m. **Modified Simon's Two-Stage Design with a Control Group—**❖Sunil K. Dhar, New Jersey Institute of Technology**;** Farid Kianifard, Novartis Pharmaceuticals**;** Michael Chen, TCM Groups, Inc.

8:50 a.m. **Censored Data Within Phase III Oncology Studies Using Independent Radiology Review (IRC) Assessments—**❖Pralay Mukhopadhyay, Bristol-Myers Squibb Company**;** Thomas Kelleher, Bristol-Myers Squibb Company

9:05 a.m. **Estimate of Treatment Effect with Adjustment for Post-Discontinuation Treatment Resumption and Crossover and Other Therapies in Oncology Clinical Trials—**❖Shengyan Hong, Eli Lilly and Company**;** Yanping Wang, Eli Lilly and Company

9:20 a.m. **A Two-Stage Multinomial Randomized Selection Design in Phase II Oncology Trials—**❖Zhiping Sun, Merck & Co., Inc.

9:35 a.m. **An Adaptive Two-Stage Design for Active-Controlled Phase II Oncology Trial—**❖Xiaoming Li, sanofi-aventis

9:50 a.m. **Optimal Three-Outcome Designs for Screening Trials of New Agents—**❖Vandana Mukhi, New York University**;** Yongzhao Shao, New York University

10:05 a.m. **A Hybrid of Traditional Design and Isotonic Regression Method To Find MTD in Phase I Cancer Clinical Trials—**❖Robert Bigelow, sanofi-aventis**;** Chunpeng Fan, University of Wisconsin-Madison**;** Richard Wu, sanofi-aventis**;** Hui Quan, sanofi-aventis

106 CC-355 B

● Mixed Effect Models and Missing Data—Contributed

ENAR, Biometrics Section

Chair(s): Matthew Gurka, University of Virginia

8:35 a.m. **A Pattern Mixture Model To Analyze Longitudinal Quality-of-Life Data with Nonignorable Dropout—**❖Qinfang Xiang, Endo Pharmaceuticals**;** Suna Barlas, Endo Pharmaceuticals

8:50 a.m. **Likelihood Ratio Hypothesis Testing in the Presence of Incomplete Data—**❖Sergey Tarima, Medical College of Wisconsin**;** Albert Vexler, National Institutes of Health

9:05 a.m. **Principal Component Analysis for Multivariate Binary Data—**❖Seokho Lee, Texas A&M University

9:20 a.m. **Overdispersion in Multilevel Correlated Data—**❖Trent Lalonde, Arizona State University**;** Jeffrey R. Wilson, Arizona State University

9:35 a.m. **Multiple Imputation Based on Functional Principal Components Analysis for Sparse Longitudinal Data—**❖Szu-Ching Tseng, University of California, Davis**;** Xiaowei Yang, University of California, Davis**;** Hao Zhang, University of California, Davis

9:50 a.m. **The Inclusion of Covariate Information in a Random Effects Agreement Model—**❖Kerrie Nelson, University of South Carolina**;** Don Edwards, University of South Carolina

10:05 a.m. **Maximum Likelihood Methods for Nonignorable Missing Data—**❖Yan Zhou, University of Michigan**;** Roderick J. Little, University of Michigan**;** John D. Kalbfleisch, University of Michigan

107 CC-255 D

✪ Random Matrix Theory and High-Dimensional Inference—Contributed

IMS, Biometrics Section

Chair(s): Lisha Chen, Yale University

8:35 a.m. **Effect of Mean on Variance Function Estimation in Nonparametric Regression—**❖Lie Wang, University of Pennsylvania**;** Lawrence D. Brown, University of Pennsylvania**;** Tony Cai, University of Pennsylvania**;** Michael Levine, Purdue University

8:50 a.m. **The Largest Root Test in Multivariate Analysis: Nonasymptotic Accuracy of the Tracy-Widom Approximation—**❖Iain Johnstone, Stanford University

9:05 a.m. **Statistical Eigen-Inference from Large Wishart Matrices—**❖Raj Rao, Massachusetts Institute of Technology

9:20 a.m. **New Optimality Test for Branch-and-Bound–Based Comprehensive Subset Search—**❖Xuelei Ni, Kennesaw State University**;** Xiaoming Huo, Georgia Institute of Technology

9:35 a.m. **High-Dimensional Classification Using Features Annealed Independence Rule—**❖Yingying Fan, Princeton University**;** Jianqing Fan, Princeton University

9:50 a.m. **On the Minimax Risks for Estimation of a Location Parameter from Sums—**❖Mokshay Madiman, Yale University**;** Andrew Barron, Yale University**;** Abram Kagan, University of Maryland**;** Tinghui Yu, University of Maryland

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

108 CC-259

✪ Nonparametric Statistics and Mixture Models—Contributed

IMS, Section on Nonparametric Statistics

Chair(s): Zepu Zhang, The University of Chicago

8:35 a.m. **Set and Set Properties Estimation—**❖Bruno Pelletier, University Montpellier II**;** Gerard Biau, University Montpellier II**;** Benoit Cadre, University Montpellier II

8:50 a.m. **Distribution Theory of Order Statistics of Concomitants Subsets and Applications—**❖Ke Wang, The Ohio State University**;** Haikady Nagaraja, The Ohio State University

9:05 a.m. **Differentiated Logdensity Approximants—**❖Serge Provost, The University of Western Ontario

9:20 a.m. **On a Grouping Method for Constructing Mixed Orthogonal Arrays—**❖Chung-yi Suen, Cleveland State University

9:35 a.m. **Labeling Issue in Finite Mixture Model: A Frequentist View—**❖Daeyoung Kim, The Pennsylvania State University**;** Bruce G. Lindsay, The Pennsylvania State University

9:50 a.m. **Using Copula To Study Dependence in Mixed Distributions—**❖Magdalena Niewiadomska-Bugaj, Western Michigan University

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

109 CC-254 B

● ✪ Bayesian Case Studies—Contributed

Section on Bayesian Statistical Science

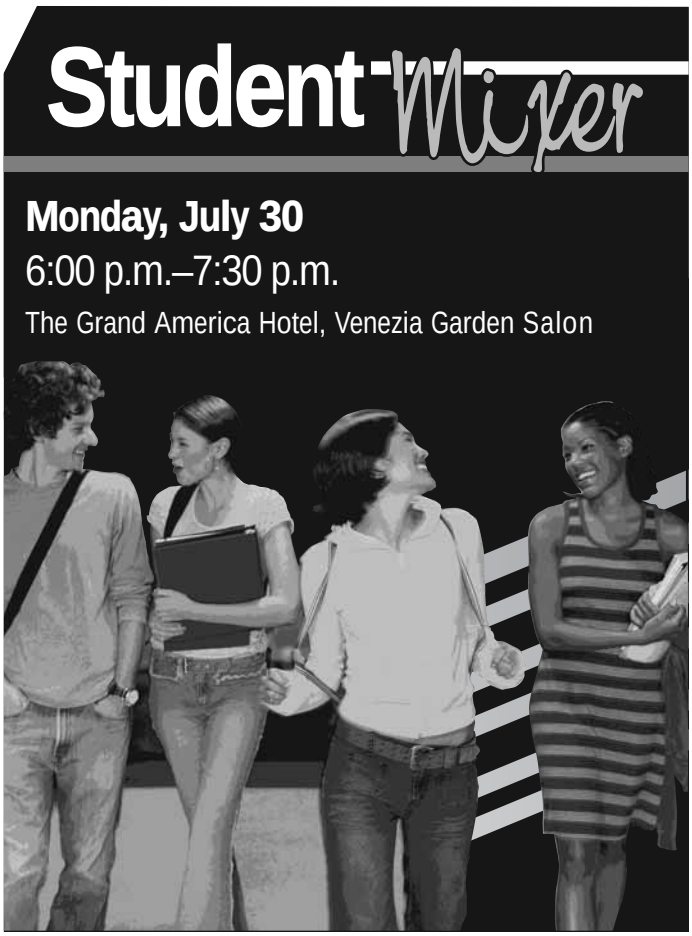
Chair(s): Peng Sun, Merck & Co., Inc.

8:35 a.m. **Bayesian Real-Time Model for Ovulation Prediction—**❖Lemuel Moye, University of Texas School of Public Health

8:50 a.m. **Bayesian Multiple Outcomes Models: Benefits and Challenges—**❖Sally W. Thurston, University of Rochester**;** David Ruppert, Cornell University

9:05 a.m. **Analyzing Pressure Ulcer Development of 36 Nursing Homes Using Bayesian Hierarchical Modeling—**❖Jing Zhang, University of Missouri-Columbia**;** Zhuoqiong (Chong) He, University of Missouri-Columbia

9:20 a.m. **Application of Bayesian Analysis in Review of Adverse Event for Product Quality Issues—**❖Harry Yang, MedImmune, Inc.**;** Lanju Zhang, MedImmune, Inc.**;** Iksung Cho, MedImmune, Inc.



9:35 a.m. **Bayesian Analysis of Surveillance Data and Meteorological Data for Detection of Aerosol Releases of B. Anthracis Spores**—❖William Hogan, University of Pittsburgh; Garrick Wallstrom, University of Pittsburgh; Gregory F. Cooper, University of Pittsburgh; Michael Wagner, University of Pittsburgh; Jean-Marc Depinay, University of Pittsburgh

9:50 a.m. **Hierarchical Bayesian Markov Switching Models with Application to Predicting Spawning Success of Shovelnose Sturgeon**—❖Ginger Davis, University of Virginia; Scott Holan, University of Missouri-Columbia; Mark Wildhaber, U.S. Geological Survey

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

110 CC-251 F
Nonparametric Testing and Model Validation—Contributed

Section on Nonparametric Statistics

Chair(s): Jeffrey Hart, Texas A&M University

8:35 a.m. **A Generalized Test Statistic for Multinomial Goodness-of-Fit**—❖Sunil Mathur, University of Mississippi

8:50 a.m. **Model-Checking in Errors-in-Variables Regression**—❖Weixing Song, Kansas State University

9:05 a.m. **A Lack-of-Fit Test for Partially Linear Models**—❖Chin-Shang Li, St. Jude Children's Research Hospital

9:20 a.m. **Robust and Powerful Two-Sample Semiparametric Tests**—❖Zhong Guan, Indiana University South Bend; Hongyu Zhao, Yale University

9:35 a.m. **A Modified Mood's Rank Test for Comparing Two Crossing Distributions**—❖Michael P. Anderson, Kansas State University

9:50 a.m. **Goodness-of-Fit Tests for Multinomial Logistic Regression**—❖David Hosmer, University of Massachusetts Amherst; Morten W. Fagerland, Ullevål University Hospital; Anna M. Bofin, Norwegian University of Science and Technology

10:05 a.m. **Model Credibility Indices and Information Criteria**—❖Jiawei Liu, Georgia State University; Bruce G. Lindsay, The Pennsylvania State University

111 CC-251 C
Symbolic, Time Series, and Image Analysis I—Contributed

Section on Statistical Computing, Section on Statistical Graphics, IMS

Chair(s): Lynne Billard, University of Georgia

8:35 a.m. **Exact Properties of a New Test and Other Tests**—❖Jie Peng, University of Louisiana at Lafayette; Kalimuthu Krishnamoorthy, University of Louisiana at Lafayette

8:50 a.m. **On a Moment-Based Test for Normality**—❖Yihao Deng, Indiana University Purdue University Fort Wayne; Chand Chauhan, Indiana University Purdue University Fort Wayne

9:05 a.m. **Testing of Hypothesis of a Structured Mean Vector for Multilevel Multivariate Data with Structured Correlations on Repeated Measurements**—❖Anuradha Roy, The University of Texas at San Antonio; Ricardo Leiva, F.C.E. Universidad Nacional de Cuyo

9:20 a.m. **Resampling-Based Multiple Testing Procedure**—❖Nasrine Bendjilali, Lehigh University; Wei-Min Huang, Lehigh University

9:35 a.m. **On an Efficient Algorithm for Boundary Detection**—❖Tsung-Lin Cheng, National Changhua University of Education

9:50 a.m. **A Geometric Feasible Direction Algorithm for Large-Scale Optimization with l1 Norm Constraint**—❖Jian Zhang, Purdue University

10:05 a.m. **Impact of Censoring on Inference for the Regression Coefficient in a Bivariate Normal Model**—❖Richard Linder, Ohio Wesleyan University

112 CC-257
Spatial Methodology—Contributed

Section on Statistics and the Environment

Chair(s): Ernst Linder, University of New Hampshire

8:35 a.m. **On the Number of Clusters in a Dataset**—❖Ahmed Albatineh, Nova Southeastern University

8:50 a.m. **Assessing Statistical Spatial Performance: An Application in Archaeology**—❖Yuemei Wang, Emory University; Lance Waller, Emory University; Zev Ross, ZevRoss Spatial Analysis

9:05 a.m. **Mining Semantic Co-Location Patterns with Clustering Techniques**—❖Bin Zhang, IBM China Research Laboratory; Wen Jun Yin, IBM China Research Laboratory; Jin Dong, IBM China Research Laboratory; Ming Xie, IBM China Research Laboratory

9:20 a.m. **Spatial Modeling for Large Multivariate Environmental Data: Advancing Methods and Applications**—❖Sudipto Banerjee, The University of Minnesota; Andrew Finley, The University of Minnesota

9:35 a.m. **A Multivariate Semiparametric Bayesian Spatial Modeling Framework for Hurricane Surface Wind Fields—**❖Brian Reich, North Carolina State University**;** Montserrat Fuentes, North Carolina State University

9:50 a.m. **Maximum Likelihood for Spatially Correlated Discrete Data—**❖Lisa Madsen, Oregon State University

10:05 a.m. **Edge Correction for Exact Tests on Nearest-Neighbor Contingency Tables for Testing Spatial Segregation—**❖Elvan Ceyhan, Koc University

113 CC-355 A

● Methods for and Analyses of Disease Surveillance Data—Contributed

Section on Statistics in Epidemiology, Section on Health Policy Statistics

Chair(s): Kiros Berhane, University of Southern California

8:35 a.m. **Power Study of a Semiparametric Cluster Detection Method—**❖Shihua Wen, University of Maryland**;** Benjamin Kedem, University of Maryland

8:50 a.m. **The Relationship Between the Recurrence Interval and Time-to-Signal Properties of Surveillance Schemes—**❖Shannon Fraker, Virginia Polytechnic Institute and State University**;** William H. Woodall, Virginia Polytechnic Institute and State University**;** Shabnam Mousavi, The Pennsylvania State University

9:05 a.m. **Using Administrative Data To Improve Sample Design and Estimation: Assaults Requiring Emergency Department Visits in New York City—**❖Kevin Konty, New York City Department of Health and Mental Hygiene**;** Catherine Stayton, New York City Department of Health and Mental Hygiene**;** Jingsong Lu, New York City Department of Health and Mental Hygiene

9:20 a.m. **Peak-Detection in Online Influenza Monitoring—**❖Eva Andersson, Göteborg University**;** Marianne Frisén, Göteborg University**;** David Bock, Astra Zeneca

9:35 a.m. **Variability of Serfling's Estimator for Excess Mortality—**❖Al Ozonoff, Boston University**;** Xiaopeng Miao, Boston College

9:50 a.m. **A Robust Regression Model for Estimating Influenza-Associated Deaths in 122 Cities' Mortality Data—**❖Po-Yung Cheng, Centers for Disease Control and Prevention**;** William W. Thompson, Centers for Disease Control and Prevention**;** David K. Shay, Centers for Disease Control and Prevention

10:05 a.m. **Evaluation of Multiple Imputation in a Vaccine Immunogenicity Trial—**❖Elizabeth Zell, Centers for Disease Control and Prevention**;** Michela Baccini, University of Florence**;** Constantine E. Frangakis, The Johns Hopkins University**;** Fan Li, Harvard Medical School**;** Fabrizia Mealli, University of Florence**;** Brian D. Plikaytis, Centers for Disease Control and Prevention**;** Charles E. Rose, Centers for Disease Control and Prevention**;** Donald B. Rubin, Harvard University

114 CC-250 A

● ✪ Advances in Latent Class and Multivariate Modeling of Survey Data—Contributed

Section on Survey Research Methods, Section on Statistics and Marketing

Chair(s): Keith Rust, Westat

8:35 a.m. **Structural Equation Models for Item Parceling—**❖Joseph Olsen, Brigham Young University

8:50 a.m. **Using Factor Analysis and Cronbach's Alpha To Ascertain Relationships Between Questions of a Dietary Behavior Questionnaire—**❖Eric Grau, Mathematica Policy Research, Inc.

9:05 a.m. **Randomization-Based Inference About Latent Variables in Classical Test Theory for a Clustered Sample—**❖Tiandong Li, Westat**;** Robert Mislevy, University of Maryland

9:20 a.m. **Hierarchical Linear Modeling for Complex Survey Data with Unequal Probability of Selection Using HLM 6—**❖Frank Jenkins, Westat**;** Hyunshik Lee, Westat**;** Pam Broene, Westat

9:35 a.m. **A Methodology to Fit Hierarchical Logistic Models for Data from Complex Sampling Designs—**❖Prabhu Bhagavatheeswaran, Bristol-Myers Squibb Company**;** Ian Harris, Southern Methodist University

9:50 a.m. **Post-Stratification with Optimized Effective Base: Linear and Nonlinear Ridge Regression Approach—**❖Stan Lipovetsky, GfK Custom Research North America

10:05 a.m. **Robustness of Latent Class Measurement Error Models—**❖Brian Meekins, Bureau of Labor Statistics**;** Daniell Toth, Bureau of Labor Statistics

115 CC-250 B

● Nonresponse and Attrition Bias in Survey Data—Contributed

Section on Survey Research Methods

Chair(s): Virginia Lesser, Oregon State University

8:35 a.m. **An Analysis of Nonresponse Bias Resulting from Nonresolution of Telephone Numbers, Eligibility Screener Nonresponse, and Interview Nonresponse for the National Immunization Survey—**❖Benjamin Skalland, NORC at the University of Chicago; Robert Montgomery, NORC at the University of Chicago; Phillip Smith, Centers for Disease Control and Prevention

8:50 a.m. **Assessing the Effect of Government Frame Refinement on Collecting Establishment Data for the National Compensation Survey—**❖Glenn Springer, Bureau of Labor Statistics

9:05 a.m. **A Comparison of Level of Effort and Benchmarking Approaches for Nonresponse Bias Analysis of an RDD Survey—**❖Daifeng Han, Westat; David Cantor, Westat

9:20 a.m. **The Impact of Refusal Conversion on Survey Response and Error—**❖Martin Barron, NORC at the University of Chicago; Karen Wooten, Centers for Disease Control and Prevention

9:35 a.m. **Designing Longitudinal Studies of Mobile Populations Such as Military Populations—**❖Shelton Jones, RTI International; Jeniffer Iriondo-Perez, RTI International; Cynthia Bland, RTI International; Robert Bray, RTI International; Janice Brown, RTI International; Michael Pemberton, RTI International

9:50 a.m. **Floor Discussion**

116 CC-251 B

● ✪ Estimating Mortality and Migration—Contributed

Social Statistics Section

Chair(s): Dawn V. Nelson, U.S. Census Bureau

8:35 a.m. **Scepticism About The Lancet Surveys on Iraqi Mortality—**❖David Kane, Kane Capital Management

8:50 a.m. **Estimating Conflict-Related Mortality in Timor-Leste, 1974-1999: A Comparative Review of Demographic and Statistical Estimation Methods—**❖Romesh Silva, Human Rights Data Analysis Group; Patrick Ball, The Benetech Initiative

9:05 a.m. **Life Table Forecasting with the Gompertz Distribution—**❖Peter Pflaumer, FH Kempten

9:20 a.m. **Methods of Estimating Internal Migration in the Undocumented Immigrant Population of the United States—**❖Christopher J. Campbell, U.S. Department of Homeland Security; Michael D. Hoefer, U.S. Department of Homeland Security; Nancy F. Rytina, U.S. Department of Homeland Security

9:35 a.m. **An Integrated Approach to Address Immigration Data Quality Problems: Sampling and Archival Research—**❖MacReadie Barr, U.S. Department of Homeland Security

9:50 a.m. **Status Upgrading: Immigrant Naturalization and Occupational Change Revisited—**❖Derekh Cornwell, Office of Immigration Statistics; Nancy F. Rytina, U.S. Department of Homeland Security; Gary Huang, Office of Immigration Statistics

10:05 a.m. **Internal Migration of Refugee Adjustments of Status: An Application of Logistic Modeling—**❖Kelly Jefferys, U.S. Department of Homeland Security

Do You Need a Break?

Have a cup of coffee courtesy of GfK. Coffee will be available outside technical sessions rooms on all convention center levels Monday between 10:15 a.m. and 10:45 a.m. Enjoy a refreshing cup of coffee between your morning sessions.

Thank you GfK!

GfK

Invited Sessions 10:30 a.m.–12:20 p.m.

117 CC-355 F

● ✪ Advanced Modeling and Imaging Endpoints in Applied Oncology Statistics—Invited

Committee on Applied Statisticians, ENAR, Section on Statistics in Epidemiology, Biometrics Section, Biopharmaceutical Section

Organizer(s): Kelly H. Zou, Harvard Medical School

Chair(s): Mani Y. Lakshminarayanan, Pfizer, Inc.

10:35 a.m. **Absolute Risk Models: Applications and Validation—** ❖Mitchell H. Gail, National Cancer Institute

11:00 a.m. **Imaging as Biomarker in Clinical Trials—** ❖Constantine Gatsonis, Brown University

11:25 a.m. **Some Statistical Issues with DCE-MRI Reproducibility Studies in Oncology—**❖William L. Mietlowski, Novartis Pharmaceuticals**;** Yuhui Ma, University of Medicine and Dentistry of New Jersey**;** Theodore C. Pellas, Novartis Pharmaceuticals**;** Ching-Ray Yu, Rutgers University

11:50 a.m. Disc: Elizabeth B. Claus, Yale University

12:10 p.m. **Floor Discussion**

118 CC-255 D

● ✪ Recent Advances In Functional Data Analysis And Nonparametric Estimation —Invited

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

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

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

10:35 a.m. **A Multiresolution Approach to Time and Image Warping—**❖Bernard W. Silverman, St. Peter's College

11:05 a.m. **Penalized Splines: Asymptotics with Increasing Number of Knots and Equivalent Kernels—**❖David Ruppert, Cornell University**;** Yingxing Li, Cornell University

11:35 a.m. **Bayesian Curve-Fitting and Functional Data Analysis in Neurophysiology—**❖Robert E. Kass, Carnegie Mellon University

12:05 p.m. **Floor Discussion**

119 CC-155 B

● ✪ Collection and Assessment of Safety Data in a New Drug Development Program—Invited

Biopharmaceutical Section, Committee on Applied Statisticians, ENAR, Section on Risk Analysis, Section on Health Policy Statistics, Biometrics Section

Organizer(s): Guowen (Gordon) Sun, sanofi-aventis; Hui Quan, sanofi-aventis

Chair(s): Guowen (Gordon) Sun, sanofi-aventis

10:35 a.m. **A Triage Approach to Evaluating Safety Incorporating Frequentist and Bayesian Methods—** ❖A. Lawrence Gould, Merck & Co., Inc.

11:00 a.m. **Assessment of Safety Data in a New Drug Development Program: Some Points to Consider—** ❖Weichung J. Shih, University of Medicine and Dentistry of New Jersey**;** Hui Quan, sanofi-aventis

11:25 a.m. **Safety First: Managing Patients' Safety and Mitigating Products' Risks—**❖Christy Chuang-Stein, Pfizer Inc.

11:50 a.m. Disc: Judith D. Goldberg, New York University

12:10 p.m. **Floor Discussion**

120 CC-255 C

● Statistics in Genomics and Proteomics—Invited

Biometrics Section, WNAR, Biopharmaceutical Section

Organizer(s): Huixia Wang, North Carolina State University

Chair(s): Huixia Wang, North Carolina State University

10:35 a.m. **A Method for the Detection of Alternative Splicing from Exon Array Data—**❖Terence Speed, University of California, Berkeley

11:00 a.m. **Statistical Analysis of Histone Acetylation—**❖Ping Ma, University of Illinois

11:25 a.m. **Quantifying Protein: Reverse-Phase Protein Arrays—**❖Keith Baggerly, The University of Texas M. D. Anderson Cancer Center

11:50 a.m. **Statistical Design of Microarrays and Multiple Testing of Gene Expression Data—**❖Jason C. Hsu, The Ohio State University

12:15 p.m. **Floor Discussion**

121 CC-257
Optimal Transformations —Invited
IMS, General Methodology

Organizer(s): Anirban Dasgupta, Purdue University

Chair(s): Anirban Dasgupta, Purdue University

10:35 a.m. **A Mean-Matching, Variance-Stabilizing Transform Approach to Nonparametric Regression in Exponential Families—**❖Tony Cai, University of Pennsylvania

11:05 a.m. **On Optimal Smoothing Parameter Choice in Deconvolution Problems—**Peter Hall, The University of Melbourne; ❖Aurore Delaigle, University of Bristol

11:35 a.m. Disc: Lawrence D. Brown, University of Pennsylvania

11:55 a.m. **Floor Discussion**

122 CC-255 E
Medallion Lecture II—Invited
IMS, General Methodology

Organizer(s): Tony Cai, University of Pennsylvania

Chair(s): Shane T. Jensen, University of Pennsylvania

10:35 a.m. **Understanding Ecological Communities—**❖Claudia Neuhauser, The University of Minnesota

12:00 p.m. **Floor Discussion**

123 CC-Ballroom B
Remembering Frederick Mosteller: 1916–2006—Invited
Memorial, Section on Statistical Education, Section on Teaching Statistics in the Health Sciences

Organizer(s): Stephen Fienberg, Carnegie Mellon University

Chair(s): Stephen Fienberg, Carnegie Mellon University

10:35 a.m. **Frederick Mosteller: A Statistical Life—**❖Stephen Fienberg, Carnegie Mellon University

11:05 a.m. **Fred Mosteller as Researcher—**❖David C. Hoaglin, Abt Associates, Inc.

11:35 a.m. **Fred as Educator—**❖Judith M. Tanur, SUNY Stoney Brook

12:05 p.m. **Floor Discussion**

124 CC-250 EF
Recent Developments in Bayesian Methods in Data Mining/Machine Learning—Invited
Section on Bayesian Statistical Science

Organizer(s): David Madigan, Rutgers University

Chair(s): David Madigan, Rutgers University

10:35 a.m. **Stochastic Block Models of Mixed Membership—**❖Edoardo M. Airoldi, Princeton University; David Blei, Princeton University; Stephen Fienberg, Carnegie Mellon University; Eric Xing, Carnegie Mellon University

11:05 a.m. **Simultaneous Regression Shrinkage, Variable Selection, and Supervised Clustering—**❖Howard D. Bondell, North Carolina State University

11:35 a.m. **The Lasso with Attribute Partition Search—**❖Suhrid Balakrishnan, Rutgers University; David Madigan, Rutgers University

12:05 p.m. **Floor Discussion**

125 CC-355 B
● ✪ A Sampling Revolution? List versus Area Frames for Probability Sampling—Invited
Section on Survey Research Methods

Organizer(s): Colm O'Muircheartaigh, NORC at the University of Chicago

Chair(s): Martin Frankel, Baruch College/CUNY

10:35 a.m. **Predicting the Relative Quality of Alternative Sampling Frames—**❖Colm O'Muircheartaigh, NORC at the University of Chicago; Edward English, NORC at the University of Chicago; Stephanie Eckman, NORC at the University of Chicago

11:00 a.m. **Improving Coverage of Residential Address Lists in Multistage Area Samples—**❖Sylvia Dohrmann, Westat; Daifeng Han, Westat; Leyla Mohadjer, Westat

11:25 a.m. **Comparing the Coverage of a Household Sampling Frame Based on Mailing Addresses to a Frame Based on Field Enumeration—**❖Vincent G. Iannacchione, RTI International; Joseph McMichael, RTI International; James R. Chromy, RTI International; David Cunningham, RTI International; Katherine Morton, RTI International; James Cajka, RTI International; Ross Curry, RTI International

11:50 p.m. **Floor Discussion**

126 CC-258

● ✪ Multiplicity Today: Perspectives on Multiple Testing—Invited

General Methodology, Section on Statistics in Epidemiology, WNAR

Organizer(s): Thomas H. Short, Indiana University of Pennsylvania

Chair(s): Thomas H. Short, Indiana University of Pennsylvania

10:35 a.m. **Political Aspects of Multiple Testing: A Controversy—**❖S. Stanley Young, National Institute of Statistical Sciences

11:00 a.m. **Empirical Bayes Methods for Multiple Testing—**❖Debashis Ghosh, University of Michigan

11:25 a.m. **Hochberg's Step-Up Method: Cutting Corners off Holm's Step-Down Method—**❖Yifan Huang, University of South Florida; Jason C. Hsu, The Ohio State University

11:50 a.m. **Multiple Tests of Association with Biological Annotation Metadata—**❖Sunduz Keles, University of Wisconsin-Madison; Sandrine Dudoit, University of California, Berkeley; Mark J. van der Laan, University of California, Berkeley

12:15 p.m. **Floor Discussion**

127 CC-260

● ✪ Spatial Surveillance for Adverse Environmental Health Outcomes—Invited

Section on Statistics and the Environment, Section on Bayesian Statistical Science, Section on Statisticians in Defense and National Security, ENAR, Section on Health Policy Statistics, Biometrics Section

Organizer(s): Andrew B. Lawson, University of South Carolina

Chair(s): Andrew B. Lawson, University of South Carolina

10:35 a.m. **Optimal Methods in Surveillance—**❖Marianne Frisén, Göteborg University

11:05 a.m. **Bayesian Modeling and Surveillance for Adverse MRDD Outcomes Associated with Soil Chemical Exposures—**❖Ji-In Kim, University of South Carolina; Andrew B. Lawson, University of South Carolina

11:35 a.m. **Assessing Spatial Performance of Surveillance Systems—**❖Lance Waller, Emory University; Yuemei Wang, Emory University; Carol Lin, Bristol-Myers Squibb Company

12:05 p.m. **Floor Discussion**

128 CC-355 E

JASA, Theory and Methods Invited Session—Invited

JASA, Theory and Methods, General Methodology

Organizer(s): Stephen Portnoy, University of Illinois; Walter W. Piegorsch, The University of Arizona

Chair(s): Walter W. Piegorsch, The University of Arizona

10:35 a.m. **Implementation of Estimating-Function–Based Inference Procedures with MCMC Samplers—**❖Lee-Jen Wei, Harvard University; Lu Tian, Northwestern University; Jun S. Liu, Harvard University

11:20 a.m. Disc: Xuming He, University of Illinois

11:40 a.m. Disc: John D. Kalbfleisch, University of Michigan

12:00 p.m. Rejoiner: Lee-Jen Wei, Harvard University

12:10 p.m. **Floor Discussion**

Longtime Member Reception

by invitation only

Monday, July 30, 6:30 to 7:30 p.m.
The Grand America Hotel
Murano Garden Salon

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.

Sponsored by the ASA Membership Retention and Recruitment Committee.

Invited Panels 10:30 a.m.–12:20 p.m.

129 CC-251 E

● ✪ SAMSI: A Five-Year Retrospective and Five-Year Prospective—Invited

Statistical and Applied Mathematical Sciences Institute

Organizer(s): James Berger, Duke University

Chair(s): James Berger, Duke University

Panelists:
- ❖ Peter Bickel, University of California, Berkeley
- ❖ Sallie Keller-McNulty, Rice University
- ❖ Alan Karr, National Institute of Statistical Sciences

12:05 p.m. **Floor Discussion**

130 CC-255 B

● Issues and Solutions to Planning and Implementing an Adaptive Design in Practice—Invited

ENAR, Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Brenda Gaydos, Eli Lilly and Company

Chair(s): Brenda Gaydos, Eli Lilly and Company

Panelists:
- ❖ Michael Krams, Wyeth
- ❖ Paul Gallo, Novartis Pharmaceuticals
- ❖ Gernot Wassmer, The University of Cologne
- ❖ Jerald S. Schindler, Merck & Co., Inc.
- ❖ Christopher S. Coffey, The University of Alabama at Birmingham

12:15 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

131 CC-355 C

● ✪ It's Only Data, What's the Big Deal?: The Significance of Using Multi-Year Estimates from the American Community Survey—Topic-Contributed

Social Statistics Section, Section on Survey Research Methods

Organizer(s): Cynthia J. Davis, U.S. Census Bureau

Chair(s): Constance F. Citro, National Academy of Sciences

10:35 a.m. **Multiple ACS Estimates: Pick a Number, Any Number!—**❖Linda Gage, California Department of Finance

10:55 a.m. **Multiyear ACS Results for Multnomah County, Oregon: Preliminary Observations—**❖George C. Hough, Portland State University**;** David A. Swanson, University of Mississippi

11:15 a.m. **The Utility of Five-Year Averages from the American Community Survey for Bronx Neighborhoods—**❖Joseph Salvo, NYC Department of City Planning**;** A. Peter Lobo, NYC Department of City Planning**;** Adam Willett, New York City Department of City Planning

11:35 a.m. Disc: Michael L. Cohen, Committee on National Statistics

11:55 a.m. Disc: Deborah H. Griffin, U.S. Census Bureau

12:15 p.m. **Floor Discussion**

132 CC-251 D

● ✪ Applications of Visualization for Web 2.0—Topic-Contributed

Section on Statistical Graphics

Organizer(s): Daniel Rope, SPSS Inc.

Chair(s): Simon Urbanek, AT&T Labs - Research

10:35 a.m. **An AJAX Web 2.0 Geospatial Visualization Framework—**❖Stephen Eick, University of Illinois at Chicago

10:55 a.m. **Statistical Graphics with Element Control in the Browser—**❖Sven Knudsen, Insightful Corporation**;** Michael O'Connell, Insightful Corporation

11:15 a.m. **Using Web 2.0 for Statistical Software—**❖Webster West, Texas A&M University

11:35 a.m. **Statistical Graphics for Collaborative Environments—**❖Daniel Rope, SPSS Inc.

12:15 p.m. **Floor Discussion**

133 CC-155 C

● ✪ When To Stop a Clinical Trial for Efficacy?—Topic-Contributed

Biopharmaceutical Section, ENAR, WNAR

Organizer(s): Vipin Arora, Novartis Pharmaceuticals

Chair(s): John Connett, The University of Minnesota

10:35 a.m. **When To Stop a Clinical Trial for Efficacy?—**❖Vipin Arora, Novartis Pharmaceuticals

10:55 a.m. **Overview of Available Methods for Efficacy Monitoring—**❖Thomas Cook, University of Wisconsin-Madison

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Fontainbleau
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Lundi 30 juillet, 17-19 h

La SSC vous y convie tous !

11:15 a.m. **Crossing Monitoring Boundaries and Not Stopping—**❖Janet Wittes, Statistics Collaborative

11:35 a.m. Disc: Marian Fisher, University of Wisconsin-Madison

11:55 a.m. Disc: Kannan Natarajan, Novartis Pharmaceuticals

12:15 p.m. **Floor Discussion**

134 CC-155 A

● ✪ Statistical Challenges for Bioassay Data—Topic-Contributed

Biopharmaceutical Section, WNAR

Organizer(s): Jason Liao, Merck & Co., Inc.

Chair(s): Rong Liu, Merck & Co., Inc.

10:35 a.m. **Prediction-Based Decision for Validation of (Bio)Analytical Methods Using Tolerance Intervals and Accuracy Profiles—**❖Bruno Boulanger, Université de Liège**;** Walthère Dewe, GlaxoSmithKline**;** Francois Moonen, Arlenda**;** Philippe Hubert, University of Liege

10:55 a.m. **Statistical Methods for Assessing Long-Term Stability of Compounds in Biological Matrices—**❖David M. Hoffman, sanofi-aventis**;** Robert Kringle, sanofi-aventis

11:15 a.m. **Bioassay: Decisionmaking in the Face of Uncertainty—**❖Timothy Schofield, Merck & Co., Inc.

11:35 a.m. **Reparameterization of the Five-Parameter Logistic Dose-Response Curve—**❖Jason Liao, Merck & Co., Inc.**;** Rong Liu, Merck & Co., Inc.

11:55 a.m. **Overcoming Practical, Statistical, and Robotic Challenges in Bioassay—**❖David Lansky, Precision Bioassay

12:15 p.m. **Floor Discussion**

135 CC-251 C

● Innovative Methods for Analyzing Observational Studies and Clinical Studies—Topic-Contributed

IMS, Section on Statistics in Epidemiology, ENAR

Organizer(s): Dylan Small, University of Pennsylvania

Chair(s): Dylan Small, University of Pennsylvania

10:35 a.m. **Robust Propensity Score Analysis for Causal Inference in Observational Studies—**❖Asheber Abebe, Auburn University**;** Joseph W. McKean, Western Michigan University**;** Bradley E. Huitema, Western Michigan University

10:55 a.m. **Propensity Score Analysis with Hierarchical Data—**❖Fan Li, Harvard Medical School**;** Alan M. Zaslavsky, Harvard University**;** Mary Beth Landrum, Harvard Medical School

11:15 a.m. **Bayesian Hidden Markov Models for Alcoholism Data—**❖Kenneth Shirley, University of Pennsylvania**;** Dylan Small, University of Pennsylvania**;** Kevin G. Lynch, University of Pennsylvania

11:35 a.m. **Laplace's Approximation for Relative Risk Frailty Models—**❖Shibao Feng, Genentech, Inc.**;** Lei Nie, Georgetown University Medical Center**;** Robert A. Wolfe, University Renal Research and Education Association

11:55 a.m. **Dental Arch Clustering in Orthodontics Practice—**❖Johan Lim, Yonsei University**;** Heon Jin Park, Inha University**;** SungIm Lee, DanKook University**;** Shin-Je Lee, Seoul National University

12:15 p.m. **Floor Discussion**

136 CC-254 A

✪ Statistics of Extremes—Topic-Contributed

IMS

Organizer(s): Zhengjun Zhang, University of Wisconsin-Madison

Chair(s): Richard A. Davis, Colorado State University

10:35 a.m. **Large Deviations for Point Processes Based on Stationary Sequences with Heavy Tails—**❖Henrik Hult, Brown University

10:55 a.m. **Inference of a Heavy-Tailed Distribution—**❖Yongcheng Qi, The University of Minnesota Duluth

11:15 a.m. **Maximum Likelihood Estimation for Alpha-Stable Autoregressive Processes—**❖Beth Andrews, Northwestern University**;** Matthew Calder, Colorado State University**;** Richard A. Davis, Colorado State University

11:35 a.m. **On the Estimation of the Heavy-Tail Exponent in Time Series Using the Max-Spectrum—**❖Stilian Stoev, University of Michigan**;** George Michailidis, The University of Michigan

11:55 a.m. **Quotient Correlation: A Sample-Based Alternative to Pearson's Correlation—**❖Zhengjun Zhang, University of Wisconsin-Madison

12:05 p.m. **Floor Discussion**

137 CC-250 C

● ✪ Applications of Objective Bayesian Analysis—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Jun Lu, American University

Chair(s): Jingqin Luo, Washington University in St. Louis

10:35 a.m. **Estimate Response Rates and Satisfaction Given Response Jointly Using Hierarchical Bayesian Modeling Approach—**❖Xiaoming Gao, Missouri Department of Conservation**;** Dongchu Sun, University of Missouri-Columbia**;** Zhuoqiong (Chong) He, University of Missouri-Columbia

10:55 a.m. **Objective Priors for Overdisposed Weibull Models for Breast Cancer Incidence and Survivals—**❖Luyan Dai, University of Missouri-Columbia**;** Zhuoqiong (Chong) He, University of Missouri-Columbia**;** Dongchu Sun, University of Missouri-Columbia**;** Mario Schootman, Washington University in St. Louis

11:15 a.m. **Objective Priors for Spatially Adaptive Smoothing Splines—**❖Yu Yue, University of Missouri-Columbia

11:35 a.m. **Objective Bayesian Analysis in Memory Study—**❖Xiaoyan Lin, University of Missouri-Columbia**;** Dongchu Sun, University of Missouri-Columbia

11:55 a.m. Disc: Jun Lu, American University

12:15 p.m. **Floor Discussion**

138 CC-250 D

● ✪ Section on Bayesian Statistics Student Paper Competition: Applications in Biostatistics—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Merlise A. Clyde, Duke University

Chair(s): Jing Li, The University of Michigan

10:35 a.m. **Multivariate Spatial-Temporal Modeling and Prediction of Speciated Fine Particles—**❖Jungsoon Choi, North Carolina State University**;** Montserrat Fuentes, North Carolina State University**;** Brian Reich, North Carolina State University**;** Jerry Davis, North Carolina State University

10:55 a.m. **Bayesian Variable Selection with Joint Modeling of Categorical and Survival Outcomes: An Application to Individualizing Chemotherapy Treatment in Advanced Colorectal Cancer—**❖Wei Chen, Karmanos Cancer Institute

11:15 a.m. **Expert Opinion, Informative Priors, and Sensitivity Analysis for Longitudinal Binary Data with Informative Dropout—**❖Joo Yeon Lee, U.S. Food and Drug Administration**;** Joseph W. Hogan, Brown University

11:35 a.m. **A Semiparametric Joint Modeling Approach for Nonignorable Missing Data—**❖Liansheng Zhu, Pharmaceutical Product Development, Inc**;** Sujit Ghosh, North Carolina State University

11:55 a.m. **Floor Discussion**

139 CC-251 B

● ✪ Nonparametric Curve Estimation—Topic-Contributed

Section on Nonparametric Statistics

Organizer(s): Sam Efromovich, University of Texas at Dallas

Chair(s): Robert Serfling, University of Texas at Dallas

10:35 a.m. **A New Bayesian Procedure for Nonparametric Regression Estimation and Pointwise Confidence Bands—**❖Linda Zhao, University of Pennsylvania

10:55 a.m. **Consistent Learning Methods Are Approximately Local—**❖Yaacov Ritov, The Hebrew University of Jerusalem**;** Alon Zakai, The Hebrew University of Jerusalem

11:15 a.m. **Remarks on Bandwidth Selection for Discrimination—**❖David W. Scott, Rice University

11:35 a.m. **Estimating Common Mean Curve in Interlaboratory Studies—**❖Andrew Rukhin, University of Maryland

11:55 a.m. **Conditional Density Estimation—**❖Sam Efromovich, University of Texas at Dallas

12:15 p.m. **Floor Discussion**

140 CC-254 B

Statistical Literacy 2007—Topic-Contributed

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

Organizer(s): Milo Schield, Augsburg College

Chair(s): Paul Fields, Brigham Young University

10:35 a.m. **Statistics for Innumerate Journalists—**❖Stephen Doig, Arizona State University

10:55 a.m. **Quantitative Reasoning: An Activity-Based Course with Real Data and Relevant Issues—**❖Kay Somers, Moravian College

11:15 a.m. **Success of Relative Strength Investing Within Similar Asset Classes—**❖Marshall Schield, Stir Research**;** Milo Schield, Augsburg College

11:35 a.m. **Grammar of Chance—**❖Tom Burnham, Cognitive Consulting**;** Milo Schield, Augsburg College

11:55 a.m. **Media Stories Involving Numbers—**❖Milo Schield, Augsburg College

12:15 p.m. **Floor Discussion**

141 CC-254 C
Statistical Phylogenetics—Topic-Contributed

IMS

Organizer(s): Bret Larget, University of Wisconsin-Madison

Chair(s): Bret Larget, University of Wisconsin-Madison

10:35 a.m. **A Bayesian Model To Infer the Relationship Among Several Recombinant Sequences—**❖Erik Bloomquist, University of California, Los Angeles**;** Marc A. Suchard, University of California, Los Angeles

10:55 a.m. **Inference About Gorilla Population History Using MCMC Method—**❖Joungyoun Kim, University of Wisconsin-Madison

11:15 a.m. **Bayes Estimation of Hybridization in Species Phylogeny Based on Incongruent Gene Topologies—**❖Chen Meng, University of New Mexico

11:35 a.m. **Joint Bayesian Estimation of Phylogeny and Sequence Alignment—**❖Heejung Shim, University of Wisconsin-Madison

11:55 a.m. **Spatial Location-Dependent Substitution Models and Their Application to Phylogenetics—**❖Xueliang Pan, The Ohio State University**;** Dennis K. Pearl, The Ohio State University**;** J. Dennis Pollack, The Ohio State University

12:15 p.m. **Floor Discussion**

142 CC-255 A
● ✪ Theory and Applications of Gene Co-Expression Network Methods—Topic-Contributed

WNAR, ENAR, Biometrics Section

Organizer(s): Wei Zhao, University of California, Los Angeles

Chair(s): Christina Ramirez Kitchen, University of California, Los Angeles

10:35 a.m. **Microarray Gene Coexpression Analysis by a Supervised Sequential Clustering Algorithm—**❖Cheng Cheng, St. Jude Children's Research Hospital

10:55 a.m. **WGCNA: A Software for Weighted Gene Coexpression Network Analysis—**❖Lin Wang, University of California, Los Angeles

11:15 a.m. **Network-Based Meta Analysis Methods for Microarray Data—**❖Wen Lin, University of California, Los Angeles**;** Steve Horvath, University of California, Los Angeles

11:35 a.m. **Clustering Procedures for Finding Shared Modules Across Multiple Microarray Datasets—**❖Peter Langfelder, University of California, Los Angeles**;** Steve Horvath, University of California, Los Angeles

11:55 a.m. **Connectivity, Module-Conformity, and Significance: Understanding Weighted Gene Coexpression Networks—**❖Jun Dong, University of California, Los Angeles**;** Steve Horvath, University of California, Los Angeles**;** Andy Yip, National University of Singapore

12:15 a.m. **Floor Discussion**

Contributed Sessions 10:30 a.m.–12:20 p.m.

143 CC-255 F
● ✪ Recent Advances in Microarray Data Analysis I—Contributed

Biometrics Section

Chair(s): Baolin Wu, The University of Minnesota

10:35 a.m. **Exonerating Bonferroni's Multiple Testing Procedure—**❖Alexander Gordon, The University of North Carolina at Charlotte**;** Galina Glazko, University of Rochester**;** Xing Qiu, University of Rochester**;** Andrei Yakovlev, University of Rochester

10:50 a.m. **Statistical Framework for Integrative Analysis of Multiple Gene Expression—**❖Chien-Cheng Tseng, University of Pittsburgh

11:05 a.m. **A Method of Detecting Differential Gene Expression for Cross-Species Hybridization Experiments—**❖Ying Chen, University of California, Davis**;** Anu Chakicherla, Lawrence Livermore National Laboratory**;** David Rocke, University of California, Davis

11:20 a.m. **Identifying Differentially Expressed Genes for Time-Course Microarray Data Through Functional Data Analysis—**❖Kun Chen, University of California, Davis**;** Jane-Ling Wang, University of California, Davis

11:35 a.m. **RDCurve: A Nonparametric Method To Evaluate the Stability of Selection Procedures—**❖Xin Lu, University of California, San Diego

11:50 a.m. **Sample Size Estimation for Factorial Designs in Microarray Studies—**❖Bruce Thompson, Clinical Trials & Surveys Corp.; Clara Chu, Clinical Trials & Surveys Corp.; Thomas J. Richards, University of Pittsburgh Medical Center

12:05 p.m. **Normalization for Replicated MicroRNA Array Data with Spike-In Controls—**❖Yuhua Su, Yale University; Joanne B. Weidhaas, Yale University; Daniel Zelterman, Yale University

144 CC-155 D

● ✪ Machine Learning and Related Issues—Contributed

Biometrics Section

Chair(s): Hao Zhang, North Carolina State University

10:35 a.m. **Integration of Relational and Hierarchical Network Information: Prediction of Protein Function—**❖Xiaoyu Jiang, Boston University; Eric D. Kolaczyk, Boston University; Simon Kasif, Boston University

10:50 a.m. **Subject-Adaptive, Real-Time Sleep Stage Classification Based on Conditional Random Field—**❖Gang Luo, IBM T.J. Watson Research Center; Wanli Min, IBM T.J. Watson Research Center

11:05 a.m. **Variable Selection for Optimal Decisionmaking—**❖Lacey Gunter, University of Michigan; Susan Murphy, University of Michigan; Ji Zhu, University of Michigan

11:20 a.m. **Correlation Analysis Between Two Sets of Brain Images—**❖Yeming Ma, State University of New York at Stony Brook

11:35 a.m. **Covariate Effect Estimation with Partial Penalization—**❖Jiang Gui, Dartmouth Medical School; James Sargent, Dartmouth Medical School

11:50 a.m. **Variable Importance Selection: Random Forest vs. Logistic Regression—**❖Andrejus Parfionovas, Utah State University; Adele Cutler, Utah State University

12:05 p.m. **Inference for Dynamic Treatment Regimes via Q-Learning—**❖Bibhas Chakraborty, University of Michigan; Susan Murphy, University of Michigan

145 CC-155 F

● ✪ Statistical Issues in Noninferiority and Equivalence Trials—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Stephanie Dunbar, Merck & Co., Inc.

10:35 a.m. **Generalized Mixed Models for Noninferiority Trials—**❖Robert Abugov, U.S. Food and Drug Administration

10:50 a.m. **Trials and Tribulations in Choosing Noninferiority Margins—**❖John Johnson, Cato Research, Ltd.

11:05 a.m. **A Testing Strategy for Noninferiority and/or Superiority Hypotheses on Multiple Endpoints—**❖Xiaohui Luo, Merck & Co., Inc.; Jianjun Li, Merck & Co., Inc.

11:20 a.m. **New Tests for Assessing Noninferiority and Equivalence from Survival Data—**❖Kallappa Koti, U.S. Food and Drug Administration

11:35 a.m. **A Multivariate Test for Population Bioequivalence—**❖Inna Chervoneva, Thomas Jefferson University; Terry Hyslop, Thomas Jefferson University; Walter W. Hauck, Kimmel Cancer Center at Jefferson

11:50 a.m. **Estimation of Long-Term Vaccine Efficacy and Waning Effects Using Surveillance Interval Data—**❖Martha Lee, U.S. Food and Drug Administration; Tsai-Lien Lin, U.S. Food and Drug Administration

12:05 p.m. **An Equivalence Test Based on the Duration of Treatment Effect as Measured by Median Time-to-Event—**❖Suriani Pokta, Allergan, Inc.; Jihao Zhou, Allergan, Inc.

146 CC-250 A

Long Memory and Related Processes—Contributed

Business and Economics Statistics Section

Chair(s): Alicia Carriquiry, Iowa State University

10:35 a.m. **Estimation in Long-Time Memory Processes—**❖Wen Li, Iowa State University; Alicia Carriquiry, Iowa State University; Wolfgang Kliemann, Iowa State University; Cindy Yu, Iowa State University

10:50 a.m. **Unit Root Tests in the Presence of a Simultaneous Break in the Mean and the Innovation Variance—**❖Amit Sen, Xavier University

11:05 a.m. **Long-Memory Parameter Estimation in Time Series and Its Connection to fBm—**❖Michael Levine, Purdue University; Frederi Viens, Purdue University; Soledad Torres, Universidad de Valparaiso

11:20 a.m. **A Power Study of Seasonal Unit Root Tests for Quarterly Data**—❖Qianyi Zhang, North Carolina State University; David Dickey, North Carolina State University; Sastry Pantula, North Carolina State University

11:35 a.m. **Test of Cointegration Using Long Run Canonical Correlations: Part I**—❖Kalidas Jana, University of Texas at Brownsville; Alastair R. Hall, University of Manchester

11:50 a.m. **Contemporaneous Aggregation of Time Series**—❖Georgios Tripodis, University of Massachusetts Amherst; Jeremy Penzer, London School of Economics

12:05 p.m. **Feature Extraction Using Functional Data Analysis for Screening Large Numbers of Time Series**—❖Ganesh Subramaniam, AT&T Labs - Research; Ravi Varadhan, The Johns Hopkins University; Ciprian M. Crainiceanu, The Johns Hopkins University

147 CC-250 B

Bayesian Approaches in Machine Learning and Model Selection—Contributed

Section on Bayesian Statistical Science

Chair(s): Meijuan Li, The University of Minnesota

10:35 a.m. **Principal Component Reduction in Linear Mixed B-Splines**—❖Carsten Botts, Williams College; Michael Daniels, University of Florida

10:50 a.m. **Adaptive Dynamic Bayesian Networks**—❖Brenda Ng, Lawrence Livermore National Laboratory

11:05 a.m. **Testing Equality of Several Functions**—❖Sam Behseta, California State University; Robert E. Kass, Carnegie Mellon University

11:20 a.m. **Aspects of Bayesian Lasso Regression**—❖Christopher Hans, The Ohio State University; Steven N. MacEachern, The Ohio State University

11:35 a.m. **Bayesian Adaptive LASSO for Linear Models**—❖Yi-Liang Tung, National Cheng Kung University

11:50 a.m. **Bayesian Kernel Regression with Feature Selection**—❖Zhi Ouyang, Duke University; Merlise A. Clyde, Duke University; Robert L. Wolpert, Duke University

12:05 p.m. **Bayesian Model Averaging Using Adaptive Sampling**—❖Joyee Ghosh, Duke University; Merlise A. Clyde, Duke University

148 CC-259

● ✪ Innovative Bayesian and Frequentist Models for Health Using Individual and Ecologic Data—Contributed

Section on Health Policy Statistics, ENAR, Biometrics Section, WNAR

Chair(s): Susan L. Stewart, University of California, San Francisco

10:35 a.m. **Truth or Consequences: Estimating Error Due to Inconsistent Self-Report of Adolescent Risk Behaviors**—❖Janet Rosenbaum, Harvard University

10:50 a.m. **A Statistical Tool Based on a Model of Personal and Ecologic Characteristics To Explain Deprivation in U.S. Health Care Access**—❖Martey Dodoo, The Robert Graham Center; Robert Phillips, Robert Graham Center; Xingyou Zhang, The Robert Graham Center

11:05 a.m. **Bayesian Hierarchal Modeling of Small-Area Suicide Rates: A Geographical and Ecological Evaluation**—❖Yi Lin, University of British Columbia; Ying MacNab, University of British Columbia

11:20 a.m. **Distribution of Cronbach's Alpha for Ordinal Data: A Bayesian-Based Approach**—❖Byron Gajewski, The University of Kansas Medical Center; Diane K. Boyle, The University of Kansas Medical Center; Sarah Thompson, University of Nebraska Medical Center

11:35 a.m. **A Bayesian Two-Part Model for Bounded Non-Negative Data: Estimating Extra Time Spent on Diabetes Self-Care**—❖Betsy C. Gunnels, Centers for Disease Control and Prevention; Theodore J. Thompson, Centers for Disease Control and Prevention; Louise B. Russell, Rutgers University; Susan L. Ettner, University of California, Los Angeles; James P. Boyle, Centers for Disease Control and Prevention

11:50 a.m. **Joint Modeling of Birth Weight and Gestational Age via the Gibbs Sampler**—❖Betsy Enstrom, Duke University; Alan E. Gelfand, Duke University; Geeta Swamy, Duke University; Marie Lynn Miranda, Duke University

12:05 p.m. **Characterizing Drug Diffusion with Patient-Level Data**—❖Camelia Sima, MSKCC; Katherine Panageas, MSKCC; Glenn Heller, MSKCC; Deborah Schrag, MSKCC

149 CC-251 A

✪ Semiparametric and Nonparametric Inference—Contributed

Section on Nonparametric Statistics

Chair(s): Alan Polansky, Northern Illinois University

10:35 a.m. **Confidence Intervals for a Discrete Population Median—**❖Ronald Randles, University of Florida**;** Denis Larocque, HEC Montreal

10:50 a.m. **A Family of Kurtosis Orderings for Multivariate Distributions—**❖Jin Wang, Northern Arizona University

11:05 a.m. **Rank-Weighted, Two-Sample U-Statistics with Application to Partial Area Under ROC Curves—**❖Chengqing (Alan) Wu, National Institutes of Health**;** Aiyi Liu, National Institutes of Health**;** Kai Fun Yu, National Institutes of Health

11:20 a.m. **When Does the Wilcoxon-Mann-Whitney Fail?—**❖Abu Minhajuddin, The University of Texas Southwestern Medical Center at Dallas**;** Paul Nakonezny, The University of Texas Southwestern Medical Center at Dallas

11:35 a.m. **Smoothed Mann-Whitney Method for Two-Sample Location Problem—**❖Feridun Tasdan, Western Illinois University

11:50 a.m. **Diagnostics for Rank Estimates for a Mixed Model—**❖John Kloke, Pomona College**;** Joseph W. McKean, Western Michigan University**;** M. Mushfiqur Rashid, U.S. Food and Drug Administration

12:05 p.m. **Clusterwise Regression Using Dirichlet Mixtures—**❖Subhashis Ghoshal, North Carolina State University**;** Changku Kang, Bank of Korea

150 CC-251 F

● ✪ Symbolic, Time Series, and Image Analysis II—Contributed

Section on Statistical Computing, Section on Statistical Graphics

Chair(s): Michael Trosset, Indiana University

10:35 a.m. **Symbolic Data Analysis—**❖Lynne Billard, University of Georgia

10:50 a.m. **Temporal Statistics for Consequences of Alcohol Use—**❖Peter Mburu, George Mason University**;** Yasmin H. Said, George Mason University**;** Edward Wegman, George Mason University

11:05 a.m. **Time-Frequency Analysis of Electroencephalogram Series—**❖Wei Yang, SUNY at Albany**;** Stephen Wong, University of Pennsylvania**;** Igor Zurbenko, SUNY at Albany

11:20 a.m. **Temporal Extensions to Spatial Statistical Metrics—**❖James Shine, U.S. Army Topographic Engineering Center**;** James P. Rogers, U.S. Army Corps of Engineers**;** Mete Celik, The University of Minnesota**;** Shashi Shekhar, The University of Minnesota

11:35 a.m. **Approaches to Time Series Clustering—**❖Hwanseok Choi, The University of Alabama**;** J. Michael Hardin, The University of Alabama

11:50 a.m. **An Empirical Spectral Test (EST) for Random Sequences—**❖David Zeitler, Grand Valley State University**;** Joseph W. McKean, Western Michigan University**;** John Kapenga, Western Michigan University

12:05 p.m. **Using Geometrical Tools for Dimension Reduction of Images—**❖Evgenia Rubinshtein, University of Central Arkansas**;** Anuj Srivastata, Florida State University

151 CC-155 E

● Reducing Bias in Epidemiological Studies: Two-Phase Sampling and Missing Data Methods—Contributed

Section on Statistics in Epidemiology, Section on Health Policy Statistics

Chair(s): Mari Palta, University of Wisconsin-Madison

10:35 a.m. **A Method To Assess Bias Reduction in Observational Studies of Influenza Vaccine Effectiveness—**❖Jennifer Nelson, Group Health Center for Health Studies**;** Michael Jackson, Group Health Center for Health Studies**;** Noel Weiss, University of Washington**;** Lisa Jackson, Group Health Center for Health Studies

10:50 a.m. **Multiple Imputation To Control for Unmeasured Confounding Using an Internal Validation Study—**❖Robert Glynn, Brigham and Women's Hospital**;** Til Stürmer, Brigham and Women's Hospital

11:05 a.m. **Estimation of Causal Effects in Studies with Outcome-Dependent, Two-Phase Sampling—**❖Weiwei Wang, Johns Hopkins Bloomberg School of Public Health**;** Daniel Scharfstein, Johns Hopkins Bloomberg School of Public Health**;** Zhiqiang Tan, Johns Hopkins Bloomberg School of Public Health**;** Ellen MacKenzie, Johns Hopkins Bloomberg School of Public Health

11:20 a.m. **Analysis of Epidemiological Studies with an Outcome-Dependent Sampling Design—**❖Haibo Zhou, The University of North Carolina at Chapel Hill

11:35 a.m. **Estimates of Causal Effects of a Continuous Exposure Using Multiple Imputation—**❖Sundar Natarajan, Veterans Affairs New York Harbor Healthcare System/New York University**;** Stuart R. Lipsitz, Brigham and Women's Hospital**;** Garrett Fitzmaurice, Harvard University**;** Scott Regenbogen, Harvard School of Public Health

11:50 a.m. **Nonparametric Regression with Missing Data Using Kernel-Estimating Equations—**❖Lu Wang, Harvard University**;** Xihong Lin, Harvard School of Public Health**;** Andrea Rotnitzky, Universidad Torcuato Di Tella

12:05 p.m. **Semiparametric Efficient Causal Inference with Missing Data—**❖Yue Shentu, Merck & Co., Inc.**;** Minge Xie, Rutgers University

152 CC-355 D

● Survey Measurement and Data Quality—Contributed

Section on Survey Research Methods, Social Statistics Section

Chair(s): Holly Shulman, Centers for Disease Control and Prevention

10:35 a.m. **Can Study Design Influence Substantive Survey Results?—**❖Dhuly Chowdhury, RTI International**;** Karol Krotki, RTI International**;** Lily Trofimovich, RTI International

10:50 a.m. **SOI Develops Better Survey Questions Through Pretesting—**❖Tara Wells, Internal Revenue Service**;** Diane M. Milleville, Internal Revenue Service

11:05 a.m. **A New Approach to Measuring Residence Status—**❖Jennifer Childs, U.S. Census Bureau**;** Elizabeth M. Nichols, U.S. Census Bureau

11:20 a.m. **Evaluating the Computer Audio-Recorded Interviewing (CARI) Household Wellness Study (HWS) Field Test—**Taniecea Arceneaux, U.S. Census Bureau**;** ❖Sherry E. Thorpe, U.S. Census Bureau

11:35 a.m. **Patterns of Nonresponse for Key Questions in NSDUH and Implications for Imputation—**❖Peter Frechtel, RTI International**;** Elizabeth Copello, RTI International

11:50 a.m. **The Impact on Data Quality of the Transition to Clean-Burning, On-Highway Diesel—**❖Paula Weir, Energy Information Administration**;** Pedro J. Saavedra, Macro International**;** Benita O'Colmain, Macro International

12:05 p.m. **Interviewer Variability and Survey Estimates: Quantifying Data Quality—**❖Novie Younger, The University of the West Indies at Mona, Jamaica**;** Damion Francis, University of the West Indies**;** Shelly McFarlane, University of the West Indies**;** Jan van den Broeck, University of the West Indies**;** Georgiana Gordon-Strachan, University of the West Indies**;** Andriene Grant, Ministry of Health, Jamaica**;** Deanna Ashley, Ministry of Health, Jamaica**;** Rainford Wilks, University of the West Indies

153 CC-355 A

● Survey Weighting and Calibration Methods—Contributed

Section on Survey Research Methods

Chair(s): Stanislav Kolenikov, University of Missouri-Columbia

10:35 a.m. **Comparing Estimate Bias and Variances Using Calibrated Weights with a Different Number of Constraints in a Sample with Oversamples in Specific Groups—**❖Nuria Diaz-Tena, TNS-Global**;** Rob Cole, TNS-Global**;** Partha Dass, TNS-Global

10:50 a.m. **A New Algorithm for High-Dimensional Calibration in Observational Studies—**❖Michael E. Jones, Westat**;** Ismael Flores Cervantes, Westat**;** David R. Judkins, Westat

11:05 a.m. **Improving the Unit Nonresponse Adjustment in the NLSCY Using Logistic Regression Modeling and Calibration—**❖Mike Tam, Statistics Canada**;** Marcelle Tremblay, Statistics Canada**;** Sarah Franklin, Statistics Canada**;** Claude Girard, Statistics Canada

11:20 a.m. **Weight-Trimming in the National Immunization Survey (NIS)—**❖Sadeq Chowdhury, NORC at the University of Chicago**;** Meena Khare, National Center for Health Statistics**;** Kirk Wolter, NORC at the University of Chicago

11:35 a.m. **Testing for Informative Weights and Weights Truncation in Multivariate and Multilevel Modeling with Survey Data—**❖Tihomir Asparouhov, Muthen & Muthen**;** Bengt Muthen, University of California, Los Angeles

11:50 a.m. **An Application of Alternative Weighting Matrix Collapsing Approaches for Improving Sample Estimates—**❖Linda Tompkins, Centers for Disease Control and Prevention**;** Jay J. Kim, National Center for Health Statistics

12:05 p.m. **Bayesian Weight-Smoothing Models in Clustered or Cross-Classed Sample Designs—**❖Xiaobi Huang, University of Michigan**;** Michael R. Elliott, University of Michigan

Contributed Poster Presentations 10:30 a.m.–12:20 p.m.

154 CC-Exhibit Hall D

Contributed Poster Presentations—Contributed

Biometrics Section, Biopharmaceutical Section, ENAR, WNAR, Section on Statistical Consulting, Section on Statistical Computing

Chair(s): Dongseok Choi, Oregon Health & Science University

Applications and case studies

01 **A Quantitative Assessment of Diagnostic Cutoff Point Selection Methods—**❖Michael Andrew, Centers for Disease Control and Prevention; Shengqiao Li, Centers for Disease Control and Prevention; Harshinder Singh, West Virginia University

02 **Application of Principal Component Analysis in the Reduction of a 19-Item Clinical Scale—**❖Hong Liu-Seifert, Eli Lilly and Company

03 **Statistical Applications in High-Throughput siRNA Synthetic Lethality Screens—**❖Yue Li, Lilly Singapore Center for Drug Discovery; Gopinath Ganji, Lilly Singapore Center for Drug Discovery; Holly Yin, Translational Genomics Research Institute; Quick Que, Translational Genomics Research Institute; Kok Long Ang, Lilly Singapore Center for Drug Discovery; Libin Ma, Lilly Singapore Center for Drug Discovery; Song Wu, Lilly Singapore Center for Drug Discovery; Greg Tucker-Kellogg, Lilly Singapore Center for Drug Discovery

04 **Outlier Detection for a High-Throughput Bioassay—**❖Shea Watrin, Amgen Inc.; Ye Frank, Amgen Inc.

05 **The Effects of Sampling and Sample Preparation on Analytical Sensitivity—**❖Thea Eudey, California State University, East Bay; Richard Lewis, GlaxoSmithKline

06 **Binary Logistic Regression Modeling of Precursor Sequence Cleavage—**❖Allison Tegge, University of Illinois at Urbana-Champaign; Sandra Rodriguez-Zas, University of Illinois at Urbana-Champaign; Bruce Southey, University of Illinois at Urbana-Champaign

Bayesian statistics, hierarchical models

07 **Frequentist and Bayesian Complement Each Other—**❖Tie-Hua Ng, U.S. Food and Drug Administration

Biometrics, bioinformatics, computational biology

08 **Sample-Size Determination for a Flow Cytometry Assay—**❖Elaine A. McVey, BD Technologies; Perry Haaland, BD Technologies; Friedrich Hahn, BD Technologies

09 **Testing for Ordered Alternatives in the Analysis of Genetic Association Studies—**❖Julia Kozlitina, Southern Methodist University

10 **Array Analysis To Assess Effects of RNAi-Based Silencing in Relation to Flavonoid Transport—**❖Robert Norton, California State University, East Bay; Mousumi Rath, California State University, East Bay; Claudia Uhde-Stone, California State University, East Bay

11 **A Semiparametric Mixture Model for Identifying Cis-Acting Regulatory Elements—**❖Gregory Hather, University of California, Berkeley; Terence Speed, University of California, Berkeley; Mary Wildermuth, University of California, Berkeley

12 **Reproducibility of Microarray Data: A Further Analysis of Microarray Quality Control Data—**❖Chien-Ju Lin, National Center for Toxicological Research; James J. Chen, U.S. Food and Drug Administration; Huey-Miin Hsueh, National Chengchi University; Robert R. Delongchamp, National Center for Toxicological Research; Chen-An Tsai, Academia Sinica

13 **An EM Algorithm for Identifying Genotypic Structure Using Genome-Wide Expression Data—**❖Ellen Breazel, University of Georgia; Paul Schliekelman, University of Georgia

14 **A Novel Application of Quantile Regression for Identification of Cartilage Biomarkers in Equine Microarray Data—**❖Liping Huang, University of Kentucky; Christopher Saunders, George Mason University; Wenying Zhu, University of Kentucky; Jamie MacLeod, University of Kentucky; Arnold Stromberg, University of Kentucky; Arne Bathke, University of Kentucky

15 **A Novel Method of Identifying Differentially Expressed Genes Based on Probe-Level Data for GeneChip Arrays—**❖Zhongxue Chen, Southern Methodist University; Monnie McGee, Southern Methodist University; Qingzhong Liu, New Mexico Institute of Mining and Technology; Megan Kong, The University of Texas Southwestern Medical Center at Dallas; Richard Scheuermann, The University of Texas Southwestern Medical Center at Dallas

16 **A Network-Based Gene Screening Approach—**❖Wei Zhao, University of California, Los Angeles; Paul Mischel, University of California, Los Angeles; Steve Horvath, University of California, Los Angeles

17 **Statistical Methods for Peptide Identification Using Tandem Mass Spectrometry Through Sequence Database Searching—**❖Qunhua Li, University of Washington; Matthew Stephens, The University of Chicago

Clinical trials, drug discovery

18 **Development and Application of a Multivariate Mantel-Haenszel Mean Scores Test**—❖Rebecca McNeil, Medical University of South Carolina; Robert Woolson, Medical University of South Carolina; Carol Wagner, Medical University of South Carolina

19 **Curtailed Two-Stage Design for Phase II Clinical Trial**—Yunchan Chi, National Cheng Kung University; ❖Chiamin Chen, National Cheng-Kung University

20 **Statistical Evaluation of Bone Mineral Density as a Surrogate Endpoint for Fracture with or Without Baseline Consideration**—❖Peiqi Chen, Eli Lilly and Company; Asad Rana, Eli Lilly and Company

21 **A Composite Endpoint for Vulvovaginal Symptoms in VVA Clinical Trials**—❖Moh-Jee Ng, U.S. Food and Drug Administration; Ling Chen, U.S. Food and Drug Administration

22 **Predicting Accrual in Clinical Trials: Bayesian Posterior Predictive Distribution**—❖Stephen D. Simon, Children's Mercy Hospital; Byron Gajewski, The University of Kansas Medical Center

23 **Inference in Clinical Trial Using ROC Curve Regression**—❖Lin Zhang, Baylor University; Jack Tubbs, Baylor University

24 **Semiparametric Smoothing for Scintigraphy Data from a Three-Period Crossover Design**—❖Jo Edmonds, Baylor University; John W. Seaman, Jr., Baylor University

25 **A Performance Analysis of Distribution-Free Tests for Drug Interaction**—❖Yuhong Tang, Sam Houston State University; Melinda M. Holt, Sam Houston State University

26 **Drug Combination Studies in Preclinical Pharmaceutical Research**—❖Joseph Haas, Eli Lilly and Company; Philip Iversen, Eli Lilly and Company

27 **Evaluation of Soluble KIT as a Potential Surrogate Marker for Time-to-Tumor Progression in Patients with Advanced GIST by Several Recently Proposed Methods**—❖Xin Huang, Pfizer Inc.; Sam DePrimo, Pfizer Inc.; Jenny Zhang, Harvard University; Charles Harmon, Pfizer Inc.; John Smeraglia, Pfizer Inc.; Chuck Baum, Pfizer Inc.; Randy Allred, Pfizer Inc.

28 **Exact Inference for Nominal and Rating Scale Data with Repeated Measurements in Clinical Trials with Parallel Group Design**—❖James Lee, Daiichi Sankyo Pharma Development; John Dar Shong Hwang, B.R.S.I.

29 **Identification of Treatment Effects in the Presence of Deviation from Randomized Assignment: Application to a Surgical Setting**—❖Corwin Zigler, University of California, Los Angeles

Data mining and knowledge discovery, machine learning

30 **Semisupervised Technique and Its Learning Rate in Intelligent Systems**—❖Morteza Marzjarani, Saginaw Valley State University

31 **The Multinode Topological Overlap Measure for Gene Neighborhood Analysis**—❖Ai Li, University of California, Los Angeles; Steve Horvath, University of California, Los Angeles

Environmetrics, ecology, agriculture, wildlife management

32 **Modeling Movement and Diving Behavior of Satellite-Tagged Sea Turtles**—❖Eric Nordmoe, Kalamazoo College; Cheong Hoong Diong, Nanyang Technological University

Experimental design

33 **Repeated Classification as a Cost-Effective Sample Design To Test Association When There Are Random Misclassification Errors**—❖Nathan Tintle, Hope College

34 **Multivariate Exploration and Analysis of Crop Yield Components for Optimal Selection in Honeycomb Designs**—❖Andy Mauromoustakos, University of Arkansas; Vasilia Fasoula, The University of Georgia; Kevin Thompson, University of Arkansas

Health policy, epidemiology, public health

35 **An Additive Model for a Heavily Right-Skewed Outcome**—❖Amanda Allshouse, RTI Health Solutions; Jianmin Wang, RTI Health Solutions; Jasmine Mathias, RTI Health Solutions; William Irish, RTI Health Solutions

36 **A Study on Bayesian Signaling of a Prespecified Drug-Adverse Event Association in Post-Marketing Safety Studies**—❖Yu-te Wu, U.S. Food and Drug Administration; George Rochester, U.S. Food and Drug Administration; Yi Tsong, U.S. Food and Drug Administration

Linear models, GLMs, parametric methods

37 **Comparing Exact and Asymptotic Confidence Intervals for a Function of Variance Components**—❖Brent Burch, Northern Arizona University

38 **Testing for Slope Equivalency of Two Orthogonal Analytical Methods**—❖Richard Burdick, Amgen Inc.; Shea Watrin, Amgen Inc.; Michael Stoner, Amgen Inc.

39 **Step-Down Pairwise Comparisons Based on the Studentized Range Distribution**—❖Scott Richter, The University of North Carolina at Greensboro; Melinda McCann, Oklahoma State University

Longitudinal data, repeated measurements, and meta-analysis

40 **An Iterative Least Squares Process To Obtain Unbiased Variance Estimates at the Second Stage of a Two-Stage Model for Longitudinal Data**—❖Mary Bartholomew, U.S. Food and Drug Administration; Chris Gennings, Virginia Commonwealth University

41 **Type I and Type II Error Properties for White's Robust Covariance Matrix Estimator in Longitudinal Designs with Several Repeats**—❖Keith Williams, University of Arkansas for Medical Sciences; Deborah W. Biddle, University of Arkansas for Medical Sciences

42 **Effect of Ignoring Baseline on Transitions from Intact Cognition to Dementia**—❖Richard J. Kryscio, University of Kentucky; Lei Yu, University of Kentucky; David Snowdon, University of Kentucky; Suzanne Tyas, University of Waterloo

43 **A Simulation Study Comparing Linear Mixed Models and Generalized Estimation Equations for Use in Longitudinal Biomarker Study for Exposure to Cigarette Smoke**—❖Qiwei Liang, Philip Morris USA; Huajiang Li, Quintiles Inc.; Hans Roethig, Philip Morris USA

Mathematical statistics, distribution theory, robust statistics

44 **A New Class of Location Parameters and Estimators**—❖Roy St Laurent, Northern Arizona University; Ian Harris, Southern Methodist University

Medical devices

45 **Effect of Sample Aliquot Size on the Sensitivity and Reproducibility of Clinical Assays**—❖Guorong Chen, Digene Corp; Irina Nazarenko, Digene Corp

46 **Noninferiority Testing with a Given Percentage of the Control as the Noninferiority Margin**—❖Paul Hshieh, U.S. Food and Drug Administration

Pharmacokinetics and pharmacodynamics

47 **Using Spline-Enhanced ODEs for PK/PD Model Development**—❖Dong Wang, University of Nebraska-Lincoln; Yi Wang, University of Nebraska-Lincoln; Kent Eskridge, University of Nebraska-Lincoln; Shunpu Zhang, University of Nebraska-Lincoln

Time series/wavelet analysis

48 **Wavelet Analysis of Super-Frequent fMRI**—❖Zibonele Valdez-Jasso, The University of Texas at Dallas

49 **Statistical Analysis of EEG-Sleep Patterns of Neonates**—❖Alexandra Piryatinska, San Francisco State University

Speaker with Lunch 12:30 p.m.–1:50 p.m.

155 CC-Ballroom D

Section on Statistics in Sports Speaker with Lunch (fee event)—Speaker with Lunch

Section on Statistics in Sports

Organizer(s): Michael Schell, Moffitt Cancer Center

ML09 **Is Tiger a Winner, or Is He Just Better Than Everyone?**—❖Scott Berry, Berry Consultants

Roundtables with Lunch 12:30 p.m.–1:50 p.m.

156 CC-Ballroom A

Biopharmaceutical Section Roundtables with Lunch (fee event)

Biopharmaceutical Section

Organizer(s): Kaylan Ghosh, Vislation

ML10 **Innovative Design and Analysis of FDA Medical Device Submissions**—❖Gary Kamer, U.S. Food and Drug Administration

ML11 **Blocks, Strata, and Covariates: What's in a Name?**—❖Veronica Taylor, U.S. Food and Drug Administration

ML12 **The Use of Meta-Analysis in Drug Development**—❖Tsushung Hua, Novartis Pharmaceuticals

ML13 **Evaluating Probability of Success for Internal Decisionmaking in Early Drug Development**—❖Narinder Nangia, Abbott Laboratories

157 CC-Ballroom A

Business and Economics Statistics Section Roundtable with Lunch (fee event)

Business and Economics Statistics Section

Organizer(s): Clifford M. Hurvich, New York University

ML14 **Statistics Teaching: Bayesian, Frequentist, United**—❖Emanuel Parzen, Texas A&M University

158 CC-Ballroom A

Section on Bayesian Statistical Science Roundtable with Lunch (fee event)

Section on Bayesian Statistical Science

Organizer(s): David van Dyk, University of California, Irvine

ML15 **Dealing with Review Efficiency: A Practical Bayesian Approach**—❖Xiao-li Meng, Harvard University

159 CC-Ballroom A

Section on Government Statistics Roundtable with Lunch (fee event)

Section on Government Statistics

Organizer(s): Michael Davern, The University of Minnesota

ML16 **Design and Use of the IPUMS International Data Series—**❖Matthew Sobek, The University of Minnesota

CANCELLED

160 CC-Ballroom A

Section on Health Policy Statistics Roundtable with Lunch (fee event)

Section on Health Policy Statistics

Organizer(s): Anirban Basu, The University of Chicago

ML17 **Estimation of Causal Effects in Health Services and Outcome Research Using Observational Data—**❖Lirong Zhao, University of Maryland

161 CC-Ballroom A

Section on Physical and Engineering Sciences Roundtables with Lunch (fee event)

Section on Physical and Engineering Sciences

Organizer(s): Randall Tobias, SAS Institute Inc.

ML18 **Sensor-Based Field Reliability Data Analysis: Opportunities and Challenges—**❖Necip Doganaksoy, General Electric

ML19 **Non-Negative Matrix Factorization in Statistics—**❖S. Stanley Young, National Institute of Statistical Sciences

162 CC-Ballroom C

Section on Quality and Productivity Roundtable with Lunch (fee event)

Section on Quality and Productivity

Organizer(s): James Williams, GE Global Research

ML20 **Exposing Students to Six Sigma as Part of Their University Training—**❖Angie Patterson, GE Global Research

163 CC-Ballroom C

Section on Risk Analysis Roundtable with Lunch (fee event)

Section on Risk Analysis

Organizer(s): Susan Simmons, The University of North Carolina at Wilmington

ML21 **Harnessing the Power of Information in Quantitative Risk Assessment—**❖Walter W. Piegorsch, The University of Arizona

164 CC-Ballroom C

Section on Statistical Consulting Roundtable with Lunch (fee event)

Section on Statistical Consulting

Organizer(s): James Grady, The University of Texas Medical Branch

ML22 **Right Answer, Wrong Question: Characterization and Reduction of the Risk of Type III Error in Statistical Applications—**❖John L. Eltinge, Bureau of Labor Statistics

165 CC-Ballroom C

Section on Statistical Education Roundtables with Lunch (fee event)

Section on Statistical Education

Organizer(s): Jacqueline Miller, The Ohio State University

ML23 **Spanning the Globe: Using Data To Introduce Students to the Rest of the World—**❖Robert Carver, Stonehill College

ML24 **TA Training for Introductory Statistics Courses—**❖Jessica Utts, University of California, Davis

ML25 **Learning to Teach Statistics: Challenges and Suggestions—**❖Candace Berrett, The Ohio State University; Jacqueline Miller, The Ohio State University

166 CC-Ballroom C

Section on Statistical Graphics Roundtable with Lunch (fee event)

Section on Statistical Graphics

Organizer(s): David Hunter, The Pennsylvania State University

ML26 **Graphical Data Mining of Network Data—**❖George Michailidis, The University of Michigan

167 CC-Ballroom C

Section on Statisticians in Defense and National Security Roundtable with Lunch (fee event)

Section on Statisticians in Defense and National Security

Organizer(s): David Marchette, Naval Surface Warfare Center

ML27 **Increasing Understanding of the Need for Statistics in Defense and Security—**❖Alyson G. Wilson, Los Alamos National Laboratory

168 CC-Ballroom C

Section on Statistics in Epidemiology Roundtable with Lunch (fee event)

Section on Statistics in Epidemiology

Organizer(s): William E. Barlow, Cancer Research and Biostatistics

ML28 **Gerontologic Biostatistics and the Challenges of Conducting Biomedical Research with Older Populations—**❖Peter H. Van Ness, Yale University**;** ❖Heather G. Allore, Yale University

169 CC-Ballroom C

Section on Survey Research Methods Roundtable with Lunch (fee event)

Section on Survey Research Methods

Organizer(s): David Marker, Westat

ML29 **What Happened in Florida-13's Election Last Year, and What Can We Do To Improve Electoral Integrity?—**❖Arlene Ash, Boston University

170 CC-Ballroom C

Social Statistics Section Roundtable with Lunch (fee event)

Social Statistics Section

Organizer(s): Jana Asher, Carnegie Mellon University

ML30 **Linking Survey Data and Administrative Data for Policy Research—**❖Michael Davern, The University of Minnesota

Special Presentation 2:00 p.m.–3:50 p.m.

171 CC-Ballroom B

Late-Breaking Session 1: Statistical Analysis of an Archeological Find—Other

ASA, ENAR, IMS, WNAR, SSC

Organizer(s): Allan Rossman, California Polytechnic State University

Chair(s): Hal Stern, University of California, Irvine

2:05 p.m. **Statistical Analysis of an Archeological Find—**❖Andrey Feuerverger, University of Toronto

2:50 p.m. Disc: Aleks Jakulin, Columbia University

3:05 p.m. Disc: Stephen Fienberg, Carnegie Mellon University

3:20 p.m. Disc: Donald Bentley, Pomona College

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

Invited Sessions 2:00 p.m.–3:50 p.m.

172 CC-255 C

● ✪ Statistical Issues in High-Dimensional Omics Data and Biomarker Discovery—Invited

Biopharmaceutical Section, ENAR, Biometrics Section

Organizer(s): Lei Zhu, GlaxoSmithKline

Chair(s): Lei Zhu, GlaxoSmithKline

2:05 p.m. **Systems-Based Analysis of Metabolic Profiles—**❖Jacqueline M. Hughes-Oliver, North Carolina State University

2:30 p.m. **Toward Superior Classifications with ABC Dissimilarities: A Microarray Case Study—**❖Dhammika Amaratunga, Johnson & Johnson PRD**;** Javier Cabrera, Rutgers University**;** Vladimir Kovtun, Rutgers University

2:55 p.m. **Sample Size Estimation for Omics Experiments—**❖Gregory R. Warnes, University of Rochester**;** Peng Liu, Iowa State University

3:20 p.m. Disc: Kwan Lee, GlaxoSmithKline

3:40 p.m. **Floor Discussion**

173 CC-255 A

● ✪ Methods To Identify and Adjust for Selection Bias in Observational Studies—Invited

Section on Statistics in Epidemiology, Section on Health Policy Statistics, Section on Risk Analysis, Section on Teaching Statistics in the Health Sciences, WNAR

Organizer(s): Robert Glynn, Brigham and Women's Hospital

Chair(s): Robert Glynn, Brigham and Women's Hospital

2:05 p.m. **Propensity Score Calibration with Validation Data—**❖Til Stürmer, Brigham and Women's Hospital**;** Sebastian Schneeweiss, Brigham and Women's Hospital**;** Kenneth J. Rothman, Brigham and Women's Hospital**;** Jerry Avorn, Brigham and Women's Hospital**;** Robert Glynn, Brigham and Women's Hospital

2:30 p.m. **Bayesian Methods to Acknowledge Confounding and Mismeasurement—**❖Paul Gustafson, University of British Columbia**;** Lawrence McCandless, University of British Columbia

2:55 p.m. **Instrumental Variables in Pharmacoepidemiology—**❖M. Alan Brookhart, Brigham and Women's Hospital

3:20 p.m. Disc: Sander Greenland, University of California, Los Angeles

3:40 p.m. **Floor Discussion**

174 CC-251 B

✪ Advances in Contemporary Nonparametric Methods—Invited

Section on Nonparametric Statistics

Organizer(s): Soumendra N. Lahiri, Texas A&M University

Chair(s): Daniel Nordman, Iowa State University

2:05 p.m. **On Least-Squares Fitting for Spatial Point Processes—**❖Michael Sherman, Texas A&M University**;** Yongtao Guan, Yale University

2:30 p.m. **A GCV Approach for Bandwidth Selection in PET Image Reconstruction—**❖Ranjan Maitra, Iowa State University

2:55 p.m. **Minimax Estimators of the Coverage Probability of the Impermissible Error for a Location Family—**❖Miguel A. Arcones, Binghamton University

3:20 p.m. **Higher-Order Properties of Block Bootstrap Confidence Intervals—**❖Soumendra N. Lahiri, Texas A&M University

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

175 CC-257

✪ The Transition from Undergraduate to Graduate Study of Statistics—Invited

Mu Sigma Rho, Section on Statistical Education

Organizer(s): Marcia Gumpertz, North Carolina State University

Chair(s): Marcia Gumpertz, North Carolina State University

2:05 p.m. **Inspiring and Challenging Students in the Mathematical Sciences—**❖William Y. Velez, The University of Arizona

2:25 p.m. **Undergraduate Preparation—**❖L. Marlin Eby, Messiah College

2:45 p.m. **The First-Year Experience—**❖Matthew Ritter, North Carolina State University

3:05 p.m. **The First-Year of Graduate Studies in Statistics—**❖Pam Arroway, North Carolina State University

3:25 p.m. Disc: Julie Legler, St. Olaf College

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

176 CC-255 F

● ✪ State of the Art in Mixed Models Analysis—Invited

ENAR, Section on Statistics in Epidemiology, Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Matthew Gurka, University of Virginia

Chair(s): Keith E. Muller, University of Florida

2:05 p.m. **Sample Size and Power Calculations in Late-Phase Clinical Trials with a Longitudinal Endpoint—**❖Jose Pinheiro, Novartis Pharmaceuticals

2:30 p.m. **Internal Pilot Designs and Mixed Models—**❖Matthew Gurka, University of Virginia**;** Christopher S. Coffey, The University of Alabama at Birmingham**;** Keith E. Muller, University of Florida

2:55 p.m. **Assessing the Performance of a Symmetric Divergence Information Criterion for Selecting the Best Linear Mixed Model—**❖Lloyd J. Edwards, The University of North Carolina at Chapel Hill**;** Anita Abraham, The University of North Carolina at Chapel Hill

3:20 p.m. Disc: Oliver Schabenberger, SAS Institute Inc.

3:40 p.m. **Floor Discussion**

177 CC-251 D

Machine Learning and Optimization—Invited

IMS, Section on Nonparametric Statistics, Section on Physical and Engineering Sciences

Organizer(s): Jon D. McAuliffe, University of Pennsylvania

Chair(s): Jon D. McAuliffe, University of Pennsylvania

2:05 p.m. **Support Vector Machines for Structured Outputs—**❖Thorsten Joachims, Cornell University

2:35 p.m. **Large-Scale Covariance Selection by Chordal Embedding—**❖Lieven Vandenberghe, University of California, Los Angeles**;** Joachim Dahl, Aalborg University

3:05 p.m. **Model Selection for SVMs through Bilevel Optimization—**❖Gautam Kunapuli, Rensselaer Polytechnic Institute

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

178 CC-250 D

● ✪ Analyzing Multiple-Response Categorical Data from Complex Survey Designs—Invited

Section on Survey Research Methods, SSC

Organizer(s): Thomas M. Loughin, Simon Fraser University

Chair(s): Thomas M. Loughin, Simon Fraser University

2:05 p.m. **Simple Practitioner-Oriented Hypothesis Tests for Various Types of Multiple Response Survey Data—**❖D. Roland Thomas, Carleton University**;** Yves J. Decady, Statistics Canada

2:30 p.m. **Estimation and Testing for Association with Multiple-Response Categorical Variables from Complex Surveys—**❖Christopher R. Bilder, University of Nebraska-Lincoln**;** Thomas M. Loughin, Simon Fraser University

2:55 p.m. **Bayesian Inference for a Stratified Categorical Variable Allowing All Possible Category Choices—** Balgobin Nandram, Worcester Polytechnic Institute**;** ❖Myron Katzoff, National Center for Health Statistics**;** Ma Criselda S. Toto, Worcester Polytechnic Institute

3:20 p.m. Disc: Robert Fay, U.S. Census Bureau

3:40 p.m. **Floor Discussion**

179 CC-155 F
● Fifty Years of the National Health Interview Survey—Invited

Section on Health Policy Statistics, Section on Government Statistics, Section on Survey Research Methods, Social Statistics Section, Section on Statistics in Epidemiology

Organizer(s): Jane F. Gentleman, National Center for Health Statistics

Chair(s): Van Parsons, National Center for Health Statistics

2:05 p.m. **The Evolution of Concepts in the National Health Interview Survey—**❖Jennifer Madans, National Center for Health Statistics

2:30 p.m. **Policy Uses of National Health Interview Survey (NHIS) Data on Health Insurance Coverage—** ❖Amy J. Davidoff, University of Maryland

2:55 p.m. **The National Health Interview Survey in the Present and in the Future—**❖Jane F. Gentleman, National Center for Health Statistics

3:20 p.m. **Fifty Years of the National Health Interview Survey—** ❖Nancy Breen, National Cancer Institute

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

180 CC-355 E
Financial Econometrics—Invited

IMS

Organizer(s): Jianqing Fan, Princeton University

Chair(s): Tony Cai, University of Pennsylvania

2:05 p.m. **Local Parametric Inference in the Hidden Semimartingale Model—**❖Per A. Mykland, The University of Chicago

2:35 p.m. **Parameter Estimation of Diffusion Process with Sequential Monte Carlo—**❖Rong Chen, University of Illinois at Chicago

3:05 p.m. **Heterogeneous Autoregressive Realized Volatility Model—**❖Yazhen Wang, University of Connecticut

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

181 CC-355 B
Large-Scale Data Mining—Invited

Section on Statistical Computing, Section on Statisticians in Defense and National Security, Section on Quality and Productivity, Section on Nonparametric Statistics, Section on Physical and Engineering Sciences, Section on Statistical Graphics

Organizer(s): Edward Wegman, George Mason University; Yasmin H. Said, George Mason University

Chair(s): David W. Scott, Rice University

2:05 p.m. **A New Family of Link Functions Extending Logistic Regression—**❖William DuMouchel, Lincoln Technologies

2:35 p.m. **Statistics and Search Engines—**❖Daryl Pregibon, Google

3:05 p.m. **A Poor Man's View of Data Mining—**❖William F. Szewczyk, National Security Agency

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

182 CC-155 B
● ✪ Missing Data in Longitudinal Studies—Invited

SSC, ENAR, Section on Statistics in Epidemiology, Biometrics Section, Biopharmaceutical Section, Section on Survey Research Methods, WNAR

Organizer(s): Lang Wu, University of British Columbia

Chair(s): Lang Wu, University of British Columbia

2:05 p.m. **Mixed Nonhomogeneous Poisson Process Spline Models for the Analysis of Recurrent Event Panel Data—**❖Jason Nielsen, Simon Fraser University**;** Charmaine Dean, Simon Fraser University

2:30 p.m. **Reducing the Bias of Between- Within-Cluster Covariate Methods When Data Are Missing at Random—**❖John Neuhaus, University of California, San Francisco**;** Charles E. McCulloch, University of California, San Francisco

2:55 p.m. **Semiparametric Methods for Clustered Binary Data—**❖Grace Y. Yi, University of Waterloo**;** Wenqing He, University of Western Ontario**;** Hua Liang, University of Rochester

3:20 p.m. **Second-Order Least Squares Estimation for Nonlinear Mixed Effects Models—**❖Liqun Wang, University of Manitoba

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

Invited Panels 2:00 p.m.–3:50 p.m.

183 CC-254 A

Summer Institutes for Training in Biostatistics (SIBS): Addressing the Biostatistician Shortage—Invited

Section on Teaching Statistics in the Health Sciences, ENAR, Biometrics Section, Section on Statistical Education

Organizer(s): Walter T. Ambrosius, Wake Forest University

Chair(s): Walter T. Ambrosius, Wake Forest University

Panelists:
- ❖ Song Yang, National Heart, Lung, and Blood Institute
- ❖ Ronald E. Gangnon, University of Wisconsin-Madison
- ❖ Lisa M. Sullivan, Boston University
- ❖ Kimberly S. Weems, North Carolina State University

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

184 CC-254 C

Rising from the Ashes of the SIPP: Opportunities and Challenges of the New Dynamics of Economic Well-Being System—Invited

Social Statistics Section, Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Daniel Kasprzyk, Mathematica Policy Research, Inc.

Chair(s): Daniel Kasprzyk, Mathematica Policy Research, Inc.

Panelists:
- ❖ David Johnson, U.S. Census Bureau
- ❖ Constance F. Citro, National Academy of Sciences
- ❖ Howard Iams, Social Security Administration
- ❖ Martin David, University of Wisconsin-Madison
- ❖ John Czajka, Mathematica Policy Research, Inc.

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

Invited Poster Presentations 2:00 p.m.–3:50 p.m.

185 CC-Exhibit Hall D

Invited Poster Presentations—Invited

Section on Statistics and the Environment, ENAR, IMS, SSC, WNAR, Biometrics Section

Chair(s): Dongseok Choi, Oregon Health & Science University

Spatial statistics, spatio-temporal modeling

50 **Estimation of Covariogram Models by Minimum Prediction Contrast for Kriging**—❖Marc Genton, University of Geneva; Olivier Perrin, University of Toulouse 1

51 **Experiments on the Earth: Smoothing and Spatial Statistics for Geophysical Applications Using Fields**—❖Stephan Sain, National Center for Atmospheric Research; Reinhard Furrer, Colorado School of Mines; Douglas Nychka, National Center for Atmospheric Research

52 **Stochastic Space-Time Regional Rainfall Modeling Adapted to Historical Rain Gauge Data**—❖Zepu Zhang, The University of Chicago; Paul Switzer, Stanford University

53 **Black Diamond Ski Runs and the Fields R Package**—❖Douglas Nychka, National Center for Atmospheric Research

Environmetrics, ecology, agriculture, wildlife management

54 **Reconstruction of NH Average Temperature by Hierarchical Bayesian Models**—❖Bo Li, National Center for Atmospheric Research; Douglas Nychka, National Center for Atmospheric Research; Caspar Ammann, National Center for Atmospheric Research

55 **Choice of Basis Functions in GAM Models of Air Pollution and Respiratory Health**—❖Chava Zibman, The University of Chicago; Vanja Dukic, The University of Chicago

56 **Statistical Approaches to El Niño Forecasting**—❖Souparno Ghosh, Texas A&M University; Amanda S. Hering, Texas A&M University; Salil Mahajan, Texas A&M University; Marc Genton, University of Geneva; Mikyoung Jun, Texas A&M University; Bani Mallick, Texas A&M University; Ramalingam Saravanan, Texas A&M University

57 **An International Comparison of Air Quality Standards**—❖Peter Guttorp, University of Washington; Laura Knudsen, University of Washington

58 **Space-Time Bayesian Environmental Modeling of the Chronic Wasting Disease in Deer**—❖Hae-Ryoung Song, University of South Carolina; Andrew B. Lawson, University of South Carolina; Dennis Heisey, U.S. Geological Survey; Damien Joly, Alberta Sustainable Resource Development

59 **Source Apportionment and Health Effects of Air Pollution**—❖Thomas Lumley, University of Washington

Applications and case studies

60 **The Exploration of Space-Time Data**—❖Li Chen, The University of Chicago; Michael Stein, The University of Chicago

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

186 CC-155 D

● Quantifying and Hedging Operational Risk—Topic-Contributed

Section on Risk Analysis

Organizer(s): Deborah Cernauskas, IBM

Chair(s): Anton Schick, Binghamton University

2:05 p.m. **Quantifying Project Management Delay Costs Through Simulation Modeling—**❖Andrew Kumiega, Spectrum Global**;** Deborah Cernauskas, IBM

2:25 p.m. **Environmental Risk Mitigation and Corporate Competitiveness—**❖Nasrin Khalili, IIT Stuart School of Business

2:45 p.m. **A Methodology for Trading and Investment System Development—**❖Benjamin Van Vliet, Illinois Institute of Technology**;** Andrew Kumiega, Spectrum Global

3:05 p.m. **Vendor Bid Evaluation Using a Risk-Adjusted Price Methodology—**❖Deborah Cernauskas, IBM

3:25 p.m. **Project Portfolio Optimization for Operational Risk Management—**❖Aberrahim Labbi, IBM/Zurich Labs

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

187 CC-355 F

● ✪ Model Selection and Applications—Topic-Contributed

Biometrics Section, ENAR

Organizer(s): Ronghui Xu, University of California, San Diego

Chair(s): Ronghui Xu, University of California, San Diego

2:05 p.m. **Adaptive Regressograms—**❖Anthony Gamst, University of California, San Diego

2:25 p.m. **On L1-Norm Multiclass Support Vector Machines: Classification of High-Dimension, Low Sample Size Data—**❖Lifeng Wang, University of Pennsylvania**;** Xiaotong Shen, The University of Minnesota

2:45 p.m. **Fence Methods for Quantitative Trait Loci Mapping in Humans—**❖Thuan Nguyen, University of California, Davis**;** Jiming Jiang, University of California, Davis**;** Jie Peng, University of California, Davis

3:05 p.m. **Model Selection Under the Proportional Hazards Mixed Effects Model (PHMM)—**❖Michael Donohue, University of California, San Diego**;** Ronghui Xu, University of California, San Diego**;** Anthony Gamst, University of California, San Diego**;** Florin Vaida, University of California, San Diego**;** David P. Harrington, Dana-Farber Cancer Institute

3:25 p.m. **Model Selection for Partial Spline Models—**❖Hao Zhang, North Carolina State University

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

188 CC-251 C

● ✪ Statistical Challenges in Evolutionary Biology—Topic-Contributed

IMS

Organizer(s): Vladimir N. Minin, University of California, Los Angeles

Chair(s): Marc A. Suchard, University of California, Los Angeles

2:05 p.m. **Analysis of Count Data with Phylogenetic Random Effects—**❖Cecile Ane, University of Wisconsin-Madison

2:25 p.m. **Coalescent-Based Inference of Population Dynamics with Gaussian Markov Random Field Temporal Smoothing—**❖Vladimir N. Minin, University of California, Los Angeles**;** Marc A. Suchard, University of California, Los Angeles

2:45 p.m. **A Step Toward Bar Coding Life: A New Method To Assign Genes to Pre-existing Species Groups—**❖Zaid Abdo, University of Idaho**;** Geoffre B. Golding, McMaster University

3:05 p.m. **Measures of Volatility and Valency for Serially Sampled Nucleotide Sequences—**❖John O'Brien, University of California, Los Angeles

3:25 p.m. **Phylogenies Unplugged: Consensus Trees with Wandering Taxa—**❖Benjamin Redelings, North Carolina State University

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

189 CC-251 F

● ✪ Statistics and Machine Learning in High Dimension—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Samiran Ghosh, Indiana University Purdue University Indianapolis

Chair(s): Melanie Wilson, Duke University

2:05 p.m. **Estimating Rates of Rare Events in Massive Web Applications—**❖Deepak Agarwal, Yahoo! Research

2:25 p.m. **Robust Test for Detecting a Signal in a High-Dimensional Sparse Normal Vector—**❖Junyong Park, University of Maryland, Baltimore County**;** Eitan Greenshtein, Statistical and Applied Mathematical Sciences Institute

2:45 p.m. **Learning Gradients and Feature Selection on Manifolds—**❖Sayan Mukherjee, Duke University

3:05 p.m. **Feature Extraction for Classification of Functional Data—**❖Bin Li, Louisiana State University**;** Qingzhao Yu, Louisiana State University Health Sciences Center

3:25 p.m. **Dimension Augmenting Vector Machine: A New General Classifier System for Large p Small n Problem—**❖Samiran Ghosh, Indiana University Purdue University Indianapolis**;** Yazhen Wang, University of Connecticut**;** Dipak Dey, University of Connecticut

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

190 CC-251 A

● ✪ Section on Bayesian Statistics Student Paper Competition: Network Models, Reliability, and Prediction—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Merlise A. Clyde, Duke University

Chair(s): Liansheng Zhu, Pharmaceutical Product Development, Inc

2:05 p.m. **A Bayesian Mixed Effects Model for Longitudinal Social Network Data-Student Paper Competitions—**❖Anton Westveld, Washington University in St. Louis**;** Peter D. Hoff, University of Washington

2:25 p.m. **Bayesian Network-Based Process Monitoring and Diagnosis in Complex Manufacturing Systems—**❖Jing Li, The University of Michigan**;** Jianjun Shi, The University of Michigan**;** Jionghua Jin, The University of Michigan

2:45 p.m. **The Dependent Poisson Race Model and Modeling Dependence in Conjoint Choice Experiments (Student Paper Competition)—**❖Shiling Ruan, The Ohio State University**;** Steven N. MacEachern, The Ohio State University**;** Thomas Otter, The Ohio State University**;** Angela Dean, The Ohio State University

3:05 p.m. **Probabilistic Weather Forecasting for Winter Road Maintenance—**❖Veronica J. Berrocal, University of Washington**;** Adrian E. Raftery, University of Washington**;** Tilmann Gneiting, University of Washington

3:25 p.m. **Floor Discussion**

191 CC-250 C

Synthetic Data and Other Methods for Disclosure Limitation and Confidentiality Preservation—Topic-Contributed

Section on Survey Research Methods, Social Statistics Section

Organizer(s): Michael D. Larsen, Iowa State University

Chair(s): Sam Hawala, U.S. Census Bureau

2:05 p.m. **Microdata Simulation for Confidentiality Protection Using Regression Quantiles and Hot Deck—**❖Jennifer Huckett, Iowa State University**;** Michael D. Larsen, Iowa State University

2:25 p.m. **Releasing Multiply Imputed, Synthetic Data Generated in Two Stages To Protect Confidentiality—**❖Joerg Drechsler, Institute for Employment Research**;** Jerome P. Reiter, Duke University

2:45 p.m. **Multiple Imputation Alternatives to Top-Coding for Statistical Disclosure Control—**❖Di An, University of Michigan**;** Roderick J. Little, University of Michigan

3:05 p.m. **Secure Logistic Regression—**❖Yuval Nardi, Carnegie Mellon University**;** Stephen Fienberg, Carnegie Mellon University**;** Aleksandra Slavkovic, The Pennsylvania State University

3:25 p.m. **Application of the Truncated Triangular and the Trapezoidal Distributions for Developing Multiplicative Noise—**❖Jay J. Kim, National Center for Health Statistics

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

192 CC-258

● Modeling Longitudinal Data in Epidemiology—Topic-Contributed

Section on Statistics in Epidemiology, Biometrics Section, ENAR, Section on Health Policy Statistics, Section on Teaching Statistics in the Health Sciences

Organizer(s): Sarah Ratcliffe, University of Pennsylvania; Mary D. Sammel, University of Pennsylvania

Chair(s): Thomas R. Tenhave, University of Pennsylvania

2:05 p.m. **Computationally Efficient Estimation of Multilevel High-Dimensional Latent Variable Models—**❖Bengt Muthén, University of California, Los Angeles**;** Tihomir Asparouhov, Muthén & Muthén

2:25 p.m. **Interval-Censored Regression for Modeling the Effect of Labor Progression on Uterine Rupture—**❖Sarah Ratcliffe, University of Pennsylvania**;** George A. Macones, Washington University in St. Louis

2:45 p.m. **Longitudinal Latent Variable Models in Environmental Epidemiology—**❖Brisa Sanchez, University of Michigan

3:05 p.m. **Bayesian Multivariate Growth Curve Latent Class Models for Mixed Outcomes—**❖Benjamin E. Leiby, Thomas Jefferson University**;** Mary D. Sammel, University of Pennsylvania**;** Thomas R. Tenhave, University of Pennsylvania**;** Kevin G. Lynch, University of Pennsylvania

3:25 p.m. **Modeling Longitudinal Steroid Hormone Levels for Predicting Menopausal Symptoms—**❖Mary D. Sammel, University of Pennsylvania**;** Jeanne Manson, Children's Hospital of Philadelphia**;** Ellen W. Freeman, University of Pennsylvania

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

193 CC-259

Smoothing Spline Methods and Their Applications—Topic-Contributed

WNAR, Biometrics Section

Organizer(s): Li Qin, Fred Hutchinson Cancer Research Center

Chair(s): Xiaoming Sheng, University of Utah

2:05 p.m. **Nonparametric Hazard Estimation for Gap Time in Recurrent Event Data—**❖Pang Du, Virginia Polytechnic Institute and State University

2:25 p.m. **Spectral Density Estimation via State Space Modeling—**❖Li Qin, Fred Hutchinson Cancer Research Center**;** Dongfeng Li, Fred Hutchinson Cancer Research Center

2:45 p.m. **Pointwise Consistency of Smoothing Spline Estimate—**❖Ming Dai, The University of North Carolina at Charlotte**;** Wensheng Guo, University of Pennsylvania

3:05 p.m. **M-Type Smoothing Spline ANOVA for Correlated Data—**❖Anna Liu, University of Massachusetts Amherst**;** John Staudenmayer, University of Massachusetts Amherst**;** Li Qin, Fred Hutchinson Cancer Research Center

3:25 p.m. **Penalized Functional Principal Components Analysis Using a Kullback-Leibler Criterion—**❖Robert Krafty, University of Pennsylvania**;** Wensheng Guo, University of Pennsylvania

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

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

194 CC-251 E

● ✪ What Have We Learned from Results of Primary Prevention Cardiovascular Medical Device Mortality Trials?—Topic-Contributed

Biopharmaceutical Section, ENAR

Organizer(s): Gosford Sawyerr, Purdue Pharma, LP

Chair(s): Dalene Stangl, Duke University

Panelists:
- ❖ Kerry Lee, Duke University
- ❖ Laura Thompson, Food and Drug Administration
- ❖ Andrew Mugglin, The University of Minnesota
- ❖ David Breiter, Boston Scientific Corporation
- ❖ W. Jackson Hall, University of Rochester

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

195 CC-255 B

● ✪ Career Opportunities for Biostatisticians: Perspectives from Industry, Government, and Academics—Topic-Contributed

Biopharmaceutical Section, ENAR, Section on Statistical Consulting, WNAR

Organizer(s): Tammy Massie, U.S. Food and Drug Administration

Chair(s): Tristan Massie, U.S. Food and Drug Administration

Panelists:
- ❖ Tammy Massie, Food and Drug Administration
- ❖ Stacey Cofield, The University of Alabama at Birmingham
- ❖ Carol Summitt, Wyeth
- ❖ Laura Stets, U.S. Food and Drug Administration

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

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

196 CC-355 C

● ✪ Recent Advances in Microarray Data Analysis II—Contributed

Biometrics Section

Chair(s): Tian Zheng, Columbia University

2:05 p.m. **Model-Based Approach for Cancer Outlier Differential Gene Expression Detection—**❖Baolin Wu, The University of Minnesota

2:20 p.m. **Application of Discrimination Method on Combining Gene Expression Data of Kidney Transplant Patients**—❖Xiangrong Kong, Virginia Commonwealth University; Kellie J. Archer, Virginia Commonwealth University

2:35 p.m. **Selection and Validation of Normalization Methods for c-DNA Microarrays Using Within-Array Replications**—❖Yue Niu, Princeton University; Jianqing Fan, Princeton University

2:50 p.m. **Inverse Regression Estimation for Censored Data**—❖Nivedita Nadkarni, University of Wisconsin-Madison; Michael Kosorok, The University of North Carolina at Chapel Hill

3:05 p.m. **Microarray Analysis: P-Values, Filtering, and Multiple Testing Adjustments**—❖Ann Hess, Colorado State University

3:20 p.m. **Distribution-Based Classification with Application to Gene Expression Data Analysis**—❖Xuelian Wei, University of California, Los Angeles; Ker-Chau Li, University of California, Los Angeles

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

197 CC-355 D

● ✪ Mixtures Models and Their Applications—Contributed

Biometrics Section

Chair(s): Weixin Yao, The Pennsylvania State University

2:05 p.m. **Mixture or Homogeneous: Modeling Placebo Response**—❖Thaddeus Tarpey, Wright State University; Dong Yun, Wright State University; Eva Petkova, New York University

2:20 p.m. **Mis-specification Bias in Poisson Mixture Models: Gamma versus Lognormal**—❖Woollcott Smith, Temple University; Shuo Zheng, Temple University

2:35 p.m. **On Some Computational Issues in Marginal Latent Mixture Analysis**—❖Yan Yang, Arizona State University; Douglas Simpson, University of Illinois

2:50 p.m. **Parametric Mixture Model for Survival Data**—❖Ying Zhang, Wyeth; Jagbir Singh, Temple University

3:05 p.m. **Prediction by Trajectory Modeling Approach**—❖Nami Maruyama, Kitasato University; Fumiaki Takahashi, Kitasato University; Hajime Uno, Kitasato University; Masahiro Takeuchi, Kitasato University

3:20 p.m. **Mutual Information for the Mixture of Two Multivariate Distributions**—❖Walfredo Javier, Southern University-Baton Rouge; Arjun K. Gupta, Bowling Green State University

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

198 CC-255 E

● ✪ Missing Data in Clinical Trials—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Xiaodong Li, Merck & Co., Inc.

2:05 p.m. **Handling Missing Data in Long-Term Clinical Trials**—❖Wei Deng, Amylin Pharmaceuticals, Inc.; Xuesong Guan, Amylin Pharmaceuticals, Inc.; Chien-Feng Chen, Amylin Pharmaceuticals, Inc.

2:20 p.m. **Something Might Be Missed in Missing Data Analysis**—❖Xiang Guo, sanofi-aventis; Guangrui Zhu, Eisai Medical Research Inc.

2:35 p.m. **A Comparison of Imputation Methods in a Randomized Active Comparator Pain Relief Clinical Trial**—❖Adam Hamm, Rho, Inc.

2:50 p.m. **Some Remarks on Multiple Imputations in Longitudinal Data Context**—❖Mohammed K. Alam, Kendle International Inc.; Marepalli B. Rao, University of Cincinnati; Ramesh N. Amatya, Kendle International Inc.; Claudia Lara, Kendle International Inc.

3:05 p.m. **A Resampling-Based Approach To Test If a Model Provides Unbiased Parameter Estimates Under Various Missing Data Assumptions**—❖Maria M. Sanchez, Merck & Co., Inc.; Edmund Luo, Merck & Co., Inc.

3:20 p.m. **Properties of Missing Data Imputation Methods: Baseline or Worst Observation Carry Forward**—❖Jun Shao, University of Wisconsin-Madison; David Jordan, Abbott Laboratories; Yannis Jemiai, Cytel Inc.; Yili Pritchett, Abbott Laboratories

3:35 p.m. **Partial FEFI for Incomplete Tables with Covariates**—❖Shin-Soo Kang, Iowa State University; Kenneth Koehler, Iowa State University; Michael D. Larsen, Iowa State University

199 CC-255 D

● ✪ Modeling Time to-Event Data from Clinical Trials—Contributed

Biopharmaceutical Section

Chair(s): Joseph G. Pigeon, Villanova University

2:05 p.m. **Controlling for Time-Dependent Confounding Using Marginal Structural Models in the Case of a Continuous Treatment Covariate—**❖Ouhong Wang, Amgen Inc.; Trevor McMullan, Validant Consulting

2:20 p.m. **Evaluating Treatment Effect in Randomized Trials with Learning Effect: An Application to Contraceptive Device Trials—**❖Pai-Lien Chen, Family Health International

2:35 p.m. **Robust Assessment of Survival Differences Using Multiple Testing Procedures—**❖Larry Ma, Temple University; Devan V. Mehrotra, Merck & Co., Inc.; Woollcott Smith, Temple University

2:50 p.m. **An Empirical Test for Using a Cox Proportional Hazards Model with Time-Varying Hazard Ratios in the Analysis of Cardiac Events of Hypertensive Patients—**❖D. Das Purkayastha, Novartis Pharmaceuticals; Lynn Ashcraft, Novartis Pharmaceuticals

3:05 p.m. **Nonproportional Hazards in Time-to-Event Analysis—**❖Yanqiong Zhang, Merck & Co., Inc.; Amarjot Kaur, Merck & Co., Inc.

3:20 p.m. **The Impact of Proportional Hazards Assumption on the Late Onset Survival Data—**❖Guoguang Ma, Amgen Inc.; Kathy Harris, Amgen Inc.

3:35 p.m. **On Selection of Survival Models with Random Effects—**❖Yanhua Zhang, University of California, Davis

200 CC-250 EF

● ✪ Statistics for Customer Relations—Contributed

Business and Economics Statistics Section

Chair(s): Graciela Gonzalez-Farias, Center for Mathematical Research

2:05 p.m. **Scoring Customer Probability of Runoff for Retention—**❖Huaiyu Ma, GE Global Research; Deniz Senturk-Doganaksoy, GE Global Research; Kareem Aggour, GE Global Research

2:20 p.m. **Customer Profiling and Mining with Multidimensional Statistical Analysis: The Case of Retail Banking Industry—**❖Ming Xie, IBM China Research Laboratory; Wen Jun Yin, IBM China Research Laboratory; Jin Dong, IBM China Research Laboratory

2:35 p.m. **Assortment Planning Under Dynamic Customer Substitution and Cross-Selling—**❖Jin Dong, IBM China Research Laboratory; Xinxin Bai, IBM China Research Laboratory; Wen Jun Yin, IBM China Research Laboratory; Ming Xie, IBM China Research Laboratory

2:50 p.m. **Statistical Methods for Accounts Receivable Tracking and Forecasting—**❖Alejandro Veen, IBM T.J. Watson Research Center; Yasuo Amemiya, IBM T.J. Watson Research Center

3:05 p.m. **The Role of Six Sigma in Achieving Perfection—**❖Mohammad Quasem, Howard University; Daniel Owunwanne, Howard University

3:20 p.m. **Estimating Taint in a Population of Insurance Claims—**❖Andrew Ostarello, Exponent, Inc.; Duane Steffey, Exponent, Inc.

3:35 p.m. **Independence of Duplicate and Invalid Signatures on a Petition—**❖Mary Whiteside, University of Texas at Arlington; Mark Eakin, University of Texas at Arlington

201 CC-355 A

● Analysis of High-Dimensional Data—Contributed

ENAR, Section on Nonparametric Statistics, Biometrics Section

Chair(s): Hemant Tiwari, The University of Alabama at Birmingham

2:05 p.m. **Modeling Progression of Cerebrovascular Disease with Longitudinal MRI Data—**❖Qian Weng, University of California, Davis

2:20 p.m. **Quantile Rank Score Tests for Longitudinal Data—**❖Huixia Wang, North Carolina State University

2:35 p.m. **Imaging Biomarkers and Sample Size Estimation—**❖Chunming Li, Pfizer Inc.

2:50 p.m. **Use of Satterthwaite Degree of Freedom in t-Statistic for Microarray Experiments with Fewer Replications—**❖Yu Ding, Merck & Co., Inc.; Damaraju Raghavarao, Temple University

3:05 p.m. **Wavelet-Based Modeling of Clinical Outcomes Using Diffusion Tensor Image Data—**❖William Prucka, The University of Alabama at Birmingham; Christopher S. Coffey, The University of Alabama at Birmingham; Gary Cutter, The University of Alabama at Birmingham; Daniel S. Reich, The Johns Hopkins University

3:20 p.m. **Local False Discovery Rate Estimation Based on Bootstrap Null Distribution of Control Group Samples—**❖Aixiang Jiang, Vanderbilt University**;** Yu Shyr, Vanderbilt University

3:35 p.m. **Longitudinal Image Analysis of Change in Tumor/Brain Vascular Permeability Induced by Radiation—**❖Xiaoxi Zhang, University of Michigan**;** Timothy D. Johnson, University of Michigan**;** Roderick J. Little, University of Michigan

202 CC-254 B

● Bayesian Analysis in Clinical Trials—Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section

Chair(s): Yingfu Li, University of Houston-Clear Lake

2:05 p.m. **Assessment of Bayesian Estimates of Biomarker's Surrogacy for a Time-to-Event Clinical Endpoint in a Single Trial—**❖Qian Shi, The University of Iowa**;** Mary K. Cowles, The University of Iowa

2:20 p.m. **A Bayesian Model for Sensitivity Analysis on Intent-to-Treat Population—**❖Niko Kacirorti, University of Michigan

2:35 p.m. **Bayesian Subgroup Analysis in Clinical Trials—**❖Claudia Pedroza, The University of Texas Health Science Center at Houston

2:50 p.m. **A New Latent Cure Rate Marker Model for Survival Data—**❖Sung Duk Kim, University of Connecticut**;** Yingmei Xi, University of Connecticut**;** Ming-Hui Chen, University of Connecticut

3:05 p.m. **Bayesian Analysis of Incomplete Data in Crossover Trials—**❖Sanjib Basu, Northern Illinois University

3:20 p.m. **Propensity Score Matching for Causal Inference When Multiply Imputing Missing Covariate Data—**❖Robin Mitra, Duke University**;** Jerome P. Reiter, Duke University

3:35 p.m. **Flexible Modeling of the Hazard Function for Breast Cancer Recurrence—**Vanja Dukic, The University of Chicago**;** ❖James Dignam, The University of Chicago

203 CC-155 E

● ✪ Topics in Reliability—Contributed

Section on Physical and Engineering Sciences, Section on Quality and Productivity

Chair(s): EunJoo Lee, Advance Micro Device

2:05 p.m. **On Risk Sets and Risk Factors—**❖William D. Heavlin, Google**;** Judith Koslov, Sun Microsystems, Inc.

2:20 p.m. **Fuzzy Estimation of Parameters in Statistical Models—**❖Ranee Thiagarajah, Illinois State University

2:35 p.m. **Accelerated Destructive Degradation Test Planning—**❖Ying Shi, Iowa State University**;** Luis Escobar, Louisiana State University**;** William Meeker, Iowa State University

2:50 p.m. **A Comparison of Maximum Likelihood Estimation and Median Rank Regression for Weibull Estimation—**❖Ulrike Genschel, Iowa State University**;** William Meeker, Iowa State University

3:05 p.m. **Availability and Cost Monitoring in Datacenters Using Mean Cumulative Functions—**❖David Trindade, Sun Microsystems, Inc.**;** Swami Nathan, Sun Microsystems, Inc.

3:20 p.m. **Estimation from Aggregate Data—**❖Marc Fredette, HEC Montreal

3:35 p.m. **Comparison Sequential Testing for Reliability: Optimal Truncation of Short Tests—**❖Yefim H. Michlin, Technion**;** Genady Grabarnik, IBM T.J. Watson Research Center**;** Elena Leshchenko, Technion

204 CC-155 C

Design and Analysis of Experiments and Other Statistical Methods—Contributed

Section on Quality and Productivity, Section on Physical and Engineering Sciences

Chair(s): William Brenneman, Procter & Gamble

2:05 p.m. **Design and Analysis of Material Characterization Experiments with Few Runs per Day—**❖William Guthrie, National Institute of Standards and Technology**;** Kenneth W. Pratt, National Institute of Standards and Technology

2:20 p.m. **Analysis of Optimization Experiments—**❖James Delaney, Carnegie Mellon University**;** Roshan Joseph, Georgia Institute of Technology

2:35 p.m. **Using Minimal Dependent Subsets To Evaluate Supersaturated Designs—**❖Arden Miller, University of Auckland

2:50 p.m. **Randomization of Factors in Multiphase Experiments—**❖Theodore Bailey, Iowa State University

3:05 p.m. **Change Point Detection Using Nonparametric Estimation of Profiles in Small Sample Setting—**❖Kathryn Prewitt, Arizona State University**;** Shilpa Gupta, Arizona State University

3:20 p.m. **A Comparison of Model Combining Methods—** ❖Lihua Chen, The University of Toledo; Panayotis Giannakouros, University of Missouri-Kansas City

3:35 p.m. **Within-Sample Prediction of Future Failure Times Based on Type-II Censored Samples from the Birnbaum-Saunders Distribution—**❖Kevin S. McCarter, Louisiana State University

205 CC-155 A

Mixture Models and Expectation Maximization—Contributed

Section on Statistical Computing, Business and Economics Statistics Section, IMS, Section on Statistical Graphics

Chair(s): David Marchette, Naval Surface Warfare Center

2:05 p.m. **Nonparametric Transformation of the Data to Obtain Bias Reduction in Kernel Estimation of the Distribution Function of Nonstandard Mixtures—**❖Ennis McCune, Stephen F. Austin State University; Sandra L. McCune, Stephen F. Austin State University

2:20 p.m. **Fitting Mixture Distributions Using Generalized Lambda Distributions (GLDs): Examples, Comparisons with Normal Mixtures, and Computational Considerations—**❖Wei Ning, Bowling Green State University; E. J. Dudewicz, Syracuse University

2:35 p.m. **Acceleration of the EM Reconstruction Algorithm for PET Images Using Squared Iterative Methods—** ❖Constantine E. Frangakis, The Johns Hopkins University; Ravi Varadhan, The Johns Hopkins University; Christophe Roland, University of Science and Technology at Lille

2:50 p.m. **Improving the Efficiency of the Monte Carlo EM Algorithm Using Squared Iterative Methods—** ❖Ravi Varadhan, The Johns Hopkins University; Brian S. Caffo, Johns Hopkins Bloomberg School of Public Health; Wolfgang Jank, University of Maryland

3:05 p.m. **Generalized t-Copula and Its Application on Biometric—**❖Wenmei Huang, Michigan State University; Sarat Dass, Michigan State University

3:20 p.m. **Comparison of the Six Sigma and Lean Sigma on the IT Management Processes—**❖Genady Grabarnik, IBM T.J. Watson Research Center; Larisa Shwartz, IBM T.J. Watson Research Center

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

206 CC-260

Online Evaluations, Online Discussions, Podcasts, and Electronic Assessment Systems—Contributed

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

Chair(s): Liam M. O'Brien, Colby College

2:05 p.m. **From Paper-and-Ink to Online Evaluation: A New Computer Maple TA–Based—**❖Li Wang, Student; Yulia R. Gel, University of Waterloo; Sean Scott, University of Waterloo

2:20 p.m. **Group Discussions in an Online Statistics Course: The Role of the Instructor—**❖Michelle Everson, The University of Minnesota

2:35 p.m. **The Benefits of Using a Course Disk To Aid in the Instruction of Statistics Courses—**❖Jamis Perrett, University of Northern Colorado

2:50 p.m. **Electronic Assessment Systems for Introductory Statistics Courses I—**❖John McKenzie, Babson College

3:05 p.m. **Electronic Assessment Systems for Introductory Statistics Courses II—**❖Patricia Humphrey, Georgia Southern University

3:20 p.m. **Electronic Assessment Systems for Introductory Statistics Courses III—**❖William Rybolt, Babson College

3:35 p.m. **Use of Podcast Technology in Statistics Education—** ❖Joni Nunnery, Louisiana State University

207 CC-250 B

Measurement Error in Survey Data Collection—Contributed

Section on Survey Research Methods, Social Statistics Section

Chair(s): Mary Ann Guadagno, National Institutes of Health

2:05 p.m. **Modeling Rotation Group Bias and Survey Errors in the Labor Force Survey of Statistics Netherlands—** ❖Jan Van den Brakel, Statistics Netherlands; Sabine Krieg, Statistics Netherlands

2:20 p.m. **Face-to-Face Interviews with Children—**❖Marek Fuchs, University of Kassel

2:35 p.m. **Survey Design for Studies of Measurement Error in Physical Activity Assessments—**❖Nicholas Beyler, Iowa State University; Sarah M. Nusser, Iowa State University; Wayne Fuller, Iowa State University; Alicia Carriquiry, Iowa State University

2:50 p.m. **Evaluating the Assumption of Uncorrelated Error Terms in a Mixed-Mode Study with Validation Data—**❖Courtney Kennedy, University of Michigan**;** Stanley Presser, University of Maryland

3:05 p.m. **Measurement Error in Calibration: An Application to the National Resources Inventory—**❖Emily Berg, Iowa State University**;** Jean Opsomer, Iowa State University**;** Wayne Fuller, Iowa State University

3:20 p.m. **Floor Discussion**

208 CC-250 A

● Web and Telephone Survey Methods—Contributed

Section on Survey Research Methods, Social Statistics Section

Chair(s): Stephen Ash, U.S. Census Bureau

2:05 p.m. **A Comparison Between a Traditional RDD Survey and a Telephone Survey with Cell-Phone-Only Populations—**❖Sunghee Lee, University of California, Los Angeles**;** David Grant, University of California, Los Angeles**;** J. Michael Brick, Westat**;** Sherm Edwards, Westat

2:20 p.m. **A New Application of Adaptive Web Sampling designs—**❖Hong Xu, The Pennsylvania State University**;** Steve K. Thompson, Simon Fraser University**;** James L. Rosenberger, The Pennsylvania State University

2:35 p.m. **Time Series Analysis of Census Internet Response—**❖Fred Highland, Lockheed Martin Corporation

2:50 p.m. **Assessing the Applicability of Self-Anchoring Scales in Web Surveys—**❖Frederik Van Acker, Vrije Universiteit Brussel**;** Peter Theuns, Vrije Universiteit Brussel

3:05 p.m. **Comparing Web Survey Samples of Schizophrenic and Bipolar Patients with Concurrent RDD and In-Person Samples—**❖LinChiat Chang, Opinion Research Corporation**;** Channing Stave, Pfizer Inc.**;** Corinne O'Brien, Pfizer Inc.**;** Fred Rappard, Pfizer Inc.**;** Jill Glathar, Opinion Research Corporation**;** Joseph Cronin, Opinion Research Corporation

3:20 p.m. **Beyond Demographics: Are 'Webographic' Questions Useful for Reducing the Selection Bias in Web Surveys?—**❖Matthias Schonlau, RAND Corporation**;** Arthur VanSoest, RAND Corporation**;** Arie Kapteyn, RAND Corporation

3:35 p.m. **When Standard Regression Techniques Fail: The Role of Propensity Score Methods—**❖Michael Posner, Villanova University**;** Arlene Ash, Boston University

Contributed Poster Presentations 2:00 p.m.–3:50 p.m.

209 CC-Exhibit Hall D

Contributed Poster Presentations—Contributed

Section on Statistics in Epidemiology, Section on Government Statistics, Section on Health Policy Statistics, Section on Statistics and the Environment, Section on Survey Research Methods, Social Statistics Section, Section on Statistical Computing

Chair(s): Dongseok Choi, Oregon Health & Science University

Applications and case studies

61 **Modeling Tilletia Indica Infection on Wheat Using Nonlinear Mixed Models with a Sharp Turning Point—**❖Zhongwen Tang, Kansas State University**;** Shie-Shien Yang, Kansas State University**;** Karen Garrett, Kansas State University**;** I. Sharma, Punjab Agriculture University**;** R. L. Bowden, U.S. Department of Agriculture

62 **Waiting Time Distributions of Sleep—**❖Anna Mnatsakanova, National Institute for Occupational Safety and Health**;** James Slaven, National Institute for Occupational Safety and Health**;** John M. Violanti, State University of New York at Buffalo**;** Bryan J. Vila, Washington State University**;** Cecil M. Burchfiel, National Institute for Occupational Safety and Health**;** Michael Andrew, Centers for Disease Control and Prevention

Categorical, multivariate analysis

63 **A Goodness-of-Fit Test of Logistic Regression Model—**❖Ying Liu, Kansas State University

64 **Categorization of Sleep Patterns with Derived Actigraph Variables—**❖James Slaven, National Institute for Occupational Safety and Health**;** Michael Andrew, Centers for Disease Control and Prevention**;** John M. Violanti, State University of New York at Buffalo**;** Bryan J. Vila, Washington State University**;** Cecil M. Burchfiel, National Institute for Occupational Safety and Health

Data mining and knowledge discovery, machine learning

65 **Logistic Regression, Classification Tree, and Boosted Regression: A Comparison of Models in the Prediction of Pregnancy-Induced Hypertension—**❖Paul Kolm, Christiana Care Health System**;** Deborah Ehrenthal,

Christiana Care Health System; Claudine Jurkovitz, Christiana Care Health System; Matthew Hoffman, Christiana Care Health System; James Bowen, Christiana Care Health System

66 **Use of Data Mining To Determine Variable Significance and Inter-relationships in Models**—❖William K. Sieber, National Institute for Occupational Safety and Health

67 **An Empirical Evaluation of the Random Forests Classifier Models for Variable Selection in a Large-Scale Lung Cancer Case Control Study**—❖Qing Zhang, The University of Texas M. D. Anderson Cancer Center; Christopher I. Amos, The University of Texas M. D. Anderson Cancer Center

68 **S-PLUS and R Package for Least Angle Regression**—❖Tim Hesterberg, Insightful Corporation

Government statistics

69 **Model and Survey Performance Measurement by the RSESP**—❖James Knaub, Energy Information Administration

Health policy, epidemiology, public health

70 **Mixture Model Analysis of Age-Appropriate and Delayed Vaccination**—❖Andrew Baughman, Centers for Disease Control and Prevention; Charles E. Rose, Centers for Disease Control and Prevention; Kate M. Shaw, Centers for Disease Control and Prevention; Gustavo H. Dayan, Centers for Disease Control and Prevention

71 **Applying Propensity Score Calibration To Reduce Unmeasured Confounding Bias**—❖Rachel Bittner, University of Washington; Jennifer Nelson, Group Health Center for Health Studies; Michael Jackson, Group Health Center for Health Studies; Noel Weiss, University of Washington; Lisa Jackson, Group Health Center for Health Studies

72 **A Case Study of Time Scale for Use in Cox's Proportional Hazard Model**—❖Qimei He, Pacific Health Research Institute; Bradley Willcox, Pacific Health Research Institute; David J. Curb, Pacific Health Research Institute

73 **Application of the Pattern-Mixture Latent Trajectory Model in an Epidemiological Study**—❖Hiroko Dodge, Oregon State University; Changyu Shen, Indiana University; Mary Ganguli, University of Pittsburgh

74 **Parametric Time Dependent SIR Model**—❖Di Shi, Riverdale Country School; Peter Gross, Riverdale Country School

75 **The Association Between Anticyclic Citrullinated Peptide Antibodies and Risk of Rheumatoid Arthritis**—❖Lori B. Chibnik, Brigham and Women's Hospital; Lisa A. Mandl, Hospital for Special Surgery; Karen H. Costenbader, Brigham and Women's Hospital; Peter Schur, Brigham and Women's Hospital; Elizabeth W. Karlson, Brigham and Women's Hospital

76 **Monte Carlo Sensitivity Analysis of Smoking as an Unmeasured Confounder in an Investigation of the Association Between Occupation and Lung Cancer Mortality**—❖Jia Li, Constella Group, LLC; Toni Alterman, National Institute for Occupational Safety and Health

77 **A New Measure of Excess Longevity in Families**—❖Kenneth Boucher, Huntsman Cancer Institute; Richard A. Kerber, Huntsman Cancer Institute

78 **A Study on the Effect of Preferred Drug Lists in Medicaid on the Overall Medical Expense**—❖Joseph Richardson, Auburn University; Mark Carpenter, Auburn University; Victoria Jordan, Auburn University

79 **Evaluating SEER-Medicare Linked Database Completeness for Oral and Pharyngeal Cancer**—Jonathan Mahnken, The University of Kansas Medical Center; ❖John Keighley, The University of Kansas Medical Center; Matthew Mayo, The University of Kansas Medical Center

80 **Cost-Effectiveness Analysis in Breast Cancer Early Detection**—❖Charlotte H. Ahern, Rice University; Yu Shen, The University of Texas M. D. Anderson Cancer Center

81 **What Do We Know About the Effects of Substance Use on Labor Productivity? A Survey of Results and Related Methodological Issues**—❖Richard Bryant, University of Missouri-Rolla; V. A. Samaranayake, University of Missouri-Rolla

82 **School Social Support and Adolescent Depressiveness: Multilevel Analysis of Finnish School Health Promotion Survey**—❖Noora Ellonen, University of Tampere

Incomplete data analysis, imputation methods

83 **Bayesian Multiple Imputation and Maximum Likelihood Methods for Missing Data**—❖Min Sun, Sam Houston State University; Ferry Butar Butar, Sam Houston State University

84 **Imputation for Missing Physiological Measurement Data: Simulations and Applications**—❖Matt Jans, University of Michigan; Steven Heeringa, Institute for Social Research

85 **A Comparison of Weighting Adjustment and Multiple Imputation Methods To Correct for Nonresponse Bias in a Longitudinal Group-Randomized Clinical Trial for Depression**—❖Lingqi Tang, University of California, Los Angeles; Naihua Duan, University of California, Los Angeles; Ruth Klap, University of California, Los Angeles; Thomas Belin, University of California, Los Angeles

Linear models, GLMs, parametric methods

86 **Comparison of Modeling Approaches to Deriving Normative Values of Bone Mineral Density from NHANES III**—❖Qing Wu, Tulane University; John Lefante, Tulane University; Jeanette Magnus, Tulane University; Janet Rice, Tulane University

Longitudinal data, repeated measurements, and meta-analysis

87 **Assessing the Potential Impact of Missing Data in a Longitudinal Study with a Continuous Outcome**—❖Owen Devine, Centers for Disease Control and Prevention; Jorge Rosenthall, Centers for Disease Control and Prevention; Nyasha Skerrette, Emory University

88 **Area Under the Curve and Other Summary Indicators of Repeated Waking Cortisol Measurements**—❖Desta Fekedulegn, National Institute for Occupational Safety and Health; Michael Andrew, Centers for Disease Control and Prevention; Cecil M. Burchfiel, National Institute for Occupational Safety and Health; John M. Violanti, State University of New York at Buffalo; Tara A. Hartley, National Institute for Occupational Safety and Health; Luenda E. Charles, National Institute for Occupational Safety and Health; Diane B. Miller, National Institute for Occupational Safety and Health

89 **On the Meta-Analysis of Incomplete Primary Study Data**—❖Todd Bodner, Portland State University

Social and behavioral science

90 **Response and Nonresponse Pattern Analysis in Survey Research**—❖Chong Ho Yu, Arizona State University; Samuel DiGangi, Arizona State University; Sandra Andrews, Arizona State University; Angel Jannasch-Pennell, Arizona State University

91 **Standard Error Estimation in Latent Variable Model**—❖Yan Wang, Southern Methodist University; S. Lynne Stokes, Southern Methodist University; Andreas Oranje, Educational Testing Service

92 **Nonlinear Random Coefficients Regression for Estimating an Interaction Term**—Reid Landes, University of Arkansas for Medical Sciences; ❖Jeffrey A. Pitcock, University of Arkansas for Medical Sciences

93 **Relationships Between Students' Science Achievement, Attitudes Toward Science, and Learning Through Inquiry**—❖Man Hung, University of Utah

94 **Evaluating a Multilevel Item Response Theory Model**—❖Thomas Schmitt, University of Wisconsin-Milwaukee; Cindy M. Walker, University of Wisconsin-Milwaukee

95 **Globalization and Chinese City System Restructuring**—❖Xiulian Ma, The University of Utah

Invited Sessions 4:00 p.m.–5:50 p.m.

210 CC-Ballrooms E-J

ASA President's Invited Address—Invited

ASA, IMS, ENAR, WNAR, SSC

Organizer(s): Mary Ellen Bock, Purdue University

Chair(s): Mary Ellen Bock, Purdue University

4:05 p.m. **Regularization Methods in Statistical Model-Building: Statisticians, Computer Scientists, Classification, and Machine Learning**—❖Grace Wahba, University of Wisconsin-Madison

5:20 p.m. **Floor Discussion**

Invited Sessions 8:00 p.m.–9:30 p.m.

211 CC-Ballroom B

IMS Presidential Address—Invited

IMS

Organizer(s): Thomas Kurtz, University of Wisconsin-Madison

Chair(s): Thomas Kurtz, University of Wisconsin-Madison

8:00 p.m. **Presentation of Awards**

8:30 p.m. **Open Access to Professional Information**—❖Jim Pitman, University of California, Berkeley

9:15 p.m. **Floor Discussion**

TUESDAY, JULY 31

Tours

TR07 Utah Olympic Park, Park City Main Street
8:30 a.m.–12:30 p.m. CC-South Foyer (200 South Street)

TR08 Salt Lake Historic Walking Tour
9:00 a.m.–12:00 p.m. CC-South Foyer (200 South Street)

TR09 Crossroads of the West City Tour
1:00 p.m.–4:00 p.m. CC-South Foyer (200 South Street)

Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. GA-Venice
Committee on Statistics and Disability Annual Meeting (closed)
Chair(s): Joan Turek, U.S. Department of Health & Human Services

7:00 a.m.–8:30 a.m. GA-Belvedere
Committee on Minorities in Statistics (closed)
Chair(s): Nagambal D. Shah, Spelman College

7:00 a.m.–8:30 a.m. GA-Grenoble
Business and Economics Statistics Section Executive Committee Meeting (closed)
Chair(s): Badi H. Baltagi, Syracuse University

7:00 a.m.–8:30 a.m. GA-Bagatelle
***JABES* Management Committee Meeting (closed)**
Chair(s): Timothy Gregoire, Yale University

7:00 a.m.–8:30 a.m. GA-Audubon
Section on Statisticians in Defense and National Security Business Meeting
Chair(s): Alyson G. Wilson, Los Alamos National Laboratory

7:00 a.m.–8:30 a.m. GA-Riviera
Committee on Individual Accredidation (closed)
Chair(s): Mary Batcher, Ernst & Young

7:00 a.m.–8:30 a.m. Off Property
Gertrude Cox Scholarship Race
Organizer(s): Tena Katsaounis, The Ohio State University

7:00 a.m.–8:30 a.m. GA-Tuscany
Scientific and Public Affairs Advisory Committee Open Meeting
Chair(s): David Marker, Westat

7:00 a.m.–8:30 a.m. GA-Embassy
Committee on Professional Ethics Meeting
Chair(s): Margaret Nemeth, Monsanto Company

7:00 a.m.–10:00 a.m. GA-Ambassador
Section on Physical and Engineering Sciences Executive Committee Meeting (closed)
Chair(s): Jennifer Van Mullekom, Capital One

7:00 a.m.–10:00 a.m. GA-Murano Garden Salon
Council of Chapters Business Meeting and Breakfast (closed)
Chair(s): J. Lynn Palmer, The University of Texas M. D. Anderson Cancer Center

7:00 a.m.–6:00 p.m. CC-252 A, CC-252B
Speaker Work Rooms

7:00 a.m.–11:00 p.m. CC-South Foyer
Cyber Center

7:30 a.m.–8:30 a.m. GA-Vienna
***Technometrics* Editorial Board Meeting (closed)**
Chair(s): Randy R. Sitter, Simon Fraser University

✪ Themed Session ● Applied Session ❖ Presenter **CC**-Salt Palace Convention Center **GA**-The Grand America Hotel

7:30 a.m.–10:00 a.m. GA-Sussex
***Statistics in Biopharmaceutical Research Journal* Editors and Advisory Committee**
Chair(s): Joseph Heyse, Merck & Co., Inc.

7:30 a.m.–4:30 p.m. GA-Envoy
ASA/NCTM Beyond AP Statistics (closed, separate registration fee required)
Chair(s): Roxy Peck, California Polytechnic State University

7:30 a.m.–4:30 p.m. CC-South Foyer
JSM Main Registration and ASA Membership/Special Assistance Desk

8:00 a.m.–10:00 a.m. CC-Kenneth Knight Board Room
Advisory Committee on Continuing Education Business Meeting (closed)
Chair(s): Katherine Halvorsen, Smith College

8:00 a.m.–10:00 a.m. GA-Versailles
Addison Wesley Focus Group (closed)
Organizer(s): Liliana Molina, Addison Wesley

8:00 a.m.–12:00 p.m. GA-Fontainbleau
Committee of Presidents of Statistical Societies Committee Meeting (closed)
Organizer(s): Jessica Utts, University of California, Davis

8:00 a.m.–6:00 p.m. CC-Main Lobby, Level 2
Salt Lake City Visitors Information Center

8:00 a.m.–6:00 p.m. CC-Exhibit Hall D
Exhibitor Lounge

8:00 a.m.–6:00 p.m. CC-Exhibit Hall C
Career Placement Service

9:00 a.m.–10:00 a.m. GA-Embassy
Mu Sigma Rho Executive Committee (closed)
Organizer(s): Marcia Gumpertz, North Carolina State University

9:00 a.m.–5:00 p.m. CC-South Foyer
ASA Marketplace

9:00 a.m.–6:00 p.m. CC-Exhibit Hall D
EXPO 2007

9:00 a.m.–6:00 p.m. CC-Exhibit Hall D
ASA Booth #101

10:30 a.m.–1:00 p.m. GA-Murano Garden Salon
ASA New Chapter Officers Meeting with Council of Chapters Vice Chairs
Chair(s): J. Lynn Palmer, The University of Texas M. D. Anderson Cancer Center

12:00 p.m.–2:00 p.m. GA-Audubon
***Journal of Computational and Graphical Statistics* Editors Meeting (closed)**
Chair(s): David van Dyk, University of California, Irvine

12:30 p.m.–1:30 p.m. CC-250 A
IMS Business Meeting
Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics

12:30 p.m.–2:00 p.m. GA-Vienna
***JASA* Editorial Board Luncheon (closed)**
Chair(s): David Banks, Duke University

12:30 p.m.–2:00 p.m. GA-Belvedere
Deming Lectureship Committee Speaker Luncheon (closed)
Chair(s): William H. Woodall, Virginia Polytechnic Institute and State University; Nicholas I. Fisher, University of Sydney

12:30 p.m.–2:00 p.m. GA-Riviera
***The American Statistician* Luncheon (closed)**
Chair(s): Peter Westfall, Texas Tech University

12:30 p.m.–4:30 p.m. GA-Provence
ENAR RAB/RECOM Luncheon Meeting (closed, by invitation only)
Organizer(s): Kathy Hoskins, ENAR

1:30 p.m.–2:30 p.m. CC-Ballrooms E-J
ASA Presidential Address and Awards Session Rehearsal (closed)
Chair(s): Sallie Keller-McNulty, Rice University

2:00 p.m.–3:30 p.m. GA-Sussex
ASA Finance Committee Meeting (closed)
Chair(s): Sastry Pantula, North Carolina State University

✪ Themed Session ● Applied Session ❖ Presenter **CC**-Salt Palace Convention Center **GA**-The Grand America Hotel

2:00 p.m.–3:30 p.m. GA-Ambassador
Council of Chapters Traveling Course
Chair(s): Stephen Simon, Children's Mercy Hospital

4:00 p.m.–5:00 p.m. GA-Embassy
***JASA* Reviews Board Meeting (closed)**
Chair(s): Robert B. Lund, Clemson University

4:00 p.m.–5:00 p.m. GA-Ambassador
Statistics Project and Poster Competitions
Chair(s): Jerry Moreno, John Carroll University

4:00 p.m.–6:00 p.m. GA-Murano Garden Salon
Council of Chapters Workshop and Reception: Expanding Our Chapter Universe (closed)
Chair(s): B. Christine Clark, ICON Clinical Research

4:30 p.m.–5:30 p.m. CC-250 D
STATCOM: Students Providing Pro Bono Consulting to the Community
Organizer(s): Cherie Ochsenfeld, Purdue University

4:30 p.m.–6:00 p.m. GA-Venice
***Biometrics* Editorial Board (closed)**
Organizer(s): Ann Hanhart, The International Biometric Society

5:00 p.m.–6:00 p.m. CC-155 E
Business and Economics Statistics Section Business Meeting
Chair(s): Badi H. Baltagi, Syracuse University

5:00 p.m.–6:30 p.m. GA-Grenoble
Centers for AIDS Research Statisticians Organizational Meeting (closed)
Organizer(s): Susan S. Ellenberg, University of Pennsylvania

✪ Themed Session ● Applied Session ❖ Presenter **CC**-Salt Palace Convention Center **GA**-The Grand America Hotel

5:00 p.m.–7:00 p.m. GA-Vienna
North Carolina State University Alumni and Friends
Organizer(s): Tom Gerig, North Carolina State University

5:00 p.m.–7:00 p.m. GA-Versailles
Rice University Reception
Organizer(s): Katherine Ensor, Rice University

5:30 p.m.–6:30 p.m. CC-150 A-C
JSM 2009 Program Committee Orientation (closed)
Chair(s): Elaine Powell, American Statistical Association

5:30 p.m.–6:30 p.m. GA-Sussex
Russian and ex-USSR Statisticians Mixer
Organizer(s): Stanislav Kolenikov, University of Missouri-Columbia

5:30 p.m.–6:30 p.m. CC-250 A
ENAR Business Meeting (open to all ENAR members)
Organizer(s): Kathy Hoskins, ENAR

5:30 p.m.–7:00 p.m. CC-155 C
Biopharmaceutical Section Annual Business Meeting and Mixer
Chair(s): Brian L. Wiens, Gilead Colorado

5:30 p.m.–7:00 p.m. CC-150 D-F
Section on Government Statistics Business Meeting
Chair(s): Steve H. Cohen, National Science Foundation

5:30 p.m.–7:00 p.m. GA-Audubon
IMS Student and New Member Reception
Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics

5:30 p.m.–7:00 p.m. CC-151 A-C
Committee on Gay and Lesbian Concerns in Statistics Social
Chair(s): Barry Johnson, Internal Revenue Service

5:30 p.m.–7:00 p.m. CC-155 B
Section on Nonparametric Statistics Business Meeting
Chair(s): Pranab K. Sen, The University of North Carolina at Chapel Hill

5:30 p.m.–7:00 p.m. CC-155 D
Section on Statistical Consulting Business Meeting
Chair(s): Stuart Gansky, University of California, San Francisco

5:30 p.m.–7:30 p.m. GA-Venezia Garden Salon
Joint Section on Quality & Productivity and Section on Physical and Engineering Sciences Business Meeting and Mixer
Chair(s): William Guthrie, National Institute of Standards and Technology; Jennifer Van Mullekom, Capital One

5:30 p.m.–7:30 p.m. CC-150 G
Section on Bayesian Statistical Science Mixer
Chair(s): Dipak Dey, University of Connecticut

5:30 p.m.–7:30 p.m. GA-Riviera
Section on Statistics in Epidemiology Social Mixer
Chair(s): Lisa M. Sullivan, Boston University

5:30 p.m.–7:30 p.m. GA-Milano
University of Michigan Joint Biostatistics and Statistics Departments Alumni Reception
Organizer(s): Roderick Little, University of Michigan

6:00 p.m.–6:30 p.m. CC-Ballrooms E-J
2007 ASA New Fellows Group Picture (closed)
Chair(s): Robert M. Bell, AT&T Research Labs

6:00 p.m.–7:00 p.m. CC-151 D-F
STATCOM Network Business Meeting
Organizer(s): Gayla R. Olbricht, Purdue University

6:00 p.m.–7:00 p.m. CC-250 B
Caucus for Women in Statistics Business Meeting
Organizer(s): Tena Katsaounis, The Ohio State University

6:00 p.m.–7:30 p.m. GA-Belvedere
Section on Statistics and the Environment Business Meeting and Social
Chair(s): Mary Christman, University of Florida

6:00 p.m.–8:00 p.m. CC-151 G
Committee on Minorities in Statistics Reception
Chair(s): Nagambal D. Shah, Spelman College

6:00 p.m.–8:00 p.m. GA-Savoy
A Reception To Celebrate Marvin Zelen's 80th Birthday and Cytel's 20th Anniversary
Organizer(s): Cyrus Mehta and Nitin Patel, Cytel Inc.

6:00 p.m.–8:00 p.m. GA-Envoy
University of Wisconsin-Madison Reception
Organizer(s): Jun Shao, University of Wisconsin-Madison

6:00 p.m.–8:00 p.m. CC-Ballroom D
Pfizer Statistics Reception (closed)
Organizer(s): Tisha Duggan, Pfizer Inc.

6:30 p.m.–8:00 p.m. GA-Fontainbleau
CRC Press Reception (closed)
Organizer(s): Nadja English, CRC Press

6:30 p.m.–8:00 p.m. GA-Bagatelle
Interface Foundation of North America Board Meeting (closed)
Organizer(s): Tim Hesterberg, Insightful Corporation

6:30 p.m.–8:30 p.m. CC-155 A
Joint Section on Statistics and Marketing and Business and Economics Statistics Section Mixer
Chair(s): John C. Liechty, The Pennsylvania State University; Badi H. Baltagi, Syracuse University

9:30 p.m.–12:00 a.m. CC-Ballrooms A&C
JSM Informal Dance Party (all welcome, included in registration fee)

Continuing Education (Fee Events)

CE_22C
Harnessing Data Streams Through Statistical Computing
8:00 a.m.–12:00 p.m. CC-151 D-F
Section on Statistical Computing, ASA
Instructor(s): Simon Urbanek, AT&T Labs - Research; Tamraparni Dasu, AT&T Labs - Research

CE_23C
Statistical Monitoring of Clinical Trials: A Unified Approach
8:30 a.m.–5:00 p.m. CC-151 G
Biopharmaceutical Section, ASA
Instructor(s): Michael Proschan, National Institute of Allergy and Infectious Diseases

CE_24C
Dropout in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis
8:30 a.m.–5:00 p.m. CC-150 G
Biometrics Section, ASA
Instructor(s): Michael Daniels, University of Florida; Joseph W. Hogan, Brown University

CE_25C
Statistical Genetics
8:30 a.m.–5:00 p.m. CC-150 A-C
Biometrics Section, ASA
Instructor(s): Kenneth Lange, University of California, Los Angeles; Janet Sinsheimer, University of California, Los Angeles; Eric Sobel, University of California, Los Angeles

CE_26C
Wavelets and Statistical Applications
8:30 a.m.–5:00 p.m. CC-150 D-F
Section on Bayesian Statistical Science, ASA
Instructor(s): Brani Vidakovic, Georgia Institute of Technology; Marina Vanucci, Texas A&M University

CE_27C
Analysis of Censored Data
8:30 a.m.–5:00 p.m. CC-151 A-C
ASA
Instructor(s): Danyu Lin, The University of North Carolina at Chapel Hill

CE_28C
Bootstrap Methods and Permutation Tests for Doing and Teaching Statistics
1:00 p.m.–5:00 p.m. CC-151 D-F
Section on Statistical Education, Section on Statistical Computing, ASA
Instructor(s): Tim Hesterberg, Insightful Corporation

Roundtables with Coffee 7:00 a.m.–8:15 a.m.

212 CC-Ballroom D
ASA Council of Chapters Roundtable with Coffee (fee event)

Council of Chapters

Organizer(s): V. A. Samaranayake, University of Missouri-Rolla

TL01 **AP Statistics and Local Chapters of the ASA—** ❖Dongseok Choi, Oregon Health & Science University

213 CC-Ballroom D
Section on Health Policy Statistics Roundtable with Coffee (fee event)

Section on Health Policy Statistics

Organizer(s): Susan Simmons, The University of North Carolina at Wilmington

TL02 **Approaches to Measuring Differences in Health That Are Unaffected by the Prevalence of an Outcome—** ❖James P. Scanlan, Attorney at Law

214 CC-Ballroom D
Section on Statistical Education Roundtable with Coffee (fee event)

Section on Statistical Education

Organizer(s): Jacqueline Miller, The Ohio State University

TL03 **Coordinating the Large Undergraduate Course—** ❖Roger Woodard, North Carolina State University

215 CC-Ballroom D
Section on Statistical Graphics Roundtable with Coffee (fee event)

Section on Statistical Graphics

Organizer(s): David Hunter, The Pennsylvania State University

TL04 **Network Visualization—**❖Deborah Swayne, AT&T Labs - Research

216 CC-Ballroom D
Section on Statistics and Marketing Roundtable with Coffee (fee event)

Section on Statistics and Marketing

Organizer(s): Stan Lipovetsky, GfK Custom Research North America

TL05 **Statistics in Humor and Art—**❖Igor Mandel, Analytic Partners

217 CC-Ballroom D
Section on Survey Research Methods Roundtable with Coffee (fee event)

Section on Survey Research Methods

Organizer(s): David Marker, Westat

TL06 **The Transition from Graduate School to a Career in Statistics—**❖Edward English, NORC at the University of Chicago

218 CC-Ballroom D
Section on Teaching Statistics in the Health Sciences Roundtables with Coffee (fee event)

Section on Teaching Statistics in the Health Sciences

Organizer(s): Jodi Lapidus, Oregon Health & Science University

TL07 **Ideas for Improving Appreciation and Understanding of Cluster Sampling—**❖Winston A. Richards, The Pennsylvania State University, Harrisburg

TL08 **Interpreting Statistical Results from Medical Literature in the Classroom—**❖Kirk Anderson, Grand Valley State University

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

219 CC-Ballroom B
Introductory Overview Lecture 3: Improving Statistical Presentations and Posters—Other

ASA, SSC, ENAR, IMS, WNAR

Organizer(s): Naomi Robbins, NBR-Graphs

Chair(s): Naomi Robbins, NBR-Graphs

8:35 a.m. **Improving Statistical Presentations—**❖Mike Colopy, GlaxoSmithKline

9:20 a.m. **Improving Statistical Posters—**❖Dianne Cook, Iowa State University

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

Invited Sessions 8:30 a.m.–10:20 a.m.

220 CC-255 A

● Practical Designs in Early-Phase Cancer Trials—Invited

ENAR, Biopharmaceutical Section, WNAR

Organizer(s): Ying-Kuen K. Cheung, Columbia University

Chair(s): Ying-Kuen K. Cheung, Columbia University

8:35 a.m. **Comparing Two-Stage Treatment Strategies Based on Sequential Failure Times Subject to Interval Censoring—**❖Peter F. Thall, The University of Texas M. D. Anderson Cancer Center; Leiko H. Wooten, The University of Texas M. D. Anderson Cancer Center; Nizar M. Tannir, The University of Texas M. D. Anderson Cancer Center; Randall E. Millikan, The University of Texas M. D. Anderson Cancer Center; Christopher J. Logothetis, The University of Texas M. D. Anderson Cancer Center

9:05 a.m. **Two-Stage Designs for Dose-Finding Trials with a Biologic Endpoint Using Stepwise Tests—**❖Mei-Yin C. Polley, Amgen Inc.; Ying-Kuen K. Cheung, Columbia University

9:35 a.m. **A Strategic Approach to Designing Early Phase Cancer Trials—**❖Tze Leung Lai, Stanford University; Philip Lavori, Stanford University; Mei-Chiung Shih, Stanford University

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

221 CC-251 E

● ✪ Valid and Reliable Disability Measurement in Surveys—Invited

Committee on Statistics and Disability, Social Statistics Section, Section on Survey Research Methods

Organizer(s): David W. Keer, National Institute on Disability and Rehabilitation Research

Chair(s): Joan Turek, U.S. Department of Health & Human Services

8:35 a.m. **Identifying the Population with Disabilities: A Comparison of Current Survey Estimates—**❖Andrew J. Houtenville, Cornell University; S. Antonio Ruiz-Quintanilla, Cornell University; Robert Weathers, Mathematica Policy Research, Inc.

9:05 a.m. **The Development and Testing of Disability Questions for the Current Population Survey—**❖Terence M. McMenamin, Bureau of Labor Statistics; Stephen M. Miller, Bureau of Labor Statistics; Anne E. Polivka, Bureau of Labor Statistics

9:35 a.m. **Disability Data and the American Community Survey—**❖Sharon Stern, U.S. Census Bureau

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

222 CC-355 F

● ✪ Present-Day Challenges in the Design and Analysis of Industrial Experiments—Invited

Section on Quality and Productivity, Section on Physical and Engineering Sciences

Organizer(s): Timothy J. Robinson, University of Wyoming

Chair(s): Shaun S. Wulff, University of Wyoming

8:35 a.m. **A Structural Approach to the Design of Experiments for Robust Parameter Design—**❖Raymond H. Myers, Virginia Polytechnic Institute and State University

9:05 a.m. **A Posterior Predictive Approach to Multiple Response Surface Optimization—**John Peterson, GlaxoSmithKline; ❖Enrique del Castillo, The Pennsylvania State University

9:35 a.m. **Componentwise Variance Dispersion Graphs for Mixture Experiments—**❖John J. Borkowski, Montana State University; Boonorm Chomtee, Kasetsart University; Kamolchanok Choochaow, Silpakorn University

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

223 CC-255 E

● ✪ Toxicogenomics: From Concept to Regulatory Issues—Invited

Biopharmaceutical Section, Biometrics Section

Organizer(s): Nandini Raghavan, Johnson & Johnson PRD

Chair(s): Dhammika Amaratunga, Johnson & Johnson PRD

8:35 a.m. **Toxicogenomics for Toxicity Evaluation and Biomarker Identification—**❖Hisham Hamadeh, Amgen Inc.

9:00 a.m. **Systematic Mining of a Large Gene Expression Database and Design of a Multi-Endpoint Diagnostic Device—**❖Georges Natsoulis, Datahooks, Inc.

9:25 a.m. **Gene Signatures for Hepatotoxicants—**❖Nandini Raghavan, Johnson & Johnson PRD; Dhammika Amaratunga, Johnson & Johnson PRD; Alex Nie, Johnson & Johnson PRD; Michael McMillian, Johnson & Johnson PRD

9:50 a.m. **Preparing the Critical Path to Acceptance of Toxicogenomic Data in Drug Safety Evaluation—**❖Alex Nie, Johnson & Johnson PRD

10:15 a.m. **Floor Discussion**

224 CC-355 B

● ✪ Resampling Methods in Small-Area Estimation—Invited

Section on Survey Research Methods, Section on Government Statistics, Section on Nonparametric Statistics

Organizer(s): Ferry Butar Butar, Sam Houston State University

Chair(s): Robert Fay, U.S. Census Bureau

8:35 a.m. **Jackknife and Bootstrap Methods for Small-Area Estimation: An Appraisal—**❖J. N. K. Rao, Carleton University

9:05 a.m. **On Small-Area Prediction Interval Problems—**Snigdhansu Chatterjee, The University of Minnesota**;** ❖Partha Lahiri, University of Maryland**;** Huilin Li, University of Maryland

9:35 a.m. Disc: Peter Hall, The University of Melbourne

9:45 a.m. Disc: Sharon L. Lohr, Arizona State University

9:55 a.m. **Floor Discussion**

225 CC-250 A

● ✪ Inference in Simple Dynamic Games with Multiple Equilibria—Invited

JBES-Journal of Business and Economic Statistics

Organizer(s): Serena Ng, University of Michigan

Chair(s): Serena Ng, University of Michigan

8:35 a.m. **The Identification Power of Equilibrium in Simple Games—**❖Elie Tamer, Northwestern University

9:05 a.m. Disc: Victor Aguirregabiria, University of Toronto

9:15 a.m. Disc: Pat Bajari, The University of Minnesota Twin Cities

9:25 a.m. Disc: Han Hong, Stanford University

9:35 a.m. Disc: Allan Collard-Wexler, New York University

9:45 a.m. Disc: Shakeeb Khan, Duke University

9:55 a.m. Disc: Adam Rosen, University College London

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

226 CC-250 D

Robust Inference and Model Selection—Invited

IMS, Biometrics Section, Section on Nonparametric Statistics

Organizer(s): Tianxi Cai, Harvard University

Chair(s): Tianxi Cai, Harvard University

8:35 a.m. **Localized Model Selection by Cross-Validation—**❖Yuhong Yang, The University of Minnesota

9:00 a.m. **Selecting Models Using Incomplete Data—**❖Gerda Claeskens, K.U. Leuven

9:25 a.m. **Predicting Future Responses Based on Possibly Mis-specified Working Models—**❖Lu Tian, Northwestern University**;** Tianxi Cai, Harvard University**;** Scott Solomon, Brigham and Women's Hospital**;** Lee-Jen Wei, Harvard University

9:50 a.m. Disc: Thomas Lumley, University of Washington

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

227 CC-155 F

● ✪ Innovative Imputation Methods in Health Research—Invited

Section on Health Policy Statistics, Biometrics Section, Section on Teaching Statistics in the Health Sciences, Section on Survey Research Methods, WNAR

Organizer(s): Alan M. Zaslavsky, Harvard University; Yulei He, Harvard Medical School

Chair(s): Anirban Basu, The University of Chicago

8:35 a.m. **Using a Mixture Model for Multiple Imputation in the Presence of Outliers—**❖Michael R. Elliott, University of Michigan**;** Nicolas Stettler, Children's Hospital of Philadelphia

9:00 a.m. **Imputing Under-Reported Treatments Using Multiple Sources of Treatment Information in a Cancer Services Study—**❖Alan M. Zaslavsky, Harvard University**;** Yulei He, Harvard Medical School

9:25 a.m. **Statistics and Lies: Correcting Questionnaire Ordering Effect via Multiple Imputation—**❖Xiao-li Meng, Harvard University**;** Jingchen Liu, Harvard University**;** Chih-nan Chen, Boston University**;** Margarita Alegria, Cambridge Health Alliance

9:50 a.m. Disc: Nathaniel Schenker, National Center for Health Statistics

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

American Statistical Association

Presidential Address & Awards Session

Mary Ellen Bock, ASA President
Tuesday, July 31, 8:00 p.m.
Salt Palace Convention Center
Ballrooms E-J

Is your associate, professor, student, colleague, friend, or organization being recognized at the Joint Statistical Meetings in Salt Lake City?

Samuel S. Wilks Memorial Award

Edward C. Bryant Scholarship

Gertrude M. Cox Scholarship

Gottfried E. Noether Awards

W. J. Youden Award in Lab Testing

★ *Statistics in Chemistry Award*
★ *ASA Fellows*
★ *Founders Award*
★ *Outstanding Statistical Application Award*
★ *Statistical Partnerships among Academe, Industry, and Government (SPAIG) Award*

Plan to attend the ASA Presidential Address and Awards Session for the recognition of the ASA's most distinguished members.

228 CC-250 EF

✪ The Bayesian Frequentist Interface: Is the Difference One of Methodology or of Other Information?—Invited

SSC, Section on Bayesian Statistical Science, ENAR, Section on Survey Research Methods

Organizer(s): Donald A.S. Fraser, University of Toronto

Chair(s): Nancy Reid, University of Toronto

8:35 a.m. **Adaptive MCMC Using Stratified Proposals for Bayesian and Frequentist Inference—**❖Mylène Bédard, University of Warwick**;** Donald A.S. Fraser, University of Toronto**;** Augustive C.M. Wong, York University

9:05 a.m. **Improved Likelihood Inference for Vector Parameters with Discrete Data—**❖Nicola Sartori, University of Venice

9:35 a.m. **Default Priors for Frequentist and Bayesian Inference—**❖Donald A. S. Fraser, University of Toronto

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

229 CC-355 E

Medallion Lecture III—Invited

IMS, General Methodology

Organizer(s): Tony Cai, University of Pennsylvania

Chair(s): Jianqing Fan, Princeton University

8:35 a.m. **Functional Regression Analysis: Models, Methods, and Applications—**❖Hans-Georg Müller, University of California, Davis

9:30 a.m. Disc: Chunming Zhang, University of Wisconsin-Madison

9:45 a.m. Disc: Fang Yao, University of Toronto

10:00 a.m. **Floor Discussion**

230 CC-155 C

● ✪ The Future of Pro Bono Statistics—Invited

Section on Statistical Consulting

Organizer(s): Nilupa S. Gunaratna, Purdue University

Chair(s): Fritz Scheuren, NORC at the University of Chicago

8:35 a.m. **Volunteerism in the ASA—**❖David Banks, Duke University

9:00 a.m. **A Role for Students in Pro Bono Statistics—**❖Gayla R. Olbricht, Purdue University

9:25 a.m. **Pro Bono Statistics and Public Policy—**❖Yasmin H. Said, George Mason University

9:50 a.m. Disc: George P. McCabe, Purdue University

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

231 CC-155 D

● ✪ Using Environmental Information for Rational Decisionmaking—Invited

Section on Statistics and the Environment, Section on Risk Analysis

Organizer(s): Barry D. Nussbaum, U.S. Environmental Protection Agency

Chair(s): Barry D. Nussbaum, U.S. Environmental Protection Agency

8:35 a.m. **Virus and Indicator Occurrence in Ground Water Sources of Public Drinking Water—**❖Michael J. Messner, U.S. Environmental Protection Agency**;** Crystal Rodgers, U.S. Environmental Protection Agency

9:00 a.m. **A Bayesian Approach to EPA's Data Quality Objectives Process—**❖Paul K. Black, Neptune and Company, Inc.**;** Mark Fitzgerald, Neptune and Company, Inc.**;** Tom Stockton, Neptune and Company, Inc.

9:25 a.m. **Strengthening Environmental Decisionmaking Through Data Quality Objectives—**❖John Warren, U.S. Environmental Protection Agency

9:50 a.m. Disc: William F. Hunt, Jr., North Carolina State University

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

232 CC-355 C

● ✪ Multiple Comparisons and Experimental Replication—Invited

Section on Bayesian Statistical Science

Organizer(s): Valen Johnson, The University of Texas M. D. Anderson Cancer Center

Chair(s): Valen Johnson, The University of Texas M. D. Anderson Cancer Center

8:35 a.m. **Synthesis of Bayes Factors and Estimation for Large Samples: Adaptive Hypothesis Testing Intervals (AHTI)—**❖Luis R. Pericchi, University of Puerto Rico, San Juan**;** Maria E. Perez, University of Puerto Rico, San Juan

9:05 a.m. **Why There Are So Many Contradicted or Exaggerated Findings in Highly Cited Clinical Research—**❖Ying Yuan, The University of Texas M. D. Anderson Cancer Center**;** Valen Johnson, The University of Texas M. D. Anderson Cancer Center

9:35 a.m. **Bayesian Decision Theory for Multiplicities—**❖Kenneth Rice, University of Washington

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

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

233 CC-255 D

● ✪ Radiation Epidemiology and Statistical Methods—Topic-Contributed

Section on Statistics in Epidemiology, ENAR

Organizer(s): N. Phillip Ross, Radiation Effects Research Foundation

Chair(s): N. Phillip Ross, Radiation Effects Research Foundation

8:35 a.m. **Health Effects of Induced Radiation from the Atomic Bombings of Hiroshima and Nagasaki—** ❖Fumiyoshi Kasagi, Radiation Effects Research Foundation

8:55 a.m. **Modeling Effects of Radiation Exposure on Disease Outcomes with Radiation-Influenced Risk Factors (RFs), using Adult Health Study (AHS) Data—** ❖Kenneth Kopecky, Fred Hutchinson Cancer Research Center; Lori A. Williams, University of Washington

9:15 a.m. **Biodosimetry in the A-Bomb Survivors' Cohort—** ❖Daniel Stram, University of Southern California

9:35 a.m. **Uncertainty of Estimated Radiation Doses Among Atomic Bomb Survivors: Using Multiple Sources of Information on Errors in the Main Exposure Variable of Health Effects Studies—** ❖Harry Cullings, Radiation Effects Research Foundation; Eric J. Grant, Radiation Effects Research Foundation; Sachiyo Funamoto, Radiation Effects Research Foundation; Sachiko Teranishi, Radiation Effects Research Foundation

9:55 a.m. **Descriptive Models for Excess Risks Following Radiation Exposure—** ❖Dale Preston, Hirosoft International

10:15 a.m. **Floor Discussion**

234 CC-260

● ✪ New Developments in Causal Inference—Topic-Contributed

Biometrics Section, ENAR

Organizer(s): Jing Cheng, University of Florida

Chair(s): Kenneth Shirley, University of Pennsylvania

8:35 a.m. **Structural Nested Mean Models for Time-Varying Causal Effect Moderation—** ❖Daniel Almirall, University of Michigan; Thomas R. Tenhave, University of Pennsylvania; Susan Murphy, University of Michigan

8:55 a.m. **Estimation and Inference for the Causal Effect of Receiving Treatment on a Multinomial Outcome—** ❖Jing Cheng, University of Florida

9:15 a.m. **Statistical Analysis of Randomized Experiments with Nonignorable Missing Outcomes—** ❖Kosuke Imai, Princeton University

9:35 a.m. **Correcting for Survivor Treatment-Selection Bias with a Structural Failure-Time Model: Survival in Oscar Award–Winning Performers—** ❖Xu Han, University of Pennsylvania; Dylan Small, University of Pennsylvania; Vishal Patel, University of Pennsylvania; Dean Foster, University of Pennsylvania

9:55 a.m. **Estimating Surrogate Endpoints Defined by Principal Causal Effects—** ❖Shiro Tanaka, University of Tokyo; Yutaka Matsuyama, University of Tokyo; Yasuo Ohashi, University of Tokyo

10:15 a.m. **Floor Discussion**

235 CC-255 F

● ✪ Statistical Analysis of Medical Device Studies—Topic-Contributed

Biopharmaceutical Section, ENAR, WNAR

Organizer(s): Steve Boeh, Medtronic Inc.

Chair(s): Cynthia DeSouza, Vertex Pharmaceuticals, Inc.

8:35 a.m. **Assessing Poolability of Data for a Clinical Trial: Why the Data Should Be Poolable and Why the Data Should Not Be Poolable—** ❖David Naftel, The University of Alabama at Birmingham

8:55 a.m. **Primary Endpoint Sensitivity Analysis on Missing Data in Medical Device Trials—** ❖Gina Garding, Boston Scientific Corporation; Nathan Carter, Boston Scientific Corporation; Eric Bass, Boston Scientific Corporation; Paul Cernohous, Boston Scientific Corporation

9:15 a.m. **Challenges and Issues of Intent-to-Treat Analysis in Cardiac Device Studies—** ❖Li Ding, Medtronic Inc.; Steve Boeh, Medtronic Inc.

9:35 a.m. **Assessment of the Success of the Propensity Score Estimation and Appropriate Adjustment in a Drug Eluting Stent Post-Marketing Registry—** ❖Yun Lu, Boston Scientific Corporation; Kevin Najarian, Boston Scientific Corporation; Aijun Song, Boston Scientific Corporation

9:55 a.m. **Bayesian Approach to Meta-Analysis in Medical Device Trials Using Mixed Effects Models—** ❖Lijuan Deng, Boston Scientific Corporation; Hong Wang, Boston Scientific Corporation; Liang Li, Genzyme Corporation

10:15 a.m. **Floor Discussion**

236 CC-250 B

✪ Nonparametric Methods for Complex and Difficult Data—Topic-Contributed

IMS, Section on Nonparametric Statistics

Organizer(s): Mu Zhu, University of Waterloo

Chair(s): Yulia R. Gel, University of Waterloo

8:35 a.m. **Covariance Selection by Sparse Regression—**❖Jie Peng, University of California, Davis**;** Pei Wang, Fred Hutchinson Cancer Research Center

8:55 a.m. **On Single-Index Models—**❖Yan Yu, University of Cincinnati**;** Zhou Wu, University of Cincinnati**;** Haiqun Lin, Yale University

9:15 a.m. **CLUES: A Nonparametric Clustering Method Based on Local Shrinking—**❖Xiaogang Wang, York University

9:35 a.m. **Longitudinal Modeling When Response and Time-Dependent Covariates Are Measured at Different Time Points—**❖Joel Dubin, University of Waterloo**;** Xiaoqin Xiong, University of Waterloo

9:55 a.m. **Regularized Autoregressive Approximation: A Bridge Between Estimation and Model Selection—**❖Bei Chen, University of Waterloo**;** Yulia R. Gel, University of Waterloo

10:15 a.m. **Floor Discussion**

237 CC-155 E

● ✪ Bayesian Applications in Marketing—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Thomas Otter, The Ohio State University

Chair(s): Thomas Otter, The Ohio State University

8:35 a.m. **A Simultaneous Quantile Regression Model for Customer Linkage Analysis—**❖Jeffrey Dotson, The Ohio State University**;** Joseph J. Retzer, Maritz Research**;** Greg M. Allenby, The Ohio State University

8:55 a.m. **Disentangling Preferences, Inertia, and Learning in Brand Choice Models—**❖Sangwoo Shin, University of Rochester**;** Sanjog Misra, University of Rochester**;** Dan Horsky, University of Rochester

9:15 a.m. **A Model of State Dependence Based on Auto- and Cross-Correlated Exponential Processes with an Application to Household Panel Data—**❖Xiuyun Zhang, The Ohio State University**;** Thomas Otter, The Ohio State University**;** Mario Peruggia, The Ohio State University

9:35 a.m. **Bayesian Semiparametric Estimation of Random Coefficients Discrete Choice Models Using Aggregate Data—**❖Sylvie Tchumtchoua,

9:55 a.m. Disc: Mario Peruggia, The Ohio State University

10:15 a.m. **Floor Discussion**

238 CC-254 B

● ✪ Leonard J. Savage Awards—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Peter Mueller, The University of Texas M. D. Anderson Cancer Center

Chair(s): Alan E. Gelfand, Duke University

8:35 a.m. **Semiparametric Models in Bayesian Event History Analysis Using Beta Processes—**❖Pierpaolo De Blasi, University of Turin

8:55 a.m. **Density Estimation and Dimension Reduction with Logistic Gaussian Process Priors—**❖Surya Tokdar, Carnegie Mellon University

9:15 a.m. **Structure and Sparsity in High-Dimensional Multivariate Analysis—**❖Carlos Carvalho, Duke University

9:35 a.m. **Bayesian Treed Gaussian Process Models—**❖Robert Gramacy, University of Cambridge

9:55 a.m. **Floor Discussion**

239 CC-251 F

● ✪ Opportunities and Challenges of Integrated Datasets To Serve Policy Research: The Medicaid Undercount Study—Topic-Contributed

Section on Government Statistics, Section on Health Policy Statistics, Social Statistics Section

Organizer(s): Michael Davern, The University of Minnesota

Chair(s): Linda Gage, California Department of Finance

8:35 a.m. **Opportunities and Challenges Facing the Construction of Integrated Datasets To Serve Policy Research Purposes—**❖Michael Davern, The University of Minnesota

8:55 a.m. **Analysis of Medicaid Enrollment Status in the Current Population Survey—**❖Ming-Yi K. Mah, U.S. Census Bureau**;** Dean M. Resnick, U.S. Census Bureau

9:15 a.m. **How Do Surveys Differ in Reporting the Quality of Reported Medicaid Enrollment Data: NHIS, CPS, and State Surveys—**❖Kathleen Call, The University of Minnesota

9:35 a.m. **Larger Statistical and Policy Implications of Moving Toward Interagency Collaborations and Integrated Data—**❖Sally Obenski, U.S. Census Bureau

9:55 a.m. Disc: Todd Rockwood, The University of Minnesota

10:15 a.m. **Floor Discussion**

240 CC-251 A

Alternative Approaches to the Introductory Applied Statistics Course—Topic-Contributed

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

Organizer(s): John Gabrosek, Grand Valley State University

Chair(s): Phyllis Curtiss, Grand Valley State University

8:35 a.m. **Alternate Topic Sequencing in the Introductory Applied Statistics Course—**❖John Gabrosek, Grand Valley State University

8:55 a.m. **Integrating Data Analysis with Parametric Inference in Undergraduate Statistics—**❖Larry Weldon, Simon Fraser University

9:15 a.m. **Comparison of a Traditionally Taught Introductory Statistics Course to a Completely Online Version of the Same Course—**❖Gail Tudor, Husson College

9:35 a.m. **Team-Based Learning in an Introductory Applied Statistics Course—**❖Paul Fields, Brigham Young University

9:55 a.m. **Active Student Learning Model of Statistics Education—**❖Ralph Turner, University of the Sciences in Philadelphia

10:15 a.m. **Floor Discussion**

University of Utah Statistics Position

The Department of Mathematics at the University of Utah invites applications for a tenure-track position (or tenured, in exceptional cases) in all areas of statistics. Availability of positions is contingent upon funding. The Hiring Committee will select candidates based on excellence in research and teaching.

In order to apply for any of these positions, you must fill out an application at `http://www.mathjobs.org/`. To complete your application, submit a curriculum vitae, bibliography, and five letters of recommendation, including, if possible, one letter addressing teaching abilities. It is advised that applicants submit a research and teaching statement. It is not necessary to send preprints or reprints with the initial applications. Application material can be submitted through the above website **(preferred)** or they may be sent by US mail to: *Committee on Staffing, Department of Mathematics, University of Utah, 155 S 1400 E, JWB 233, Salt Lake City, UT 84112.* Completed applications will be considered starting October 1, 2007, and positions may be offered from that date on. Applications will be accepted until positions are filled.

The University of Utah is an Equal Opportunity, Affirmative Action Employer and encourages applications from women and minorities, and provides reasonable accommodation to the known disabilities of applicants and employees.

The department is one of 25 Group I Mathematics Departments in public institutions nationwide, and its faculty have received many honors including Guggenheim, Packard, and Sloan Fellowships. It has active VIGRE and IGERT programs. For more information see `http://www.math.utah.edu/positions/`.

241 CC-254 C

● ✪ Biostatistics and Bioinformatics at the Interface—Topic-Contributed

WNAR, Biometrics Section, ENAR, Section on Health Policy Statistics

Organizer(s): Wei Zhu, State University of New York at Stony Brook

Chair(s): Wei Zhu, State University of New York at Stony Brook

8:35 a.m. **How Well Does Structural Equation Modeling (SEM) Reveal Weakened Brain Anatomical Connections? An fMRI Simulation Study—**❖Jieun Kim, National Institutes of Health**;** Barry Horwitz, National Institutes of Health

8:55 a.m. **Correlation Analysis of the Transcriptomic and Proteomic Data in Platelet—**❖Chen Ji, Stony Brook University**;** Wei Zhu, State University of New York at Stony Brook

9:15 a.m. **Optimal Designs Accounting for Potentially Missing Observation in Quantal Dose Responses—**❖Inyoung Baek, Novartis Pharmaceuticals

9:35 a.m. **Power and Sample Size in Genetic Association Studies in Presence of Genotyping Error—**❖Wonkuk Kim, Stony Brook University**;** Qing Wang, Stony Brook University**;** Derek Gordon, Rutgers University**;** Stephen J. Finch, Stony Brook University

9:55 a.m. **Locally Optimal Weighting and Classifier Selection in Ensembles—**❖Melissa Fazzari, Stony Brook University**;** Hongshik Ahn, Stony Brook University**;** Wei Zhu, State University of New York at Stony Brook

10:15 a.m. **Floor Discussion**

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

242 CC-255 B

● ✪ Statistical Graphics for Everyday Use?—Topic-Contributed

Section on Statistical Graphics, Section on Statistical Consulting

Organizer(s): TBD

Panelists: ❖ John Emerson, Yale University
❖ Frederick Wicklin, SAS Institute Inc.
❖ Leland Wilkinson, SPSS Inc.

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

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

243 CC-258

● ✪ Analysis of Censoring/Truncated Data—Contributed

Biometrics Section

Chair(s): Bingshu Chen, National Institutes of Health

8:35 a.m. **Nonparametric Maximum Likelihood Estimation of the Incidence Rate Using Data from a Prevalent Cohort Study with Follow-Up—**❖Vittorio Addona, Macalester College**;** Masoud Asgharian, McGill University**;** David Wolfson, McGill University

8:50 a.m. **Semiparametric Analysis for Recurrent Event Data with Time-Dependent Covariates and Informative Censoring—**❖Chiung-Yu Huang, National Institutes of Health**;** Jing Qin, National Institutes of Health**;** Mei-Cheng Wang, The Johns Hopkins University

9:05 a.m. **Nonparametric Estimation in a Markov 'Illness-Death' Process from Interval-Censored Observations with Missing Intermediate Transition Status—**Halina Frydman, New York University**;** ❖Michael Szarek, Pfizer Inc.

9:20 a.m. **Inference for Three-State Progressive Disease Models with Common Periodic Observations—**❖Beth Ann Griffin, RAND Corporation**;** Stephen Lagakos, Harvard School of Public Health

9:35 a.m. **Semiparametric Estimation with Recurrent Event Data Under an Informative Monitoring Period—**❖Akim Adekpedjou, University of South Carolina**;** Edsel A. Pena, University of South Carolina

9:50 a.m. **Comparing in vivo Tumor Growth with Response-Dependent Right-Censoring—**❖Wenquan Wang, The University of Alabama at Birmingham

10:05 a.m. **Evaluation of a Binary Response Variable as a Surrogate for Survival: A Gynecologic Oncology Group Study—**❖Virginia Filiaci, GOG Statistical and Data Center**;** Randolph L. Carter, University at Buffalo-SUNY

244 CC-259

Bayesian Statistical Methodology and Its Application to Biometrics—Contributed

Biometrics Section

Chair(s): Meehyung Cho, sanofi-aventis

8:35 a.m. **A Bayesian Approach to a Logistic Regression Model with Incomplete Information—**❖Taeryon Choi, University of Maryland, Baltimore County; Mark J. Schervish, Carnegie Mellon University; Ketra Schmitt, Battelle Memorial Institute; Mitchell Small, Carnegie Mellon University

8:50 a.m. **A Bayesian Method for the Detection of Epistasis in Quantitative Trait Loci—**❖Edward Boone, Virginia Commonwealth University

9:05 a.m. **Group Sequential Designs and Analyses for Clinical Trials Based on a Utility Setting—**❖Yi Cheng, Indiana University South Bend

9:20 a.m. **Statistical Model for Detecting Multiple eQTLs—**❖Wei Zhang, Harvard University; Jun S. Liu, Harvard University; Jun Zhu, Rosetta Inpharmatics, LLC

9:35 a.m. **Empirical Bayes Estimators in Stratified Random Sampling/Ranked Set Sampling—**❖Tetsuji Ohyama, Kurume University; Jimmy A. Doi, California Polytechnic State University; Takashi Yanagawa, Kurume University

9:50 a.m. **Linear Model Selection Based on Estimation of Model Bias—**❖Andrew Neath, Southern Illinois University Edwardsville; Letitia Downen, Southern Illinois University Edwardsville; Joseph Cavanaugh, The University of Iowa

10:05 a.m. **Empirical Bayes Methods for Controlling the False Discovery Rate with Dependent Data—**❖Weihua Tang, Bristol-Myers Squibb Company; Cun-Hui Zhang, Rutgers University

245 CC-257

Sequence Analysis and Genetic Association Studies—Contributed

Biometrics Section

Chair(s): Michele Shaffer, The Pennsylvania State University

8:35 a.m. **Mining ChIP Data for Transcription Factor Binding Sites by the Addition of Background Sequences—**❖Yu Liang, National Institute of Environmental Health Sciences; Leping Li, National Institute of Environmental Health Sciences

8:50 a.m. **Complex Demodulation Applied to bZIP and bHLH-PAS Protein Domains—**❖Charles Smith, North Carolina State University; Zhi Wang, North Carolina State University; William R. Atchley, North Carolina State University

9:05 a.m. **A Probabilistic Approach for Phylogenetic Sequence Selection—**❖Michelle Lacey, Tulane University

9:20 a.m. **Variable Selection in Logistic Models for Testing SNP-SNP Interactions—**❖Huiyi Lin, The University of Alabama at Birmingham; Renee Desmond, The University of Alabama at Birmingham; Yung-Hsin Liu, Pharmaceutical Product Development Inc.; Seng-jaw Soong, The University of Alabama at Birmingham

9:35 a.m. **Likelihood-Based Procedures for Disease Gene Localization with General Pedigree Data—**❖Shuyan Wan, Merck & Co., Inc.; Shili Lin, The Ohio State University

9:50 a.m. **Statistical Methods for Genetic Association Studies Based on Haplotype Sharing—**❖Glen Satten, Centers for Disease Control and Prevention; Andrew Allen, Duke University

10:05 a.m. **Constructing Gene Association Network for Rheumatoid Arthritis Using the Backward Genotype-Trait Association (BGTA) Algorithm—**❖Yuejing Ding, Columbia University; Tian Zheng, Columbia University; Iuliana Ionita-Laza, Harvard University; Lei Cong, Columbia University; Shaw-Hwa Lo, Columbia University

246 CC-255 C

● ✪ Issues with Survival Data in Clinical Trials—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Larry Thorderson, ICON Clinical Research

8:35 a.m. **Comparison of Methods for Handling Early Dropouts in Analysis of Event Rates—**❖Yuting Zhang, Amgen Inc.

8:50 a.m. **Conditional Power for Stratified Logrank Tests—**❖Chung-Kuei Chang, Cephalon, Inc.; Lothar Tremmel, Cephaloh, Inc.

9:05 a.m. **Optimal Cost-Effective Designs of Proof of Concept Trials—**❖Cong Chen, Merck & Co., Inc.

9:20 a.m. **Nonparametric Confidence Intervals for Survival Probabilities—**❖Kun Chen, Bristol-Myers Squibb Company

9:35 a.m. **Generalized Estimating Equations for Clustered Survival Data—**❖Xiaohong Zhang, Amgen Inc.; Kenneth Koehler, Iowa State University; Terry M. Therneau, Mayo Clinic

9:50 a.m. **Modeling Multicenter Survival Data: Simulation Results—**❖Daozhi Zhang, Daiichi Sankyo Pharma Development

10:05 a.m. **A Note on Discrete-Time Survival Model with Application to Vertebral Fracture—**❖Hongwei Wang, Merck & Co., Inc.; Weili He, Merck & Co., Inc.; Arvind K. Shah, Merck & Co., Inc.

247 CC-155 B

✪ Volatility and Risk—Contributed

Business and Economics Statistics Section

Chair(s): Roger Berger, Arizona State University

8:35 a.m. **Optimal House Tenure and Portfolio Choice with Housing as a Hedging Asset—**❖Yu Zhang, Columbia Business School

8:50 a.m. **Comparing Portfolio Credit Risk Methods on Diversification Effect—**❖Ming-Chin Hung, Soochow University; Yi-Ping Chang, Soochow University; Huimei Liu, National Chengchi University

9:05 a.m. **Volatility in Output Growth: A Wavelet Analysis—**❖David J. Doorn, The University of Minnesota Duluth

9:20 a.m. **An Approximation Scheme for Option Pricing for Stochastic Volatility Models—**❖Jungyeon Yoon, The University of North Carolina at Chapel Hill; Chuanshu Ji, The University of North Carolina at Chapel Hill

9:35 a.m. **Empirical Analysis of Volatility Dynamics in High-Frequency Returns with a Time-Varying Component Model—**❖Ka Sing Man, Western Illinois University; Chunchi Wu, Singapore Management School

9:50 a.m. **A Multivariate Stochastic Volatility Model and Its Inference—**❖Peng Liu, North Carolina State University; Peter Bloomfield, North Carolina State University

10:05 a.m. **High-Dimensional Volatility Models—**❖David S. Matteson, The University of Chicago; Ruey S. Tsay, The University of Chicago Graduate School of Business

248 CC-250 C

✪ Semiparametric Models and Biostatistics—Contributed

IMS, SSC, Biometrics Section

Chair(s): Jonathan Gelfond, The University of North Carolina at Chapel Hill

8:35 a.m. **Maximum Average-Power Tests—**❖Chih-Rung Chen, National Chiao Tung University

8:50 a.m. **Estimating the Error Distribution Function in Semiparametric Regression—**❖Ursula Mueller-Harknett, Texas A&M University

9:05 a.m. **Inference for the Cox Regression Models with Time-Dependent Coefficients via Empirical Likelihood—**❖Yanqing Sun, The University of North Carolina at Charlotte; Rajeshwari Sundaram, National Institute of Child Health and Human Development; Yichuan Zhao, Georgia State University

9:20 a.m. **Effects of Rounding of Conditional Frequencies on Odds Ratio—**❖Juyoun Lee, The Pennsylvania State University; Aleksandra Slavkovic, The Pennsylvania State University

9:35 a.m. **Use of Marginal Structural Models To Estimate the Effect of Epoetin on Survival of Dialysis Patients—**❖Yi Zhang, Medical Technology and Practice Patterns Institute; Dennis Cotter, Medical Technology and Practice Patterns Institute; Mae Thamer, Medical Technology and Practice Patterns Institute; James Kaufman, Veterans Affairs Boston Healthcare Systems/ Boston University School of Medicine; Miguel A. Hernan, Harvard School of Public Health

9:50 a.m. **Determining the Cutoff Points for a Continuous Biomarker When Its Interaction with Study Treatment Is of Interest with Time-to-Event Outcomes—**❖Keyue Ding, Queen's University

10:05 a.m. **Robust Methods for Estimation of State Occupancy Probabilities with Interval-Censored Multistate Data—**❖David Tolusso, University of Waterloo; Richard J. Cook, University of Waterloo

249 CC-251 D

✪ Nonparametric Methods for Machine Learning and High-Dimensional Data—Contributed

Section on Nonparametric Statistics

Chair(s): Rebecca Nugent, Carnegie Mellon University

8:35 a.m. **A Method for Dimension Reduction in Classification with Functional Data—**❖Santiago Velilla, Universidad Carlos III de Madrid

8:50 a.m. **Exact Bagging of k-Nearest-Neighbor Learners—**❖Brian Steele, University of Montana

9:05 a.m. **Consistency of Lasso Selection in High-Dimensional Approximating Models—**Florentina Bunea, Florida State University**;** ❖Shuva Gupta, Florida State University

9:20 a.m. **Statistical Approaches to Mining Multivariate Datastreams—**❖Eric Vance, Duke University

9:35 a.m. **Modeling Computer Experiments with Multiple Responses—**❖Zhe Zhang, The Pennsylvania State University**;** Runze Li, The Pennsylvania State University**;** Agus Sudjianto, Bank of America

9:50 a.m. **Nonparametric Tests and Finite Approximations for Balanced and Unbalanced Multivariate Data, with Applications—**❖Arne Bathke, University of Kentucky**;** Solomon W. Harrar, University of Montana

10:05 a.m. **Methodological Aspect of Interpretation of Principal Components—**❖Lev Sverdlov

250 CC-155 A

● ✪ Computer Experiments and Network Traffic Models—Contributed

Section on Physical and Engineering Sciences

Chair(s): Tena Katsaounis, The Ohio State University

8:35 a.m. **Simultaneous Calibration and Tuning of Computer Experiments—**❖Gang Han, The Ohio State University**;** Thomas Santner, The Ohio State University

8:50 a.m. **Estimating Percentiles in Computer Experiments—**❖Soma Roy, The Ohio State University**;** William Notz, The Ohio State University

9:05 a.m. **Blind Kriging—**❖Roshan Vengazhiyil, Georgia Institute of Technology**;** Ying Hung, Georgia Institute of Technology**;** Agus Sudjianto, Bank of America

9:20 a.m. **Optimal Design of Network Traffic Measurement Scheme—**❖Harsh Singhal, University of Michigan**;** George Michailidis, The University of Michigan

9:35 a.m. **Sample-Based Estimation of Internet Traffic Flow Characteristics—**❖Lili Yang, The University of Michigan**;** George Michailidis, The University of Michigan

9:50 a.m. **Propagating SLAs Statistics in the IT Service Provider Environment—**❖Larisa Shwartz, IBM T.J. Watson Research Center**;** Genady Grabarnik, IBM T.J. Watson Research Center

10:05 a.m. **Estimating Traffic Volume over a Large Transportation Network from Noisy Data—**❖Jaimyoung Kwon, California State University, East Bay**;** Karl Petty, Berkeley Transportation Systems, Inc.

251 CC-251 C

● Machine Learning—Contributed

Section on Statistical Computing, Section on Statistical Graphics, Section on Physical and Engineering Sciences, Section on Quality and Productivity

Chair(s): Simon Sheather, Texas A&M University

8:35 a.m. **Semisupervised Learning from Dissimilarity Data—**❖Michael Trosset, Indiana University**;** Carey E. Priebe, The Johns Hopkins University

8:50 a.m. **Algorithms for Support Vector Machines—**❖Denise Reeves, George Mason University

9:05 a.m. **Random Forests for Feature Selection: To Be Handled with Caution—**❖Carolin Strobl, LMU Munich

9:20 a.m. **Feature Selection for Large Data—**❖Peng Liu, Case Western Reserve University**;** Jiayang Sun, Case Western Reserve University

9:35 a.m. **Asymptotic Mean Squared Prediction Error of L2Boosting Estimator Under Mis-specified Models—**❖Tzu-Chang Cheng, University of Illinois at Urbana-Champaign**;** Ching-Kang Ing, Academia Sinica

9:50 a.m. **On Efficient Supervised Learning of Multivariate t Mixture Models with Missing Information—**❖Tsung-I Lin, National Chung Hsing University**;** Hsiu-J Ho, National Chung Hsing University**;** Pao-S Shen, Tunghai University

10:05 a.m. **Conditional Confidence Intervals for Classification Error Rate—**❖Hie-Choon Chung, Gwangju University**;** Chien-Pai Han, University of Texas at Arlington

252 CC-355 D

● Variance Estimation–Advanced Applications—Contributed

Section on Survey Research Methods

Chair(s): Karen Messer, University of California, San Diego

8:35 a.m. **Quasi–Monte Carlo Methods for Variance Estimation—**❖Stanislav Kolenikov, University of Missouri-Columbia

8:50 a.m. **Estimating the Distribution of Distances for a Large-Scale Complex Survey—**❖Jianqiang Wang, Iowa State University**;** Jean Opsomer, Iowa State University

9:05 a.m. **Variance Estimation for Calibration with Estimated Control Totals—**❖Jill Dever, University of Maryland**;** Richard Valliant, University of Maryland

9:20 a.m. **Variance Estimation After Nearest-Neighbor Imputation with Application to 2000 Census Long Form Sample—**❖Jae-kwang Kim, Yonsei University**;** Wayne Fuller, Iowa State University

9:35 a.m. **On Variance Estimation Under Auxiliary Value Imputation in Sample Surveys—**❖David Haziza, University of Montréal**;** Jean-François Beaumont, Statistics Canada**;** Cynthia Bocci, Statistics Canada

9:50 a.m. **The Effect of Stochastic Population Controls on the Precision of Radio Listening Estimates—**❖Richard Griffiths, Arbitron Inc.

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

253 CC-355 A

● Improved Methods for Survey Contact and Incentives—Contributed

Section on Survey Research Methods

Chair(s): Christopher Johnson, Centers for Disease Control and Prevention

8:35 a.m. **Using Linear Programming Techniques for Balancing Automatic Case Assignments in Field Surveys—**❖Edward English, NORC at the University of Chicago**;** Steven Pedlow, NORC at the University of Chicago

8:50 a.m. **First Impression: An Advance Contact Experiment to Locate and Engage Potential Respondents—**❖Michael E. White, U.S. Census Bureau**;** Megan Henly, U.S. Census Bureau**;** Amy B. Herron, U.S. Census Bureau**;** Andrew Zukerberg, U.S. Census Bureau

9:05 a.m. **The Impact of Incentives on Survey Participation and Reports of Intimate Partner and Sexual Violence—**❖Lisa Carley-Baxter, RTI International**;** Michele Lynberg, Centers for Disease Control and Prevention**;** Susan Twiddy, RTI International

9:20 a.m. **Money Can Buy Me Love: Experiments To Increase Response Rates Using Monetary Incentives—**❖Andrew Zukerberg, U.S. Census Bureau**;** Megan Henly, U.S. Census Bureau**;** David Hall, U.S. Census Bureau

9:35 a.m. **Floor Discussion**

254 CC-251 B

Teaching Statistics in the Health Sciences—Contributed

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

Chair(s): Patrick Arbogast, Vanderbilt University

8:35 a.m. **The Job Outlook for Biostatistics Graduates—**❖Stephen W. Looney, Medical College of Georgia**;** Joseph L. Hagan, Louisiana State University Health Sciences Center

8:50 a.m. **Developing a Biostatistical Collaboration Course in a Health Research Methodology Program—**❖Lehana Thabane, McMaster University**;** Stephen Walter, McMaster University**;** Steven E. Hanna, McMaster University**;** Charlie Goldsmith, McMaster University**;** Eleanor Pullenayegum, McMaster University

9:05 a.m. **The Effect of Effect Size on Teaching, Collaboration, and Publishing—**❖Linda S. Hynan, The University of Texas Southwestern Medical Center at Dallas**;** Alan Elliott, The University of Texas Southwestern Medical Center at Dallas

9:20 a.m. **Use of Interesting Examples from Medicine and Biology—**❖Harry Norton, Carolinas Medical Center

9:35 a.m. **WMWodds: A Simple and Direct Effect-Size Parameter for the Wilcoxon-Mann-Whitney Two-Sample Test—**❖Ralph G. O'Brien, The Cleveland Clinic**;** John Castelloe, SAS Institute Inc.

9:50 a.m. **Calibrated Peer Review (CPR) as a Tool To Teach Interpretation of Linear Regression Coefficients: Development of the CPR Module and Examination of Students' Results—**❖Felicity B. Enders, Mayo Clinic**;** Sarah Stoner, Mayo Clinic**;** Verna Hoverman, Mayo Clinic

10:05 a.m. **A SAS Macro Implementation of a Multiple Comparison Post Hoc Test—**❖Alan Elliott, The University of Texas Southwestern Medical Center at Dallas; Linda S. Hynan, The University of Texas Southwestern Medical Center at Dallas

255 CC-254 A

● ✪ Estimating Social Statistics: Hurricanes, Murders, and Other Applications—Contributed

Social Statistics Section

Chair(s): Daniel Cork, Committee on National Statistics

8:35 a.m. **Assessing Katrina's Impact: Report of a Study on the Mississippi Gulf Coast—**❖David A. Swanson, University of Mississippi; Mark Van Boening, University of Mississippi; Richard Forgette, University of Mississippi

8:50 a.m. **Factors That Facilitated and Inhibited Job-Holding Among Female AFDC/TANF Recipients in 1996—**❖Denton Vaughan, Consultant

9:05 a.m. **Under-Reporting of Means-Tested Transfer Benefits in the CPS—**❖Laura Wheaton, The Urban Institute

9:20 a.m. **Dial M for Missing Murder Data—**❖James A. Fox, Northeastern University; Marc L. Swatt, Northeastern University

9:35 a.m. **Measurement and Evaluation of Ancestry: Differences Between Specific and Generalized Responses—**❖Frank Hobbs, U.S. Census Bureau; Angela Brittingham, U.S. Census Bureau

9:50 a.m. **Measuring Religious Change Among Michigan Southern Baptists—**❖William Livingston, Baker College

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

Special Presentation 10:30 a.m.–12:20 p.m.

256 CC-255 B

ASA College Stat Bowl I—Other

ASA, IMS, ENAR, WNAR, SSC

Organizer(s): Stephanie Cano, University of Texas at San Antonio; Michael T. Anderson, University of Texas at San Antonio

Chair(s): Michael T. Anderson, University of Texas at San Antonio

Game 1—❖Ellen Breazel, University of Georgia; ❖Ann Lazar, University of Colorado at Denver and Health Sciences Center; ❖Chris Rigdon, Arizona State University; ❖Tanya Sikdar, University of Georgia

Game 2—❖Ming-Hung (Jason) Kao, University of Georgia; ❖Amanda-Sue King, Wright State University; ❖Peng Liu, Case Western Reserve University; ❖Balaji Raman, University of Connecticut

Game 3—❖Sourish Das, University of Connecticut; ❖Yiying (Richard) Fan, Case Western Reserve University; ❖Qin Wang, University of Georgia; ❖Andrejus Parfionovas, Utah State University

Game 4—❖Jien Chen, University of Georgia; ❖Xiaosong Li, Case Western Reserve University; ❖Sourish Saha, University of Florida; ❖ Erin Tewksbury, Wright State University

Invited Sessions 10:30 a.m.–12:20 p.m.

257 CC-251 C

✪ Recent Advancements in Nonparametric Methods for Regression Model Selection and Model Checking—Invited

Section on Nonparametric Statistics, Biometrics Section

Organizer(s): Lan Wang, The University of Minnesota

Chair(s): Arne Bathke, University of Kentucky

10:35 a.m. **Recent Developments in Noise-Addition Methods for Model Selection—**❖Dennis Boos, North Carolina State University; Leonard A. Stefanski, North Carolina State University

11:00 a.m. **Frequentist-Bayes Lack-of-Fit Tests Based on a Laplace Approximation—**❖Jeffrey Hart, Texas A&M University

11:25 a.m. **A Goodness-of-Fit Test for Parametric and Semiparametric Models in Multiresponse Regression—**❖Ingrid Van Keilegom, Université catholique de Louvain; Song Xi Chen, Iowa State University

11:50 a.m. **Robust Tests in Regression Models with Omnibus Alternatives and Bounded Influence—**❖Lan Wang, The University of Minnesota

12:15 p.m. **Floor Discussion**

258 CC-255 F

● ✪ Nonparametric Bayesian Inference for Challenging Biomedical Problems—Invited

International Society of Bayesian Analysis, Section on Bayesian Statistical Science, ENAR, Biometrics Section, Section on Nonparametric Statistics

Organizer(s): Peter Mueller, The University of Texas M. D. Anderson Cancer Center

Chair(s): Athanasios Kottas, University of California, Santa Cruz

10:35 a.m. **Bayesian Semiparametric Factor Modeling in Large P Problems—**❖Mike West, Duke University

11:05 a.m. **The Matrix Stick-Breaking Process: Flexible Bayes Meta-Analysis—**❖David B. Dunson, National Institute of Environmental Health Sciences

11:35 a.m. **Bayesian Nonproportional Hazards Survival Analysis—**❖Wesley Johnson, University of California, Irvine

12:05 p.m. **Floor Discussion**

259 CC-355 B

● The National Children's Study: The Challenges and Promises of a Follow-Up Study of a Randomly Selected Cohort of 100,000 Pre- and Post-Conception Women and Their Offspring Through 21 Years of Life—Invited

ENAR, Biometrics Section, Section on Statistics and the Environment, Section on Statistics in Epidemiology, Section on Survey Research Methods, Section on Health Policy Statistics, Social Statistics Section, Section on Teaching Statistics in the Health Sciences

Organizer(s): Jonas H. Ellenberg, University of Pennsylvania

Chair(s): Louise Ryan, Harvard School of Public Health/Dana-Farber Cancer Institute

10:35 a.m. **The National Children's Study (NCS): Background, Rationale, and Scope—**❖Peter C. Scheidt, National Institute of Child Health and Human Development

10:55 a.m. **Methods for Sampling Households To Identify 100,000 Births—**❖Jill M. Montaquila, Westat; J. Michael Brick, Westat; Lester Curtin, Centers for Disease Control and Prevention

11:15 a.m. **Adaptive Tuning of Field Performance in the National Children's Study: Protection of the Inferential Base—**❖Jonas H. Ellenberg, University of Pennsylvania

11:35 a.m. **Issues in the Measurement and Assessment of Environmental Exposures for a Large Prospective Cohort Study—**❖James Quackenboss, U.S. Environmental Protection Agency; Warren Galke, National Institute of Child Health and Human Development; Susan Viet, Westat; David Marker, Westat; Steven Bodesky, LFR, Inc.

11:55 a.m. Disc: Roderick J. Little, University of Michigan

12:15 p.m. **Floor Discussion**

260 CC-259

● ✪ Design of Experiment for Categorical Data—Invited

Biometrics Section, ENAR, Biopharmaceutical Section, General Methodology, Section on Physical and Engineering Sciences, Section on Quality and Productivity, WNAR

Organizer(s): Min Yang, University of Missouri-Columbia

Chair(s): Min Yang, University of Missouri-Columbia

10:35 a.m. **A Response-Driven Design: The Randomized Reinforcement Urn—**❖Nancy Flournoy, University of Missouri-Columbia

11:00 a.m. **Optimal Designs for Dose-Finding Studies—**❖Holger Dette, Ruhr-Universitaet Bochum

11:25 a.m. **Multicenter Clinical Trials with Binary Outcomes and Random Effects for Centers: Sample Size Determination—**❖Kathryn Chaloner, The University of Iowa

11:50 a.m. **Optimal Designs of Clinical Studies for Multivariate Probit Model—**❖Valeri V. Fedorov, GlaxoSmithKline

12:15 p.m. **Floor Discussion**

261 CC-254 B

✪ Asymptotic Decision Theory and Its Applications—Invited

IMS, Section on Nonparametric Statistics

Organizer(s): Harrison Zhou, Yale University

Chair(s): Harrison Zhou, Yale University

10:35 a.m. **Adaptive Nonparametric Density Estimation via the Root-Unroot Transform and Wavelet Block Threshholding—**❖Lawrence D. Brown, University of Pennsylvania

11:00 a.m. **Asymptotic Equivalence for Nonparametric Regression Experiments with Random Design—**❖Andrew Carter, University of California, Santa Barbara

11:25 a.m. **Estimating Convex Functions—**❖Mark Low, University of Pennsylvania

11:50 a.m. **Sufficiency and the Preservation of Fisher Information—**❖David Pollard, Yale University

12:15 p.m. **Floor Discussion**

262 CC-155 A

● ✪ Seasonal Time Series—Invited

Business and Economics Statistics Section

Organizer(s): Stuart Scott, Bureau of Labor Statistics

Chair(s): Ed Melnick, New York University

10:35 a.m. **Recasting X11 Seasonal Adjustment Filters into Smoothers—**❖Tucker S. McElroy, U.S. Census Bureau**;** Agustin Maravall, Bank of Spain

11:00 a.m. **New Models for Seasonal Time Series and Seasonal Adjustment—**❖David Findley, U.S. Census Bureau**;** Brian Monsell, U.S. Census Bureau**;** John Aston, Academia Sinica**;** Jyh-Ying Peng, Academia Sinica

11:25 a.m. **Quantifying and Measuring Revisions in Time-Series Estimates—**❖Duncan Elliot, Office for National Statistics**;** Craig H. McLaren, Office for National Statistics**;** Xichaun (Mark) Zhang, Australian Bureau of Statistics

11:50 a.m. **Empirical Evaluation of X-11 and Model-Based Seasonal Adjustment Methods—**❖Stuart Scott, Bureau of Labor Statistics**;** Richard Tiller, Bureau of Labor Statistics**;** Daniel Chow, Bureau of Labor Statistics

12:15 p.m. **Floor Discussion**

263 CC-251 D

● ✪ Statistical Analysis and Forecast of Space-Time Wind Power Data—Invited

IMS, Section on Statistics and the Environment

Organizer(s): Marc Genton, University of Geneva

Chair(s): Marc Genton, University of Geneva

10:35 a.m. **Calibrated Probabilistic Forecasting at the Stateline Wind Energy Center: The Regime-Switching Space-Time (RST) Method—**❖Kristin A. Larson, 3TIER**;** Tilmann Gneiting, University of Washington

11:00 a.m. **Nonparametric Assessment of Properties of Space-Time Covariance Functions Associated with Wind Speed Data—**❖Bo Li, National Center for Atmospheric Research**;** Marc Genton, University of Geneva**;** Michael Sherman, Texas A&M University

11:25 a.m. **Models for Short-Term Wind Speed Prediction—**❖Amanda S. Hering, Texas A&M University**;** Marc Genton, University of Geneva

11:50 a.m. Disc: Michael Stein, The University of Chicago

12:10 p.m. **Floor Discussion**

264 CC-155 F

● ✪ Confronting the Realities of Massive Imputation in Complex Surveys—Invited

Section on Survey Research Methods, Section on Health Policy Statistics, Section on Government Statistics

Organizer(s): Alan M. Zaslavsky, Harvard University; Yulei He, Harvard Medical School

Chair(s): Thomas Belin, University of California, Los Angeles

10:35 a.m. **Preservation of Skip Patterns and Covariance Structure through Semiparametric Whole-Questionnaire Imputation—**❖David R. Judkins, Westat**;** Thomas Krenzke, Westat**;** Zizhong Fan, MedImmune, Inc.**;** Andrea R. Piesse, Westat

11:00 a.m. **Imputation in a Multimode Multi-instrument Study of Cancer Care—**❖Yulei He, Harvard Medical School**;** Alan M. Zaslavsky, Harvard University

11:25 a.m. **Multiple Imputation Analysis of Association Between Cardiovascular Disease Risk Factors and Environmental Exposures—**❖Trivellore E. Raghunathan, University of Michigan**;** Wei Chen, Karmanos Cancer Institute

11:50 a.m. Disc: Michael D. Larsen, Iowa State University

12:10 p.m. **Floor Discussion**

265 CC-Ballroom B

● ✪ Causal Inference: Past, Present, and Future—Invited

Council of Chapters, Biometrics Section, General Methodology, WNAR

Organizer(s): V. A. Samaranayake, University of Missouri-Rolla

Chair(s): V. A. Samaranayake, University of Missouri-Rolla

10:35 a.m. **Statistics and Causal Inference: Past and Present—**❖Paul Holland, Educational Testing Services

11:00 a.m. **The Mathematics of Causal Inference in Statistics—**❖Judea Pearl, University of California, Los Angeles

11:25 a.m. **Causal Inference as a Missing Data Problem: Past, Present, and Future—**❖Donald B. Rubin, Harvard University

11:50 a.m. Disc: Mark J. van der Laan, University of California, Berkeley

12:10 p.m. **Floor Discussion**

266 CC-255 D

● ✪ Recent Developments of Statistics in Forest, Wildlife, Fisheries, and Ecological Research—Invited

WNAR, ENAR, Biometrics Section, Section on Statistical Consulting, Section on Statistics and the Environment

Organizer(s): Dongchu Sun, University of Missouri-Columbia

Chair(s): Steve Sheriff, Missouri Department of Conservation

10:35 a.m. **Searching for Ecological-Environmental Relationships—**Eric P. Smith, Virginia Polytechnic Institute and State University**;** ❖Samantha Bates Prins, James Madison University

11:00 a.m. **Statistical and Nonstatistical Issues in Designing Large-Scale Monitoring Efforts for the Northern Spotted Owl—**❖James A. Baldwin, USDA Forest Service**;** Joseph Lint, USDI Bureau of Land Management**;** Martin G. Raphael, USDA Forest Service**;** Eric Forsman, USDA Forest Service**;** John A. Laurence, USDA Forest Service**;** Robert Anthony, U.S. Geological Survey

11:25 a.m. **Bayesian Spatial Modeling of Vegetation Coverage Data in the Missouri Ozark Forest Ecosystem Project—**❖Zhuoqiong (Chong) He, University of Missouri-Columbia**;** Xiaoqian Sun, Clemson University

11:50 a.m. **Capture-Recapture Models: Uses of the Robust Design—**❖Ken Pollock, North Carolina State University

12:15 p.m. **Floor Discussion**

267 CC-251 B

Computationally Intensive Methods—Invited

Section on Statistical Computing, ENAR, Section on Nonparametric Statistics

Organizer(s): Yasmin H. Said, George Mason University

Chair(s): Edward Wegman, George Mason University

10:35 a.m. **Exploratory Statistical Software—**❖Antony Unwin, University of Augsburg

11:05 a.m. **Reducing the Variability in Least Squares Cross-Validation Bandwidths—**Jeffrey Hart, Texas A&M University**;** ❖Simon Sheather, Texas A&M University

11:35 a.m. **K Models Clustering—**❖James E. Gentle, George Mason University**;** Li Li, George Mason University

12:05 p.m. **Floor Discussion**

Invited Panels 10:30 a.m.–12:20 p.m.

268 CC-254 C

● ✪ Influencing State-by-State Curriculum Standards in Statistics for K–12 Education—Invited

ASA NCTM Joint Committee on Curriculum in Stats and Probability, Section on Statistical Education, Section on Teaching Statistics in the Health Sciences

Organizer(s): Jerry Moreno, John Carroll University

Chair(s): Jerry Moreno, John Carroll University

Panelists:
- ❖ Gail Burrill, Michigan State University
- ❖ Christine Franklin, University of Georgia
- ❖ Katherine Halvorsen, Smith College
- ❖ Cathy Seeley, University of Texas at Austin

12:15 p.m. **Floor Discussion**

269 CC-251 E

● ✪ Overarching Issues in Risk Analysis—Invited

Section on Risk Analysis, Section on Statisticians in Defense and National Security

Organizer(s): Duane Steffey, Exponent, Inc.

Chair(s): Alan Karr, National Institute of Statistical Sciences

Panelists:
- ❖ Duane Steffey, Exponent, Inc.
- ❖ Bruce Craig, Purdue University
- ❖ Robert Obenchain, Eli Lilly and Company
- ❖ Walter W. Piegorsch, The University of Arizona

12:05 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

270 CC-355 C

● ✪ Phase II/III Clinical Trials: Combine or Not To Combine—Topic-Contributed

Biopharmaceutical Section, WNAR, ENAR, Biometrics Section, Section on Health Policy Statistics

Organizer(s): James Hung, U.S. Food and Drug Administration

Chair(s): James Hung, U.S. Food and Drug Administration

10:35 a.m. **Multiplicity in Adaptive Designs—**❖Willi Maurer, Novartis Pharmaceuticals AG

10:55 a.m. **How Much Evidence Is Enough?**—❖Kuang-Kuo Lan, Johnson & Johnson PRD

11:15 a.m. **Adaptation of Adaptive Design in Japan**—❖Masahiro Takeuchi, Kitasato University; Hajime Uno, Kitasato University; Fumiaki Takahashi, Kitasato University

11:35 a.m. **Stagewise Planning for Clinical Trials from Phase II to Phase III**—❖Sue-Jane Wang, U.S. Food and Drug Administration

11:55 a.m. Disc: Ralph B. D'Agostino, Sr., Boston University

12:15 p.m. **Floor Discussion**

271 CC-155 B

● ✪ Using Computer Models for Ecological, Environmental, and Biological Applications: A SAMSI Program—Topic-Contributed

Section on Bayesian Statistical Science, ENAR

Organizer(s): Susie Bayarri, University of Valencia

Chair(s): Susie Bayarri, University of Valencia

10:35 a.m. **How Far Can a Physicist Travel Along the Bayesian Way: Probability, Uncertainty, and Adequacy in Climate-Like Modeling**—❖Leonard Smith, London School of Economics

10:55 a.m. **Analyzing Input and Structural Uncertainty of a Hydrological Model with Stochastic Time-Dependent Parameters**—❖Peter Reichert, Swiss Federal Institute of Aquatic Science and Technology; Johanna Mieleitner, Eawag

11:15 a.m. **Analysis of Seasonal Epidemiological Parameters**—❖Ariel Cintron-Arias, Statistical and Applied Mathematical Sciences Institute/ North Carolina State University; Peter Reichert, Swiss Federal Institute of Aquatic Science and Technology; Alun Lloyd, North Carolina State University; H. T. Banks, North Carolina State University

11:35 a.m. **Hazard Mapping: Modeling Volcanic Avalanches**—❖E. Bruce Pitman, University at Buffalo-SUNY

11:55 a.m. **Calibration of an Air Quality Model**—❖Serge Guillas, Georgia Institute of Technology; Lew Lefton, Georgia Institute of Technology; Yunsoo Choi, Georgia Institute of Technology; Yuhang Wang, Georgia Institute of Technology

12:15 p.m. **Floor Discussion**

272 CC-255 E

● ✪ Genome-Wide Studies and Proteomics in Cancer—Topic-Contributed

Biometrics Section, ENAR, WNAR

Organizer(s): Terry Hyslop, Thomas Jefferson University

Chair(s): Inna Chervoneva, Thomas Jefferson University

10:35 a.m. **Statistical Validation of Breast Cancer Subtypes**—❖Amy Kapp, Stanford University; Robert Tibshirani, Stanford University

10:55 a.m. **Analytical Pipeline for 2D Gels**—❖Francoise Seillier-Moiseiwitsch, Georgetown University Medical Center

11:15 a.m. **Two-Stage Designs for Genome-Wide Association Studies in Cancer**—❖Abhijit Dasgupta, Thomas Jefferson University

11:35 a.m. **Effect of the Number of Top Genes on Survival Analysis in Microarray Data**—❖Dung-Tsa Chen, Moffitt Cancer Center; Michael Schell, Moffitt Cancer Center; Steven Eschrich, Moffitt Cancer Center; Alan Cantor, Moffitt Cancer Center; Timothy Yeatman, Moffitt Cancer Center

11:55 a.m. Disc: Sin-Ho Jung, Duke University

12:15 p.m. **Floor Discussion**

273 CC-355 D

● ✪ Adaptive Medical Device Clinical Trials—Topic-Contributed

Biopharmaceutical Section, ENAR

Organizer(s): Lilly Yue, U.S. Food and Drug Administration

Chair(s): Laura Thompson, U.S. Food and Drug Administration

10:35 a.m. **Comparison of Two Adaptive Randomization Methods in Multicenter Clinical Trials**—❖Lei Peng, Abbott Vascular

10:55 a.m. **Data Analysis in a Medical Device Trial When Planned Randomized Enrollment Is Too Slow**—❖Yonghong Gao, U.S. Food and Drug Administration; Gerry Gray, U.S. Food and Drug Administration

11:15 a.m. **Statistical Analysis for Two-Stage Adaptive Design with Different Study Endpoints**—❖Shein-Chung Chow, Duke University; Siu-Keung Tse, Hong Kong City University

11:35 a.m. **One Adaptive Design and Its Application to Medical Device PMA Study**—❖Xiaolong Luo, Johnson & Johnson PRD; David Snead, Cordis, a Johnson & Johnson Company; Dennis Donohoe, Cordis, a Johnson & Johnson Company

11:55 a.m. **Flexible Designs in Clinical Trials: Case studies—**❖Ning Li, U.S. Food and Drug Administration

12:15 p.m. **Floor Discussion**

274 CC-355 A

● ✪ Statistical Issues of a Thorough QT/QTc Study—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Joanne Zhang, U.S. Food and Drug Administration

Chair(s): Scott Patterson, GlaxoSmithKline

10:35 a.m. **Effect of Baseline Measurement on the Change from Baseline in QTc Intervals—**❖Hong Tian, Johnson & Johnson PRD**;** Jaya Natarajan, Johnson & Johnson PRD

10:55 a.m. **QT Interval Variability and Sample Size Consideration for Thorough QT Studies—**❖Lu Zhang, Eli Lilly and Company**;** Alex Dmitrienko, Eli Lilly and Company

11:15 a.m. **Examination of Concentration Effect Modeling of QT Interval from a Statistical Perspective—**❖Brian Smith, Amgen Inc.

11:35 a.m. **Statistical Issues of a Thorough QT/QTc Study—**❖Joanne Zhang, U.S. Food and Drug Administration

11:55 a.m. Disc: Venkat Sethuraman, Novartis Pharmaceuticals

12:15 p.m. **Floor Discussion**

275 CC-254 A

✪ Diverse Applications of Modern Time Series—Topic-Contributed

IMS, Business and Economics Statistics Section

Organizer(s): Michael Levine, Purdue University

Chair(s): Tonglin Zhang, Purdue University

10:35 a.m. **Local Whittle Estimation of Fractional Integration for Nonlinear Processes—**❖Xiaofeng Shao, University of Illinois**;** Wei Biao Wu, The University of Chicago

10:55 a.m. **Minimax Detection of Structural Change Using Large Deviations—**❖Chuan Goh, University of Toronto

11:15 a.m. **State-Space Discrimination and Clustering of Atmospheric Time Series Data Based on Kullback Information Measures—**❖Joseph Cavanaugh, The University of Iowa**;** Thomas Bengtsson, Alcatel-Lucent

11:35 a.m. **Inference for Vector Processes with Long Memory via the EM Algorithm—**❖Nalini Ravishanker, University of Connecticut**;** Jeffrey Pai, University of Manitoba

11:55 a.m. **Spline-Backfitted Kernel Smoothing of Additive Models in Time Series—**❖Li Wang, Michigan State University**;** Lijian Yang, Michigan State University

12:15 p.m. **Floor Discussion**

276 CC-251 F

✪ High-Dimensional Inference and Spatial Analysis—Topic-Contributed

IMS, Section on Nonparametric Statistics

Organizer(s): Jinchi Lv, Princeton University

Chair(s): Yingying Fan, Princeton University

10:35 a.m. **Profile-Kernel Likelihood Inference with Diverging Number of Parameters—**❖Clifford Lam, Princeton University**;** Jianqing Fan, Princeton University

10:55 a.m. **High-Dimension, Low Sample Size (HDLSS) Data Asymptotics—**❖Xuxin Liu, The University of North Carolina at Chapel Hill

11:15 a.m. **Model Selection Using Hellinger Distance: Methods and Applications—**❖Xiaofan Cao, Colorado State University**;** Haonan Wang, Colorado State University**;** Hariharan Iyer, Colorado State University

11:35 a.m. **Mixture of Thresholded, Transformed Gaussian Processes Modeling with Application to Rainfall Extremes—**❖Jie Zhou, The University of North Carolina at Chapel Hill**;** Richard L. Smith, The University of North Carolina at Chapel Hill

11:55 a.m. **Sure Independence Screening for Ultra-High Dimensional Feature Space—**❖Jinchi Lv, Princeton University**;** Jianqing Fan, Princeton University

12:15 p.m. **Floor Discussion**

277 CC-155 C

When Rubber Meets the Road: Bayesian Clinical Trials in Action - MDA Experience—Topic-Contributed

Section on Bayesian Statistical Science, ENAR

Organizer(s): J. Jack Lee, The University of Texas M. D. Anderson Cancer Center

Chair(s): J. Kyle Wathen, The University of Texas M. D. Anderson Cancer Center

10:35 a.m. **Bayesian Clinical Trials Designed and Conducted at the University of Texas M. D. Anderson Cancer Center (MDACC)—**Swati Biswas, University of North Texas Health Science Center**;** ❖Diane D. Liu, The University of Texas M. D. Anderson Cancer Center**;** J. Jack Lee, The University of Texas M. D. Anderson Cancer Center**;** Donald A. Berry, The University of Texas M. D. Anderson Cancer Center

10:55 a.m. **Five-Arm Dose Selection Trial with Adaptive Randomization—**❖Mark F. Munsell, The University of Texas M. D. Anderson Cancer Center**;** Donald A. Berry, The University of Texas M. D. Anderson Cancer Center**;** J. Kyle Wathen, The University of Texas M. D. Anderson Cancer Center**;** Marcos J. de Lima, The University of Texas M. D. Anderson Cancer Center

11:15 a.m. **An Application of Adaptive Randomization Using Hierarchical Bayes Model in a Prospective Biomarker-Based Clinical Trial—**❖Suyu Liu, The University of Texas M. D. Anderson Cancer Center**;** Edward S. Kim, The University of Texas M. D. Anderson Cancer Center**;** Xian Zhou, Genentech, Inc.**;** Ignacio Wistuba, The University of Texas M. D. Anderson Cancer Center**;** Roy Herbst, The University of Texas M. D. Anderson Cancer Center**;** Jeffrey Lewis, The University of Texas M. D. Anderson Cancer Center**;** J. Jack Lee, The University of Texas M. D. Anderson Cancer Center

11:35 a.m. **Software and Practical Considerations for Designing and Conducting Innovative Clinical Trials at MDACC—**❖John D. Cook, The University of Texas M. D. Anderson Cancer Center

11:55 a.m. **When Rubber Meets the Road: Bayesian Clinical Trials in Action—MDA Experience—**❖J. Jack Lee, The University of Texas M. D. Anderson Cancer Center

12:15 p.m. **Floor Discussion**

278 CC-250 A

● ✪ Multistate Life Table Methods in Health Policy Research—Topic-Contributed

Section on Health Policy Statistics

Organizer(s): Paula Diehr, University of Washington

Chair(s): Beth Ann Griffin, RAND Corporation

10:35 a.m. **Evaluation of Using Life Table Methods Combined with Microsimulation To Produce Estimates of Distributions—**James Lubitz, National Center for Health Statistics**;** ❖Liming Cai, National Center for Health Statistics**;** Nathaniel Schenker, National Center for Health Statistics**;** Paula Diehr, University of Washington

10:55 a.m. **Age-Specific Prevalence and Years of Healthy Life in a System with Three Health States—**❖Paula Diehr, University of Washington**;** David Yanez, University of Washington**;** Ann Derleth, University of Washington**;** Anne Newman, University of Pittsburgh

11:15 a.m. **Multistate Life Table Distributions for Highly Refined Subpopulations from Cross-Sectional Data: A Bayesian Alternative to Sullivan's Method—**❖Scott Lynch, Princeton University

11:35 a.m. **An Extension of the Cohort-Component Model of Population Projection: From Multistate Life Table to Multistate Model for Households and Living Arrangement Projections—**❖Kenneth Land, Duke University**;** Yi Zeng, Duke University

11:55 a.m. **Flowgraph Models for Multivariate Survival Data—**❖C. Lillian Yau, Tulane University

12:15 p.m. **Floor Discussion**

279 CC-250 D

Marketing Research Challenging Statistics: Problems Solved and Unsolved—Topic-Contributed

Section on Statistics and Marketing

Organizer(s): Stan Lipovetsky, GfK Custom Research North America

Chair(s): Raimund K. Wildner, GfK Group

10:35 a.m. **Methodology and Challenges in Search Marketing at Business.com—**❖Nathan Janos, Business.Com**;** Tom Anderson, Business.Com**;** Paul Dagum, Business.Com

10:55 a.m. **Optimal Designs for Choice Experiments To measure the Willingness to Pay—**❖Bart Vermeulen, Katholieke Universiteit Leuven**;** Peter Goos, Universiteit Antwesrpen**;** Martina Vandebroek, Katholieke Universiteit Leuven

11:15 a.m. **Statistical Issues in Optimal Product Design—**❖James Cochran, Louisiana Tech University

11:35 a.m. **A Theory of Attribution—**❖Barry Feldman, Prism Analytics/Russell Investment

11:55 a.m. **Using Cooperative Game Theory as a Foundation for Marketing Research—**❖Shon Magnan, GfK Custom Research North America**;** Stan Lipovetsky, GfK Custom Research North America**;** Ken Powaga, GfK Custom Research North America

12:15 p.m. **Floor Discussion**

280 CC-260

● ✪ Optimal Designs: Ideas and Applications—Topic-Contributed

WNAR, ENAR

Organizer(s): Weng-Kee Wong, University of California, Los Angeles

Chair(s): Kimmie C. Carriere, University of Alberta

10:35 a.m. **Optimal Allocation for Sequential Binary Response Experiments—**❖William Rosenberger, George Mason University**;** Yevgen Tymofyeyev, Merck & Co., Inc.**;** Feifang Hu, University of Virginia

10:55 a.m. **Optimal Allocation in Sequential Continuous Response Experiments—**❖Feifang Hu, University of Virginia**;** Hongjian Zhu, University of Virginia

11:15 a.m. **D-Optimal Minimax Response Surface Designs—**❖Julie Zhou, University of Victoria

11:35 a.m. **Some Results on Two-Level Nonregular Designs Constructed from Quaternary Codes—**❖Kin Hing (Frederick) Phoa, University of California, Los Angeles**;** Hongquan Xu, University of California, Los Angeles

11:55 a.m. **Optimal Designs for Dose-Finding Experiments in Toxicity Studies—**❖Weng-Kee Wong, University of California, Los Angeles**;** Holger Dette, Ruhr-Universitaet Bochum**;** Andrey Preplyshev, St. Petersburg State University

12:15 p.m. **Floor Discussion**

281 CC-355 E

● ✪ Sample Size and Effect Size Estimation—Topic-Contributed

Biopharmaceutical Section, Section on Statistical Consulting, WNAR

Chair(s): Yonggang Zhao, Wyeth

10:35 a.m. **Sample Size for Equivalence Trials: A Case Study from a Vaccines Lot Consistency Trial—**❖Jitendra Ganju, Amgen Inc.

10:55 a.m. **Assessing the Accuracy of the WMWodds Method for the Wilcoxon-Mann-Whitney Test—**❖John Castelloe, SAS Institute Inc.**;** Ralph G. O'Brien, The Cleveland Clinic

11:15 a.m. **Power and Sample Size Estimation for Comparing Two Means: Assessment and a New Tool—**❖Ken Gerow, University of Wyoming

11:35 a.m. **Localization versus Holism in the Analysis of Neurological Imaging Data: Power Comparisons of Multivariate and Univariate Methods—**❖Dawson Hedges, Brigham Young University**;** Suzanne Hendrix, Myriad Pharmaceuticals**;** Bruce Brown, Brigham Young University

11:55 a.m. **Small Sample Properties of Information-Based Monitoring—**❖David Sawrie, The University of Alabama at Birmingham**;** Christopher S. Coffey, The University of Alabama at Birmingham

12:15 p.m. **Floor Discussion**

Topic-Contributed Poster Presentations 10:30 a.m.–12:20 p.m.

282 CC-Exhibit Hall D

● ✪ Atypical Experiments in Industry—Topic-Contributed

Section on Physical and Engineering Sciences

Chair(s): Dongseok Choi, Oregon Health & Science University

Applications and case studies

01 **Consumer Product Optimization Through a Mixture-of-Mixtures Experiment—**❖William Brenneman, Procter & Gamble

02 **What Textbook Experiments?—**❖Winson Taam, The Boeing Company

03 **Estimating the Probability of Detecting Cracks in Aerospace Structures Using Nondestructive Inspections—**❖Peter Hovey, University of Dayton

Experimental design

04 **Design on Nonconvex Regions: Optimal Experiments for Spatial Process Prediction with Applications to Industrial Processes—**❖Matthew Pratola, Simon Fraser University

05 **Dynamic Structural Health Monitoring Validation—**❖David Banaszak, Air Force Research Laboratory

06 **Complex Experimental Design and Simple Data Analysis—**❖Joseph G. Pigeon, Villanova University

07 **J-FACT: A Factor-Covering Design Tool for Deriving Software Test Cases**—❖Joseph Morgan, SAS Institute Inc.; Bradley Jones, SAS Institute Inc.

Contributed Sessions 10:30 a.m.–12:20 p.m.

283 CC-255 C

● ✪ Recent Advances in Microarray Data Analysis III—Contributed

Biometrics Section

Chair(s): Ning Sun, Yale University

10:35 a.m. **ROC Curve of a Generalized Odds-Rate Model**—❖Huining Kang, University of New Mexico; Edward J. Bedrick, University of New Mexico; Susan R. Atlas, University of New Mexico; Cheryl L. Willman, University of New Mexico

10:50 a.m. **Transformation for the Additive Effect on the Affymetrix Probe Data**—❖Fenghai Duan, University of Nebraska Medical Center

11:05 a.m. **Variable Selection in Penalized Model-Based Clustering with Cluster-Dependent Diagonal Covariances with Application to Microarray Data**—❖Benhuai Xie, The University of Minnesota; Wei Pan, The University of Minnesota; Xiaotong Shen, The University of Minnesota

11:20 a.m. **FDR Control in Identification of Differentially Expressed Genes Using Mixed Linear Models When Some Variance Components May Be Zero**—❖Cumhur Demirkale, Iowa State University; Tapabrata Maiti, Iowa State University; Dan Nettleton, Iowa State University

11:35 a.m. **Controlling the Average False Discovery in Large-Scale Multiple Testing**—❖Meng Du, University of Toronto; Muni S. Srivastava, University of Toronto

11:50 a.m. **Integrated Clustering of Heterogeneous Genomic Data**—❖Jyotsna Kasturi, Johnson & Johnson PRD

12:05 p.m. **Reconstruction of Gene Transcription Regulation Network Using a Bayesian Approach**—❖Feng Hong, University of Illinois at Urbana-Champaign

284 CC-258

● ✪ Design and Sampling Methods—Contributed

Biometrics Section

Chair(s): Shenghua (Kelly) Fan, California State University, East Bay

10:35 a.m. **Optimal Designs in High-Throughput Screening**—❖Xianggui Qu, Oakland University

10:50 a.m. **Sampling Design for a Survey of Pregnant Women Following a Natural Disaster**—❖Jason Hsia, Centers for Disease Control and Prevention; Marianne E. Zotti, Centers for Disease Control and Prevention; Van T. Tong, Centers for Disease Control and Prevention

11:05 a.m. **Adaptive Two-Stage Designs for Heterogeneous Patient Populations in Phase II Cancer Trials**—❖Karen Messer, University of California, San Diego; Michael Donohue, University of California, San Diego

11:20 a.m. **Inverse Probability-Weighted Estimators in the Stratified Nested Case-Control Sampling Methods**—❖Sachiko Tanaka, Tokyo University of Science; Yutaka Matsuyama, University of Tokyo; Shiro Tanaka, University of Tokyo; Seiichiro Yamamoto, National Cancer Center

11:35 a.m. **Precision of Double Sampling with Error-Prone and Error-Free Measures and Optimum Case-Control Study Design**—❖Jun-mo Nam, National Cancer Institute

11:50 a.m. **Early Termination of Two-Stage, Phase II, One-Sample Cancer Clinical Trials**—❖William E. Barlow, Cancer Research and Biostatistics

12:05 p.m. **Design of Long-Term Viral Dynamic Studies in Semiparametric Mixed-Effects Models**—❖Jeong-Gun Park, Harvard School of Public Heath/ Frontier Science & Technology Research Foundation; Yangxin Huang, University of South Florida; Yiliang Zhu, University of South Florida

285 CC-355 F

● ✪ The Era of Omics Data: Statistical Issues and Possible Solutions—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Jingli Song, Eli Lilly and Company

10:35 a.m. **Proteomic Analysis by 2-D PAGE for Response to Low-Dose Ionizing Radiation and Arsenic Exposure**—❖Dan Li, University of California, Davis; Susanne R. Berglund, University of California, Davis; Alison Santana, University of California, Davis; Zelanna Goldberg, University of California, Davis; David Rocke, University of California, Davis

10:50 a.m. **Statistical Differential Analysis of 2-D Gel Images**—❖Feng Li, University of Maryland, Baltimore County; Francoise Seillier-Moiseiwitsch, Georgetown University Medical Center

11:05 a.m. **Methods for Classification of NMR Metobololomic Spectroscopy—**❖Yuanxin Xi, University of California, Davis**;** David Rocke, University of California, Davis

11:20 a.m. **Genetic Association Analysis Using the Penalized Likelihood Approach—**❖Xiwu Lin, GlaxoSmithKline**;** Kijoung Song, GlaxoSmithKline**;** Daniel Parks, GlaxoSmithKline**;** Jie Cheng, GlaxoSmithKline**;** Kwan Lee, GlaxoSmithKline

11:35 a.m. **Microarray Experiments for Pharmacogenomics—**❖Youlan Rao, The Ohio State University**;** Yoonkyung Lee, The Ohio State University**;** Jane Chang, Bowling Green State University**;** Tao Wang, University of South Florida**;** Jason C. Hsu, The Ohio State University

11:50 a.m. **Analyzing Omics Data Using rSVD and NMF—**❖Li Liu, sanofi-aventis**;** Donghui Zhang, sanofi-aventis

12:05 p.m. **A New Procedure of Identifying Differentially Expressed Genes in Microarray Experiments—**❖Chunrong Dong, Case Western Reserve University

286 CC-255 A

Bayesian Methods—Contributed

ENAR, Biometrics Section

Chair(s): Wade Davis, University of Missouri-Columbia

10:35 a.m. **Comparing Various Designs of Temporal Microarray Experiments—**❖Yijun Yang, Boston University**;** Paola Sebastiani, Boston University

10:50 a.m. **Bayesian Analysis of Cross-Classified Spatial Data with Autocorrelation—**❖Xiaolei Li, GlaxoSmithKline**;** Murray K. Clayton, University of Wisconsin-Madison

11:05 a.m. **Bayesian Sample Size Determination Under Hypothesis Tests—**❖Gary Cutter, The University of Alabama at Birmingham**;** Xiao Zhang, The University of Alabama at Birmingham

11:20 a.m. **Bayesian SUR Modeling of Multiple Ordinal Traits for Genome-Wide Epistatic QTL Mapping—**❖Samprit Banerjee, The University of Alabama at Birmingham**;** Nengjun Yi, The University of Alabama at Birmingham

11:35 a.m. **Bayesian Inferences for Bivariate Positive Stable Frailty—**❖Madhuja Mallick, Merck & Co., Inc.**;** Nalini Ravishanker, University of Connecticut**;** Nandini Kannan, University of Texas at San Antonio

11:50 a.m. **Bayesian Analysis of the Effect of Intentional Weight Loss on Mortality Rate—**Nengjun Yi, The University of Alabama at Birmingham**;** Shouluan Ding, The University of Alabama at Birmingham**;** ❖Scott W. Keith, The University of Alabama at Birmingham**;** Christopher S. Coffey, The University of Alabama at Birmingham**;** David B. Allison, The University of Alabama at Birmingham

12:05 p.m. **Testing Random Effects in the Linear Mixed Model Using Bayes Factors—**❖Benjamin Saville, The University of North Carolina at Chapel Hill**;** Amy H. Herring, The University of North Carolina at Chapel Hill

287 CC-155 E

● ✪ Bayesian Model Selection, FDR, and HIV Applications—Contributed

Section on Bayesian Statistical Science

Chair(s): Richard Carlson, Medica

10:35 a.m. **Bayesian Model Selection in High-Dimensional Genetic Association Studies—**❖Melanie Wilson, Duke University

10:50 a.m. **A Bayesian Multiple Comparison Procedure for Unbalanced Mixed Models—**❖Junfeng Shang, Bowling Green State University**;** Farroll T. Wright, University of Missouri-Columbia**;** Joseph Cavanaugh, The University of Iowa

11:05 a.m. **Using FDR To Address a Controversy About the Meaning of P Values—**❖Hormuzd Katki, National Institutes of Health

11:20 a.m. **Modeling and Computation for Parametric Bayesian Multiple Hypothesis Testing—**❖James Scott, Duke University**;** James Berger, Duke University

11:35 a.m. **Nonparametric Bayesian Estimation of Positive False Discovery Rates—**❖Anindya Roy, University of Maryland, Baltimore County**;** Subhashis Ghoshal, North Carolina State University**;** Yongqiang Tang, SUNY Health Science Center

11:50 a.m. **A Hierarchical Bayesian Approach in Viral Dynamic System-Based Differential Equation Models with Application to AIDS Studies—**❖Yangxin Huang, University of South Florida**;** Hulin Wu, University of Rochester

12:05 p.m. **Lipid Analysis for HIV Patients: Does Fasting Bias Matter?—**❖Xiting Yang, Carnegie Mellon University**;**

Joseph B. Kadane, Carnegie Mellon University; Heidi M. Crane, University of Washington

288 CC-250 B

● Sampling Issues and Variance Estimation—Contributed

Section on Government Statistics, Section on Physical and Engineering Sciences, Section on Survey Research Methods

Chair(s): Michael P. Cohen, Statistical Consultant

10:35 a.m. **Effects of Calculating Standard Errors Using Sampling versus Variance Weights for 2004 National Nursing Home Survey—**❖Rong Cai, National Center for Health Statistics; Sarah Gousen, National Center for Health Statistics; Iris Shimizu, National Center for Health Statistics; Robin Remsburg, National Center for Health Statistics

10:50 a.m. **Variance Estimations for International Price Program Indexes—**❖Te-Ching Chen, Bureau of Labor Statistics; Patrick Bobbitt, Bureau of Labor Statistics; James A. Himelein Jr., Bureau of Labor Statistics; Steven P. Paben, Bureau of Labor Statistics; Moon Jung Cho, Bureau of Labor Statistics; Lawrence Ernst, Bureau of Labor Statistics

11:05 a.m. **Applying M-Estimation to Computation of Price Indexes—**❖Zdenek Patak, Statistics Canada

11:20 a.m. **Can a Geographic Sort Improve Hot Deck Donor Imputation in the Canadian Census?—**❖Darryl Janes, Statistics Canada

11:35 a.m. **Imputation Classes by Size Measure for the Annual Survey of Manufacture of Statistics Canada—**❖Yi Li, Statistics Canada

11:50 a.m. **Floor Discussion**

289 CC-251 A

✪ Nonparametric Methods for Reliability and Health Sciences Applications—Contributed

Section on Nonparametric Statistics, Section on Health Policy Statistics, Section on Teaching Statistics in the Health Sciences

Chair(s): Anton Westveld, Washington University in St. Louis

10:35 a.m. **A Nonparametric Test for Homogeneity of Survival Means—**❖Mohammad Rahbar, Michigan State University; Sangchoon Jeon, Michigan State University; Joseph C. Gardiner, Michigan State University

10:50 a.m. **The Simultaneous Use of Weighted Logrank and Weighted Kaplan-Meier Statistics with Clustered Right-Censored Data—**Yunchan Chi, National Cheng Kung University; ❖Pei-Fang Su, National Cheng Kung University

11:05 a.m. **Exact, Distribution-Free Confidence Intervals for Late Effects in Censored Matched Pairs—**❖Shoshana Daniel, University of Pennsylvania; Paul Rosenbaum, University of Pennsylvania

11:20 a.m. **Use of the Spike-Motif Distance Metric—**❖Katherine Tranbarger, Amherst College

11:35 a.m. **Semiparametric Estimation of Hazard Function with Failure Indicators MAR—**❖Chunling Liu, University of Hong Kong; Qihua Wang, University of Hong Kong

11:50 a.m. **Nonparametric Estimation of Mean Residual Life Function—**❖Shufang Liu, North Carolina State University; Sujit Ghosh, North Carolina State University

12:05 p.m. **Two-Fold Heteroscedastic Nested Models When the Number of Subclasses Is Large—**❖Shu-min Liao, The Pennsylvania State University; Michael G. Akritas, The Pennsylvania State University

290 CC-250 C

Helpful Teaching Techniques —Contributed

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

Chair(s): Arlene Casiple, James Madison University

10:35 a.m. **An Experience in Teaching Inferential Statistics with Focus on the Analyses of Simple Survey Data—**❖Bodapati V.R. Gandhi, University of Puerto Rico

10:50 a.m. **Teaching Data Mining to Undergraduate Business Students—**❖Margaretha Hsu, Shippensburg University

11:05 a.m. **Students Don't Do 'Optional'—**❖Kimberly Denley, University of Mississippi

11:20 a.m. **Teaching Hypothesis Testing Using a Magic Trick—**❖Gregory L. Snow, Intermountain Healthcare

11:35 a.m. **Pig Data and Bayesian Inference on Multinomial Probabilities—**❖John Kern, Duquesne University

11:50 a.m. **Using Humming To Teach Experimental Design in Introduction Statistics—**❖Cora Neal, Sonoma State University

12:05 p.m. **Using Matlab in the First Probability and Statistics Sequence—**❖John Turner, U.S. Naval Academy

291 CC-250 EF

Environmental Health Effects—Contributed

Section on Statistics and the Environment, ENAR, Section on Health Policy Statistics, Section on Statistical Graphics

Chair(s): Brian Reich, North Carolina State University

10:35 a.m. **Targeting Areas at Risk for Childhood Lead Poisoning—**❖Margaret Conomos, U.S. Environmental Protection Agency; Warren Strauss, Battelle; Tim Pivetz, Battelle; Jyothi Nagaraja, Battelle; Elizabeth Sloan, Battelle; Rona Boehm, Battelle; Michael Schlatt, Battelle; Darlene Wells, Battelle; Michele Morara, Battelle; Bruce Buxton, Battelle; Barry D. Nussbaum, U.S. Environmental Protection Agency; Heather Case, U.S. Environmental Protection Agency

10:50 a.m. **Spatio-Temporal Dynamics of Eastern Equine Encephalitis in Southern New Hampshire—**❖Ernst Linder, University of New Hampshire; Carlee Moser, University of New Hampshire; Francois Laflamme, Statistics Canada; Jason Stull, U.S. Department of Health & Human Services

11:05 a.m. **Exploring the Relation Between Frailty and Negative Health Outcomes Associated with Air Pollution in an Older Population—**❖Sandrah Eckel, Johns Hopkins Bloomberg School of Public Health; Thomas A. Louis, The Johns Hopkins University; Karen Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health; Linda Fried, Johns Hopkins Medical Institutions; Helene Margolis, California Department of Health Services

11:20 a.m. **Analysis of the Effect of Pollutants on Respiratory Infection Using Case-Crossover Design and Generalized Additive Models—**❖Long H. Ngo, BIDMC & Harvard Medical School; Dzung V. Do, University of Medicine and Pharmacy; Thuan Q. Thach, University of Hong Kong; Sumi Mehta, Health Effects Institute; Aaron J. Cohen, Health Effects Institute

11:35 a.m. **Demographic and Behavioral Modifiers of Arsenic Exposure Pathways: A Bayesian Hierarchical Analysis of NHEXAS Data—**❖Rajib Paul, The Ohio State University; Catherine A. Calder, The Ohio State University; Peter F. Craigmile, The Ohio State University; Thomas Santner, The Ohio State University

11:50 a.m. **A Correlation Analysis of Bivariate Normal Data Subject to Partial Left-Censoring—**❖Wendy Leith, Portland State University; Jong Kim, Portland State University; Tom Fielden, Portland State University

12:05 p.m. **Floor Discussion**

292 CC-257

● Statistical Issues in Case-Control and Combined Study Designs—Contributed

Section on Statistics in Epidemiology, Section on Teaching Statistics in the Health Sciences

Chair(s): Sanjay Shete, The University of Texas M. D. Anderson Cancer Center

10:35 a.m. **Sample-Size Calculations in Case-Control Unmatched Studies When Controls Contain Cases—**❖Xiaolei Liu, University of Cincinnati; Marepalli B. Rao, University of Cincinnati

10:50 a.m. **Weighting for Case-Control Studies with Partial Matched Controls—**❖Ronaldo Iachan, Macro International; Aliza Fink, Macro International

11:05 a.m. **A Latent Group Approach for Combining Matched and Unmatched Case-Control Studies—**❖Mulugeta Gebregziabher, MUSC; Paulo Guimaraes, MUSC; Wendy Cozen, University of California, Los Angeles; David Conti, University of Southern California

11:20 a.m. **Joint Modeling for Survival and Longitudinal Data Under Nested Case-Control Sampling—**❖Chi-hong Tseng, New York University; Mengling Liu, New York University

11:35 a.m. **Statistical Methods for Detecting Microdeletions in Genetic Markers—**❖Chih-Chieh Wu, The University of Texas M. D. Anderson Cancer Center; Sanjay Shete, The University of Texas M. D. Anderson Cancer Center; Christopher I. Amos, The University of Texas M. D. Anderson Cancer Center

11:50 a.m. **Estimating the Prevalence of Disease Using Relatives of Case and Control Profanes—**❖Kristin Javaras, Harvard School of Public Health; Nan Laird, Harvard University; Brian D. Ripley, Oxford University; James I. Hudson, Harvard Medical School

12:05 p.m. **Alleviating Ecological Bias in Generalized Linear Models with Optimal Subsample Design—**❖Adam N. Glynn, Harvard University; Jon Wakefield, University of Washington; Mark S. Handcock, University of Washington; Thomas Richardson, University of Washington

293 CC-155 D

● Survey Response Propensity and Responsive Design—Contributed

Section on Survey Research Methods

Chair(s): Matthias Schonlau, RAND Corporation

10:35 a.m. **Evaluating Response Quality of Nonrespondents Using the Imputation Technique—**❖Cong Ye, University of Maryland**;** Ting Yan, University of Michigan**;** Mandi Yu, University of Michigan

10:50 a.m. **Using Callback Models To Adjust for Nonignorable Nonresponse in Face-to-Face Surveys—**❖Paul Biemer, RTI International/The University of North Carolina at Chapel Hill**;** Kevin Wang, RTI International

11:05 a.m. **Assessing Bias in Estimates in a Two-Stage Design from an Early Close Out of the First Stage Data Collection: An Empirical Investigation Using NSRCG Sample Data—**❖Donsig Jang, Mathematica Policy Research, Inc.**;** Xiaojing Lin, Mathematica Policy Research, Inc.

11:20 a.m. **Optimal Survey Design When Nonrespondents Are Subsampled for Follow-Up—**❖Alistair J. O'Malley, Harvard Medical School**;** Alan M. Zaslavsky, Harvard University

11:35 a.m. **Research and Responsive Design Options for Survey Data Collection at Statistics Canada—**❖Chris Mohl, Statistics Canada**;** Francois Laflamme, Statistics Canada

11:50 a.m. **A Dynamic Approach to Response Propensity—**❖Kristen Olson, University of Michigan

12:05 p.m. **Findings from Methodology Innovations on Population Health Survey—**❖Urban Landreman, Hennepin County HSPHD

Contributed Poster Presentations 10:30 a.m.–12:20 p.m.

294 CC-Exhibit Hall D

Contributed Poster Presentations—Contributed

Business and Economics Statistics Section, Section on Bayesian Statistical Science, Section on Nonparametric Statistics, Section on Physical and Engineering Sciences, Section on Quality and Productivity, Section on Risk Analysis, Section on Statistical Consulting, Section on Statistical Education, Section on Teaching Statistics in the Health Sciences, IMS, Section on Statisticians in Defense and National Security

Chair(s): Dongseok Choi, Oregon Health & Science University

Applications and case studies

08 **Assessment Meets Institutional Research—**❖Julia Norton, California State University, East Bay

Bayesian statistics, hierarchical models

09 **Bayesian Analysis of Correlated Proportions (Matched-Pair Data) in 2 x 2 Tables with Incompletely Classified Data: Bayesian Extension of McNemar's Test to Missing Data—**❖Yan Lin, The University of Texas M. D. Anderson Cancer Center**;** Stuart R. Lipsitz, Brigham and Women's Hospital**;** Debajyoti Sinha, Medical University of South**;** Scott Regenbogen, Harvard School of Public Health**;** Caprice Greenberg, Brigham and Women's Hospital

10 **A Bayesian Model for Inversion of Geophysical Seismic and Electromagnetic Data—**❖Jinsong Chen, Lawrence Berkeley National Laboratory**;** Susan Hubbard, Lawrence Berkeley National Laboratory**;** Michael Hoversten, Chevron Energy Technology Company**;** Alan Hubbard, University of California, Berkeley

11 **Probabilistic Plan Tracking and Detection for Intelligence Analysis—**❖Sinjini Mitra, The University of Southern California**;** Paul Cohen, The University of Southern California**;** Aram Galstyan, The University of Southern California

12 **Approximations to Continuous Dynamic Processes in Hierarchical Models—**❖Amanda R. Cangelosi, Utah State University**;** Mevin Hooten, Utah State University

13 **Bayesian Modeling of Ecosystems in the Permian Mass Extinction—**❖Michael Karcher, Swarthmore College**;** Steve Wang, Swarthmore College**;** Peter Roopnarine, California Academy of Sciences**;** Kenneth D. Angielczyk, California Academy of Sciences

14 **A Bayesian Nonparametric Multivariate Model for Evaluation of Correlated Diagnostic Tests—**❖Adam Branscum, University of Kentucky**;** Timothy E. Hanson, The University of Minnesota**;** Ian Gardner, University of California, Davis

15 **Pilot Study on Motivating High School AP Students To Learn Conditional Probability—**❖Neale Hirsh, NSH & Associates

Clinical trials, drug discovery

16 **Bayesian Screening for Pharmacogenetic Effects in Clinical Trials—**❖Mengye Guo, University of Pennsylvania**;** Daniel F. Heitjan, University of Pennsylvania

17 **Bayesian Statistical Power in Randomized Small Clinical Trials—**❖Yufeng Li, The University of Alabama at Birmingham**;** Shouluan Ding, The University of Alabama at Birmingham**;** Seng-jaw Soong, The University of Alabama at Birmingham

Engineering and physical sciences, chemometrics

18 **A Stochastic Gravitational Field Simulated by a Monte Carlo Method: An Alternate Explanation for the Dynamics of Neutral Dust Grains in Saturn's Rings—**❖Elizabeth Martinez-Gomez,

19 **Bivariate Generalized Poisson Regression Model—**❖Felix Famoye, Central Michigan University

20 **The Application of Statistical Process Control to Chemical Solution Stability—**❖Jennifer Herberich, Pratt & Whitney Rocketdyne

Experimental design

21 **Aliasing Strings for Some Nonregular Designs with Generalized Minimum Aberration—**❖Debra Ingram, Arkansas State University; Alison L. Wiley, Arkansas State University

Incomplete data analysis, imputation methods

22 **Semiparametric Maximum Likelihood for Regression Models with Missing Data—**❖Suzanne Dubnicka, Kansas State University

Linear models, GLMs, parametric methods

23 **Portmanteau Test of Independence for Functional Observations—**❖Robertas Gabrys, Utah State University; Piort Kokoszka, Utah State University

24 **Generalized Inverse Characteristics in Linear Statistical Modeling—**❖Fang Duan, Sam Houston State University; Cecil Hallum, Sam Houston State University

25 **Testing for Lack of Dependence in a Functional Linear Model—**❖Inga Maslova, Utah State University; Piort Kokoszka, Utah State University

26 **A Comparison of Restricted Heteroscedastic Estimators for Small Samples (n<50)—**❖Luis Frank, Universidad de Buenos Aires

Pattern recognition, computer vision, shape analysis, signal processing

27 **Methods for Constructing Classifiers from Sparse Categorical Data for Forensic Document Analysis—**❖Christopher Saunders, George Mason University; Linda J. Davis, George Mason University

Semiparametric and nonparametric methods

28 **Testing Equality of Mean Functions for Continuous Time Stochastic Processes—**❖Yolanda Munoz, University of Texas at Houston

29 **Analysis of Within-Individual Areas Under the Curve Weighted by an Individual Variance—**❖Jeff Thostenson, University of Arkansas for Medical Sciences; Reid Landes, University of Arkansas for Medical Sciences

Spatial statistics, spatio-temporal modeling

30 **Spatio-Temporal Modeling Using Stochastic Differential Equations—**❖Gavino Puggioni, Duke University

31 **Spatial Statistics for Entrepreneurial Opportunities—**❖Jerry Platt, University of Redlands

Statistical consulting

32 **A Bayesian Model and Expansion for Predicting Undergraduate and Graduate Institutional Re-Enrollment Rates and Totals—**❖Lindsay Renfro, Baylor University; Mark Hamner, Texas Woman's University

Statistical education, teaching, and training

33 **Uses of Packages in R and S-PLUS—**❖Stephen Kaluzny, Insightful Corporation

34 **Manipulatives To Improve Learning DOE Concepts—**❖James Alloway, EMSQ Associates

35 **The Progress of Master of Applied Statistics Program at Penn State—**❖Mosuk Chow, The Pennsylvania State University

36 **Passing On the Passion: Recruiting Students of Statistics—**❖Reid Landes, University of Arkansas for Medical Sciences

37 **WeBWorK in the Statistics Curriculum—**❖Jeff Holt, University of Virginia

38 **Classroom Response Systems and the Development of Students' Conceptual Understanding: The Value of Question Ambiguity—**❖Robert Terry, University of Oklahoma; Teri J. Murphy, University of Oklahoma; Curtis C. McKnight, University of Oklahoma; Michael Richman, University of Oklahoma

39 **Comparing Two Proportions with the Binomial Distribution—**❖James B. Orris, Butler University

40 **Expectations for Statistical Literacy: A Survey of College Faculty—**❖S. David Kriska, Restat Systems; Mark C. Fulcomer, Richard Stockton College of New Jersey; Marcia M. Sass, University of Medicine and Dentistry of New Jersey

41 **Integrating Video Clips into an Introductory Statistics Course—**❖Edward Mansfield, The University of Alabama; Subhabrata Chakraborti, The University of Alabama

42 **Classroom Simulation: Distributions of Sales and Queue Lengths at a Fast-Food Counter—**❖Eric Suess, California State University, East Bay; Bruce Trumbo, California State University, East Bay; David Ahlberg, California State University, East Bay

43 **Using JMP Scripts in Teaching Introductory Statistics—**❖Amy Froelich, Iowa State University; William M. Duckworth, Creighton University

44 **The International Statistical Literacy Project (ISLP) of the International Association for Statistics Education (IASE): How To Use It for Teaching and Learning—**❖Juana Sanchez, University of California, Los Angeles

45 **Applying Some Computational Simplifications for Binomial and Poisson Random Variables to the Teaching of Statistical Concepts—**❖Mark C. Fulcomer, Richard Stockton College of New Jersey; S. David Kriska, Restat Systems; Maritza Jauregui, The Richard Stockton College of New Jersey; Marcia M. Sass, University of Medicine and Dentistry of New Jersey; Jallah M. Kennedy, University of Medicine and Dentistry of New Jersey

46 **A Free Software Live DVD for Statistics—**❖Panayotis Giannakouros, University of Missouri-Kansas City; Lihua Chen, The University of Toledo

Time series/wavelet analysis

47 **A New Type of Portmanteau Test Based on the Discrete Cosine Transform—**❖Sungun Oh, Sookmyung Women's University; Hyemin Cho, Sookmyung Women's University; In-Kwon Yeo, Sookmyung Women's University

48 **Prediction Interval Estimation in Transformed ARMA Models—**❖Hyemin Cho, Sookmyung Women's University; Sungun Oh, Sookmyung Women's University; In-Kwon Yeo, Sookmyung Women's University

Speaker with Lunch 12:30 p.m.–1:50 p.m.

295 CC-Ballroom D

Business and Economics Statistics Section Speaker with Lunch (fee event)—Speaker with Lunch

Business and Economics Statistics Section

Organizer(s): Badi H. Baltagi, Syracuse University

TL09 **The Use of Birth Panel Data in Economic Research—**❖Jason Abrevaya, Purdue University

Roundtables with Lunch 12:30 p.m.–1:50 p.m.

296 CC-Ballroom A

Biopharmaceutical Section Roundtables with Lunch (fee event)

Biopharmaceutical Section

Organizer(s): Kaylan Ghosh, Vislation

TL10 **Joining the Evil Empire: What It's Like To Move from Academics to Industry—**❖Robert Parker, Amgen Inc.

TL11 **Statistical Analysis Plans: How, When, Why, and for Whom Do We Do Them?—**❖Bruce Binkowitz, Merck & Co., Inc.

TL12 ***JAMA* Policy on Independent Analysis and Public Trust—**❖Hong Liu-Seifert, Eli Lilly and Company

TL13 **Blinded Sample Size Re-estimation—**❖Biao Xing, Genentech, Inc.

TL14 **Estimation of Treatment Effects in Randomized Trials with Noncompliance and Crossover: Why ITT Analysis May Not Be Our Best Option—**❖Afisi S. Ismaila, McMaster University; Stephen Walter, McMaster University

297 CC-Ballroom A

Section on Bayesian Statistical Science Roundtable with Lunch (fee event)

Section on Bayesian Statistical Science

Organizer(s): David van Dyk, University of California, Irvine

TL15 **Meta-Analysis of Diagnostic Tests—**❖Vanja Dukic, The University of Chicago

298 CC-Ballroom A

Section on Government Statistics Roundtables with Lunch (fee event)

Section on Government Statistics

Organizer(s): Michael Davern, The University of Minnesota

TL16 **Data User Issues with the American Community Survey—**❖Patricia Becker, APB Associates/APDU/SEMCC

TL17 **Remote Access to Microdata—**❖Julia Lane, NORC at the University of Chicago

CANCELLED

Tuesday

299 CC-Ballroom A

Section on Health Policy Statistics Roundtables with Lunch (fee event)

Section on Health Policy Statistics

Organizer(s): Anirban Basu, The University of Chicago

TL18 **Recent Methodological Developments on Prediction of Health-Care Costs—**❖Xiao-Hua (Andrew) Zhou, University of Washington

TL19 **Statistical Methods for Measuring Workflow and Workload in Medical Care Systems—**❖Jimmy Efird, John A. Burns School of Medicine

300 CC-Ballroom A

Section on Physical and Engineering Sciences Roundtables with Lunch (fee event)

Section on Physical and Engineering Sciences

Organizer(s): Randall Tobias, SAS Institute Inc.

TL20 **Challenges in Mixture Experiments—**❖Greg Piepel, Battelle/PNNL

TL21 **Drug Discovery and Cheminformatics: Advances, Challenges, and Frontiers—**Raymond L.H. Lam, Centocor, Inc.**;** ❖Jacqueline M. Hughes-Oliver, North Carolina State University

301 CC-Ballroom C

Section on Quality and Productivity Roundtables with Lunch (fee event)

Section on Quality and Productivity

Organizer(s): James Williams, GE Global Research

TL22 **Tools for Planning and Properly Sizing a Factorial DOE—**❖Shari Kraber, Stat-Ease, Inc.

TL23 **Teaching Experimental Design to Students Planning an Industrial Career—**❖John Lawson, Brigham Young University

302 CC-Ballroom C

Section on Statistical Consulting Roundtables with Lunch (fee event)

Section on Statistical Consulting

Organizer(s): James Grady, The University of Texas Medical Branch

TL24 **Alternative Models for Consulting Services in Academic Medical Centers—**❖Shelley Hurwitz, Harvard Medical School

TL25 **Statistical Consulting in Medical Devices: Opportunities and Challenges—**❖Jianxiong Chu, U.S. Food and Drug Administration

303 CC-Ballroom C

Section on Statistical Education Roundtables with Lunch (fee event)

Section on Statistical Education

Organizer(s): Jacqueline Miller, The Ohio State University

TL26 **My Favorite Case Study—**❖Laura Chihara, Carleton College

TL27 **Group Work and How To Assess It—**❖William Harkness, The Pennsylvania State University

TL28 **What Is So Great About Service Learning (SL), and How Much Work Is It?—**❖Amy Phelps, Duquesne University

304 CC-Ballroom C

Section on Statistics in Epidemiology Roundtable with Lunch (fee event)

Section on Statistics in Epidemiology

Organizer(s): William E. Barlow, Cancer Research and Biostatistics

TL29 **Managing the Biostatistics Consulting Service in an Academic Hospital—**❖Dianne M. Finkelstein, Harvard/MGH

305 CC-Ballroom C

Social Statistics Section Roundtable with Lunch (fee event)

Social Statistics Section

Organizer(s): Jana Asher, Carnegie Mellon University

TL30 **From Soft to Hard Science: Will Survey Research Make the Transition?—**❖Robert Fay, U.S. Census Bureau

Special Presentation 2:00 p.m.–3:50 p.m.

306 CC-255 B

ASA College Stat Bowl II—Other

ASA, IMS, ENAR, WNAR, SSC

Organizer(s): Stephanie Cano, University of Texas at San Antonio; Michael T. Anderson, University of Texas at San Antonio

Chair(s): Michael T. Anderson, University of Texas at San Antonio

Round 2—❖Winners from Session 1

Invited Sessions 2:00 p.m.–3:50 p.m.

307 CC-258

✪ Functional Data Analysis—Invited

IMS, Biometrics Section, Section on Nonparametric Statistics

Organizer(s): Bernard W. Silverman, St. Peter's College

Chair(s): Bernard W. Silverman, St. Peter's College

2:05 p.m. **A Smoothing Spline ANOVA Approach to Fit Functional Linear Models—**❖Yuedong Wang, University of California, Santa Barbara

2:35 p.m. **Interpretable Functional Generalized Linear Models—**❖Gareth James, University of Southern California**;** Peter Radchenko, University of Southern California

3:05 p.m. **Iterative Functional Principal Component Analysis for Correlation Reduction—**❖Fang Yao, University of Toronto**;** C. M. Lee, Colorado State University

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

308 CC-259

Bayesian Model Selection—Invited

IMS, Section on Bayesian Statistical Science

Organizer(s): Edward I. George, University of Pennsylvania

Chair(s): Edward I. George, University of Pennsylvania

2:05 p.m. **Bayesian Model Selection and Levy Random Field Priors—**❖Merlise A. Clyde, Duke University

2:35 p.m. **Fully Nonparametric Bayesian Ensemble Modeling—**❖Robert McCulloch, The University of Chicago Graduate School of Business**;** Edward I. George, University of Pennsylvania**;** Hugh Chipman, Acadia University

3:05 p.m. **Multiple Shrinkage Predictive Densities for Linear Regression Models—**❖Xinyi Xu, The Ohio State University**;** Edward I. George, University of Pennsylvania

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

309 CC-355 A

● ✪ *Technometrics* Invited Session: Topics in Information Technology—Invited

Technometrics, Section on Statisticians in Defense and National Security, Section on Quality and Productivity

Organizer(s): Randy R. Sitter, Simon Fraser University

Chair(s): Randy R. Sitter, Simon Fraser University

2:05 p.m. **Embracing Statistical Challenges in the Information Technology Age—**❖Bin Yu, University of California, Berkeley

2:35 p.m. **Statistical Principles in Image Modeling—**❖Ying Nian Wu, University of California, Los Angeles**;** Jinhui Li, University of California, Los Angeles**;** Ziqiang Liu, University of California, Los Angeles**;** Song-Chun Zhu, University of California, Los Angeles

3:05 p.m. **A Statistical View of the Transient Signals That Support a Wireless Call—**❖Diane Lambert, Google**;** David A. James, Novartis Pharmaceuticals**;** Chuanhai Liu, Purdue University**;** A. Buvaneswari, Alcatel-Lucent**;** John M. Graybeal, Alcatel-Lucent**;** W. Michael MacDonald, Alcatel-Lucent

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

310 CC-355 D

● ✪ A Sensible Way To Design a Longitudinal Study—Invited

WNAR, Section on Statistical Consulting, Section on Statistics in Epidemiology, Section on Health Policy Statistics, Biometrics Section, Section on Survey Research Methods, ENAR

Organizer(s): Martijn P.F. Berger, University of Maastricht

Chair(s): Mirjam Moerbeek, Utrecht University

2:05 p.m. **Sample Size Determination for Hierarchical Longitudinal Designs with Differential Attrition Rates—**Anindya Roy, University of Maryland, Baltimore County**;** ❖Dulal K. Bhaumik, University of Illinois at Chicago**;** Subhash Aryal, University of Illinois at Chicago**;** Robert D. Gibbons, University of Illinois at Chicago

2:30 p.m. **A Response Adaptive Repeated Measurement Design for Clinical Trials—**❖Kimmie C. Carriere, University of Alberta**;** Yuanyuan Liang, University of Alberta

2:55 p.m. **Optimal Designs for Linear Mixed Effects Models—**❖Martijn P. F. Berger, University of Maastricht

3:20 p.m. Disc: Geert Molenberghs, Hasselt University

3:40 p.m. **Floor Discussion**

311 CC-355 B

● ✪ Modeling Time-Varying Exposures in Epidemiology—Invited

Section on Statistics in Epidemiology, Section on Health Policy Statistics, Section on Teaching Statistics in the Health Sciences

Organizer(s): David B. Dunson, National Institute of Environmental Health Sciences

Chair(s): David B. Dunson, National Institute of Environmental Health Sciences

2:05 p.m. **Semiparametric Bayesian Latent Trajectory Models—**❖Amy H. Herring, The University of North Carolina at Chapel Hill**;** David B. Dunson, National Institute of Environmental Health Sciences

2:35 p.m. **Bayesian Semiparametric Clustering of Functional Predictors—**❖Jamie Bigelow, Duke University

3:05 p.m. **Modeling Time-Varying Exposures in Epidemiology—**❖Francesca Dominici, The Johns Hopkins University

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

312 CC-155 C

● ✪ Scagnostics—Invited

Section on Statistical Graphics

Organizer(s): Leland Wilkinson, SPSS Inc.

Chair(s): Paul Tukey, Telcordia Labs

2:05 p.m. **Scagnostics in R—**❖Hadley Wickham, Iowa State University**;** Duncan Temple Lang, University of California, Davis

2:35 p.m. **Scagnostic-Driven Autovisualization—**❖Graham Wills, SPSS Inc.

3:05 p.m. **Scagnostics for Projection Pursuit—**❖Heike Hofmann, Iowa State University**;** Dianne Cook, Iowa State University**;** Hadley Wickham, Iowa State University

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

313 CC-155 B

● Bayesian Bioinformatics—Invited

Section on Bayesian Statistical Science, ENAR, Biometrics Section

Organizer(s): Marina Vannucci, Texas A&M University

Chair(s): Jeffrey S. Morris, The University of Texas M. D. Anderson Cancer Center

2:05 p.m. **Simultaneous Inference for Multiple Testing and Clustering via a Dirichlet Process Mixture Model—**❖David B. Dahl, Texas A&M University**;** Qianxing Mo, Texas A&M University**;** Marina Vannucci, Texas A&M University

2:30 p.m. **A Bayesian Branching Process Model for Loss of Cell Cycle Synchrony—**❖Edwin Iversen, Duke University**;** David Orlando, Duke University**;** Allister Bernard, Duke University**;** Alexander Hartemink, Duke University

2:55 p.m. **Better Stochastic Mapping and Effective Tests for Evolutionary Innovation—**❖Marc A. Suchard, University of California, Los Angeles**;** Vladimir N. Minin, University of California, Los Angeles

3:20 p.m. **Associating High-Dimensional Response and Covariate Data—**❖Mahlet G. Tadesse, University of Pennsylvania**;** Stefano Monni, University of Pennsylvania

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

314 CC-254 C

● ✪ Issues in Modeling Product Choices in Marketing—Invited

Section on Statistics and Marketing

Organizer(s): Peter Boatwright, Carnegie Mellon University

Chair(s): Samuel Koslowsky, Harte Hanks Analytics

2:05 p.m. **Market Share Constraints and the Loss Function in Choice-Based Conjoint Analysis—**❖Timothy Gilbride, University of Notre Dame**;** Peter Lenk, The University of Michigan**;** Jeff Brazell, The Modellers, LLC

2:35 p.m. **Unobserved Change in Conjoint Analysis—**❖Thomas Otter, The Ohio State University**;** Sylvia Fruehwirth-Schnatter, Johannes Kepler Universitaet Linz**;** Regina Tuechler, Vienna University of Economics and Business Administration

3:05 p.m. **Deconstructing Each Item's Category Contribution—**❖Sharad Borle, Rice University**;** Peter Boatwright, Carnegie Mellon University**;** Kirthi Kalyanam, Santa Clara University

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

315 CC-257

Investing in Our Youth as Future Users of Statistics and Future Respondents—Invited

Section on Government Statistics, Section on Statistical Education

Organizer(s): Robert Lussier, Statistics Canada

Chair(s): Robert Lussier, Statistics Canada

2:05 p.m. **Statistics Canada's Education Outreach Program: Fostering a Data and Knowledge Culture in Canadian Youth—**❖Mary Townsend, Statistics Canada

2:30 p.m. **How to Make the Census Exciting for Educators and K–12 Students—**❖Kimberly Crews, U.S. Census Bureau

2:55 p.m. **Web Services as an Aid in Promoting Statistical Knowledge Within Educational Institutions—**❖Reija Helenius, Statistics Finland

3:20 p.m. Disc: Cynthia Clark, Office for National Statistics

3:40 p.m. **Floor Discussion**

316 CC-260

● ✪ Causal Inference in Education Research—Invited

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

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

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

2:05 p.m. **Random Assignment Designs, Issues of Implementation, and Analytic Challenges Faced in Education Settings—**❖David Myers, American Institutes for Research

2:30 p.m. **Causal Inference and Accountability in NYC Public Schools—**❖Jennifer Hill, Columbia University

2:55 p.m. **Regression Discontinuity Analyses of the Effects of NCLB Accountability Provisions on Student Achievement—**❖John R. Lockwood, RAND Corporation**;** Brian P. Gill, RAND Corporation**;** Messan C. Setodji, RAND Corporation**;** Francisco Martorell, RAND Corporation

3:20 p.m. Disc: Audrey Pendleton, U.S. Department of Education

3:40 p.m. **Floor Discussion**

317 CC-255 F

● ✪ Statistical Methods in Nanotechnology—Invited

Section on Physical and Engineering Sciences, Section on Quality and Productivity

Organizer(s): Chien-Fu Jeff Wu, Georgia Institute of Technology

Chair(s): Robert W. Mee, University of Tennessee

2:05 p.m. **Experimental Design and Analysis for Robust Synthesis of Nanostructures—**❖Chien-Fu Jeff Wu, Georgia Institute of Technology**;** Tirthankar Dasgupta, Georgia Institute of Technology**;** Roshan Vengazhiyil, Georgia Institute of Technology**;** Zhong Lin Wang, Georgia Institute of Technology**;** Christopher Ma, Georgia Institute of Technology

2:40 p.m. **Challenges Related to Reliability and Statistics in Nano Electronics—**Way Kuo, University of Tennessee**;** ❖Tao Yuan, University of Tennessee

3:15 p.m. Disc: David Banks, Duke University

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

318 CC-155 A

● ✪ Anomaly Detection Methods for Multivariate, Distributed, and Stratified Data in Biosurveillance—Invited

Section on Statisticians in Defense and National Security, Section on Statistics in Epidemiology, Section on Health Policy Statistics, Section on Risk Analysis, Section on Physical and Engineering Sciences

Organizer(s): Howard S. Burkom, The Johns Hopkins University

Chair(s): Howard S. Burkom, The Johns Hopkins University

2:05 p.m. **A Multivariate Bayesian Method for Spatial Biosurveillance—**❖Daniel B. Neill, Carnegie Mellon University**;** Andrew W. Moore, Carnegie Mellon University**;** Gregory F. Cooper, University of Pittsburgh

2:30 p.m. **Multivariate Health Surveillance Using a Network of Bayesian Data Fusion Models—**❖Zaruhi R. Mnatsakanyan, The Johns Hopkins University**;** Howard S. Burkom, The Johns Hopkins University

2:55 p.m. **Epidemiological Network Models for Disease Outbreak Detection—**❖Ben Y. Reis, Harvard Medical School

3:20 p.m. **KFC: Anomaly Detection in Multivariate Cross-Classified Datastreams—**❖Colin Goodall, AT&T Labs - Research

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

Invited Panels 2:00 p.m.–3:50 p.m.

319 CC-251 E

Integrating Innovative Technology Resources into Introductory Courses—Invited

Section on Statistical Education

Organizer(s): Kim Robinson Gilbert, Georgia Gwinnett College

Chair(s): Robert Gould, University of California, Los Angeles

Panelists:
- ❖ Jacqueline Miller, The Ohio State University
- ❖ Kim Robinson Gilbert, Georgia Gwinnett College
- ❖ Nicholas Horton, Smith College

❖ Ginger Holmes Rowell, Middle Tennessee State University

❖ Roxy Peck, California Polytechnic State University

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

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

320 CC-254 B

● Real-Time Analysis of Revised Macroeconomic Data—Topic-Contributed

Business and Economics Statistics Section

Organizer(s): Peter Zadrozny, Bureau of Labor Statistics

Chair(s): William R. Bell, U.S. Census Bureau

2:05 p.m. **Real-Time Filtered Estimates of Final Superlative CPI Based on an Estimated Monthly VAR Model of Initial and Final Superlative CPI—**❖Peter Zadrozny, Bureau of Labor Statistics

2:25 p.m. **Real-Time Estimation of Revised GDP Based on an Estimated Model of Initial and Revised GDP—**❖Baoline Chen, Bureau of Economic Analysis**;** Peter Zadrozny, Bureau of Labor Statistics

2:45 p.m. **VAR Estimation and Forecasting When Data Are Subject to Revision—**❖Evan Koenig, Federal Reserve Bank of Dallas**;** N. Kundan Kishor, Texas Tech University

3:05 p.m. **Modeling Data Revisions: Measurement Error and Dynamics of 'True' Values—**❖Jan Jacobs, University of Groningen**;** Simon van Norden, HEC Montreal

3:25 p.m. **A State Space Approach to the Policymaker's Data Uncertainty Problem—**❖Jana Eklund, Bank of England**;** Alastair Cunningham, Bank of England**;** George Kapetanios, Bank of England/ Queen Mary, University of London**;** Chris Jeffery, Bank of England**;** Vincent Labhard, European Central Bank

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

321 CC-255 E

● ✪ The Role of Statistics in Ecological and Climate Modeling—Topic-Contributed

Section on Statistics and the Environment, ENAR, International Indian Statistical Assoc, Reps. For Young Statisticians

Organizer(s): Montserrat Fuentes, North Carolina State University

Chair(s): Bo Li, National Center for Atmospheric Research

2:05 p.m. **Getting What We Need from Wireless Sensor Networks: A Role for Inferential Ecosystem Models—**❖James Clark, Duke University**;** Pankaj Agarwal, Duke University**;** David Bell, Duke University**;** Carla Ellis, Duke University**;** Paul Flikkema, Northern Arizona University**;** Alan E. Gelfand, Duke University**;** Gabriel Katul, Duke University**;** Kamesh Munagala, Duke University**;** Gavino Puggioni, Duke University**;** Adam Silberstein, Duke University**;** Jun Yang, Duke University

2:25 p.m. **The Uncertain Hockey Stick: A Statistical Perspective on the Reconstruction of Past Temperatures—**❖Douglas Nychka, National Center for Atmospheric Research

2:45 p.m. **Modeling Extremes in Regional Climate Model Simulations—**❖Daniel Cooley, Colorado State University**;** Stephan Sain, National Center for Atmospheric Research

3:05 p.m. **Functional ANOVA Modeling of Regional Climate Model Experiments—**❖Cari Kaufman, Statistical and Applied Mathematical Sciences Institute/ North Carolina State University**;** Stephan Sain, National Center for Atmospheric Research

3:25 p.m. **Spatio-Temporal Processing of MISR's Aerosol Optical Depth Data—**❖Tao Shi, The Ohio State University**;** Noel Cressie, The Ohio State University

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

322 CC-250 EF

● ✪ Advanced Quantitative Brain MRI—Topic-Contributed

Biometrics Section

Organizer(s): Daniel Rowe, Medical College of Wisconsin

Chair(s): Daniel Rowe, Medical College of Wisconsin

2:05 p.m. **The Acquisition and Statistical Analysis of High Temporal Resolution 3D fMRI Data—**❖Martin Lindquist, Columbia University

2:25 p.m. **Semiparametric Detection of Significant Activation for Brain fMRI—**❖Chunming Zhang, University of Wisconsin-Madison**;** Tao Yu, University of Wisconsin-Madison

2:45 p.m. **Brain Asymmetry Analysis via Weighted Spherical Harmonic Representation—**❖Moo K. Chung, University of Wisconsin-Madison

3:05 p.m. **Estimation of Pre-Post Surgical Changes in the fMRI Visual Field Map—**❖Raymond Hoffmann, Medical College of Wisconsin**;** Edgar A. DeYoe, The Medical College of Wisconsin**;** Mary Jo Maciejewski, Marquette University**;** Daniel Rowe, Medical College of Wisconsin

3:25 p.m. **Statistical Analysis of Diffusion Tensors in Diffusion-Weighted Magnetic Resonance Image Data—**❖Hongtu Zhu, The University of North Carolina at Chapel Hill**;** Heping Zhang, Yale University**;** Joseph G. Ibrahim, The University of North Carolina at Chapel Hill**;** Bradley G. Peterson, Columbia University

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

323 CC-355 F

● ✪ Challenges in Medical Device Trials: Novel Approaches to Design and Analysis—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

Organizer(s): Greg Campbell, U.S. Food and Drug Administration

Chair(s): Gosford Sawyerr, Purdue Pharma, LP

2:05 p.m. **Experimental Design for Assessing the Effect of Bone Density on Mechanical Properties After Vertebroplasty—**❖Chul Ahn, U.S. Food and Drug Administration

2:25 p.m. **On the Use of Fisher's Exact Test When Randomization Is Sitewise—**❖Shanti Gomatam, U.S. Food and Drug Administration

2:45 p.m. **Control of Type I Error and the Correlation of Multiple Endpoints in a Medical Device Trial—**❖Kevin Najarian, Boston Scientific Corporation**;** Carola Alfaro, Boston Scientific Corporation

3:05 p.m. **A Comparison of Statistical Approaches for Long-Term MACE Rate in a Medical Device Trial—**❖Jian Huang, Boston Scientific Corporation**;** Lan Pan, Boston Scientific Corporation

3:25 p.m. **The SYNTAX Score: Development of a Predictive Scoring Algorithm To Determine Treatment Assignment in Complex Coronary Patients—**❖Eric Bass, Boston Scientific Corporation**;** Peggy Pereda, Boston Scientific Corporation

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

324 CC-251 F

Statistical Issues in HIV/AIDS Research—Topic-Contributed

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

Organizer(s): Felicia Hardnett, Centers for Disease Control and Prevention

Chair(s): Ramses Sadek, Centers for Disease Control and Prevention

2:05 p.m. **Estimates of Intraclass Correlation from the Community Intervention Trial for Youth (CITY): An HIV Prevention Intervention for Young Men Who Have Sex with Men—**❖Sherri L. Pals, Centers for Disease Control and Prevention**;** Lillian S. Lin, Centers for Disease Control and Prevention**;** Carolyn Guenther-Grey, Centers for Disease Control and Prevention**;** Johnson Wayne, Centers for Disease Control and Prevention

2:25 p.m. **Effect of Multiple Imputation on the HIV Prevalence Estimate and Analysis of Risk Factors for HIV Infection: Guyana 2004—**❖Maxine Denniston, Centers for Disease Control and Prevention**;** Nicole Seguy, Centers for Disease Control and Prevention

2:45 p.m. **On the Bias of Case Counts Adjusted for Reporting Delay—**❖Ruiguang Song, Centers for Disease Control and Prevention

3:05 p.m. **A Comparison of Various Analytical Methods for U-Shape Distributed Random Variables: A Real-World Application from a Behavioral Intervention Trial—**❖Terry Wang, Centers for Disease Control and Prevention**;** Torrance T. Stephens, Morehouse School of Medicine**;** Lillian S. Lin, Centers for Disease Control and Prevention

3:25 p.m. Disc: Ryan Wiegand, Centers for Disease Control and Prevention

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

325 CC-250 A

● ✪ Statistical Methods for Studying Gene Expression and Transcriptional Regulation—Topic-Contributed

IMS, ENAR, Section on Physical and Engineering Sciences

Organizer(s): Jun Xie, Purdue University

Chair(s): Ping Ma, University of Illinois

2:05 p.m. **Clustering Time Course Gene Expression Data Using Nonparametric Hypothesis Testing—**❖Haiyan Wang, Kansas State University**;** James Neill, Kansas State University**;** Forrest Miller, Kansas State University

2:25 p.m. **Studying the Relationship Between Coexpression and Coregulation of Protein Complex Using ChIP-Chip Data—**❖Ching-Ti Liu, Yale University; Ker-Chau Li, University of California, Los Angeles

2:45 p.m. **Protein Multiple Alignment Using Primary and Secondary Structure Information—**❖Nak-Kyeong Kim, National Institutes of Health; Jun Xie, Purdue University

3:05 p.m. **Detection of eQTL Modules Mediated by Activity Levels of Transcription Factors—**❖Wei Sun, University of California, Los Angeles; Ker-Chau Li, University of California, Los Angeles; Tianwei Yu, Emory University

3:25 p.m. **Variable Selection Using Single Index Models for Motif Discovery—**❖Wenxuan Zhong, Harvard University

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

326 CC-254 A

● ✪ Applications of Bayesian Inference in Wildlife Ecology—Topic-Contributed

Section on Bayesian Statistical Science, ENAR, Section on Statistics and the Environment

Organizer(s): Robert Dorazio, U.S. Geological Survey/University of Florida

2:05 p.m. **A Hierarchical Bayesian Model for Stochastic Metapopulation Viability in the Presence of Translocation—**❖Christopher K. Wikle, University of Missouri-Columbia; Sammuel F. Bussman, University of Missouri-Columbia; Robert L. Schooley, University of Illinois

2:25 p.m. **Discrete Representations of Ecological Process Models in the Presence of Uncertainty and Data—**❖Mevin Hooten, Utah State University; Amanda R. Cangelosi, Utah State University

2:45 p.m. **Continuous-Time Modeling of Marine Mammal Telemetry Data—**❖Devin Johnson, National Marine Mammal Laboratory; John Durbin, National Marine Mammal Laboratory; Mary-Anne Lea, National Marine Mammal Laboratory; Joshua London, National Marine Mammal Laboratory

3:05 p.m. **Estimation of Carcass Recovery Rates for Florida Manatees Using MCMC—**❖Christopher Fonnesbeck, Fish & Wildlife Research Institute; Carol Sanders-Reed,

3:25 p.m. **Modeling Unobserved Sources of Heterogeneity in Animal Abundance Using a Dirichlet Process Prior—**❖Robert Dorazio, U.S. Geological Survey/ University of Florida; Bhramar Mukherjee, University of Michigan; Li Zhang, The Cleveland Clinic; Malay Ghosh, University of Florida

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

327 CC-155 D

● ✪ Nonparametric and Robust Methods for Genetic Data Analysis—Topic-Contributed

Section on Nonparametric Statistics, WNAR

Organizer(s): Gang Zheng, National Heart, Lung, and Blood Institute

Chair(s): Gang Zheng, National Heart, Lung, and Blood Institute

2:05 p.m. **Empirical Likelihood-Based Inferences in a Complex Genetic Mixture Model—**❖Jing Qin, National Institutes of Health

2:25 p.m. **A Method Toward Mapping of Common Traits—**❖Shaw-Hwa Lo, Columbia University; Tian Zheng, Columbia University

2:45 p.m. **Two-Stage Tests for Association on the X Chromosome—**❖Jungnam Joo, National Heart, Lung, and Blood Institute

3:05 p.m. **Genetic Model Selection in Two-Stage Analysis for Case-Control Association Studies—**❖Hon Keung (Tony) Ng, Southern Methodist University; Gang Zheng, National Heart, Lung, and Blood Institute

3:25 p.m. **A New Hypothesis-Testing Approach When the Nuisance Parameter Is Only Present Under the Alternative Hypothesis—**❖Olivier Thas, Ghent University; Gang Zheng, National Heart, Lung, and Blood Institute

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

328 CC-251 A

Statistical Methods for Graphs and Networks—Topic-Contributed

Section on Statistical Computing, Section on Statistical Graphics

Organizer(s): Sujay Datta, Texas A&M University

Chair(s): Sujay Datta, Texas A&M University

2:05 p.m. **Bayesian Self-Modeling Warping Regression—**❖Donatello Telesca, University of Washington; Lurdes Inoue, University of Washington

2:25 p.m. **What Is a 'Random Network'?—**❖David Hunter, The Pennsylvania State University

2:45 p.m. **Collective Inference for Network-Based Marketing—**❖Shawndra Hill, University of Pennsylvania

3:05 p.m. **Transitivity in Weighted Graphs: Effects on the Topology of Knowledge and Social Networks—**❖Tiago Simas, Indiana University**;** Bharat Dravid, Indiana University**;** Luis Rocha, Indiana University

3:25 p.m. **Floor Discussion**

329 CC-355 C
● Studies with Multiple Biomarkers —Topic-Contributed

Section on Statistics in Epidemiology, Biometrics Section, ENAR

Organizer(s): Estelle Russek-Cohen, U.S. Food and Drug Administration; Ursula Garczarek, Roche Diagnostics GmbH

Chair(s): Kyunghee Song, U.S. Food and Drug Administration

2:05 p.m. **Diagnostic and Analytical Accuracies of Qualitative Multiplex Tests—**❖Marina Kondratovich, U.S. Food and Drug Administration

2:25 p.m. **Interpretation of Multimarker Scores—**❖Ursula Garczarek, Roche Diagnostics GmbH

2:45 p.m. **Multivariate Assays Reporting a Composite Score—**❖Estelle Russek-Cohen, U.S. Food and Drug Administration**;** Mary Pastel, U.S. Food and Drug Administration**;** Zivana Tezek, U.S. Food and Drug Administration

3:05 p.m. **Principal Component Analysis for Data Reduction of Gait Analysis for Knee Prosthesis Research—**❖Jeffrey Murphy, DePuy Orthopaedics**;** Luke Aram, DePuy Orthopaedics**;** Jordan Lee, DePuy Orthopaedics**;** Travis Bennett, DePuy Orthopaedics**;** Catherine Truxillo, SAS Institute Inc.**;** Paul Rullkoetter, University of Denver

3:25 p.m. **Utilizing Multiple Biomarkers To Assess Myocardial Function in a Dose-Finding Study: Determining the Optimal Dose by 'Scoring' the Outcomes—**❖Cynthia L. Green, Duke Clinical Research Institute**;** Kathleen Trollinger, Duke Clinical Research Institute**;** Saling Huang, KAI Pharmaceuticals**;** Matthew Roe, Duke Clinical Research Institute

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

330 CC-255 D
Multiple Frame Survey Design and Inference—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Marianne Winglee, Westat

Chair(s): Marianne Winglee, Westat

2:05 p.m. **A Case Study in Dual-Frame Estimation Methods—**❖Keith Rust, Westat**;** Inho Park, Westat**;** Marianne Winglee, Westat**;** Gary Shapiro, Westat

2:25 p.m. **A Strategy for Estimating the Number of Minority-Operated Farms—**❖Matthew J. Fetter, USDA National Agricultural Statistics Service**;** Phillip S. Kott, USDA National Agricultural Statistics Service

2:45 p.m. **Linearization Variance Estimators for Dual Frame Survey Data—**❖Abdellatif Demnati, Statistics Canada**;** J. N. K. Rao, Carleton University**;** Mike A. Hidiroglou, Statistics Canada**;** Jean-Louis Tambay, Statistics Canada

3:05 p.m. **Designing a Dual-Frame Survey for Breeding Bald Eagle Pairs in the Lower 48 States—**❖Mark C. Otto, U.S. Fish & Wildlife Service**;** John R. Sauer, U.S. Geological Survey

3:25 p.m. Disc: Michael Bankier, Statistics Canada

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

331 CC-251 D
✪ Joint Analysis of Longitudinal and Survival Data—Topic-Contributed

WNAR, Biometrics Section, ENAR, Section on Risk Analysis, Section on Statistics in Epidemiology

Organizer(s): Gang Li, University of California, Los Angeles

Chair(s): Gang Li, University of California, Los Angeles

2:05 p.m. **Joint Modeling of Recurrent Event and Event Marker—**❖Jianwen Cai, The University of North Carolina at Chapel Hill**;** Donglin Zeng, The University of North Carolina at Chapel Hill

2:25 p.m. **Robust Inference for Joint Modeling of Longitudinal Measurements and Competing Risks Failure Time Data—**❖Ning Li, University of California, Los Angeles**;** Gang Li, University of California, Los Angeles**;** Robert Elashoff, University of California, Los Angeles

2:45 p.m. **Joint Analysis of Longitudinal Measurements and Competing Risks Failure Time Data: A Bayesian Approach—**❖Wenhua Hu, University of California, Los Angeles**;** Gang Li, University of California, Los Angeles

3:05 p.m. **Joint Analysis of Repeated State Transition in Activities of Daily Living and Death in Longitudinal Aging Study—**❖Haiqun Lin, Yale University**;** Zhenchao Guo, Yale University**;** Peter Peduzzi, Yale University**;** Thomas Gill, Yale University**;** Heather G. Allore, Yale University

3:25 p.m. Disc: Xin Huang, University of California, Los Angeles

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

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

332 CC-155 F

● ✪ Applications of Bayesian Statistical Method —Contributed

Biometrics Section

Chair(s): Erning Li, Texas A&M University

2:05 p.m. **Estimating the Survivor Average Causal Effect in Nonrandomized Studies Where Treatment Assignment Is Missing for Some Patients—** ❖Abbie Stokes-Riner, University of Rochester**;** Jason Roy, Geisinger Health System**;** Sally W. Thurston, University of Rochester

2:20 p.m. **Bayesian Modeling of Multivariate Binary Response with a Change-Point for Applications to Adolescent Offender Registry—**❖Dipankar Bandyopadhyay, Medical University of South Carolina**;** Debajyoti Sinha, Medical University of South**;** Stuart R. Lipsitz, Brigham and Women's Hospital**;** Elizabeth Letourneau, Medical University of South Carolina

2:35 p.m. **Bayesian Genome-Wide Screening via Pseudo Perfect Sampling for Quantitative Trait Loci Problems—**❖Cheongeun Oh, University of Medicine and Dentistry of New Jersey

2:50 p.m. **Ridge Regression To Accommodate LD in WGA Studies—**❖Nathalie Malo, University of California, San Diego**;** Jennifer Wessel, University of California, San Diego**;** Nicholas J. Schork, University of California, San Diego

3:05 p.m. **Small Sample Conditional Inference for the Cox Model—**❖Juan Zhang, Rutgers University**;** John E. Kolassa, Rutgers University

3:20 p.m. **A Bayesian Analysis of Spatially Correlated Binary Data with Applications in Dental Research—** ❖Yanwei Zhang, Michigan State University**;** David Todem, Michigan State University**;** R. V. Ramamoorthi, Michigan State University

3:35 p.m. **Hierarchical Mixed Membership Models for Honey Bee Genomes—**❖Tanzy Love, Carnegie Mellon University

333 CC-250 D

● ✪ Robust Modeling Strategy—Contributed

Biometrics Section, Section on Nonparametric Statistics

Chair(s): Honghua Jiang, Eli Lilly and Company

2:05 p.m. **Variability Study of a Robust Estimator of Mutation Rate in Fluctuation Analysis—**❖Xiaowei Wu, Rice University**;** Erin Strome, Texas Children's Cancer Center**;** Sharon Plon, Texas Children's Cancer Center**;** Marek Kimmel, Rice University

2:20 p.m. **Robust Quantile Regression with Structured Design Space—**❖Ying Wei, Columbia University**;** Matías Salibián-Barrera, The University of British Columbia

2:35 p.m. **A Rank Regression Analysis of Hormonal and Cytokine Effects on Birth Outcome—**❖Alai Tan, The University of Texas Medical Branch**;** Roberta J. Ruiz, The University of Texas Medical Branch**;** Daniel H. Freeman, The University of Texas Medical Branch

2:50 p.m. **Sequential Confidence Limits for the Ratio of Two Binomial Proportions—**❖Hokwon Cho, University of Nevada, Las Vegas**;** Z. Govindarajulu, University of Kentucky

3:05 p.m. **An Index of Local Sensitivity to Nonignorability Under Pseudo-Likelihood—**❖Fang Zhu, University of Pittsburgh**;** Gong Tang, University of Pittsburgh

3:20 p.m. **Fiducial Generalized Confidence Interval for Median Lethal Dose (LD50)—**❖Lidong E, Colorado State University**;** Jan Hannig, Colorado State University**;** Hariharan Iyer, Colorado State University

3:35 p.m. **Multinomial Logistic Regression Models with a Stochastic Design Variable—**❖Evrim Oral, Middle East Technical University

334 CC-Ballroom B

● ✪ Adaptive Designs in Drug Development—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Kimberly Crimin, Wyeth

2:05 p.m. **Findings from Simulation Studies on Treatment (Trt) Switching in Clinical Trial (CT)—**❖Dachuang Cao, Eli Lilly and Company**;** Hongmei Jiang, Northwestern University,

2:20 p.m. **Adaptive Design with Continuous Responses and Binary Utility—**❖Yuehui Wu, GlaxoSmithKline**;** Valeri V. Fedorov, GlaxoSmithKline

2:35 p.m. **Midcourse Selection of the Primary Endpoint in Clinical Trials—**❖Zhilong Yuan, Johnson & Johnson PRD; Yang Song, Johnson & Johnson PRD; Xiaolong Luo, Johnson & Johnson PRD; George Chi, Johnson & Johnson PRD

2:50 p.m. **On Treatment Selection in Accelerated Drug Development—**❖Ying Wan, Temple University; Keaven M. Anderson, Merck & Co., Inc.; Cong Chen, Merck & Co., Inc.; Boris Iglewicz, Temple University

3:05 p.m. **Adaptive Treatment Selection in Seamless Phase II/III Designs—**❖Xiaoling Wu, Bristol-Myers Squibb Company

3:20 p.m. **Adaptive Design and Decision Analysis: Companions for Transforming Clinical Development—**❖Andreas Sashegyi, Eli Lilly and Company

3:35 p.m. **Unweighted versus Weighted Adaptive Design and Its Application in COPD Clinical Trials—**❖Peter Zhang, Otsuka Pharmaceutical Development & Commercialization, Inc.

335 CC-355 E
● Design Issues for Clinical Trials—Contributed

ENAR, Biometrics Section

Chair(s): Jill Goldschneider, Insightful Corporation

2:05 p.m. **Correcting for Misrandomization in a Peer-Teaching Intervention Trial—**❖Dirk Moore, University of Medicine and Dentistry of New Jersey; Weichung J. Shih, University of Medicine and Dentistry of New Jersey; Thomas Kearney, University of Medicine and Dentistry of New Jersey

2:20 p.m. **Evaluation of Surrogate Biomarker in a Randomized Clinical Trial—**❖Long-Long Gao, GlaxoSmithKline; Marshall Joffe, University of Pennsylvania; Xiwu Lin, GlaxoSmithKline

2:35 p.m. **Proportion of Treatment Effect Explained by a Continuous Surrogate Marker—**❖Jie Huang, Novartis Pharmaceuticals; Bin Huang, Cincinnati Children's Hospital Medical Center

2:50 p.m. **Inference of Noncentrality Parameter of a Truncated Chi-Squared Distribution, with Application to Flexible Two-Stage Designs—**❖Qizhai Li, National Institutes of Health; Kai Yu, National Institutes of Health

3:05 p.m. **An Internal Pilot Study with Interim Analysis for Gaussian Linear Models—**❖John Kairalla, The University of North Carolina at Chapel Hill; Keith E. Muller, University of Florida; Christopher S. Coffey, The University of Alabama at Birmingham

3:20 p.m. **Estimation of Correlated Response Rates in Clinical Trials—**❖Myron Chang, University of Florida

3:35 p.m. **Test Size for Two-Stage and One-Stage Analyses of Cluster Samples of Unequal Size—**❖Jacqueline Johnson, The University of North Carolina at Chapel Hill; Diane Catellier, The University of North Carolina at Chapel Hill; Keith E. Muller, University of Florida

336 CC-250 B
✪ MLE and Related Topics—Contributed

IMS, Section on Nonparametric Statistics

Chair(s): Jing Qiu, University of Missouri-Columbia

2:05 p.m. **Testing Homogeneity Variances for Non-Normal Models Using Entropy—**❖Solomon W. Harrar, University of Montana; Arjun K. Gupta, Bowling Green State University; Leandro Pardo, Complutense University of Madrid

2:20 p.m. **Bootstrapping the Grenander Estimator—**❖Bodhisattva Sen, University of Michigan

2:35 p.m. **Estimation of Tail Probability via the Maximum Lq-Likelihood Method—**❖Davide Ferrari, The University of Minnesota

2:50 p.m. **Minimax-Bias L-Estimators of Scale—**❖Daniela Szatmari-Voicu, University of Texas at El Paso

3:05 p.m. **Asymptotic Properties of MLEs for Extended Generalized Log-Logistic Families of Lifetime Distributions—**❖James U. Gleaton, University of North Florida; M. Mahbubur Rahman, University of North Florida

3:20 p.m. **Profile Likelihood-Based Confidence Intervals in Repeated Categorical Data—**❖Esa I. Uusipaikka, University of Turku

3:35 p.m. **Maximum Likelihood Estimation of the Dispersion Parameter of Negative Multinomial Distribution—**❖Soumi Lahiri, GlaxoSmithKline

337 CC-155 E

● Bayesian Approaches to Sample Size Determination and Experimental Design—Contributed

Section on Bayesian Statistical Science

Chair(s): Rongwei (Rochelle) Fu, Oregon Health & Science University

2:05 p.m. **Survey of Bayesian Sample Size Calculation—** ❖Susan Alber, The University of Texas M. D. Anderson Cancer Center; J. Jack Lee, The University of Texas M. D. Anderson Cancer Center

2:20 p.m. **Bayesian Power and Sample Size Calculations for Multicenter Clinical Trials with Binary Responses—**❖Emine O. Bayman, The University of Iowa/Uludag University; Kathryn Chaloner, The University of Iowa; Mary K. Cowles, The University of Iowa

2:35 p.m. **Bayesian Sample Size Determination for the Misclassified Binary Response Variable with One Error-Free Covariate—**❖Dunlei Cheng, Baylor University; James Stamey, Baylor University

2:50 p.m. **Bayesian Sample Size Calculation for Counted Data with Excess Zeroes—**❖Chunyao Feng, Amgen Inc.; John W. Seaman, Jr., Baylor University; James Stamey, Baylor University

3:05 p.m. **Bayesian Up and Down: Combining the Best of Both Worlds—**❖Assaf Oron, University of Washington; Peter D. Hoff, University of Washington

3:20 p.m. **How Many Images Are Enough? Bayesian and Non-Bayesian Approaches to Sample Size Determination—**❖Junheng Ma, Case Western Reserve University; Jiayang Sun, Case Western Reserve University; Joe Sedransk, Case Western Reserve University

3:35 p.m. **Kullback-Leibler Divergence for Design and Model Selection—**❖Chenpin Wang, University of Texas Health Science Center San Antonio

338 CC-251 C

✪ Resampling Methods and Confidence Intervals—Contributed

Section on Nonparametric Statistics

Chair(s): Michael Sherman, Texas A&M University

2:05 p.m. **Bootstrap Confidence Intervals in Nonparametric Regression with Built-In Bias Correction—** ❖McMurry Timothy, DePaul University; Dimitris Politis, University of California, San Diego

2:20 p.m. **Tapered Empirical Likelihood Methods—**❖Daniel Nordman, Iowa State University

2:35 p.m. **An Empirical Likelihood-Based Approach To Estimate Covariance Matrices with Structural Zeroes—**❖Sanjay Chaudhuri, National University of Singapore

2:50 p.m. **Conditional Empirical Likelihood Inference in Presence of Nuisance Parameters—**❖Mi-Ok Kim, Cincinnati Children's Hospital Medical Center

3:05 p.m. **Strong Approximations for Resample Quantile Processes and Application to ROC Methodology—** ❖Jiezhun Gu, North Carolina State University; Subhashis Ghoshal, North Carolina State University

3:20 p.m. **Observed Confidence Levels for Modes of Smooth Densities—**❖Alan Polansky, Northern Illinois University

3:35 p.m. **Semiparametric Sequential D-Optimal Design—**❖Joseph Warfield, The Johns Hopkins University; Anindya Roy, University of Maryland, Baltimore County

339 CC-250 C

Financial Risk Analysis: Theory, Methods, and Applications—Contributed

Section on Risk Analysis, Business and Economics Statistics Section

Chair(s): Wai Chan, Exponent, Inc.

2:05 p.m. **Extreme Value Theorem and Its Applications—** ❖Yan Li, The Pennsylvania State University

2:20 p.m. **A New Estimator for the Extremal Index Based on Scaling and Resampling—**❖Kam Hamidieh, University of Michigan; Stilian Stoev, University of Michigan; George Michailidis, The University of Michigan

2:35 p.m. **Tail Expansions for the Distribution of the Maxima of Random Walks with Negative Drift and Regularly Varying Increments—**❖Chenhua Zhang, University of Georgia; Philippe Barbe, CNRS, France; William P. McCormick, University of Georgia

2:50 p.m. **A General Rule To Average a Set of Frequency Statistics—**❖Joseph Kahan, FM Global

3:05 p.m. **Bootstrapping the Expected Shortfall—**❖Shuxia Sun, Wright State University

3:20 p.m. **Using Data Mining Tools and GIS (Geographic Information Systems) in Hot-Spot Detection—** ❖Wei-hong Wang, The College of New Jersey; Ben Liu, William Paterson University

3:35 p.m. **Estimation for Non-negative, Levy-Driven Ornstein-Uhlenbeck Processes—**❖Yu Yang, Colorado State University**;** Peter J. Brockwell, Colorado State University**;** Richard A. Davis, Colorado State University

340 CC-251 B

● Clustering and Classification—Contributed

Section on Statistical Computing, Section on Statistical Graphics, IMS

Chair(s): James E. Gentle, George Mason University

2:05 p.m. **Clustering the Short Stories of Edgar Allan Poe Using Galois Lattices—**❖Roger Bilisoly, Central Connecticut State University

2:20 p.m. **Smoothing the Dissimilarities Among Binary Data for Cluster Analysis—**❖David Hitchcock, University of South Carolina**;** Zhimin Chen, University of South Carolina

2:35 p.m. **Measuring the Similarity between Spatial Clusters—**❖Xinxin Bai, IBM China Research Laboratory**;** Wen Jun Yin, IBM China Research Laboratory**;** Jin Dong, IBM China Research Laboratory

2:50 p.m. **Uniformity Testing in High Dimensions—**❖Adam Petrie, Rensselaer Polytechnic Institute

3:05 p.m. **Presence versus Significance: How Significant Are Your Clusters?—**❖Rebecca Nugent, Carnegie Mellon University**;** Werner Stuetzle, University of Washington

3:20 p.m. **Clustering Gene Expressions in the Presence of Scatter—**❖Ivan Ramler, Iowa State University**;** Ranjan Maitra, Iowa State University

3:35 p.m. **A New Clustering Algorithm Based on Self-Updating Process—**❖Ting-Li Chen, Academia Sinica**;** Shang-Ying Shiu, Academia Sinica

341 CC-255 C

● Adjustment Methods for Survey Nonresponse and Noncoverage—Contributed

Section on Survey Research Methods, Social Statistics Section

Chair(s): Kenneth Portier, American Cancer Society

2:05 p.m. **Nonresponse Adjustment for Multipurpose Surveys—**❖Hee-Choon Shin, NORC at the University of Chicago

2:20 p.m. **Comparison of Methods to Adjust Further for Nonresponse Due to Missing Lab Data in NHANES—**❖Maya Sternberg, Centers for Disease Control and Prevention**;** Alula Hadgu, Centers for Disease Control and Prevention

2:35 p.m. **Post-Katrina New Orleans Adjustment to Control Totals for the National Immunization Survey—**❖Steven Pedlow, NORC at the University of Chicago**;** Zhen Zhao, Centers for Disease Control and Prevention

2:50 p.m. **Diagnostic Process to Assess the Effects of Weighting BRFSS Data—**Henry Roberts, Centers for Disease Control and Prevention**;** Robert Woldman, North Carolina Department of Health and Human Services**;** Elizabeth Hughes, Northup Gruman Inc**;** Ruth Jiles, Centers for Disease Control and Prevention

3:05 p.m. **Minimizing Conditional Local Bias for Health Estimates from the Behavioral Risk Factor Surveillance System for U.S. Counties Contiguous to the United States-Mexico Border—**❖Joe Fred Gonzalez, Jr., Centers for Disease Control and Prevention**;** Machell Town, Centers for Disease Control and Prevention**;** Jay H. Kim, National Center for Health Statistics

3:20 p.m. **Evaluation of the Current Weighting Methodology for the Behavioral Risk Factor Surveillance System (BRFSS) and Alternatives for Improvement—**❖Mansour Fahimi, RTI International**;** Darryl Creel, RTI International**;** Paul S. Levy, RTI International**;** Michael Link, Centers for Disease Control and Prevention

3:35 p.m. **Diagnostic Process to Assess the Effects of Truncating Extreme BRFSS Sampling Weights—**❖Henry Roberts, Centers for Disease Control and Prevention**;** Elizabeth Hughes, Northup Gruman Inc**;** Robert Woldman, North Carolina Department of Health and Human Services**;** Ruth Jiles, Centers for Disease Control and Prevention

342 CC-255 A

● Complex Survey Data Analysis Software GIS—Contributed

Section on Survey Research Methods, Section on Statistical Computing, Section on Statistical Consulting, Section on Statistical Graphics

Chair(s): Ronaldo Iachan, Macro International

2:05 p.m. **Identification of Influential Observations for Regression Using Complex Survey Data—**❖Jianzhu Li, University of Maryland**;** Richard Valliant, University of Maryland

2:20 p.m. **Goodness-of-Fit Tests for Logistic Regression with Complex Survey Data—**❖Amang S. Sukasih, Mathematica Policy Research, Inc.; Donsig Jang, Mathematica Policy Research, Inc.; Haixia Xu, Mathematica Policy Research, Inc.

2:35 p.m. **Longitudinal Data Analysis Using SUDAAN—**❖Darryl Creel, RTI International

2:50 p.m. **Comparison of the Five Test Statistics Currently Available in the SUDAAN Modeling Procedures—**❖G. Gordon Brown, RTI International

3:05 p.m. **Subpopulation Analysis of Survey Data: Statistical Approaches and Software Options—**❖Brady West, University of Michigan; Steven Heeringa, Institute for Social Research; Pat Berglund, University of Michigan

3:20 p.m. **GIS Data Collection for Longitudinal Surveys—**❖Sarah M. Nusser, Iowa State University

3:35 p.m. **Economic Evaluation of Road Improvements Using GIS and Propensity Score Matching: Case Example from the Republic of Georgia—**❖John Felkner, NORC at the University of Chicago; Fritz Scheuren, NORC at the University of Chicago; Celeste Tarricone, Millennium Challenge Corporation; Mamuka Shatirishvili, Millennium Challenge Georgia; Temur Paksashvili, Republic of Georgia

Contributed Poster Presentations 2:00 p.m.–3:50 p.m.

343 CC-Exhibit Hall D

Contributed Poster Presentations—Contributed

Social Statistics Section, Section on Statistical Computing, Section on Statistical Graphics, Section on Statistics in Sports, Section on Survey Research Methods, Section on Quality and Productivity, Section on Risk Analysis, Section on Statistics and the Environment, Section on Statisticians in Defense and National Security, Business and Economics Statistics Section

Chair(s): Dongseok Choi, Oregon Health & Science University

Applications and case studies

51 **Modeling Enrollment Growth at California State University, East Bay—**❖Barbara Warsavage, CSUEB

52 **Model-Based Clustering Analysis: An Application to Food and Nutrition Data—**❖Jingjing Chen, Student

53 **Geospatial Modeling for Water Chemistry in a Stream Network—**❖Stephanie Fitchett, Florida Atlantic University

Biometrics, bioinformatics, computational biology

54 **Predicting Survival from Microarray Data: A Comparative Study—**Hege Marie Boevelstad, University of Oslo; ❖Staale Nygaard, University of Oslo

Categorical, multivariate analysis

55 **Stalactite Plot for Outlier Detection in the Presence of a Computationally Singular Covariance Matrix—**❖Jeremy Nadolski, Benedictine University; Pablo Marquez, Benedictine University; Lee Ann Smith, Benedictine University

56 **Reckless or Responsible: A Multivariate Statistical Analysis of Consumer Spending—**❖Shannon Grant, SUMSRI; Emilola Abayomi, SUMSRI

Computational statistics, numerical methods, simulation

57 **SASweave: Literate Programming Using SAS—**❖Russell Lenth, The University of Iowa; Søren Højsgaard, Aarhus University

58 **Maximum Likelihood Estimation Using Iterative Importance Sampling—**❖Fassil Nebebe, Concordia University; Tak Mak, Concordia University

59 **The Power of Linkage Analysis of a Quantitative Disease Endophenotype—**❖Zhuying Huang, Stony Brook University; Nancy Mendell, State University of New York at Stony Brook

Data mining and knowledge discovery, machine learning

60 **Development of Nearest-Neighbor Classifiers Identifying Dermal Sensitizers Based on a Local Lymph Node Assay Database—**❖Shengqiao Li, Centers for Disease Control and Prevention; Adam Fedorowicz, Centers for Disease Control and Prevention

61 **Methods for K-Models Clustering—**❖Li Li, George Mason University; James E. Gentle, George Mason University

Environmetrics, ecology, agriculture, wildlife management

62 **A New Ecological Model for Insect Population Size with Local Collapse—**❖James Matis, Texas A&M University; Thomas Kiffe, Texas A&M University; Timothy Matis, Texas Tech University; Gerald Michels, Texas A&M University

63 **Assessment of Plant Communities Exposed to Fugitive Dust Along a Mine Transportation Corridor in Alaska—**❖Melanie Edwards, Exponent, Inc.; Elizabeth Maier, Exponent, Inc.; Dawn Reeder, Rare Earth Science; Scott S. Shock, Exponent, Inc.; Nicholas Gard, Exponent, Inc.

64 **Is There a Weekend Effect in Diurnal Temperature Range?—**❖Madhuri S. Mulekar, University of South Alabama; Sytske Kimball, University of South Alabama

Experimental design

65 **Choice of Randomized Design in Large-Scale Education Experiments—**❖Brenda Jenney, Arizona State University; Sharon L. Lohr, Arizona State University

Graphics, visualization

66 **Matrix Plots in Support of Visualization of Matrix Characteristics—**❖Ferry Butar Butar, Sam Houston State University; Wathurawa A. Bandulasiri, Sam Houston State University; Melinda M. Holt, Sam Houston State University; Cecil Hallum, Sam Houston State University

Incomplete data analysis, imputation methods

67 **Statistical Inference in the Presence of Panel Segmentation in Ranking Data—**❖Lin Xie, Kansas State University; Paul I. Nelson, Kansas State University

68 **Generalization of the Paired T-Test for the Missing Values Case—**❖Sophie Desjardins, University of Québec at Montréal; Alain Desgagne, University of Québec at Montréal; Pierre Lafaye de Micheaux, Universite Pierre-Mendes France; Benoit Liquet, Universite Pierre-Mendes France

Linear models, GLMs, parametric methods

69 **Use of Beta Regression To Model Adherence to HIV Medication—**❖Che Smith, The University of North Carolina at Chapel Hill; Yin Yin, GlaxoSmithKline; Sharon Murray, GlaxoSmithKline; Steven Kathman, GlaxoSmithKline

70 **A Modified Bonferroni Procedure for Multiple Tests—**❖Daniel Mundfrom, University of Northern Colorado; Michelle Roozeboom, University of Northern Colorado; Jamis Perrett, University of Northern Colorado

Pattern recognition, computer vision, shape analysis, signal processing

71 **Multivariate Statistical Methods Applied to Digital Photo Processing in Support of Object Detection—**❖Huixing He, Sam Houston State University; Cecil Hallum, Sam Houston State University

Probability, stochastic processes

72 **A Method for Estimating Intensity of a Poisson Process—**❖Chih-Hsiang Ho, University of Nevada, Las Vegas; Sandhya Gunti, University of Nevada, Las Vegas; Heng-Wei Cheng, University of Nevada, Las Vegas

QC, operation research, risk assessment

73 **Monitoring Variation in a Multivariate Process with Sample Size Smaller Than the Dimension—**❖John Young, McNeese State University; Robert L. Mason, Southwest Research Institute; Youn-Min Chou, University of Texas at San Antonio

74 **Development of New Capability Indices for Multivariate Manufacturing Processes—**Jen-Nan Pan, National Cheng Kung University; ❖Chun-Yi Lee, National Cheng Kung University

Sampling and survey methodology

75 **Software Alternatives for Variance Estimation in the Analysis of Complex Sample Surveys: A Comparison of SAS Survey Procedures, SUDAAN, and AM—**❖Bethany Bell-Ellison, University of South Florida; Jeffrey Kromrey, University of South Florida

76 **Performance of First-Order Weighted Random Effects Model Estimators Under Complex Sampling Designs—**❖Yue Jia, Educational Testing Service; S. Lynne Stokes, Southern Methodist University; Ian Harris, Southern Methodist University

77 **Alternative Methods to Compensate for Provider Nonresponse in the National Immunization Survey—**❖Phillip Smith, Centers for Disease Control and Prevention; Benjamin Skalland, NORC at the University of Chicago; Robert Montgomery, NORC at the University of Chicago; Sadeq Chowdhury, NORC at the University of Chicago

78 **Extensions of a Matrix Approach for Comparing Estimate Precision of a Population Total Under a Many-to-Many Frame Structure—**Martin Levy, University of Cincinnati; ❖ZhiYuan Dong, University of Cincinnati

79 **Review of NHIS Public-Design Structures—**❖Van Parsons, National Center for Health Statistics; Chris Moriarity, National Center for Health Statistics

Spatial statistics, spatio-temporal modeling

80 **Estimation of Exposure Point Concentrations for Probabilistic Risk Assessment Using a Three-Dimensional Estimation Technique—**❖James Gleason, Trihydro Corporation; Heidi Bowen-Morris, Trihydro Corporation

81 **Spatiotemporal Bayesian Maximum Entropy Modeling of Hydrogen Sulfide Concentrations Using Data Collected at Different Observation Time Scales Near Swine Operations—**❖William Allshouse, The University of North Carolina at Chapel Hill; Marc Serre, The University of North Carolina at Chapel Hill; Devon Hall, Rural Empowerment Association for Community Help; Katherine Mills, The University of North Carolina at Chapel Hill; Steve Wing, The University of North Carolina at Chapel Hill

Sports, art, entertainment

82 **A Critical Evaluation of 'Moneyball'—**❖Mitchell Watnik, California State University, East Bay

83 **Stochastic Modeling of Sports Data—**❖Charles N. Lowe, Marshall University**;** Alfred A. Akinsete, Marshall University

84 **You (Should Be) Out of Here! Off-the-Field Factors Influencing National Baseball Hall of Fame Selection—**❖John Rasp, Stetson University**;** Nathan Crowder, Stetson University

85 **Coors Field: Pitchers Graveyard?—**❖Jay Schaffer, University of Northern Colorado**;** Raj Chandran, University of Northern Colorado

86 **An Analysis of Judges' Inconsistency in the Athens 2004 Olympics Artistic Gymnastics Events Using the Multiplicative Interaction Model—**❖Wijith Munasinghe, Kansas State University**;** Dallas Johnson, Kansas State University

87 **Assessing Ratings Methods for College Hockey Teams—**❖Robin Lock, St. Lawrence University**;** Julia Palmateer, St. Lawrence University

88 **Measuring Player Contribution in the NBA—**❖David Lewin, Macalester College**;** Vittorio Addona, Macalester College

Statistical consulting

89 **Statistical Application in Law: Empirical Investigation on Suspected Drunk Drivers' Data in New Jersey—**❖Ayako Kambara,

Statistical education, teaching, and training

90 **Education by Nation: A Multivariate Statistical Analysis—**❖Anthony Franklin, SUMSRI**;** Ashley Brooks, SUMSRI

Time series/wavelet analysis

91 **Multiple Signal Extraction in Seismic Array Data—**❖Joshua Kerr, California State University, East Bay**;** Wolfang Polonik, University of California, Davis

92 **Smoothed Moments Variance Estimator for X-11 Seasonal Adjustment—**❖Daniell Toth, Bureau of Labor Statistics**;** Stuart Scott, Bureau of Labor Statistics

Transportation statistics

93 **A Market Segmentation Analysis of Multivariate Travel Survey Data—**Shuang Liu, University of California, Davis**;** ❖Peng Wu, University of California, Davis

Invited Sessions 4:00 p.m.–5:50 p.m.

344 CC-Ballroom B

Wald Lecture I—Invited

IMS, General Methodology, Section on Bayesian Statistical Science

Organizer(s): Tony Cai, University of Pennsylvania

Chair(s): Robert L. Wolpert, Duke University

4:05 p.m. **A Review of Surprises Encountered in Bayesian Model Selection—**❖James Berger, Duke University

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

345 CC-Ballrooms E-J

Deming Lecture—Invited

Deming Lectureship Committee, ASA, IMS, ENAR, SSC, WNAR

Organizer(s): Stephen B. Cohen, Agency for Healthcare Research and Quality

Chair(s): Stephen B. Cohen, Agency for Healthcare Research and Quality

4:05 p.m. **A Modern Framework for Enterprise Excellence—**❖Douglas C. Montgomery, Arizona State University

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

Invited Sessions 8:00 p.m.–9:30 p.m.

346 CC-Ballrooms E-J

ASA Presidential Address and Awards—Invited

ASA, ENAR, IMS, SSC, WNAR

Organizer(s): Mary Ellen Bock, Purdue University

Chair(s): Sallie Keller-McNulty, Rice University

8:00 p.m. **Presentation of Awards—**❖Sallie Keller-McNulty, Rice University

8:30 p.m. **Statistics: Harnessing the Power of Information—**❖Mary Ellen Bock, Purdue University

9:00 p.m. **Presentation of Founders Awards and New ASA Fellows—**❖Sallie Keller-McNulty, Rice University

WEDNESDAY, AUGUST 1

Tours

TR10 Antelope Island and the Great Salt Lake
8:00 a.m.–12:00 p.m. CC-South Foyer (200 South Street)

TR11 Kennecott Copper Mine and Great Salt Lake
8:00 a.m.–12:00 p.m. CC-South Foyer (200 South Street)

TR12 Utah Olympic Park, Park City Main Street
1:00 p.m.–5:00 p.m. CC-South Foyer (200 South Street)

Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. GA-Vienna
Committee of Representatives to AAAS Meeting
Chair(s): Michael P. Cohen, Statistical Consultant

7:00 a.m.–8:30 a.m. Off Property
Friends and Alumni of Brigham Young University Open House/Breakfast
Organizer(s): Del Scott, Brigham Young University

7:00 a.m.–8:30 a.m. GA-Milano
Caucus for Women in Statistics Breakfast Roundtable Discussions
Organizer(s): Tena Katsaounis, The Ohio State University

7:00 a.m.–8:30 a.m. GA-Ambassador
Committee on Career Development Meeting (closed)
Chair(s): Janice Lent, Energy Information Administration

7:00 a.m.–8:30 a.m. GA-Bagatelle
Committee on Privacy and Confidentiality Meeting
Chair(s): Alvan Zarate, National Center for Health Statistics

7:00 a.m.–8:30 a.m. GA-Embassy
Committee on Archives and Historic Materials Meeting (closed)
Chair(s): Carol J. Lancaster, Medical University of South Carolina

7:00 a.m.–6:00 p.m. CC-252 A, CC-252 B
Speaker Work Rooms

7:00 a.m.–9:00 p.m. CC-South Foyer
Cyber Center

7:30 a.m.–4:30 p.m. CC-South Foyer
JSM Main Registration and ASA Membership/Special Assistance Desk

8:00 a.m.–9:00 a.m. GA-Sussex
Noether Award Committee Business Meeting (closed)
Chair(s): James Higgins, Kansas State University

8:00 a.m.–10:00 a.m. GA-Fontainbleau
Section on Statistical Education Executive Committee Meeting (closed)
Chair(s): Jessica Utts, University of California, Davis

8:00 a.m.–2:00 p.m. CC-Exhibit Hall D
Exhibitor Lounge

8:00 a.m.–4:30 p.m. CC-Exhibit Hall C
Career Placement Service

8:00 a.m.–6:00 p.m. CC-Main Lobby, Level 2
Salt Lake City Visitors Information Center

8:30 a.m.–10:30 a.m. CC-Kenneth Knight Board Room
Committee on Outreach Education Meeting (closed)
Chair(s): Wendy Martinez, Office of Naval Research

9:00 a.m.–11:00 a.m. GA-Audubon
Council of Sections Publication and Newsletter Editors Meeting (closed)

9:00 a.m.–2:00 p.m. CC-Exhibit Hall D
ASA Booth #101

9:00 a.m.–2:00 p.m. CC-Exhibit Hall D
EXPO 2007

9:00 a.m.–5:00 p.m. CC-South Foyer
ASA Marketplace

10:30 a.m.–11:30 a.m. GA-Vienna
ASA Special Interest Group on Volunteerism Meeting (closed)
Chair(s): Robert Starbuck, Wyeth

10:30 a.m.–12:30 p.m. GA-Sussex
Advisory Committee on Continuing Education Excellence in CE Meeting (closed)
Chair(s): Katherine Halvorsen, Smith College

11:30 a.m.–1:30 p.m. CC-Kenneth Knight Board Room
Committee on Meetings (closed)
Chair(s): Xiao-li Meng, Harvard University

12:00 p.m.–2:00 p.m. GA-Ambassador
Committee on International Relations in Statistics Meeting (closed)
Chair(s): Demissie Alemayehu, Pfizer Inc.

12:00 p.m.–2:30 p.m. GA-Embassy
ENAR 2008 Spring Meeting Planning Committee Luncheon (closed, by invitation only)
Organizer(s): Kathy Hoskins, ENAR

12:30 p.m.–2:00 p.m. GA-Bagatelle
Noether Award Committee Luncheon (closed)
Chair(s): James Higgins, Kansas State University

12:30 p.m.–2:00 p.m. GA-Fontainbleau
Writing Workshop Lunch (closed)
Chair(s): Nell Sedransk, National Institute of Statistical Sciences; Keith Crank, American Statistical Association

2:00 p.m.–8:00 p.m. CC-Exhibit Hall D
Exhibitor Move Out

5:00 p.m.–6:30 p.m. CC-151 AB
Section on Survey Research Methods Business Meeting
Chair(s): William D. Kalsbeek, The University of North Carolina at Chapel Hill

5:30 p.m.–8:30 p.m. GA-Audubon
IMS Council Meeting II (closed)
Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics

6:00 p.m.–7:00 p.m. CC-155 A
International Chinese Statistical Association Annual Members Meeting
Organizer(s): Ming-Hui Chen, University of Connecticut

6:00 p.m.–7:30 p.m. GA-Room 2473
JSM Program Committee/ACCE/COM/Local Area Committee Reception (closed, by invitation only)
Chair(s): William B. Smith, American Statistical Association

6:00 p.m.–7:30 p.m. CC-151 DE
Section on Statistical Education Business Meeting
Chair(s): Jessica Utts, University of California, Davis

Continuing Education (Fee Events)

CE_29T
Introduction to CART: Data Mining with Decision Trees
8:00 a.m.–9:45 a.m. CC-151 AB
ASA
Instructor(s): Mikhail Golovnya, Salford Systems

CE_30T
New Features for Clustered and Survey Data Analysis in SUDAAN Release 9.0.3
8:00 a.m.–9:45 a.m. CC-151 C
ASA
Instructor(s): Angela Pitts, RTI International; G. Gordon Brown, RTI International

CE_31T
Modern Regression Analysis in SAS Software
8:00 a.m.–9:45 a.m. CC-151 G
ASA
Instructor(s): Robert Cohen, SAS Institute Inc.

CE_32T
Power Analysis: A Simple and Effective Approach
8:00 a.m.–9:45 a.m. CC-151 DE
ASA
Instructor(s): Hannah Rothstein,; Michael Borenstein

CE_33T
East© 5: A Comprehensive Package for Adaptive and Group Sequential Design, Interim Monitoring, and Simulation
8:00 a.m.–9:45 a.m. CC-151 F
ASA
Instructor(s): Cyrus Mehta, Cytel Inc.

CE_34T
Introduction to MARS: Predictive Modeling with Nonlinear Automated Regression Tools
10:00 a.m.–11:45 a.m. CC-151 AB
ASA
Instructor(s): Mikhail Golovnya, Salford Systems

CE_35T
From Software to Solutions in Statistics and Risk Analysis
10:00 a.m.–11:45 a.m. CC-151 C
ASA
Instructor(s): Shawn Harahush, Palisade Corporation

CE_36T
Design and Analysis of Split-Plot Experiments Using the SAS ADX Interface
10:00 a.m.–11:45 a.m. CC-151 G
ASA
Instructor(s): Sharad Prabhu, SAS Institute Inc.; José G. Ramírez, W.L. Gore & Associates, Inc.

CE_37T
Meta-Analysis: Concepts and Applications
10:00 a.m.–11:45 a.m. CC-151 DE
ASA
Instructor(s): Michael Borenstein; Hannah Rothstein

CE_38T
Generalized Linear Modeling in SPSS
10:00 a.m.–11:45 a.m. CC-151 F
ASA
Instructor(s): Weicai Zhong, SPSS Inc.

CE_39T
Advances in Data Mining: Jerome Friedman's TreeNet/ MART and Leo Breiman's Random Forests
1:00 p.m.–2:45 p.m. CC-151 AB
ASA
Instructor(s): Mikhail Golovnya, Salford Systems

CE_40T
Quantile Regression Using the SAS QUANTREG Procedure
1:00 p.m.–2:45 p.m. CC-151 G
ASA
Instructor(s): Colin Chen, SAS Institute Inc.

Roundtables with Coffee 7:00 a.m.–8:15 a.m.

347 **CC-Ballroom D**
Section on Risk Analysis Roundtable with Coffee (fee event)
Section on Risk Analysis
Organizer(s): Anirban Basu, The University of Chicago
WL01 **Assessing Risks in the Environment—**❖Edward Boone, Virginia Commonwealth University

348 **CC-Ballroom D**
Section on Statistical Education Roundtable with Coffee (fee event)
Section on Statistical Education
Organizer(s): Jacqueline Miller, The Ohio State University
WL02 **Study Design in Statistics Education—**❖Felicity B. Enders, Mayo Clinic

349 **CC-Ballroom D**
Section on Statistical Graphics Roundtable with Coffee (fee event)
Section on Statistical Graphics
Organizer(s): David Hunter, The Pennsylvania State University
WL03 **Introducing Multivariate Statistics Through Graphics and Geometry—**❖Daniel Kaplan, Macalester College

350 **CC-Ballroom D**
Section on Statistics and the Environment Roundtables with Coffee (fee event)
Section on Statistics and the Environment
Organizer(s): Andrew B. Lawson, University of South Carolina
WL04 **Multivariate Environmental Health Surveillance—**❖Andrew B. Lawson, University of South Carolina
WL05 **Bayesian Disease-Mapping Methods and Applications: Past, Present, and Future—**❖Ying MacNab, University of British Columbia

351 CC-Ballroom D

Section on Statistics in Epidemiology Roundtable with Coffee (fee event)

Section on Statistics in Epidemiology

Organizer(s): William E. Barlow, Cancer Research and Biostatistics

WL06 **Methods for Missing Data in Survey Response—** ❖Xiaoming Sheng, University of Utah

352 CC-Ballroom D

Section on Teaching Statistics in the Health Sciences Roundtables with Coffee (fee event)

Section on Teaching Statistics in the Health Sciences

Organizer(s): Jodi Lapidus, Oregon Health & Science University

WL07 **Biostatistics Curriculum for National Institutes of Health (NIH) Training Grants: Training, Expectation, and Outcome—**❖Madhu Mazumdar, Cornell University

WL08 **Balancing Teaching and Research: Statistics in the Health Sciences—**❖Novie Younger, The University of the West Indies at Mona, Jamaica

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

353 CC-Ballroom B

Introductory Overview Lecture 4: How Scientists Can Work Effectively with the Media—Other

ASA, ENAR, IMS, WNAR, SSC

Organizer(s): G. David Williamson, Centers for Disease Control and Prevention

Chair(s): Tim Hesterberg, Insightful Corporation

8:35 a.m. **How Scientists Can Work Effectively with the Media—** ❖Richard Hayes, Union of Concern Scientists

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

Invited Sessions 8:30 a.m.–10:20 a.m.

354 CC-355 E

✪ Boosting and Related Methods for Machine Learning—Invited

IMS, Section on Physical and Engineering Sciences

Organizer(s): Peter Bühlmann, ETH Zurich

Chair(s): Ji Zhu, University of Michigan

8:35 a.m. **Fast Boosting Algorithms for Regularized Linear Regression and Classification—**❖Jerome H. Friedman, Stanford University

9:05 a.m. **mboost: A Package for Model-Based Boosting—**❖Torsten Hothorn, Institut fuer Medizininformatik

9:35 a.m. **Greedy Methods, Weak Learning, and L1 Optimization—**❖Tong Zhang, Yahoo! Inc.

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

355 CC-155 D

● ✪ Robust Statistical Machine Learning—Invited

Section on Statisticians in Defense and National Security, Section on Statistical Computing, Section on Physical and Engineering Sciences

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

Chair(s): Howard D. Bondell, North Carolina State University

8:35 a.m. **SigClust: Statistical Significance of Clustering—** ❖J. Stephen Marron, The University of North Carolina at Chapel Hill

9:00 a.m. **A Robust Hybrid of Lasso and Ridge Regression—** ❖Art Owen, Stanford University

9:25 a.m. **Consistent Multicategory Support Vector Machines—**Yufeng Liu, The University of North Carolina at Chapel Hill**;** ❖Ming Yuan, Georgia Institute of Technology

9:50 a.m. **Estimating Spatial Covariance Using Penalized Likelihood with Weighted L1 Penalty—** ❖Zhengyuan Zhu, The University of North Carolina at Chapel Hill**;** Yufeng Liu, The University of North Carolina at Chapel Hill

10:15 a.m. **Floor Discussion**

356 CC-250 EF

● ✪ Exploratory Centers for Cheminformatics Research from a Statistician's Point of View—Invited

Section on Physical and Engineering Sciences, Section on Quality and Productivity

Organizer(s): Jacqueline M. Hughes-Oliver, North Carolina State University

Chair(s): S. Stanley Young, National Institute of Statistical Sciences

8:35 a.m. **Multiple Mechanisms from a High-Throughput Screen—**❖Douglas M. Hawkins, The University of Minnesota**;** Lexin Li, North Carolina State University

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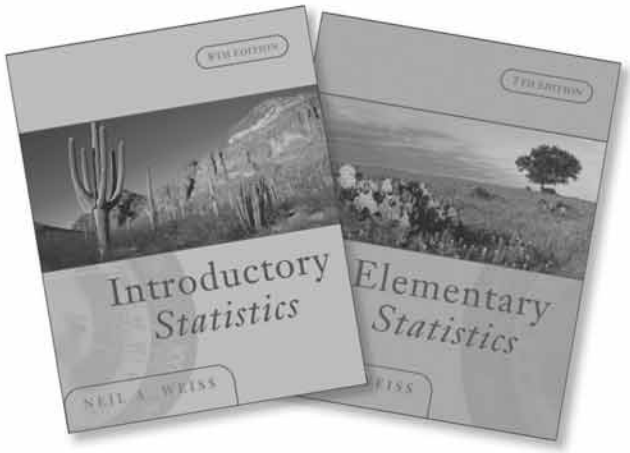

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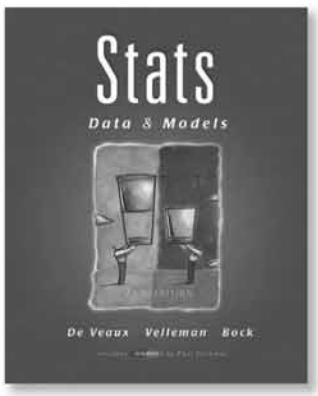

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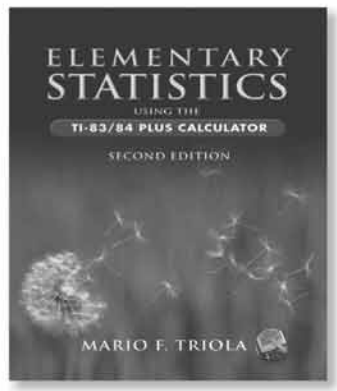

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9:05 a.m. **Projects in the Michigan Alliance for Cheminformatic Research—**❖Kerby Shedden, University of Michigan

9:35 a.m. **Efficient Cross-Validation for Tuning and Ranking Cheminformatics Models—**❖William J. Welch, University of British Columbia**;** Hui Shen, University of British Columbia

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

357 CC-250 C

● Application of Hierarchical Models To Study Genetic and Epidemiologic Risk Factors—Invited

Section on Statistics in Epidemiology, ENAR, Section on Risk Analysis, Biometrics Section, WNAR

Organizer(s): Marinela Capanu, Memorial Sloan-Kettering Cancer Center

Chair(s): Colin B. Begg, Memorial Sloan-Kettering Cancer Center

8:35 a.m. **The Use of Hierarchical Models for Estimating Relative Risks of Individual Genetic Variants—**❖Marinela Capanu, Memorial Sloan-Kettering Cancer Center**;** Colin B. Begg, Memorial Sloan-Kettering Cancer Center

9:00 a.m. **Hierarchical Modeling and Stochastic Variable Selection in the Analysis of Multiple SNPs in Genetic Association Studies—**❖David Conti, University of Southern California**;** Juan P. Lewinger, University of Southern California

9:25 a.m. **Multilevel Approaches to Genotype-Phenotype Association: VUS Classification and SNP Blocking—**❖Giovanni Parmigiani, The Johns Hopkins University**;** Edwin Iversen, Duke University**;** Xi Zhou, Cornell University**;** Daniele Fallin, The Johns Hopkins University**;** Ingo Ruczinski, The Johns Hopkins University**;** Cristian Pattaro, Eurac

9:50 a.m. **Hierarchical Models for Biases in Observational Studies—**❖Sander Greenland, University of California, Los Angeles

10:15 a.m. **Floor Discussion**

358 CC-355 B

✪ Medallion Lecture IV—Invited

IMS, General Methodology

Organizer(s): Bernard W. Silverman, St. Peter's College

Chair(s): Mark Low, University of Pennsylvania

8:35 a.m. **Quantile Regression Under Censorship—**❖Xuming He, University of Illinois

10:00 a.m. **Floor Discussion**

359 CC-255 E

● ✪ Statistical Methodology for the Analysis of Sleep Studies—Invited

Biometrics Section, WNAR

Organizer(s): Brian S. Caffo, Johns Hopkins Bloomberg School of Public Health

Chair(s): Karen Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health

8:35 a.m. **Generalized Linear Mixed Model Analysis of Multistate Sleep Transition Data: The Sleep Heart Health Study—**❖Brian S. Caffo, Johns Hopkins Bloomberg School of Public Health**;** Bruce Swihart, The Johns Hopkins University**;** Naresh Punjabi, Johns Hopkins Bayview Medical Center

9:00 a.m. **Methods for Signal Extraction from EEG Time Series with Application to Large Studies of Sleep—**❖Chongzhi Di, The Johns Hopkins University**;** Ciprian M. Crainiceanu, The Johns Hopkins University

9:25 a.m. **Semiparametric Event History Models for Analyzing Human Sleep Data—**❖Thomas Kneib, Ludwig-Maximilians-Universität München**;** Ludwig Fahrmeir, University of Munich**;** Alexander Yassouridis, Max-Planck-Institute for Psychiatry

9:50 a.m. Disc: David Ruppert, Cornell University

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

360 CC-150 A-C

● Recent Developments in Macroeconometrics—Invited

Business and Economics Statistics Section

Organizer(s): Atsushi Inoue, University of British Columbia

Chair(s): Atsushi Inoue, University of British Columbia

8:35 a.m. **Not All Oil Price Shocks Are Alike: Disentangling Demand and Supply Shocks in the Crude Oil Market—**❖Lutz Kilian, University of Michigan

9:00 a.m. **Optimal Impulse Response Function Matching Estimation—**❖Barbara Rossi, Duke University**;** Atsushi Inoue, University of British Columbia**;** Alastair R. Hall, University of Manchester**;** James Nason, Federal Reserve Bank of Atlanta

9:25 a.m. **Structural Vector Autoregressions: Theory and Application—**❖Dan Waggoner, Federal Reserve Bank of Atlanta**;** Tao Zha, Federal Reserve Bank of Atlanta

9:50 a.m. **Projection Minimum Distance: An Estimator for Dynamic Models—**❖Oscar Jorda, University of California, Davis

10:15 a.m. **Floor Discussion**

361 CC-255 C

● ✪ Bayesian Modeling of Incomplete Heterogeneous Data—Invited

WNAR, ENAR, Section on Bayesian Statistical Science, Biometrics Section

Organizer(s): W. John Boscardin, University of California, Los Angeles

Chair(s): Xiao Zhang, The University of Alabama at Birmingham

8:35 a.m. **Flexible Modeling of the Mean and Covariance Structure for Heterogeneous Incomplete Multiple Longitudinal Markers—**❖W. John Boscardin, University of California, Los Angeles**;** Hector Lemus, University of California, Los Angeles

9:00 a.m. **Calculating the Effect of a Randomized Intervention from Panel Data Subject to Noncompliance—**❖Siddhartha Chib, Washington University in St. Louis**;** Liana Jacobi, The University of Melbourne

9:25 a.m. **Temporal Configuration Analysis: Hidden Markov Models for Heterogeneous Multivariate Longitudinal Data—**❖Steven L. Scott, University of Southern California

9:50 a.m. **Bayesian Modeling of Longitudinal Processes with Dropout and Noncompliance—**❖Michael Daniels, University of Florida**;** Xuefeng Liu, Wayne State University

10:15 a.m. **Floor Discussion**

362 CC-260

✪ Variable Selection and Related Statistical Inference—Invited

Section on Teaching Statistics in the Health Sciences, Biometrics Section, General Methodology

Organizer(s): Hua Liang, University of Rochester

Chair(s): Steven Wang, York University

8:35 a.m. **Variable Selection in Semiparametric Regression Modeling—**❖Runze Li, The Pennsylvania State University**;** Hua Liang, University of Rochester

9:00 a.m. **Selections—**❖Chih-Ling Tsai, University of California, Davis

9:25 a.m. **Overall AIC Selection Strategy for Linear Mixed-Effects Models—**❖Hua Liang, University of Rochester**;** Guohua Zou, Chinese Academy of Sciences

9:50 a.m. **Conditional AIC for Nonlinear Mixed Effects Models—**❖Florin Vaida, University of California, San Diego

10:15 a.m. **Floor Discussion**

Invited Panels 8:30 a.m.–10:20 a.m.

363 CC-251 E

✪ New Policies To Facilitate the Tenure Process for Women in Sciences—Invited

Committee on Career Development, Caucus for Women in Statistics

Organizer(s): Tena Katsaounis, The Ohio State University

Chair(s): Anna Nevius, U.S. Food and Drug Administration

Panelists:
- ❖ Rebecca Doerge, Purdue University
- ❖ Regina Liu, Rutgers University
- ❖ Mari Palta, University of Wisconsin-Madison
- ❖ Nancy Reid, University of Toronto

10:15 a.m. **Floor Discussion**

364 CC-254 A

✪ Improving the Agriculture Resources Management Survey: Dealing with Complexity in Government Surveys—Invited

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Thomas J. Plewes, National Academy of Sciences

Chair(s): Thomas J. Plewes, National Academy of Sciences

Panelists:
- ❖ David Binder, Statistics Canada (Retired)
- ❖ Cynthia Clark, Office for National Statistics
- ❖ Frederick Conrad, University of Michigan
- ❖ Carol C. House, National Agricultural Statistics Service

10:15 a.m. **Floor Discussion**

365 CC-255 B

● Protecting Confidentiality in Public Use Data by Releasing Synthetic Datasets: Experiences with Genuine Applications—Invited

Committee on Privacy and Confidentiality, Section on Bayesian Statistical Science, Section on Survey Research Methods

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

Chair(s): Trivellore E. Raghunathan, University of Michigan

Panelists:
- ❖ Jerome P. Reiter, Duke University
- ❖ John Abowd, Cornell University

❖ Simon Woodcock, Simon Fraser University
❖ Sam Hawala, U.S. Census Bureau

10:15 a.m. **Floor Discussion**

366 CC-254 C

Conflict of Interest Concerns in Medical Statistics—Invited

Committee on Professional Ethics, ENAR, Biometrics Section, Section on Teaching Statistics in the Health Sciences

Organizer(s): Peter B. Imrey, The Cleveland Clinic

Chair(s): Janet Wittes, Statistics Collaborative

Panelists:
❖ Peter B. Imrey, The Cleveland Clinic
❖ Saskia le Cessie, Leiden University Medical Centre
❖ Stephen Ruberg, Eli Lilly and Company
❖ Lisa LaVange, The University of North Carolina at Chapel Hill
❖ Susan S. Ellenberg, University of Pennsylvania
❖ Niels Keiding, University of Copenhagen

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

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

367 CC-150 G

● ✪ Bayesian Applications in Astronomy and Physics—Topic-Contributed

Section on Bayesian Statistical Science, ENAR

Organizer(s): David van Dyk, University of California, Irvine

Chair(s): David van Dyk, University of California, Irvine

8:35 a.m. **A Dempster-Shafer Bayesian Solution to the Banff A1 Challenge—**❖Paul Edlefsen, Harvard University

8:55 a.m. **An Exploratory Statistical Study of the Measured Motion of the Guide Star Used in a New Test of Einstein's Universe—**❖Jingchen Liu, Harvard University; Xiao-li Meng, Harvard University; Michael Ratner, Harvard-Smithsonian Center for Astrophysics; Irwin Shapiro, Harvard-Smithsonian Center for Astrophysics

9:15 a.m. **Upper Limits for Source Detection in the Three-Poisson Model—**❖Paul Baines, Harvard University

9:35 a.m. **A Statistical Approach to Stellar Archaeology—**❖Hyunsook Lee, Harvard-Smithsonian Center for Astrophysics; Vinay L. Kashyap, Harvard-Smithsonian Center for Astrophysics; Andreas Zezas, Harvard-Smithsonian Center for Astrophysics

9:55 a.m. **Coherent Bayesian Inference on Compact Binary Inspirals Using a Network of Interferometric Gravitational Wave Detectors—**❖Christian Röver, The University of Auckland; Renate Meyer, The University of Auckland; Nelson Christensen, Carleton College

10:15 a.m. **Floor Discussion**

368 CC-155 C

● ✪ Keepers of the Fire—Topic-Contributed

Social Statistics Section

Organizer(s): Olivia Blum, Israeli Central Bureau of Statistics

Chair(s): Virginia A. de Wolf, Consultant

8:35 a.m. **Institutional Memory and Information Management—**❖Paul Johanis, Statistics Canada

8:55 a.m. **Transforming Statistical Knowledge into Institutional Memory—**❖Olivia Blum, Israeli Central Bureau of Statistics

9:15 a.m. **The Planning Database: Decennial Census Data for Historical, Real-Time, and Prospective Analysis—**❖J. Gregory Robinson, U.S. Census Bureau; Carrie L. Johanson, U.S. Census Bureau; Antonio Bruce, U.S. Census Bureau

9:35 a.m. Disc: Fritz Scheuren, NORC at the University of Chicago

9:55 a.m. **Floor Discussion**

369 CC-355 A

● ✪ Application and Issues of Crossover and Matched Design in Clinical Trials—Topic-Contributed

Biopharmaceutical Section, ENAR, WNAR

Organizer(s): Yi Tsong, U.S. Food and Drug Administration

Chair(s): Sharon Murray, GlaxoSmithKline

8:35 a.m. **A Study of Bioequivalence Trials with Missing Data—**❖Yiyun Zhang, The Pennsylvania State University

8:55 a.m. **Crossover Designs Based on Type I Orthogonal Arrays for a Self and Simple Mixed Carryover Effects Model with Correlated Errors—**❖Samad Hedayat, University of Illinois at Chicago; Zhiwu Yan, University of Illinois at Chicago

9:15 a.m. **Uniformly Balanced Repeated Measurements Designs in the Presence of Subject Dropout—**❖Dibyen Majumdar, University of Illinois at Chicago

9:35 a.m. **A Monte Carlo Study for the Methods Used for Assessing Treatment Differences with Possible Carryover Effect in Crossover Designed Studies—**❖Ling Chen, U.S. Food and Drug Administration**;** Ferrin D. Harrison, U.S. Food and Drug Administration

9:55 a.m. **Sample Size Re-estimation for Noninferior Study of Matched Data—**❖Yi Tsong, U.S. Food and Drug Administration**;** Wu Yu-te, U.S. Food and Drug Administration

10:15 a.m. **Floor Discussion**

370 CC-355 C

● ✪ Experimental Design and Analysis of Drug Combinations—Topic-Contributed

Biopharmaceutical Section, ENAR, WNAR

Organizer(s): Ming T. Tan, University of Maryland Greenebaum Cancer Center

Chair(s): J. Jack Lee, The University of Texas M. D. Anderson Cancer Center

8:35 a.m. **A Hierarchical Paradigm for Synergy Assessment Modeling Approaches—**❖William Greco, Roswell Park Cancer Institute

8:55 a.m. **Nonlinear Blending: An Alternative to Dosewise Additivity, the Interaction Index, and Bliss Independence—**John Peterson, GlaxoSmithKline**;** ❖Steven J. Novick, GlaxoSmithKline

9:15 a.m. **Experimental Design and Synergy Analysis for Drug Combination Studies Based on Log-Linear Dose Responses—**❖Hong-Bin Fang, University of Maryland Greenebaum Cancer Center**;** Ming T. Tan, University of Maryland Greenebaum Cancer Center

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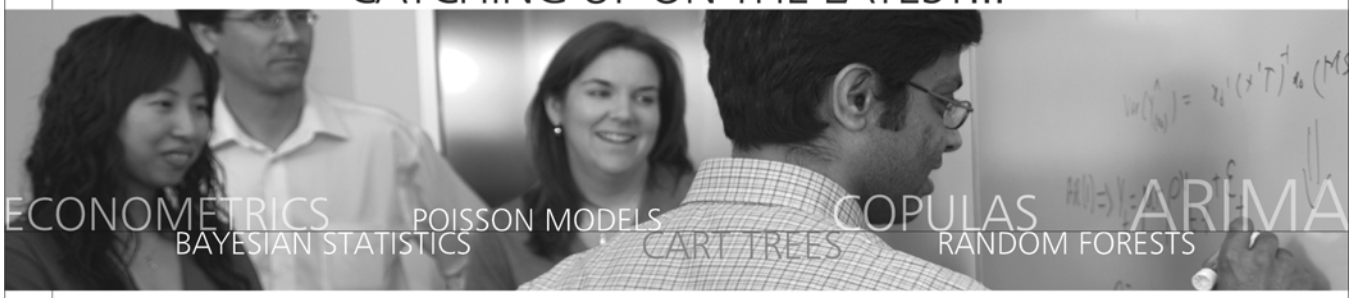

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9:35 a.m. **A Semiparametric Response Surface Model for Assessing Drug Interaction**—❖Maiying Kong, University of Louisville; J. Jack Lee, The University of Texas M. D. Anderson Cancer Center

9:55 a.m. Disc: Ming T. Tan, University of Maryland Greenebaum Cancer Center

10:15 a.m. **Floor Discussion**

371 CC-255 D

● Current Issues in Risk Prediction Modeling—Topic-Contributed

ENAR, Biometrics Section

Organizer(s): Nancy Cook, Brigham and Women's Hospital

Chair(s): Ralph B. D'Agostino, Sr., Boston University

8:35 a.m. **Evaluating the Incremental Impact of a Risk Prediction Marker Using Predictiveness Curves**—❖Margaret Pepe, Fred Hutchinson Cancer Research Center; Wen Gu, University of Washington; Ying Huang, University of Washington; Ziding Feng, Fred Hutchinson Cancer Research Center

8:55 a.m. **C-Statistics and Reclassification in Risk Prediction Models**—❖Nancy Cook, Brigham and Women's Hospital

9:15 a.m. **Updating Clinical Prediction Models: Simple Methods Give Promising Results**—❖Kristel J.M. Janssen, Julius Center UMC Utrecht; Karel G. Moons, Julius Center UMC Utrecht; Yvonne Vergouwe, Julius Center UMC Utrecht; Diederick E. Grobbee, Julius Center UMC Utrecht

9:35 a.m. **Rehabilitation of the Case-Control Design in Prediction Research**—❖Karel G. Moons, Julius Center UMC Utrecht; Cornelis Biesheuvel, Julius Center UMC Utrecht; Yvonne Vergouwe, Julius Center UMC Utrecht; Ruud Oudega, Julius Center UMC Utrecht; Arno W. Hoes, Julius Center UMC Utrecht; Diederick E. Grobbee, Julius Center UMC Utrecht

9:55 a.m. Disc: Michael J. Pencina, Boston University

10:15 a.m. **Floor Discussion**

372 CC-251 A

✪ Statistics for Nonlinear Dynamics—Topic-Contributed

IMS, Business and Economics Statistics Section

Organizer(s): Giles Hooker, Cornell University

Chair(s): Anand Vidyashankar, Cornell University

8:35 a.m. **Collocation Tempering for Differential Equation Models**—❖David A. Campbell, Simon Fraser University Surrey

8:55 a.m. **Meta-Analysis Based on Summarized Data with Application to Drug-Drug Interaction**—❖Lang Li, Indiana University

9:15 a.m. **Detecting Nonlinear Dynamics in a Psychoacoustics Experiment**—❖Theodoro Koulis, JSS Medical Research

9:35 a.m. **Testing for Missing Dynamical Variables**—❖Giles Hooker, Cornell University

9:55 a.m. **Statistical Data Assimilation for Marine Ecological Prediction**—❖Michael Dowd, Dalhousie University

10:15 a.m. **Floor Discussion**

373 CC-155 F

● ✪ Bayesian Statistics in Medical Device Clinical Trials—Topic-Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section, ENAR

Organizer(s): Telba Irony, U.S. Food and Drug Administration

Chair(s): Jeffrey D. Blume, Brown University

8:35 a.m. **Weighing Evidence and Loss in Clinical Decisionmaking**—❖Jeng Mah, American Medical Systems

8:55 a.m. **Constructing Bayesian Trials in a Type I Error–Controlled Regulatory World: The Good, the Bad, and the Ugly**—❖Scott Berry, Berry Consultants

9:15 a.m. **Bayesian Designs and Therapeutic Medical Device Trials**—❖Pablo Bonangelino, U.S. Food and Drug Administration

9:35 a.m. **Examples from Medical Device Clinical Trials To Illustrate Advantages of the Bayesian Approach**—❖Teresa Nelson, Technomics Research, LLC

9:55 a.m. **Bayesian Sample Size Calculation with Average Length Criterion Using Historical Control Data in Medical Device Trials**—❖Liang Li, Genzyme Corporation; Ming-Hui Chen, University of Connecticut; Hong Wang, Boston Scientific Corporation

10:15 a.m. **Floor Discussion**

374 CC-251 D

● ✪ Statistical Research in the VA Healthcare System—Topic-Contributed

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

Organizer(s): Roslyn A. Stone, Veterans Affairs Pittsburgh Healthcare System

Chair(s): Xiao-Hua (Andrew) Zhou, University of Washington

8:35 a.m. **Determining Sample Sizes for Estimating and Comparing Item Parameters from the Rasch Model—**❖Linda Young, University of Florida

8:55 a.m. **The Impact of Imbalance in Two-level Logistic Models—**❖Huanyu Chen, University of Pittsburgh**;** Roslyn A. Stone, Veterans Affairs Pittsburgh Healthcare System

9:15 a.m. **A Comparison of Methods To Impute Missing Race in VA Administrative Data—**❖Maria Mor, CHERP/VA Pittsburgh Healthcare System**;** Chunrong Cheng, University of Pittsburgh**;** Bevanne Bean-Mayberry, Veterans Affairs Greater Los Angeles**;** Gong Tang, University of Pittsburgh**;** Roslyn A. Stone, Veterans Affairs Pittsburgh Healthcare System

9:35 a.m. **Estimating Concordance for a Hazard Scale in the Presence of Time-Varying Data—**❖Peter Richardson, Baylor College of Medicine

9:55 a.m. **Analyzing Health Care Cost Data in the Presence of Heterogeneous Patients: Wouldn't Three Pieces Be Better Than One?—**❖James F. Burgess, Jr., Boston University**;** ❖Kevin L. Sloan, University of Washington

10:15 a.m. **Floor Discussion**

375 CC-250 B

● ✪ Risk Measures in Actuarial Science—Topic-Contributed

Section on Nonparametric Statistics, Section on Risk Analysis, Business and Economics Statistics Section

Organizer(s): Ricardas Zitikis, University of Western Ontario

Chair(s): Duncan Murdoch, University of Western Ontario

8:35 a.m. **Risk Measures, Distortion Parameters, and their Empirical Estimation—**❖Bruce Jones, University of Western Ontario**;** Ricardas Zitikis, University of Western Ontario

8:55 a.m. **Nested L-Statistics and Their Use in Comparing the Riskiness of Portfolios—**❖Vytaras Brazauskas, University of Wisconsin-Milwaukee**;** Bruce Jones, University of Western Ontario**;** Madan Puri, Indiana University**;** Ricardas Zitikis, University of Western Ontario

9:15 a.m. **Testing Hypotheses About the Equality of Several Risk Measure Values with Applications in Insurance—**❖Madan Puri, Indiana University

9:35 a.m. **Estimating Conditional Tail Expectations with Actuarial Applications in View—**❖Ricardas Zitikis, University of Western Ontario

9:55 a.m. **Floor Discussion**

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

376 CC-255 F

Analysis of Binary Data and Directional Data—Contributed

Biometrics Section

Chair(s): Tammy Massie, U.S. Food and Drug Administration

8:35 a.m. **Some New Models and Procedures for Directional Data—**❖Brett Presnell, University of Florida**;** Pavlina Rumcheva, C-BASS, LLC

8:50 a.m. **Analysis of Binary and Continuous Outcomes in Neonatal Clinical Trials with Twin Births—**❖Michele Shaffer, The Pennsylvania State University**;** Kristi L. Watterberg, University of New Mexico**;** Allen Kunselman, The Pennsylvania State University

9:05 a.m. **Analysis of Relatively Large Sparse Binary Data—**❖Ko-Kang Wang, The Australian National University**;** Susan Wilson, The Australian National University**;** Alan Welsh, The Australian National University**;** John Maindonald, The Australian National University

9:20 a.m. **Generalized Linear Mixed Models for Binary Outcome Data with a Low Number of Occurrences: Understanding When Estimation Procedures Fail—**❖Marie-Eve Beauchamp, McGill University**;** Robert W. Platt, McGill University**;** James A. Hanley, McGill University

9:35 a.m. **Binary Time Series Modeling with Application to Kinetic—**❖Ying Hung, Georgia Institute of Technology**;** Chien-Fu Jeff Wu, Georgia Institute of Technology

9:50 a.m. **Regional Spatial Cluster Detection for Repeated Measured Outcomes—**❖Andrea Cook, Group Health Center for Health Studies**;** Diane R. Gold, Channing Laboratory, Brigham and Women's Hospital, and Harvard Medical School**;** Yi Li, Harvard School of Public Health

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

377 CC-257

● ✪ Advances in Some Classic Tests of Hypotheses—Contributed

Biometrics Section

Organizer(s): Gengsheng Qin, Georgia State University

8:35 a.m. **Likelihood Ratio Tests of Correlated Multivariate Samples—**❖Erning Li, Texas A&M University**;** Johan Lim, Texas A&M University

8:50 a.m. **A Comparison of Node-Splitting Rules in Recursive Partitioning Analysis of Multivariate Quantitative Structure Activity Data—**❖Yujun Wu, University of Medicine and Dentistry of New Jersey**;** Marc Genton, University of Geneva**;** Leonard A. Stefanski, North Carolina State University

9:05 a.m. **On Identifying Minimum Efficacious Doses in Combination Drug Trials—**❖Julia Soulakova, University of Nebraska-Lincoln**;** Allan Sampson, University of Pittsburgh

9:20 a.m. **Weighted Distance Measures for Metabolomic Data—**❖Philip Dixon, Iowa State University

9:35 a.m. **A Combined Test for the Equality of Means—**❖Yvonne Zubovic, Indiana University Purdue University Fort Wayne**;** Chand Chauhan, Indiana University Purdue University Fort Wayne

9:50 a.m. **Analysis of One-Way Layout of Overdispersed Count Data—**❖Krishna Saha, Central Connecticut State University

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

378 CC-355 D

● ✪ Bayesian Approaches in Drug Development—Contributed

Biopharmaceutical Section

Chair(s): Susan Portugal, Wyeth

8:35 a.m. **A Revisit to Sample Size Computation—**❖Ruoyong Yang, Pfizer Inc.

8:50 a.m. **Joint Exploration of Haplotype Information and High-Order SNP-Phenotype Associations via Gibbs Sampling—**❖Jing Zhao, Merck & Co., Inc.

9:05 a.m. **Using the Bayesian Approach for Pharmaceutical Process Optimization—**❖Aili Cheng, GlaxoSmithKline**;** John Peterson, GlaxoSmithKline**;** Younan Chen, GlaxoSmithKline**;** Gregory Stockdale, GlaxoSmithKline

9:20 a.m. **Bayesian Spines To Infer Population Mean and Tolerance Region from Multivariate Longitudinal Data—**Qianqiu Li, Wyeth**;** ❖Yonggang Zhao, Wyeth

9:35 a.m. **Bayesian Hierarchical Models for Detecting Safety Signals in Clinical Trials—**❖Hong A. Xia, Amgen Inc.**;** Haijun Ma, Amgen Inc.

9:50 a.m. **Controlled Bayesian Optimal Designs for Dose-Response Studies—**❖Wei Zhu, State University of New York at Stony Brook**;** Jiaqiao Hu, State University of New York at Stony Brook**;** Weng-Kee Wong, University of California, Los Angeles

10:05 a.m. **A Bayesian Approach to Utilizing Prior Data in New Drug Development—**❖Todd Coffey, Amylin Pharmaceuticals, Inc.**;** Larry Z. Shen, Amylin Pharmaceuticals, Inc.**;** Wei Deng, Amylin Pharmaceuticals, Inc.

379 CC-355 F

Linear Models in Clinical Trials—Contributed

Biopharmaceutical Section

Chair(s): Thomas J. Uryniak, AstraZeneca

8:35 a.m. **Inverse Prediction: A Clinical Application—**❖Jayawant Mandrekar, Mayo Clinic

8:50 a.m. **An Approach to Obtaining Initial Values for the Covariance Parameters for Repeated Measures Analysis with Unstructured Covariance Model—**❖Kaifeng Lu, Merck & Co., Inc.

9:05 a.m. **Permutation Test-Based Significance Levels for Repeated Measures—**❖Katie Spencer, Zimmer, Inc.**;** Daniel Reyner, Zimmer, Inc

9:20 a.m. **A Multiplicative Heteroscedasticity-Based Transformation To Reduce Heteroscedasticity in General Linear Models—**❖Mitchell Rosen, Omnicare Clinical Research

9:35 a.m. **Choosing an Appropriate Variance-Covariance Structure for Small Sample Size Data—**❖Zhaoling Meng, sanofi-aventis**;** Xun Chen, sanofi-aventis**;** Robert Kringle, sanofi-aventis

9:50 a.m. **Modeling Covariance Structure in Unbalanced Longitudinal Data—**❖Min Chen, Texas A&M University**;** Jianhua Z. Huang, Texas A&M University

10:05 a.m. **Permuted Block Randomization and Balance in Clinical Trials—**❖John (Joong Hee) Han, Centocor, Inc.**;** Lee-Lian Kim, Centocor, Inc.

380 CC-255 A

● Applications in Statistical Genetics—Contributed

ENAR, Section on Teaching Statistics in the Health Sciences, Biometrics Section

Chair(s): Jared Lunceford, Merck & Co., Inc.

8:35 a.m. **Gene-Environment Interaction Test for Dichotomous Traits in Nuclear Families—**❖Thomas Hoffmann, Harvard University**;** Nan Laird, Harvard University

8:50 a.m. **Oracle and Adaptive Compound Decision Rules for False Discovery Rate Control—**❖Wenguang Sun, University of Pennsylvania**;** Tony Cai, University of Pennsylvania

9:05 a.m. **A General Tree-Based Regression Model for Multivariate Outcomes—**❖Kai Yu, National Institutes of Health**;** William Wheeler, Information Management Service Inc**;** Qizhai Li, National Institutes of Health**;** Jinbo Chen, University of Pennsylvania

9:20 a.m. **Using a Hybrid-Modified Genetic Algorithm To Find Feasible Regions of a Desirability Function—**❖Wen Wan, Virginia Polytechnic Institute and State University**;** Jeffrey B. Birch, Virginia Polytechnic Institute and State University

9:35 a.m. **A Study of Variability in Mass Spectrometry Data—**❖Ann L. Oberg, Mayo Clinic**;** Douglas W. Mahoney, Mayo Clinic**;** Jeanette E. Eckel-Passow, Mayo Clinic**;** Terry M. Therneau, Mayo Clinic**;** Christopher J. Mason, Mayo Clinic**;** Kenneth L. Johnson, Mayo Clinic**;** K. Sreekumaran Nair, Mayo Clinic**;** H. Robert Bergen, Mayo Clinic

9:50 a.m. **An Approach to Infer Gene Interaction Networks—**❖Alina Andrei, University of Wisconsin-Madison**;** Christina Kendziorski, University of Wisconsin-Madison

10:05 a.m. **Cluster-Based Phenotype Construction for Linkage Heterogeneity—**❖Cavan Reilly, The University of Minnesota

381 CC-150 D-F

● ✪ Bayesian Methods in the Social Sciences—Contributed

Section on Bayesian Statistical Science

Chair(s): Messan C. Setodji, RAND Corporation

8:35 a.m. **A Bayesian Method for IRT Model Selection—**❖Sherwin Toribio, University of Wisconsin-La Crosse

8:50 a.m. **A New Bayesian Approach for Misidentification with Applications for Survey Data—**Simon Cheng, University of Connecticut**;** ❖Yingmei Xi, University of Connecticut**;** Ming-Hui Chen, University of Connecticut

9:05 a.m. **Model-Based Clustering of non-Gaussian Longitudinal Data—**❖Miguel Juarez, University of Warwick**;** Mark F. J. Steel, University of Warwick

9:20 a.m. **Markov Chain Monte Carlo–Based Mixture Modeling Applications in Psychometrics—**❖Dipendra Subedi, Michigan State University

9:35 a.m. **Bayesian Analysis of Repeated Behaviors Using Event-Dependent Frailty Models—**❖Getachew Dagne, University of South Florida

9:50 a.m. **A Joint Multivariate Ordered Probit and Tobit Modeling of Households' Vehicle Choice and Usage—**❖Hao Fang, University of California, Irvine

10:05 a.m. **Fusion, Pro and Con: Model-Based Fusion of MaxDiff and Ratings Data to Put Respondent Choice Parameters on a Common Scale and Consistency with Random Utility Theory—**❖Peter Lenk, The University of Michigan**;** Lynd Bacon, Lynd Bacon Associates

382 CC-250 A

✪ Nonparametric Inference for Correlated Data—Contributed

Section on Nonparametric Statistics

Chair(s): Mikyoung Jun, Texas A&M University

8:35 a.m. **Spectral-Based Tests for Periodicities—**❖Lai Wei, The Ohio State University**;** Peter F. Craigmile, The Ohio State University

8:50 a.m. **A Nonparametric Time Reversibility Test Based on U-Statistics—**❖Nusrat Jahan, James Madison University**;** Yuji Tomita, James Madison University

9:05 a.m. **Asymptotic Properties of Discrete Fourier Transforms of Spatial Processes—**❖Soutir Bandyopadhyay, Texas A&M University**;** Soumendra N. Lahiri, Texas A&M University

9:20 a.m. **Adaptive Density Estimation Under Dependence—**❖Olivier Wintenberger, SAMOS**;** Irene Gannaz, University Joseph Fourier

9:35 a.m. **Model Selection for Multivariate Smoothing Splines with Correlated Random Errors—**❖Eren Demirhan, North Carolina State University**;** Hao Zhang, North Carolina State University

9:50 a.m. **An Entropy-derived Measurement of Dependence Between Two Groups of Random Variables—**❖Nan Kong, Educational Testing Services

10:05 a.m. **One-Sample Location Tests for Multilevel Data—**❖Denis Larocque, HEC Montreal**;** Jaakko Nevalainen, University of Tampere**;** Hannu Oja, University of Tampere

383 CC-251 F

● Health Risk and Exposure Assessment—Contributed

Section on Risk Analysis

Chair(s): Edmund Lau, Exponent, Inc.

8:35 a.m. **Bayesian Exposure Assessment for Pesticide Intake from Multiple Food Products—**❖Ayona Chatterjee, University of West Georgia**;** Graham Horgan, Biomathematics & Statistics of Scotland**;** Chris Theobald, University of Edinburgh

8:50 a.m. **The Application of the Benchmark Approach to the Study of the Joint Effect of Mixtures of Air Pollutants—**❖David Svendsgaard, U.S. Environmental Protection Agency

9:05 a.m. **Bayesian Analysis of Physiologically Based Pharmacokinetics Modeling of Perchloroethylene in Humans—**❖Junshan Qiu, University of Georgia

9:20 a.m. **Parametric Modeling of Melanoma Prognoses: An Alternative to the Cox Regression Model—**❖Shouluan Ding, The University of Alabama at Birmingham**;** Huiyi Lin, The University of Alabama at Birmingham**;** Renee Desmond, The University of Alabama at Birmingham**;** Seng-jaw Soong, The University of Alabama at Birmingham

9:35 a.m. **A Bayesian Network-Driven Approach for Quantitative Risk Assessment of Foreign Body Injuries in Children—**❖Cecilia Scarinzi, Università degli Studi di Torino**;** Paola Berchialla, University of Torino**;** Silvia Snidero, S&A S.r.l.**;** Alexander Stancu, University of Torino**;** Roberto Corradetti, University of Torino**;** Dario Gregori, University of Torino

9:50 a.m. **Confidence Intervals for Quantiles Using Generalized Lambda Distributions—**❖Steve Yu Shuo Su, The George Institute for International Health

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

384 CC-155 A

● ✪ Graphs and Networks—Contributed

Section on Statistical Computing, Section on Government Statistics, Section on Statistical Graphics, Section on Statisticians in Defense and National Security

Chair(s): Stanley Wasserman, Indiana University

8:35 a.m. **Structural Learning of Chain Graphs via Decomposition—**❖Zongming Ma, Stanford University**;** Xianchao Xie, Harvard University**;** Zhi Geng, Peking University

8:50 a.m. **A Statistical Social Network Approach to Computer Network Optimization—**❖Hadi Rezazad; Yasmin H. Said, George Mason University**;** Edward Wegman, George Mason University

9:05 a.m. **Scale-Free Origin-Destination Flow Statistics Estimation in a High-Speed Network—**❖Aiyou Chen, Alcatel-Lucent**;** Jin Cao, Bell Labs**;** Tian Bu, Bell Labs

9:20 a.m. **Style of Author-Coauthorship Social Networks: Statisticians of Prominent U.S. Universities—**❖Walid Sharabati, George Mason University**;** Yasmin H. Said, George Mason University**;** Edward Wegman, George Mason University

9:35 a.m. **Partitioning the Sample Space on Five Taxa for the Neighbor Joining Algorithm—**❖Ruriko Yoshida, University of Kentucky**;** Kord Eickmeyer, Institute fir Informatik, Humboldt-Universitat zu Berlin

9:50 a.m. **Destratified Importance Sampling—**❖Joseph Blitzstein, Harvard University

10:05 a.m. **Process Modeling To Explain Ordinal Categorical Data—**❖Simone Gray, Duke University**;** Alan E. Gelfand, Duke University

385 CC-254 B

Creating Cognitive Thinking Opportunities in Introductory Statistics Classes—Contributed

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

Chair(s): Josephine Hamer, Western Connecticut State University

8:35 a.m. **Shades of Gray: Ambiguity Tolerance and Inferential Thinking—**❖Robert Carver, Stonehill College

8:50 a.m. **Using Student-Generated Survey Data To Reinforce Basic Concepts of Introductory Statistics—**❖Elizabeth Walters, Loyola College in Maryland

9:05 a.m. **How Much Mathematics Is Appropriate in a Modern Statistics Course?—**❖Brian E. Smith, McGill University

9:20 a.m. **Misconceptions in Interpreting Center and Variability in Graphical Representations—**❖Linda Cooper, Towson University**;** Felice Shore, Towson University

9:35 a.m. **College Students' Intuitive Reasoning About Variation of Sample Mean—**❖Carl Lee, Central Michigan University**;** Maria Meletiou-Mavrotheris, Cyprus College

9:50 a.m. **Observational Creativity: Statistical Reasoning and the Dead Sea Scrolls—**❖Donald Bentley, Pomona College

10:05 a.m. **Discovering the Underlying Themes of Statistical Models—**❖Steve Wang, Swarthmore College

386 CC-251 B

Space-Time Modeling—Contributed

Section on Statistics and the Environment, General Methodology, Section on Statisticians in Defense and National Security

Chair(s): Lisa Madsen, Oregon State University

8:35 a.m. **Characterizing the Dependence Structure of Space-Time Processes Using Computer-Model Output and Sparse Observations—**❖Candace Berrett, The Ohio State University**;** Catherine A. Calder, The Ohio State University**;** Tao Shi, The Ohio State University

8:50 a.m. **Bayesian Hierarchical Models for Extreme Values Observed over Space and Time—**❖Huiyan Sang, Duke University**;** Alan E. Gelfand, Duke University

9:05 a.m. **Semiparametric Zero-Inflated Poisson Models for Spatio-Temporal Environmental Processes—**❖Ali Arab, University of Missouri-Columbia; Christopher K. Wikle, University of Missouri-Columbia; Scott Holan, University of Missouri-Columbia

9:20 a.m. **A Spatial-Temporal Point Process Model for Nowcasting Radar Reflectivities—**❖Yong Song, University of Missouri-Columbia; Christopher K. Wikle, University of Missouri-Columbia

9:35 a.m. **Identification of Pollution Source Directions via MCMC—**❖Basil Williams, Brigham Young University; William Christensen, Brigham Young University

9:50 a.m. **Bias in the Estimation of Self-Exciting Point Process Models for Earthquake Occurrences—**❖Annie Chu, University of California, Los Angeles; Frederic Paik Schoenberg, University of California, Los Angeles; Alejandro Veen, IBM T.J. Watson Research Center

10:05 a.m. **An Application of Voronoi Diagrams to Modeling Earthquake Catalogs—**❖Christopher Barr, University of California, Los Angeles; Frederic Paik Schoenberg, University of California, Los Angeles

387 CC-250 D

● Bayesian Methods and Applications in Epidemiology—Contributed

Section on Statistics in Epidemiology, Section on Teaching Statistics in the Health Sciences, Section on Health Policy Statistics

Chair(s): Bo Cai, University of South Carolina

8:35 a.m. **HIV Dynamics and Natural History Studies: Joint Modeling with Interval-Censored Event Times and Sparse Longitudinal Data—**❖Li Su, Brown University; Joseph W. Hogan, Brown University

8:50 a.m. **Covariate-Adjusted Constrained Bayes Predictions of Random Intercepts and Slopes—**❖Robert Lyles, Emory University; Renee Moore, University of Pennsylvania; Amita K. Manatunga, Emory University; Kirk Easley, Emory University

9:05 a.m. **Family-Based Case-Control Studies—**❖Li Zhang, The Cleveland Clinic; Bhramar Mukherjee, University of Michigan

9:20 a.m. **Association Test Using Pedigree and Multilocus Data with Missing Genotypes and Population Structure—**❖Jie Ding, The Ohio State University; Shili Lin, The Ohio State University

9:35 a.m. **Regression Models for Paired Censored Exponential and Gamma Distributions—**❖Michael P. Jones, Macquarie University; Don R. McNeil, Macquarie University

9:50 a.m. **Modeling a Cross-Sectional Response Variable with Longitudinal Predictors: An Example of Pulse Pressure and Pulse Wave Velocity—**❖Veena Shetty, National Institutes of Health; Christopher Morrell, Loyola College in Maryland; Samer S. Najjar, National Institutes of Health

10:05 a.m. **ROC Analysis for Longitudinal Disease Diagnostic Data Without a Gold Standard Test—**❖Chong Wang, Cornell University; Bruce W. Turnbull, Cornell University; Yrjö T. Gröhn, Cornell University; Søren S. Nielsen, The Royal Veterinary and Agricultural University

388 CC-155 E

● Topics in Survey and Census Redesigns—Contributed

Section on Survey Research Methods

Chair(s): Ismael Flores Cervantes, Westat

8:35 a.m. **Strategic Directions for the 2011 Canadian Census of Population—**❖David Dolson, Statistics Canada; Normand Laniel, Statistics Canada

8:50 a.m. **Alternative Allocation Designs for a Highly Stratified Establishment Survey—**❖Ernest Lawley, Bureau of Labor Statistics

9:05 a.m. **Sampling with Uncertain Frame Counts: Challenges in Sampling Head Start Children for the FACES Study—**❖Barbara L. Carlson, Mathematica Policy Research, Inc.

9:20 a.m. **Sample Design Research for the National Home and Hospice Care Survey—**❖Karen Davis, National Center for Health Statistics; Iris Shimizu, National Center for Health Statistics

9:35 a.m. **Sample Design of the Canadian Health Measures Survey—**❖Sarah M. Dion, Statistics Canada

9:50 a.m. **Sampling and Estimation Issues in the Redesign of the Canadian Survey of Household Spending—**❖Christian Nadeau, Statistics Canada

10:05 a.m. **Sample Redesign for the FDIC's Asset Valuation Review—**❖David W. Chapman, Federal Deposit Insurance Corporation

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389 CC-155 B

● Survey Estimation and Inference—Contributed

Section on Survey Research Methods

Chair(s): James R. Chromy, RTI International

8:35 a.m. **Design Effects of Sampling Frames in Establishment Surveys of Small Populations—** Monroe Sirken, National Center for Health Statistics; ❖Iris Shimizu, National Center for Health Statistics

8:50 a.m. **Variance Estimation for Statistical Matching Using Multiple Imputation—**❖James Reilly, University of Auckland

9:05 a.m. **Using Bootstrap Variance Calculations for a Survey with a Simple Design: The Case of the 2005 National Survey of the Work and Health of Nurses—**❖Gildas Kleim, Statistics Canada; Yves Bélanger, Statistics Canada

9:20 a.m. **Balanced Repeated Replication Variance Estimates from the Medical Expenditure Panel Survey 1996–2003 Household Component—**❖Dan Liao, University of Maryland

9:35 a.m. **Application of the Bootstrap Method in the International Price Program—**❖Patrick Bobbitt, Bureau of Labor Statistics; Steven P. Paben, Bureau of Labor Statistics; Moon Jung Cho, Bureau of Labor Statistics; James A. Himelein Jr., Bureau of Labor Statistics; Te-Ching Chen, Bureau of Labor Statistics; Lawrence Ernst, Bureau of Labor Statistics

9:50 a.m. Floor Discussion

390 CC-251 C

● Model Specification, Estimation, and Evaluation—Contributed

Social Statistics Section

Chair(s): Frank J. Potter, Mathematica Policy Research, Inc.

8:35 a.m. **A New Model for Interaction Effects—**❖David Weakliem, University of Connecticut

8:50 a.m. **Linear Information Models: A Prototype—**❖Philip E. Cheng, Academia Sinica; Jiun W. Liou, Academia Sinica; Michelle Liou, Academia Sinica; John Aston, Academia Sinica

9:05 a.m. **How Many Factors? A Strategy for Identifying Latent Structure in Factor Analysis—**❖Mitchell Harris, Brigham Young University; Michael K. Lauritzen, Brigham Young University; Landon Poppleton, Brigham Young University; Robert Bubb, Brigham Young University; Bruce Brown, Brigham Young University

9:20 a.m. **Comparing Factor Loadings in Exploratory Factor Analysis: Comparison of Asymptotic and Randomization Tests—**❖Holmes Finch, Ball State University; Brian French, Purdue University

9:35 a.m. **Extensions to Latent Cluster Models for Social Networks—**❖Pavel Krivitsky, University of Washington; Mark S. Handcock, University of Washington; Adrian E. Raftery, University of Washington; Peter D. Hoff, University of Washington

9:50 a.m. **Estimating Personal Network Size—**❖Tyler H. McCormick, University of Connecticut; Tian Zheng, Columbia University; Matthew J. Salganik, Columbia University

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

Invited Sessions 10:30 a.m.–12:20 p.m.

391 CC-155 D

● Statistical Consulting in Games and Sports Organizations—Invited

Section on Statistics in Sports, Section on Statistical Consulting

Organizer(s): Mark E. Glickman, Boston University

Chair(s): Eric T. Bradlow, University of Pennsylvania

10:35 a.m. **Prediction of Hitting Performance in Baseball—** ❖Shane T. Jensen, University of Pennsylvania

11:00 a.m. **It's All Fair Game: Consulting for an Online Competitive Entertainment Company—**❖Mark E. Glickman, Boston University

11:25 a.m. **Academic Sports Radio: Construction of Interpretable and Valid Metrics for Sports Consulting—**❖C. Shane Reese, Brigham Young University

11:50 a.m. Disc: David H. Annis, Wachovia Corporation

12:10 p.m. **Floor Discussion**

392 CC-355 F

● ✪ Analyses and Applications in High-Throughput Screening Assays—Invited

Biopharmaceutical Section, WNAR

Organizer(s): Xiaohua (Douglas) Zhang, Merck & Co., Inc.

Chair(s): Xiaodong (Eric) Wu, Johnson & Johnson PRD

10:35 a.m. **High Throughput Screening (HTS) for Lead and Target Identification—**❖Marc Ferrer, Merck & Co., Inc.

11:00 a.m. **Testing for Excess Over Highest Single Agent with an Application to High-Throughput Screening—**❖John Peterson, GlaxoSmithKline

11:25 a.m. **Simple Statistical Parameters but Quick Solutions in High-Throughput Screening Assays—**❖Xiaohua (Douglas) Zhang, Merck & Co., Inc.

11:50 a.m. **Applications of RNAi High-Throughput Screening in Drug Discovery—**❖Amy S. Espeseth, Merck & Co., Inc.

12:15 p.m. **Floor Discussion**

393 CC-355 D

● ✪ Statistical Issues and Novel Models for Quantifying the Effects of Continuous Traits on Mortality: Examples from Obesity—Invited

ENAR, Section on Statistics in Epidemiology, Section on Health Policy Statistics, Biometrics Section, WNAR

Organizer(s): Mai A. Elobeid, The University of Alabama at Birmingham

Chair(s): Mark Beasley, The University of Alabama at Birmingham

10:35 a.m. **Methods for Correcting Regression Dilution and Reverse Causation Biases in Regression-Model Survival Analyses—**❖James Greenberg, Brooklyn College

10:55 a.m. **Intentional Weight-Loss Effects on Mortality Rate Modeled as a Latent Variable Problem—**❖Gary L. Gadbury, University of Missouri-Rolla

11:15 a.m. **In Search of the Law of Mortality—**❖S. Jay Olshansky, University of Illinois at Chicago

11:35 a.m. **Accounting for Unobserved Confounders via Data Augmentation—**❖David B. Allison, The University of Alabama at Birmingham

11:55 a.m. Disc: Joseph Cappelleri, Pfizer Inc.

12:15 p.m. **Floor Discussion**

394 CC-251 F

● ✪ Understanding and Measurement of Human Capital—Invited

Social Statistics Section, Section on Survey Research Methods

Organizer(s): Juanita Tamayo Lott, U.S. Census Bureau

Chair(s): Daniel H. Weinberg, U.S. Census Bureau

10:35 a.m. **The Whole Is Greater than the Sum of Its Parts: The U.S. Census Bureau Human Capital Management Information System—**❖Juanita Tamayo Lott, U.S. Census Bureau; Tyra D. Smith, U.S. Census Bureau; Mark Holdrege, U.S. Census Bureau

10:55 a.m. **Measuring a Blended 21st-Century Work Force: Lessons from NASA—**❖Stephen E. Chesley, National Aeronautics and Space Administration; Craig Conlin, National Aeronautics and Space Administration

11:15 a.m. **Accurately Measuring a Creative Economy—**❖Steven W. Pedigo, Greater Washington Initiative

11:35 a.m. **Water, Water Everywhere and Not a Drop to Drink: Higher Education Access and Success Among America's Growing Population of Under-Represented Students of Color—**❖Walter R. Allen, University of California, Los Angeles; Derek Mitchell, Stupski Foundation; Gloria Gonzalez, University of California, Los Angeles

11:55 a.m. Disc: Ivan P. Fellegi, Statistics Canada

12:15 p.m. **Floor Discussion**

395 CC-355 E

● ✪ Mighty Nonparametrics—Invited

Noether Award Committee, General Methodology

Organizer(s): James Higgins, Kansas State University

Chair(s): James Higgins, Kansas State University

10:35 a.m. **Nonparametric Modeling for Classification of High-Dimensional Data and Multiple Hypothesis Testing—**❖Peter Hall, The University of Melbourne

11:20 a.m. **Nonparametric Hierarchical Models—**❖Ciprian M. Crainiceanu, The Johns Hopkins University

12:05 p.m. **Floor Discussion**

396 CC-150 D-F

Statistical Models and Methods for Microarray Data—Invited

IMS, Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Cun-Hui Zhang, Rutgers University

Chair(s): Cun-Hui Zhang, Rutgers University

10:35 a.m. **Inferences on the Proportion of Non-Null Effects in Large-Scale Multiple Comparisons—**❖Jiashun Jin, Purdue University

11:05 a.m. **Epigenomics: Some Statistical Applications—**❖Rafael Irizarry, Johns Hopkins Bloomberg School of Public Health

11:35 a.m. **Simultaneous Subset Selection via Rate-Distortion Theory with Applications to Clustering and Significance Analysis of Gene Expression Data—**❖Rebecka Jornsten, Rutgers University

12:05 p.m. **Floor Discussion**

397 CC-155 A

● ✪ Causal Methods: Advances and Applications in Health—Invited

Section on Health Policy Statistics, Section on Statistics in Epidemiology, Section on Teaching Statistics in the Health Sciences, WNAR

Organizer(s): Amelia Haviland, RAND Corporation

Chair(s): Jason Connor, Berry Consultants

10:35 a.m. **Gangs and Teen Violence: A Matched Analysis Using Trajectory Groups and Propensity Scores—**❖Amelia Haviland, RAND Corporation**;** Daniel Nagin, Carnegie Mellon University**;** Paul Rosenbaum, University of Pennsylvania

11:00 a.m. **Causal Inference of Nonrandomized Treatment Effects—**❖Heejung Bang, Cornell University**;** Yolanda Barrón, Cornell University

11:25 a.m. **Dealing with Control Group Drop-Out: Using Historical Patient Information to Supplement a Randomized Trial—**❖Elizabeth A. Stuart, Johns Hopkins Bloomberg School of Public Health**;** Donald B. Rubin, Harvard University**;** Samantha Cook, Google

11:50 a.m. **Propensity Scores and Multiple Treatments: An Application to Beneficiary Evaluations from the Medicare CAHPS Surveys—**❖Marc N. Elliott, RAND Corporation**;** Amelia Haviland, RAND Corporation

12:15 p.m. **Floor Discussion**

398 CC-155 F

✪ New Developments on Quantile Regression—Invited

IMS

Organizer(s): Xuming He, University of Illinois

Chair(s): Stephen Portnoy, University of Illinois

10:35 a.m. **Bayesian Model-Based Approaches to Semiparametric and Nonparametric Quantile Regression—**❖Athanasios Kottas, University of California, Santa Cruz**;** Milovan Krnjajic, Lawrence Livermore National Laboratory**;** Matthew Taddy, University of California, Santa Cruz

11:00 a.m. **Some Recent Advances in Computing Regularized Quantile Regression Models—**❖Ji Zhu, University of Michigan

11:25 a.m. **Learnability and Robustness of Nonparametric Quantile Regression—**❖Andreas Christmann, Free University of Brussels VUB**;** Ingo Steinwart, Los Alamos National Laboratory

11:50 a.m. **Conditional Quantile Estimation for GARCH Models—**❖Zhijie Xiao, Boston College

12:15 p.m. **Floor Discussion**

399 CC-Ballroom B

Wald Lecture II—Invited

IMS, General Methodology, Section on Bayesian Statistical Science

Organizer(s): Tony Cai, University of Pennsylvania

Chair(s): Luis R. Pericchi, University of Puerto Rico, San Juan

10:35 a.m. **Model Selection: Multiplicities and Approximations—**❖James Berger, Duke University

11:40 a.m. Disc: Susie Bayarri, University of Valencia

12:00 p.m. **Floor Discussion**

400 CC-355 B

● Frailty Models for Survival Analysis—Invited

Biometrics Section, ENAR, Section on Risk Analysis

Organizer(s): Xuelin Huang, The University of Texas M. D. Anderson Cancer Center

Chair(s): Lei Liu, University of Virginia

10:35 a.m. **Semiparametric Approaches for the Analysis of Multilevel Failure Time Data—**❖Joanna H. Shih, National Cancer Institute**;** Shou-En Lu, University of Medicine and Dentistry of New Jersey

11:00 a.m. **Frailty Models for Survival Data with Informative Censoring—**❖Xuelin Huang, The University of Texas M. D. Anderson Cancer Center**;** Robert Wolfe, University of Michigan**;** Lei Liu, University of Virginia

11:25 a.m. **Goodness-of-Fit for Frailty Models—**❖John Klein, Medical College of Wisconsin

11:50 a.m. Disc: Michael Kosorok, The University of North Carolina at Chapel Hill

12:10 p.m. **Floor Discussion**

401 CC-150 G

● ✪ Remote Sensing in Environmental Statistics—Invited

Section on Statistics and the Environment, Section on Statisticians in Defense and National Security

Organizer(s): Tao Shi, The Ohio State University

Chair(s): Tao Shi, The Ohio State University

10:35 a.m. **Markov Random Fields, Remote Sensing, and Predicting Crop Yields—**❖Stephan Sain, National Center for Atmospheric Research

10:55 a.m. **Nonstationary Covariance Models for TOMS Ozone Data—**❖Mikyoung Jun, Texas A&M University

11:15 a.m. **Understanding Large-Scale Structure in Massive Remote-Sensing Datasets—**❖Amy Braverman, Jet Propulsion Laboratory

11:35 a.m. **Space-Time Modeling of Biomass Burning and Regional Aerosols in Southeast Asia—**❖Catherine A. Calder, The Ohio State University**;** Tao Shi, The Ohio State University

11:55 a.m. Disc: Eric D. Kolaczyk, Boston University

12:05 p.m. Disc: Bin Yu, University of California, Berkeley

12:15 p.m. **Floor Discussion**

402 CC-251 A

Applications in Computational Biostatistics—Invited

Section on Statistical Computing, ENAR

Organizer(s): Yasmin H. Said, George Mason University

Chair(s): Yasmin H. Said, George Mason University

10:35 a.m. **Application of the State-Space Modeling Paradigm in Neuroscience Data Analysis—**Emery N. Brown, Massachusetts General Hospital; ❖Uri Eden, Boston University

11:05 a.m. **The Use of Distances in Surveillance—**❖Marcello Pagano, Harvard University

11:35 a.m. **Assessing Interventions Related to HIV Incidents Under the Influence of Ethanol—**Yasmin H. Said, George Mason University**;** ❖Edward Wegman, George Mason University

12:05 p.m. **Floor Discussion**

403 CC-255 E

● ✪ Advances in Statistical Quality Improvement—Invited

Section on Quality and Productivity, Section on Physical and Engineering Sciences

Organizer(s): Joe Sullivan, Mississippi State University

Chair(s): Joe Sullivan, Mississippi State University

10:35 a.m. **Bayesian Modeling of Accelerated Life Tests with Random Effects—**Ramon V. Leon, University of Tennessee**;** ❖Avery J. Ashby, BlueCross BlueShield of Tennessee

11:00 a.m. **A Control Chart for the Coefficient of Variation—**❖Chang W. Kang, Hanyang University**;** Man S. Lee, LG Philips LCD**;** Young J. Seong, Gyenggi Research Institute**;** Douglas M. Hawkins, The University of Minnesota

11:25 a.m. **An Optimal Filter Design Approach to Statistical Process Control—**❖Daniel W. Apley, Northwestern University**;** Chang-Ho Chin, Kyung Hee University

11:50 a.m. **The Rate of False Signals in X-bar Control Charts with Estimated Limits—**❖Diane P. Bischak, University of Calgary**;** Dan Trietsch, American University of Armenia

12:15 p.m. **Floor Discussion**

404 CC-150 A-C

2007 ASA Educational Ambassadorship—Invited

Committee on International Relations in Statistics

Organizer(s): Demissie Alemayehu, Pfizer Inc.

Chair(s): Martha Aliaga, American Statistical Association

10:35 a.m. **Challenges with Statistical Education in Developing Countries: A Case Study—**❖Eshetu Wencheko, Alpha University College

12:00 p.m. **Floor Discussion**

Invited Panels 10:30 a.m.–12:20 p.m.

405 CC-255 B

● ✪ Estimating Nonresponse Bias in Light of the New OMB Standards and Guidelines for Statistical Surveys—Invited

Section on Government Statistics, Section on Survey Research Methods, Social Statistics Section

Organizer(s): Roberta Sangster, Bureau of Labor Statistics

Chair(s): Michael P. Battaglia, Abt Associates, Inc.

Panelists:
- ❖ J. Michael Brick, Westat
- ❖ Robert M. Groves, University of Michigan
- ❖ Brian Harris-Kojetin, Office of Management and Budget

12:15 p.m. **Floor Discussion**

406 CC-251 E

The 20/20 of Statistical Education-Where We've Been and Where We're Going—Invited

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

Organizer(s): Patti Collings, Brigham Young University

Chair(s): Brad Hartlaub, Kenyon College

Panelists:
- ❖ Jeff Witmer, Oberlin College
- ❖ Allan Rossman, California Polytechnic State University
- ❖ Jessica Utts, University of California, Davis
- ❖ George Cobb, Mount Holyoke College

12:15 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

407 CC-250 A

● Seasonality and Statistics in Finance—Topic-Contributed

Business and Economics Statistics Section

Organizer(s): Tucker S. McElroy, U.S. Census Bureau; Rituparna Sen, University of California, Davis

Chair(s): Tucker S. McElroy, U.S. Census Bureau

10:35 a.m. **Seasonal Heteroscedasticity in Time Series: Modeling, Estimation, and Testing—**❖William R. Bell, U.S. Census Bureau**;** Thomas M. Trimbur, Federal Reserve Board

10:55 a.m. **A Local Goodness-of-Fit Diagnostic Based on the Log Determinant of the Sample Covariance Matrix—**Tucker S. McElroy, U.S. Census Bureau**;** ❖Scott Holan, University of Missouri-Columbia

11:15 a.m. **Are Volatility Estimators Robust with Respect to Modeling Assumptions?—**❖Yingying Li, The University of Chicago**;** Per A. Mykland, The University of Chicago

11:35 a.m. **Covariance Estimation for Nonsynchronous High-Frequency Data with Microstructure Noise—**❖Qiuyan Xu, University of California, Davis**;** Rituparna Sen, University of California, Davis

11:55 a.m. **On Diagnostic Checking for Mixture Autoregressive Time Series—**❖Qin Shao, University of Toledo

12:15 p.m. **Floor Discussion**

408 CC-255 A

● ✪ Interacting with the FDA in Medical Device Pre-Market Applications: From Pre-IDE to PMA Submission—Topic-Contributed

Biopharmaceutical Section, WNAR

Organizer(s): Lilly Yue, U.S. Food and Drug Administration

Chair(s): Yao Huang, U.S. Food and Drug Administration

10:35 a.m. **Challenges in Trial Design for the Next Generation Drug-Eluting Stents—**❖Zheng Zhou, Boston Scientific Corporation**;** Peter Lam, Boston Scientific Corporation

10:55 a.m. **Pre-PMA Meetings with the FDA in Medical Device Submissions—**Greg Campbell, U.S. Food and Drug Administration**;** Gerry Gray, U.S. Food and Drug Administration**;** ❖Lilly Yue, U.S. Food and Drug Administration

11:15 a.m. **Some Thoughts on the Variables in Communications on Medical Device Studies Between the Sponsor and the FDA from the View of the Statistical Consultant—**❖Dennis King, STATKING Consulting, Inc.

11:35 a.m. **One Statistician's Thoughts on Nonstatistical Issues That Affect Statistical Considerations in Medical Device Studies—**❖Alicia Toledano, Biostatistics Consulting, LLC

11:55 a.m. Disc: Greg Campbell, U.S. Food and Drug Administration

12:15 p.m. **Floor Discussion**

409 CC-255 C

● Topics in Crossover Trial Design and Analysis—Topic-Contributed

Biopharmaceutical Section, WNAR, Section on Statistical Consulting, ENAR

Organizer(s): Mary Putt, University of Pennsylvania

Chair(s): Mary Putt, University of Pennsylvania

10:35 a.m. **Carryover Effects in Crossover Designs—**❖John Stufken, University of Georgia

10:55 a.m. **Optimal and Efficient Crossover Designs for Comparing Test Treatments to a Control Treatment Under Various Models—**❖Min Yang, University of Missouri-Columbia**;** John Stufken, University of Georgia

11:15 a.m. **Optimal Crossover Designs: Investigating the Role of Baseline Measurements—**❖Yuanyuan Liang, University of Alberta**;** Kimmie C. Carriere, University of Alberta

11:35 a.m. **A Robust Bayesian Analysis of a Crossover Trial in Smoking Cessation—**❖Pulak Ghosh, Georgia State University**;** Mary Putt, University of Pennsylvania

11:55 a.m. Disc: Vernon Chinchilli, The Pennsylvania State University

12:15 p.m. **Floor Discussion**

410 CC-250 EF

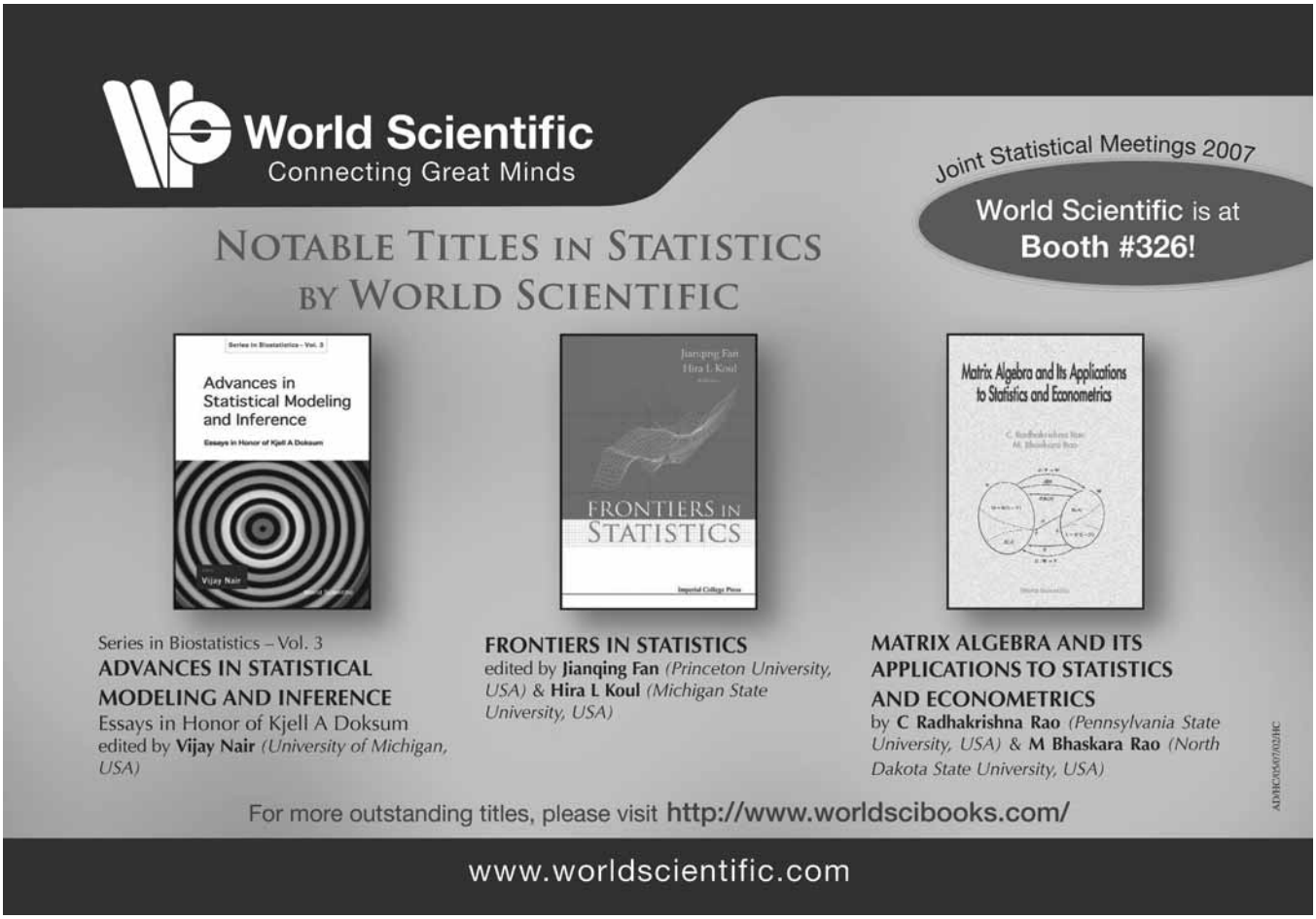
● ✪ Bayesian Applications Using Structured Stochastic Models—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Marco Ferreira, University of Missouri-Columbia

Chair(s): Ana Rappold, Duke University

10:35 a.m. **Evolutionary Markov Chain Monte Carlo Algorithms for Expected Utility Maximization—**❖Marco Ferreira, University of Missouri-Columbia**;** Ramiro Ruiz, Universidade Federal do Rio de Janeiro**;** Alexandra Schmidt, Universidade Federal do Rio de Janeiro



10:55 a.m. **Bayesian Analysis of Inverse Gaussian Models for Response Time—**❖Paul Speckman, University of Missouri-Columbia**;** Yue Yu, University of Missouri-Columbia**;** Jeffrey Rouder, University of Missouri-Columbia

11:15 a.m. **High-Resolution Space-Time Ozone Modeling for Assessing Trends—**❖Sujit Sahu, University of Southampton

11:35 a.m. **Bayesian Model Selection by Smoothly Clipped Continuous Priors—**❖Sounak Chakraborty, University of Missouri-Columbia

11:55 a.m. **A Reference Prior for AR(2) Models—**❖Shawn Ni, University of Missouri-Columbia**;** Dongchu Sun, University of Missouri-Columbia

12:15 p.m. **Floor Discussion**

411 CC-250 C

● ✪ Image Analysis in Solar and Astrophysics—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): David van Dyk, University of California, Irvine; Thomas C.M. Lee, The Chinese University of Hong Kong; Yaming Yu, University of California, Irvine

Chair(s): Yaming Yu, University of California, Irvine

10:35 a.m. **Astronomical Imaging Using the GLAST Large-Area Telescope—**❖James Chiang, Stanford University

10:55 a.m. **Fully Bayesian Analysis of Low-Count Astronomical Images—**❖David van Dyk, University of California, Irvine**;** Alanna Connors, Eurika Scientific

11:15 a.m. **Multiscale Solar Image Processing—**❖C. Alex Young, National Aeronautics and Space Administration**;** Jack Ireland, ADNET Systems, Inc.**;** R. T. James McAteer, Catholic University of America**;** Peter T. Gallagher, Trinity College Dublin

11:35 a.m. **Automatic Detection and Classification of Sunspot Images—**❖Thomas C.M. Lee, The Chinese University of Hong Kong**;** C. Alex Young, National Aeronautics and Space Administration

11:55 a.m. **How to Find Loops in the Solar Corona—**❖Vinay L. Kashyap, Harvard-Smithsonian Center for Astrophysics**;** Julia Sandell, Barnard College**;** Thomas C.M. Lee, The Chinese University of Hong Kong

12:15 p.m. **Floor Discussion**

412 CC-251 B

● ✪ Applications of Nonparametric Smoothing to Spatial and Temporal Data—Topic-Contributed

Section on Nonparametric Statistics, ENAR

Organizer(s): Lijian Yang, Michigan State University

Chair(s): Lijian Yang, Michigan State University

10:35 a.m. **Generalized Semiparametric Linear Mixed Effects Models—**❖Tatiyana Apanasovich, Cornell University

10:55 a.m. **Nonparametric Transfer Function Models: A Polynomial Spline Approach—**❖Jun Liu, Georgia Southern University**;** Jing Wang, University of Illinois at Chicago

11:15 a.m. **Kernel Estimation of Multivariate Cumulative Distribution Function—**❖Rong Liu, Michigan State University**;** Lijian Yang, Michigan State University

11:35 a.m. Disc: Jane Harvill, Baylor University

11:55 a.m. **Floor Discussion**

413 CC-254 B

● The Statistician's Contribution to Fact-Finding in Law—Topic-Contributed

Section on Statistical Consulting

Organizer(s): William B. Fairley, Analysis and Inference, Inc.

Chair(s): Alan J. Izenman, Temple University

10:35 a.m. **Proof of Changepoints in Securities Prices Litigation: Use and Misuse of Event History Analysis—**❖Kenneth Swartz, Analysis and Inference, Inc.**;** Yulia R. Gel, University of Waterloo**;** R. Alan Miller, Philadelphia Investment Bank**;** William B. Fairley, Analysis and Inference, Inc.

10:55 a.m. **Bagging and Propensity Scores in Statistical Learning to Assign Ownership of Unclaimed Property—**❖Marc Sobel, Temple University/Analysis and Inference, Inc.**;** Kenneth Swartz, Analysis and Inference, Inc.

11:15 a.m. **Resolving a Multimillion Dollar Contract Dispute with a Latin Square Design—**❖Steven Crunk, San Jose State University**;** William B. Fairley, Analysis and Inference, Inc.**;** Marian Hofer, California State University, East Bay**;** Peter J. Kempthorne, Kempthorne Analytics, Inc.

11:35 a.m. **Statistical Assessment of the Fairness of a Firm's Allocation of Shares in Initial Public Offerings—**❖Efstathia Bura, George Washington University

11:55 a.m. Disc: William B. Fairley, Analysis and Inference, Inc.

12:15 p.m. **Floor Discussion**

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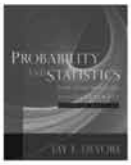

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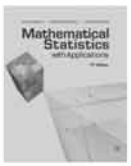

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414 CC-155 B

Use of Measures Related to the Survey Variables in Post-Survey Adjustment for Nonresponse—Topic-Contributed

Section on Survey Research Methods, Social Statistics Section

Organizer(s): Andy Peytchev, RTI International

Chair(s): Kristen Olson, University of Michigan

10:35 a.m. **Preliminary Assessment of the Impact of Health Variables on Nonresponse Adjustment in the Medical Expenditure Panel Survey (MEPS)—**❖Trena Ezzati-Rice, Agency for Healthcare Research and Quality**;** Lap-Ming Wun, Agency for Healthcare Research and Quality

10:55 a.m. **Using Interviewer Observations To Improve Nonresponse Adjustments: NES 2004—**❖Andy Peytchev, RTI International**;** Kristen Olson, University of Michigan

11:15 a.m. **Use of Interviewer Judgments About Attributes of Selected Respondents in Post-Survey Adjustment for Unit Nonresponse: An Illustration with the National Survey of Family Growth—**Robert M. Groves, University of Michigan**;** James Wagner, University of Michigan**;** ❖Emilia Peytcheva, University of Michigan

11:35 a.m. **Using Proxy Measures of Survey Outcomes in Post-Survey Adjustments: Examples from the Consumer Expenditure Survey (CES) and the Los Angeles Neighborhood Observations Study (LA FANS)—**❖Frauke Kreuter, University of Maryland**;** Carolina Casas-Cordero, University of Maryland

11:55 a.m. **Using Proxy Measures of the Survey Variables in Post-Survey Adjustments in a Transportation Survey—**❖Ting Yan, University of Michigan**;** Trivellore E. Raghunathan, University of Michigan

12:15 p.m. **Floor Discussion**

415 CC-254 A

● ✪ Computationally Intensive Methods in AIDS Research I—Topic-Contributed

WNAR, Biometrics Section, ENAR, Section on Health Policy Statistics, Section on Statistics in Epidemiology

Organizer(s): Lilit Yeghiazarian, University of California, Los Angeles

Chair(s): Mark S. Handcock, University of Washington

10:35 a.m. **Mathematical Modeling and Statistical Methods for AIDS Translational Research from Benchside to Bedside—**❖Hulin Wu, University of Rochester

10:55 a.m. **A Multiscale Model of HIV Dynamics Linking In-Host Processes with Virus Spread in Human Populations—**❖Lilit Yeghiazarian, University of California, Los Angeles**;** William G. Cumberland, University of California, Los Angeles**;** Otto Yang, University of California, Los Angeles

11:15 a.m. **A Stochastic Model of HIV Escape from the Cytotoxic T Lymphocyte Response—**❖Elissa Schwartz, Washington State University**;** Lisette G. De Pillis, Harvey Mudd College**;** William G. Cumberland, University of California, Los Angeles**;** Otto Yang, University of California, Los Angeles

11:35 a.m. **Application of a Model with Two Types of CTL Regulation to Shiv Vaccination Trials—**❖Igor Rouzine, Tufts University

11:55 a.m. **Two-Way Hierarchical Phylogenetic Models: An Application to HIV-1 Evolution During Fusion Inhibitor Therapy—**❖Christina Ramirez Kitchen, University of California, Los Angeles**;** Marc A. Suchard, University of California, Los Angeles

12:15 p.m. **Floor Discussion**

Contributed Sessions 10:30 a.m.–12:20 p.m.

416 CC-260

● ✪ Gene Expression and Genomics—Contributed

Biometrics Section

Chair(s): Brian S. Caffo, Johns Hopkins Bloomberg School of Public Health

10:35 a.m. **Genome Phylogeny Accommodating Lateral Gene Transfer—**❖Hongmei Zhang, University of West Florida**;** Rohan Hemasinha, University of West Florida**;** Xun Gu, Iowa State University

10:50 a.m. **A Simulation Study of the Operating Characteristics of Statistical Analysis Plans for Genome-Wide Association Studies—**❖John Barnard, The Cleveland Clinic

11:05 a.m. **Analyzing Data from Gene Expression in Neuronal Activity—**❖Xiaofeng Wang, The Cleveland Clinic

11:20 a.m. **Mutation Detection in Exon Grouping Analysis—**❖Yuan Yuan, Harvard University**;** Xin Lu, University of California, San Diego**;** Jun S. Liu, Harvard University**;** James D. Iglehart, Dana-Farber Cancer Institute**;** Alexander Miron, Dana-Farber Cancer Institute

11:35 a.m. **Gene-Gene and Gene-Environment Interactions for Complex Traits—**❖Qinyi Cheng, New York University**;** Mengling Liu, New York University**;** Yongzhao Shao, New York University

11:50 a.m. **Characterization of Transcriptomes by Application of Reliability Analysis in Structural Genomics—**❖Fisseha Abebe, Clark Atlanta University**;** William Seffens, Clark Atlanta University

12:05 p.m. **Floor Discussion**

417 CC-257

● ✪ Applications of Semiparametric and Nonparametric Modeling Techniques—Contributed

Biometrics Section, Section on Nonparametric Statistics

Chair(s): Chunming Zhang, University of Wisconsin-Madison

10:35 a.m. **Weighted Fourier Series Analysis of Anatomical Brain Structures—**❖Shubing Wang, University of Wisconsin-Madison

10:50 a.m. **A Semiparametric Empirical Likelihood Method for ROC Curve Regression of Ordinal Diagnostic Test in the Presence of Verification Bias—**❖Xiaofei Wang, Duke University**;** Haibo Zhou, The University of North Carolina at Chapel Hill

11:05 a.m. **A Novel Wavelet Approach for Denoising Mass Spectrometry Data—**❖Jaesik Jeong, Texas A&M University

11:20 a.m. **Nonparametric Quantification of Protein Lysate Arrays—**❖Jianhua Hu, The University of Texas M. D. Anderson Cancer Center

11:35 a.m. **Semiparametric Two-Sample Changepoint Model—**❖Zonghui Hu, National Institutes of Health**;** Jing Qin, National Institutes of Health**;** Dean Follmann, National Institute of Allergy and Infectious Diseases

11:50 a.m. **Double Nonparametric Estimation for Relating Dose Distributions to Scalar Outcomes—**❖Matthew Schipper, University of Michigan**;** Jeremy Taylor, University of Michigan

12:05 p.m. **Asymptotic Theories in Multiple-Sample Semiparametric Density Ratio Models—**❖Guanhua Lu, University of Maryland**;** Benjamin Kedem, University of Maryland

418 CC-355 C

● ✪ Adaptive Group Sequential Designs in Drug and Vaccine Development—Contributed

Biopharmaceutical Section

Chair(s): Naitee Ting, Pfizer Inc.

10:35 a.m. **A Hybridized Two-Stage Design in an Ulcerative Colitis Pivotal Trial—**❖Guohui Liu, Millennium Pharmaceuticals, Inc.**;** Mingxiu Hu, Millennium Pharmaceuticals, Inc.

10:50 a.m. **Multiplicity Adjustment for Testing of Multiple Endpoints in Group Sequential Study Design—**❖Jianming Wang, Amgen Inc.**;** Xiang Zhang, Amgen Inc.**;** Chunlei Ke, Amgen Inc.

11:05 a.m. **Self-Designing Multiple Dose Study via Adaptive Randomization—**❖Lin Wang, sanofi-aventis**;** Lu Cui, Eisai Medical Research Inc.

11:20 a.m. **Estimation Following an Adaptive Group Sequential Test—**❖Cyrus Mehta, Cytel Inc.

11:35 a.m. **A Supremum Log-Rank Test for Adaptive Two-Stage Treatment Strategies and Corresponding Sample Size Formula—**❖Wentao Feng, University of Pittsburgh**;** Abdus S. Wahed, University of Pittsburgh

11:50 a.m. **Sample Size Re-estimation for Adaptive Sequential Design in Clinical Trials—**❖Ping Gao, The Medicines Company**;** James H. Ware, Harvard University

12:05 p.m. **On Group Sequential Adaptations in Vaccine Development—**❖William Wang, Merck & Co., Inc.**;** Ivan Chan, Merck & Co., Inc.**;** Joseph Heyse, Merck & Co., Inc.

419 CC-255 D

● ✪ General Statistical Issues and the Role of Statisticians in Medical Research—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Xiaolei Li, GlaxoSmithKline

10:35 a.m. **The Role of the Statistician in Biomedical Research: Scientist, Shoe Clerk, or Hired Gun—**❖Anthony Segreti, RTI Health Solutions

10:50 a.m. **Comparison of Predictive Values of Two Diagnostic Tests Using Conditional Model—**❖Yoonjin Cho, North Carolina State University**;** Andrzej S. Kosinski, Duke University

11:05 a.m. **Statistical Performance of Cladistic Strategies for Haplotype Grouping in Pharmacogenetics—**❖Jared Lunceford, Merck & Co., Inc.**;** Nancy Liu, Merck & Co., Inc.

11:20 a.m. **Statistics in Translational Medicine—**❖Dennis Cosmatos, Wyeth**;** Shein-Chung Chow, Duke University

11:35 a.m. **Working for a Medical Device Company versus a Pharmaceutical Firm—**❖Yanping Chang, Medtronic Inc.

11:50 a.m. **Assessment of the Placebo Effect in Quality-of-Life Evaluations—**❖Jens Eickhoff, University of Wisconsin-Madison

12:05 p.m. **On Errors in Stratifications—**❖Chunlei Ke, Amgen Inc.**;** Jianming Wang, Amgen Inc.**;** Xiang Zhang, Amgen Inc.**;** Qi Jiang, Amgen Inc.**;** Alan Rong, Amgen Inc.**;** Steven Snapinn, Amgen Inc.

420 CC-355 A

● ✪ Methods for Survival Analysis—Contributed

ENAR, Section on Risk Analysis

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

10:35 a.m. **Application of Survival Models to Vaccine Efficacy Evaluation—**❖Barbara Krasnicka, U.S. Food and Drug Administration**;** Sang Ahnn, U.S. Food and Drug Administration

10:50 a.m. **An Adjusted Cumulative Incidence Function Estimator for Unbalanced Groups—**❖Yongyun Zhao, University of Pittsburgh**;** Chung-Chou H. Chang, University of Pittsburgh

11:05 a.m. **Robust Estimation in the Presence of Extreme Censoring—**❖Ruta Bajorunaite, Marquette University**;** Vytaras Brazauskas, University of Wisconsin-Milwaukee

11:20 a.m. **Methods for Cox Regression with Nonclassical Measurement Error in the Covariates with an Application to Nutritional Epidemiology—**❖Pamela A. Shaw, National Institutes of Health**;** Ross L. Prentice, Fred Hutchinson Cancer Research Center

11:35 a.m. **Modeling Associations via Incidence Functions with Bivariate Competing Risks Data—**❖Yu Cheng, University of Pittsburgh**;** Jason Fine, University of Wisconsin-Madison

11:50 a.m. **A Generalized Bivariate Gamma Distribution and Its Characterization—**❖Norou Diawara, Old Dominion University**;** Mark Carpenter, Auburn University

12:05 p.m. **A Taxonomy of Hazards for the Generalized Gamma Distribution—**❖Christopher Cox, Johns Hopkins Bloomberg School of Public Health**;** Haitao Chu, Johns Hopkins Bloomberg School of Public Health**;** Michael Schneider, Johns Hopkins Bloomberg School of Public Health**;** Alvaro Munoz, Johns Hopkins Bloomberg School of Public Health

421 CC-250 B

● ✪ Bayesian Applications in Genomics—Contributed

Section on Bayesian Statistical Science

Chair(s): Faming Liang, Texas A&M University

10:35 a.m. **Bayesian Pathway Annotation Analysis of Genomewide Expression Profiles—**❖Haige Shen, Duke University**;** Mike West, Duke University

10:50 a.m. **A Bayesian Approach to Pool Multiple Datasets for Periodically Expressed Genes Detection—**❖Xiaodan Fan, Harvard University**;** Jun S. Liu, Harvard University

11:05 a.m. **Bayesian Nonparametric Clustering of Amino Acid Usage Profiles—**❖Daniel Merl, Cornell University

11:20 a.m. **A Fast Bayesian Method for eQTL Linkage Analysis in Experimental Crosses—**❖Jinze Liu, The University of North Carolina at Chapel Hill**;** Fred Wright, The University of North Carolina at Chapel Hill**;** Fei Zou, The University of North Carolina at Chapel Hill**;** Yu-Ling Chang, The University of North Carolina at Chapel Hill

11:35 a.m. **Bayesian Variogram Modeling in a Metric Space—**❖Yan Zheng, sanofi-aventis**;** Cavan Reilly, The University of Minnesota

11:50 a.m. **A Bayesian Model for Genetic Association with Phenotype Defined in a Limited Range—**❖Ling Wang, Boston University**;** Vikki Nolan, Boston University**;** Clinton Baldwin, Boston University**;** Martin Steinberg, Boston University**;** Paola Sebastiani, Boston University

12:05 p.m. **Two-Way Clustering of DNA Microarray Data Using the Bayesian Plaid Model—**❖Jiajun Gu, Harvard University**;** Jun Gu, Harvard University

422 CC-255 F

● ✪ Design and Analysis of Experiments—Contributed

Section on Physical and Engineering Sciences, Section on Quality and Productivity

Chair(s): Charmaine Dean, Simon Fraser University

10:35 a.m. **Nested Space-Filling Designs for Experiments with Multiple Levels of Accuracy—**❖Zhiguang Qian, University of Wisconsin-Madison

10:50 a.m. **Mixed Effects Models for Prediction of Tool Wear—**❖Arzu Onar, St. Jude Children's Research Hospital

11:05 a.m. **Geometric Equivalence of Symmetric Factorial Designs—**❖Tena Katsaounis, The Ohio State University; Angela Dean, The Ohio State University; Cheryl Dingus, Battelle

11:20 a.m. **Comparison of Slack Variable and Mixture Approaches for Mixture Experiments—**❖Greg Piepel, Battelle/PNNL

11:35 a.m. **Optimal Foldovers of Minimum Aberration Even Designs—**❖Robert W. Mee, University of Tennessee; Jihua Xiao, University of Tennessee

11:50 a.m. **A Class of Optimal Three-Level Response Surface Designs—**❖William Li, The University of Minnesota; Xuan Lu, Tsinghua University

12:05 p.m. **Projection Properties of Hadamard Designs and Their Application—**❖Yingfu Li, University of Houston-Clear Lake

423 CC-251 C

Estimation—Contributed

IMS, Section on Statistical Computing

Chair(s): Daryl Pregibon, Google

10:35 a.m. **A Generalized P-Value Approach to Inference on Common Mean—**❖Pranab K. Mitra, Bristol-Myers Squibb Company

10:50 a.m. **Implementation of an Extended Familial Correlation Structure with Quasi-Least Squares—**❖Jichun Xie, University of Pennsylvania; Justine Shults, University of Pennsylvania

11:05 a.m. **On the Asymptotic Properties of the Signed Composite Likelihood Ratio Statistic—**❖Zi Jin, University of Toronto; Nancy Reid, University of Toronto

11:20 a.m. **Preferred Distribution Function for Estimating P(Y < X)—**❖Mohammed A. Shayib, Prairie View A&M University; Aliakbar Haghighi, Prairie View A&M University

11:35 a.m. **A Stationary Stochastic Approximation Algorithm for Estimation in Generalized Linear Mixed Models—**❖Sheng-Mao Chang, North Carolina State University; John F. Monahan, North Carolina State University

11:50 a.m. **Generalized Estimating Equations for Nonlinear Mixed Effect Model—**❖Lawrence Lee, University of California, Davis; Jiming Jiang, University of California, Davis

12:05 p.m. **Floor Discussion**

424 CC-251 D

● Surveillance, Identity, and Other Issues in Defense Statistics—Contributed

Section on Statisticians in Defense and National Security

Chair(s): Pranab Banerjee, Space Dynamics Laboratory

10:35 a.m. **Military Requirements Forecasting: A Reliability-Based Approach—**❖Dennis Mathaisel, Babson College

10:50 a.m. **An Optimization Approach for Identity Matching in the Federal Sector—**❖David Lloyd, MITRE Corporation; Keith Miller, MITRE Corporation

11:05 a.m. **Addressing the Problem of Data Scarceness in Risk Analysis with Hierarchical Coordinated Bayesian Models—**❖Zhenyu Yan, University of Virginia; Yacov Y. Haimes, University of Virginia

11:20 a.m. **An Environmental Sampling Model for Combining Judgment and Randomly Placed Samples—**❖Landon Sego, Pacific Northwest National Laboratory; Anderson Kevin, Pacific Northwest National Laboratory; Brett Matzke, Pacific Northwest National Laboratory; Brent Pulsipher, Pacific Northwest National Laboratory; William K. Sieber, National Institute for Occupational Safety and Health; Stanley Shulman, National Institute for Occupational Safety and Health; Matt Gillen, National Institute for Occupational Safety and Health; James Bennett, National Institute for Occupational Safety and Health; Wilson John, Pacific Northwest National Laboratory; Richard Gilbert, Pacific Northwest National Laboratory

11:35 a.m. **Unveiling Significant Patterns in High-Speed Networks—**❖Jin Cao, Bell Labs; Tian Bu, Bell Labs; Aiyou Chen, Alcatel-Lucent; Patrick Lee, Columbia University

11:50 a.m. **Floor Discussion**

425 CC-250 D

Modeling and Evaluating Customer Behavior—Contributed

Section on Statistics and Marketing

Chair(s): Peter Boatwright, Carnegie Mellon University

10:35 a.m. **A Bayesian Approach for the Multidimensional Scaling of Ordered Preference Data—**❖Duncan K.H. Fong, The Pennsylvania State University

10:50 a.m. **Quantifying the Indirect Effects of a Marketing Contact—**❖Dingxi Qiu, Northwestern University; Edward C. Malthouse, Northwestern University; Ajit Tamhane, Northwestern University

11:05 a.m. **Development of Personal Proposals from Financial Institutes During Interactive Real-Time Browsing of Potential Clients—**❖Hye-Kyoung Kim, Intellidyn Corp.; Dmitri Kuznetsov, Intellidyn Corp.; Peter E. Harvey, Intellidyn Corp.

11:20 a.m. **Channel Partner Runoff Detection for Retention—**❖Wei Chai, GE Global Research; Deniz Senturk-Doganaksoy, GE Global Research; Kareem Aggour, GE Global Research; James Williams, GE Global Research

11:35 a.m. **Dynamics of Opinion Spreading in Marketing—**❖Dmitri Kuznetsov, Intellidyn Corp.

11:50 a.m. **On Models for Identifying Likely Lapsers—**❖Enping Mai, Syracuse University; Raja Velu, Syracuse University

12:05 p.m. **Evaluating Database Marketing Models: More Than Meets the Eye—**❖Samuel Koslowsky, Harte Hanks Analytics

426 CC-254 C

● Correlated Data Methods and Analyses in Epidemiology—Contributed

Section on Statistics in Epidemiology, Section on Teaching Statistics in the Health Sciences, Section on Health Policy Statistics

Chair(s): Alula Hadgu, Centers for Disease Control and Prevention

10:35 a.m. **Analysis of Smoking Cessation Patterns Using a Stochastic Mixed Effects Model with a Latent Cured State—**❖Sheng Luo, The Johns Hopkins University; Ciprian M. Crainiceanu, The Johns Hopkins University; Thomas A. Louis, The Johns Hopkins University; Nilanjan Chatterjee, National Cancer Institute

10:50 a.m. **Assessing Baseline and Post-Baseline Effects in Repeated Measures Data Analyses: An Example Using Smoking Cessation Data—**❖Xiaolei Zhou, RTI International; Beth Sherrill, RTI International; Jianmin Wang, RTI Health Solutions

11:05 a.m. **Systolic Blood Pressure in Childhood Predicts Hypertension and Metabolic Syndrome Later in Life—**❖Shumei Sun, Wright State University; Ruohong Liang, Wright State University

11:20 a.m. **Modeling Correlated Longitudinal Processes with Some Processes Partially Observed—**❖Qilu Yu, The Johns Hopkins University; Laurel Beckett, University of California, Davis; David Bennett, Rush University; Robert Wilson, Rush University

11:35 a.m. **Assessing Trend in Longitudinal Data—**❖Shailendra Banerjee, Centers for Disease Control and Prevention

11:50 a.m. **Regression Analysis of Multivariate Panel Count Data—**❖Xin He, University of Missouri-Columbia; Xingwei Tong, Beijing Normal University; Jianguo Sun, University of Missouri-Columbia; Richard J. Cook, University of Waterloo

12:05 p.m. **Analysis of Recurrent Event Data in Case-Crossover Studies—**❖Xianghua Luo, The University of Minnesota; Chiung-Yu Huang, National Institutes of Health; Gary S. Sorock, Johns Hopkins Bloomberg School of Public Health

427 CC-155 C

● Topics in Confidence Intervals and Inference—Contributed

Section on Survey Research Methods

Chair(s): Jill Dever, University of Maryland

10:35 a.m. **Parametric Bootstrap Confidence Interval in a Small-Area Estimation Problem—**❖Huilin Li, University of Maryland; Partha Lahiri, University of Maryland

10:50 a.m. **Setting Precision Requirements for Estimating Proportions—**❖James R. Chromy, RTI International

11:05 a.m. **Confidence Intervals for Statistics for Categorical Variables from Complex Samples—**❖Valerie Hsu, Westat; Keith Rust, Westat

11:20 a.m. **One-Sided Coverage Intervals for the Extreme Binomial Proportion Under Complex Sample Design—**❖Yan Liu, Internal Revenue Service; Phillip S. Kott, USDA National Agricultural Statistics Service

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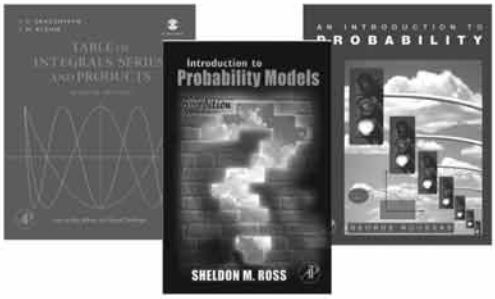

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11:35 a.m. **Investigation of Empirical Bayesian Confidence Intervals for Expenditure Data in the Medical Expenditure Panel Survey—**❖Robert Baskin, Agency for Healthcare Research and Quality**;** Malay Ghosh, University of Florida

11:50 a.m. **Tailoring Survey Data Products and Reliability Criteria To Best Match Customers' Revenue Needs—**❖Mandy Webb, Arbitron Inc.**;** Alan R. Tupek, Arbitron, Inc.

12:05 p.m. **Properties of the Combined Ratio Estimator and a Best Linear Unbiased Estimator When Design Control Is Problematic—**❖Stephen Woodruff, Retired

428 CC-155 E
Analysis and Disclosure of Survey Data—Contributed

Section on Survey Research Methods

Chair(s): Karol Krotki, RTI International

10:35 a.m. **Multiyear Estimation for a Single Stratum from the Continuous National Health and Nutrition Examination Survey (NHANES)—**❖R. Lee Harding, Westat**;** Jay Clark, Westat**;** Jill M. Montaquila, Westat

10:50 a.m. **The Effectiveness of Stepwise Discriminate Analysis as a Post Hoc Procedure to a Significant Manova—**❖Erik Heiny, Western Carolina University

11:05 a.m. **Researcher Access to Microdata: Measuring the Impact of Different Access Protocols on Data Utility—**❖Stephanie Shipp, National Institute of Standards and Technology**;** Julia Lane, NORC at the University of Chicago

11:20 a.m. **Measuring Privacy Loss Due to Data Release: A New Perspective—**❖Lei Liu, Yale University**;** Heping Zhang, Yale University

11:35 a.m. **The Use of Propensity Score Matching Methods in Mixed Mode Studies—**❖John Bremer, Harris Interactive**;** Kerri Miller, Harris Interactive

11:50 a.m. **Practical Considerations in Applying the pq-Rule for Primary Disclosure Suppressions—**❖Meghan O'Malley, Bureau of Labor Statistics**;** Lawrence Ernst, Bureau of Labor Statistics

12:05 p.m. **Floor Discussion**

Speaker with Lunch 12:30 p.m.–1:50 p.m.

429 CC-Ballroom D
Section on Health Policy Statistics Speaker with Lunch (fee event)—Speaker with Lunch

Section on Health Policy Statistics

Organizer(s): Anirban Basu, The University of Chicago

WL09 **Importance of Using Cost-Effectiveness Analysis To Inform Health Policy in the United States—**❖David Meltzer, The University of Chicago

Roundtables with Lunch 12:30 p.m.–1:50 p.m.

430 CC-Ballroom A
Biopharmaceutical Section Roundtables with Lunch (fee event)

Biopharmaceutical Section

Organizer(s): Kaylan Ghosh, Vislation

WL10 **Incomplete Data in Longitudinal Studies—**❖Geert Molenberghs, Hasselt University

WL11 **Clinical Trial Simulation: Beyond Statistics—**❖Bret Musser, Merck & Co., Inc.

WL12 **Statistical Concerns and Methodology Regarding Radiographic Data in Rheumatoid Arthritis—**❖Lifen Zhou, Amgen Inc.

WL13 **Design-Based Multiplicity Adjusting Strategies in Late-Phase Clinical Trials—**❖Jianjun Li, Merck & Co., Inc.

431 CC-Ballroom A
Business and Economics Statistics Section Roundtables with Lunch (fee event)

Business and Economics Statistics Section

Organizer(s): Clifford M. Hurvich, New York University

WL14 **Model Selection—**❖David Findley, U.S. Census Bureau

WL15 **Statistical Analysis of Large Panels of Economic Data—**❖Serena Ng, University of Michigan

432 CC-Ballroom A
Section on Bayesian Statistical Science Roundtable with Lunch (fee event)
Section on Bayesian Statistical Science

Organizer(s): David van Dyk, University of California, Irvine

WL16 **The Quasi-Bayesian Approach to Risk Management at the Department of Homeland Security—**❖David Banks, Duke University

433 CC-Ballroom A
Section on Physical and Engineering Sciences Roundtables with Lunch (fee event)
Section on Physical and Engineering Sciences

Organizer(s): Randall Tobias, SAS Institute Inc.

WL17 **Verifying Computer Experiments with Physical Experiments—**❖William Notz, The Ohio State University

WL18 **Publishing an Industrial Case Study: Advice for Would-Be Authors—**❖Robert Rodriguez, SAS Institute Inc.

434 CC-Ballroom A
Section on Quality and Productivity Roundtables with Lunch (fee event)
Section on Quality and Productivity

Organizer(s): James Williams, GE Global Research

WL19 **Communicating with Nonstatisticians—**❖Mark Bailey, SAS Institute Inc.

WL20 **Risk-Adjusted Charts in Health-Care Monitoring—**❖Landon Sego, Pacific Northwest National Laboratory

435 CC-Ballroom C
Section on Statistical Consulting Roundtable with Lunch (fee event)
Section on Statistical Consulting

Organizer(s): James Grady, The University of Texas Medical Branch

WL21 **Recognizing and Resolving Breakdowns in Your Consulting Practice—**❖Doug Zahn, Zahn and Associates

436 CC-Ballroom C
Section on Statistical Education Roundtables with Lunch (fee event)
Section on Statistical Education

Organizer(s): Jacqueline Miller, The Ohio State University

WL22 **User-Friendly Jargon for Statistics—**❖Larry Weldon, Simon Fraser University

WL23 **Statistics and Research Design: Oil and Vinegar?—**❖Seth Hirshorn, University of Michigan-Dearborn

WL24 **Academic Integrity in a High-Tech Classroom—**❖John McKenzie, Babson College

437 CC-Ballroom C
Section on Statistical Graphics Roundtable with Lunch (fee event)
Section on Statistical Graphics

Organizer(s): David Hunter, The Pennsylvania State University

WL25 **Visualizing Model and Parameter Uncertainty—**❖David W. Scott, Rice University

438 CC-Ballroom C
Section on Statisticians in Defense and National Security Roundtable with Lunch (fee event)
Section on Statisticians in Defense and National Security

Organizer(s): David Marchette, Naval Surface Warfare Center

WL26 **Text Data Mining for Defense Applications—**❖Jeffrey Solka, Naval Surface Warfare Center

439 CC-Ballroom C
Section on Statistics in Epidemiology Roundtable with Lunch (fee event)
Section on Statistics in Epidemiology

Organizer(s): William E. Barlow, Cancer Research and Biostatistics

WL27 **Longitudinal Causal Modeling—**❖James Robins, Harvard School of Public Health

440 CC-Ballroom C
Section on Survey Research Methods Roundtable with Lunch (fee event)
Section on Survey Research Methods

Organizer(s): David Marker, Westat

WL28 **Auditing Election Results—**❖Wendy Rotz, Ernst & Young

441 CC-Ballroom C
Social Statistics Section Roundtable with Lunch (fee event)
Social Statistics Section

Organizer(s): Jana Asher, Carnegie Mellon University

WL29 **Media Coverage Regarding Data on Mortality in Iraq—**❖Leslie Roberts, Columbia Mailman School of Public Health; Gilbert Burnham, The Johns Hopkins University; Shannon Doocy, The Johns Hopkins University

442 CC-Ballroom C

Statistical Society of Canada Roundtable with Lunch (fee event)

SSC

Organizer(s): X. Joan Hu, Simon Fraser University

WL30 **Fifty Years of Empirical Bayes/Shrinkage Inference: Past, Present, and Future Outlook**—❖S. Ejaz Ahmed, University of Windsor

Special Presentation 2:00 p.m.–3:50 p.m.

443 CC-Ballroom B

● Late-Breaking Session 2: War and Death in Iraq—Other

ASA, ENAR, SSC, WNAR, IMS, Section on Survey Research Methods, Section on Statisticians in Defense and National Security, Social Statistics Section

Organizer(s): Mathew R. Marler, University of California, Irvine

Chair(s): Stephen Fienberg, Carnegie Mellon University

2:05 p.m. **Results of a Survey Estimating Mortality Before and After the 2003 Invasion of Iraq**—❖Leslie Roberts, Columbia Mailman School of Public Health

2:55 p.m. Disc: Jana Asher, Carnegie Mellon University

3:15 p.m. Disc: Fritz Scheuren, NORC at the University of Chicago

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

Invited Sessions 2:00 p.m.–3:50 p.m.

444 CC-251 A

● ✪ Recent Advances in Causal Modeling—Invited

ENAR, Section on Statistics in Epidemiology, Section on Health Policy Statistics, Biometrics Section, Section on Teaching Statistics in the Health Sciences, WNAR

Organizer(s): Jason Roy, Geisinger Health System

Chair(s): Jason Roy, Geisinger Health System

2:05 p.m. **Mediation Analysis Using Random Assignment Interacted with Baseline Covariates as Instrumental Variables**—❖Dylan Small, University of Pennsylvania

2:35 p.m. **Inference in Randomly Censored Regression Models Using Conditional Moment Inequalities**—❖Shakeeb Khan, Duke University

3:05 p.m. **Causal Comparisons in Randomized Trials of Two Active Treatments**—Jason Roy, Geisinger Health System; ❖Joseph W. Hogan, Brown University

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

445 CC-355 B

● ✪ Twenty-Five Years of Noninferiority Trials—Invited

Biopharmaceutical Section, ENAR, Biometrics Section, WNAR

Organizer(s): Brian L. Wiens, Gilead Colorado

Chair(s): Brian L. Wiens, Gilead Colorado

2:05 p.m. **Early Developments in Clinical Equivalence and Similarity Trials**—❖William C. Blackwelder, University of Maryland, Baltimore County

2:30 p.m. **The Establishment of Efficacy on the Basis of Noninferiority Trials: Updating Our Approach**—❖Steven Snapinn, Amgen Inc.

2:55 p.m. **Bayesian Perspectives on the Issue of Noninferiority**—❖Andrew P. Grieve, King's College

3:20 p.m. Disc: Susan S. Ellenberg, University of Pennsylvania

3:40 p.m. **Floor Discussion**

446 CC-155 E

● ✪ Recent Advances in Statistical Learning: Modern Regularization Methods and Semisupervised Learning—Invited

Section on Statistical Computing, Section on Nonparametric Statistics

Organizer(s): Hui Zou, The University of Minnesota

Chair(s): Jinchi Lv, Princeton University

2:05 p.m. **Efficient Large-Margin Semisupervised Learning**—Junhui Wang, Columbia University; ❖Xiaotong Shen, The University of Minnesota

2:35 p.m. **Infinite Dimensional Lasso**—❖Nathan Srebro, Toyota Technological Institute at Chicago; Saharon Rosset, IBM T.J. Watson Research Center; Ji Zhu, University of Michigan; Grzegorz Swirszcz, IBM T.J. Watson Research Center

3:05 p.m. **Grouped and Hierarchical Model Selection through Composite Absolute Penalties**—Peng Zhao, University of California, Berkeley; ❖Guilherme V. Rocha, University of California, Berkeley; Bin Yu, University of California, Berkeley

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

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04/07

447 CC-150 D-F

● Risk Analysis in National Defense—Invited

Section on Risk Analysis, Section on Statisticians in Defense and National Security, Section on Physical and Engineering Sciences

Organizer(s): David Banks, Duke University

Chair(s): David Banks, Duke University

2:05 p.m. **Risk Estimation and National Security: Introduction and Overview—**❖A. John Bailer, Miami University

2:30 p.m. **Biosurveillance and the BioSense Program—**❖Henry Rolka, Centers for Disease Control and Prevention

2:55 p.m. **Risk Analysis at Los Alamos National Laboratory—**❖Alyson G. Wilson, Los Alamos National Laboratory

3:20 p.m. Disc: Ed Melnick, New York University

3:40 p.m. **Floor Discussion**

448 CC-150 A-C

● ✪ Preventing, Correcting, and Measuring Overcoverage in Censuses—Invited

SSC

Organizer(s): David Dolson, Statistics Canada

Chair(s): David Dolson, Statistics Canada

2:05 p.m. **Preventing and Correcting Coverage Errors in the United States Decennial Census—**❖David Sheppard, U.S. Census Bureau

2:30 p.m. **Unduplication in the 2010 United States Decennial Census—**❖Robin A. Pennington, U.S. Census Bureau

2:55 p.m. **Measuring Person Duplication: The 2006 Canadian Census Overcoverage Study—**❖Heather Farr, Statistics Canada; José Morel, Statistics Canada

3:20 p.m. **Overcoverage in the 2011 UK Census—**❖Owen Abbott, Office for National Statistics; James Brown, University of Southampton

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

449 CC-254 B

● ✪ Sparse Inference and Large-Scale Multiple Comparisons—Invited

IMS, Section on Nonparametric Statistics

Organizer(s): Jiashun Jin, Purdue University

Chair(s): Bruce Craig, Purdue University

2:05 p.m. **Maxima of Discretely Sampled Random Fields, with an Application to 'Bubbles'—**❖Keith J. Worsley, McGill University; Jonathan E. Taylor, University of Montréal

2:35 p.m. **Network Kriging—**❖Eric D. Kolaczyk, Boston University; David Chua, Boston University; Mark Crovella, Boston University

3:05 p.m. **Bayes and Empirical Bayes Approaches to Controlling the FDR—**❖Cun-Hui Zhang, Rutgers University; Weihua Tang, Rutgers University

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

450 CC-155 B

● ✪ *JASA*, Applications and Case Studies Invited Session—Invited

JASA, Applications and Case Studies, General Methodology

Organizer(s): David Banks, Duke University

Chair(s): Robert B. Lund, Clemson University

2:05 p.m. **Subjective Likelihood for the Assessment of Trends in the Ocean's Mixed-Layer Depth—**❖Michael Lavine, Duke University; Ana Rappold, Duke University; Susan Lozier, Duke University

3:10 p.m. Disc: C. Shane Reese, Brigham Young University

3:30 p.m. **Floor Discussion**

451 CC-155 C

✪ Increasing Statistical Literacy in Nonstatistical Professions—Invited

Committee on Outreach Education, Section on Statisticians in Defense and National Security

Organizer(s): Anna Nevius, U.S. Food and Drug Administration

Chair(s): Owen Devine, Centers for Disease Control and Prevention

2:05 p.m. **Teaching Medical Statistics—**❖Mary A. Foulkes, George Washington University

2:30 p.m. **Lessons Learned in Teaching a Statistics Workshop—**❖Jeffrey Solka, Naval Surface Warfare Center; Daniel Carr, George Mason University

2:55 p.m. **Statistics in a Legal Context—**❖Mary W. Gray, American University

3:20 p.m. Disc: Wendy Martinez, Office of Naval Research

3:40 p.m. **Floor Discussion**

452 CC-255 E

Adaptive Monte Carlo Methods—Invited

Section on Bayesian Statistical Science, ENAR

Organizer(s): Antonietta Mira, University of Insubria

Chair(s): Antonietta Mira, University of Insubria

2:05 p.m. **Adaptive Independent Metropolis-Hastings Using Normal Mixtures—**❖Robert Kohn, University of New South Wales; Paolo Giordani, Bank of Sweden

2:25 p.m. **Combining Adaptation with MCMC Sampling Methods—**❖Heikki Haario, Lappeenranta University of Technology; Antti Solonen, Lappeenranta University of Technology

2:45 p.m. **Adaptive MCMC, Intractable Likelihood Functions, and Phylogenetic Inference—**❖Yves F. Atchade, University of Michigan

3:05 p.m. **Adaptive Population Monte Carlo—**❖Christian P. Robert, Universite Paris Dauphine

3:25 p.m. **Recent Advances in Monte Carlo Methods—**❖Christophe Andrieu, University of Bristol

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

453 CC-355 E

Medallion Lecture V—Invited

IMS, General Methodology, Biometrics Section

Organizer(s): Tony Cai, University of Pennsylvania

Chair(s): Xihong Lin, Harvard School of Public Health

2:10 p.m. **Joint Modeling of Longitudinal and Survival Data—**❖Jane-Ling Wang, University of California, Davis

3:00 p.m. Disc: Jeremy Taylor, University of Michigan

3:20 p.m. Disc: Robin Henderson, Newcastle University

3:40 p.m. **Floor Discussion**

454 CC-150 G

● ✪ Multicriteria Prioritization and Ranking with Partial Order Without Compositing Multiple Indicators into an Index in Social, Environmental, and Infrastructure Work—Invited

Environmental and Ecological Statistics, Section on Statistics and the Environment

Organizer(s): Ganapati P. Patil, The Pennsylvania State University

Chair(s): Ganapati P. Patil, The Pennsylvania State University

2:05 p.m. **Multicriteria Prioritization, Partial Order, and Hasse Diagrams in Environmental Sciences and Chemistry—**❖Rainer Bruggemann, Leibniz Institute of Freshwater Ecology and Inland Fisheries

2:30 p.m. **Exploring Partial Order of European Countries—**❖Paola Annoni, University of Milan**;** Rainer Bruggemann, Leibniz Institute of Freshwater Ecology and Inland Fisheries

2:55 p.m. **Unmasking Weight Camouflage of a Composite Index Based on Multiple Indicators—**❖K. Sham Bhat, The Pennsylvania State University**;** Ganapati P. Patil, The Pennsylvania State University

3:20 p.m. Disc: N. Phillip Ross, Radiation Effects Research Foundation

3:40 p.m. **Floor Discussion**

455 CC-250 A

● ✪ Web Panel Surveys: A Solution to Declining Response Rates?—Invited

Section on Survey Research Methods

Organizer(s): Karol Krotki, RTI International

Chair(s): Mansour Fahimi, RTI International

2:05 p.m. **Nonresponse Bias in Two Methods of Panel Recruitment—**❖Charles DiSogra, Knowledge Networks, Inc.**;** Daniel Slotwiner, Knowledge Networks, Inc.**;** Sarah Clinton, Knowledge Networks, Inc.**;** Elisa Chan, Knowledge Networks, Inc.**;** Erlina Hendarwan, Knowledge Networks, Inc.

2:30 p.m. **Combining RDD and Web Panel Surveys—**❖Karol Krotki, RTI International

2:55 p.m. **Sample Matching for Web Surveys: Theory and Application—**❖Douglas Rivers, Stanford University

3:20 p.m. Disc: Robert Santos, The Urban Institute

3:30 p.m. Disc: John Bremer, Harris Interactive

3:40 p.m. **Floor Discussion**

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

456 CC-155 A

● Statistical Graphics for Analysis of Drug Safety and Efficacy—Topic-Contributed

Section on Statistical Graphics, Section on Risk Analysis, WNAR

Organizer(s): Michael O'Connell, Insightful Corporation

Chair(s): Stephen Kaluzny, Insightful Corporation

2:05 p.m. **Statistical and Graphical Analysis of Adverse Event Counts in Clinical Trials—**❖Michael O'Connell, Insightful Corporation

2:30 p.m. **Using Graphics To Discover and Explore—**❖Julia Wang, Johnson & Johnson PRD

2:45 p.m. **Statistical Graphics for the Analysis of Safety and Efficacy Data from Clinical Trials—**❖Ohad Amit, GlaxoSmithKline

3:05 p.m. **Graphical Analyses of Clinical Trial Safety Data—**Kefei Zhou, Amgen Inc.**;** ❖Haijun Ma, Amgen Inc.**;** Hong A. Xia, Amgen Inc.**;** Matthew Austin, Amgen Inc.**;** George Li, Amgen Inc.**;** Michael O'Connell, Insightful Corporation

3:25 p.m. **Design of Statistical Graphics for Clinical Data—**❖Richard M. Heiberger, Temple University

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

457 CC-355 D

● ✪ Phase I Trials in Cancer—Topic-Contributed

Biometrics Section, WNAR, Biopharmaceutical Section, ENAR

Organizer(s): Terry Hyslop, Thomas Jefferson University

Chair(s): Terry Hyslop, Thomas Jefferson University

2:05 p.m. **New Phase I Trial Designs for Combinations of Two Agents—**Shenghua (Kelly) Fan, California State University, East Bay**;** Alan P. Venook, University of California, San Francisco**;** ❖Ying Lu, University of California, San Francisco

2:25 p.m. **An Application of the Time-to-Event Continual Reassessment Method: Dose Escalation in Patients with Lymphoma Undergoing Chemotherapy over an Extended Period—**❖Ken Cheung, Columbia University

2:45 p.m. **A Hierarchical Bayesian Design for Phase I Trials of Novel Drug Combinations—**❖Thomas M. Braun, University of Michigan

3:05 p.m. **An Adaptive Bayesian Approach to Incorporating PG Information in Phase I Trials—**❖Meihua Wang, University of Pittsburgh**;** Roger Day, University of Pittsburgh

3:25 p.m. **Toward a Benchmark for Sequential Phase I Cancer Trial Designs—**❖Jay Bartroff, University of Southern California**;** Tze Leung Lai, Stanford University

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

458 CC-250 D

● ✪ Noninferiority Trial Designs in Medical Devices—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, WNAR, ENAR

Organizer(s): David Snead, Cordis, a Johnson & Johnson Company

Chair(s): Dennis King, STATKING Consulting, Inc.

2:05 p.m. **Statistics and Clinical, and Regulatory Considerations in the Selection of an Offset for Noninferiority Designs—**❖Philip Lavin, Averion International Corp.

2:25 p.m. **Considerations for the Development of a Set of Noninferiority Trials for a Second-Generation Drug Eluting Stent—**❖Joe Bero, Boston Scientific Corporation

2:45 p.m. **A Noninferiority Trial Utilizing a Closed Hierarchical Testing Procedure—**❖Peggy Pereda, Boston Scientific Corporation**;** Eric Bass, Boston Scientific Corporation**;** Peter Lam, Boston Scientific Corporation

3:05 p.m. **Bayesian NonInferiority Trial Design Using Hierarchical Models—**❖Yongyi Yu, Boston Scientific Corporation.**;** Frank Zhou, Boston Scientific Corporation**;** Scott Wehrenberg, Boston Scientific Corporation**;** Ming-Hui Chen, University of Connecticut

3:25 p.m. **Comparison Between Hierarchical Model and Power Prior Approach in a Bayesian Noninferiority Trial Design—**❖Peter Lam, Boston Scientific Corporation**;** Alan Yu, Boston Scientific Corporation**;** Ming-Hui Chen, University of Connecticut

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

459 CC-254 C

Shrinkage Theory and Its Applications—Topic-Contributed

IMS, Section on Nonparametric Statistics

Organizer(s): Jing Qiu, University of Missouri-Columbia

Chair(s): Chong Wang, Cornell University

2:05 p.m. **Accounting for Selection Bias in the Estimation of Fold Change in Microarray Experiments—**❖George Wright, National Institutes of Health

2:25 p.m. **Objective Bayesian Analysis for Estimating the KL Divergence Between Two Normal Populations with Common Covariance Matrix—**❖Zhonggai Li, Virginia Polytechnic Institute and State University**;** Dongchu Sun, University of Missouri-Columbia

2:45 p.m. **Optimal Tests Shrinking Both Means and Variances Applicable to Microarray Data Analysis—**❖Peng Liu, Iowa State University**;** Gene J. T. Hwang, Cornell University

3:05 p.m. **Hard and Soft Parameter Shrinkage in Microarray Data Analysis—**❖Gordon Smyth, Walter & Eliza Hall Institute

3:25 p.m. **Double Shrinkage Empirical Bayesian Confidence Intervals for Multiple Parameters When the Variances Are Unequal and Unknown—**❖Jing Qiu, University of Missouri-Columbia**;** Gene J. T. Hwang, Cornell University**;** Zhigen Zhao, Cornell University

4:45 p.m. **Floor Discussion**

460 CC-355 F

Monte Carlo Methods and Their Applications—Topic-Contributed

IMS, General Methodology

Organizer(s): Yuguo Chen, University of Illinois at Urbana-Champaign

Chair(s): Yuguo Chen, University of Illinois at Urbana-Champaign

2:05 p.m. **Improving SAMC Using Smoothing Methods: Theory and Applications—**❖Faming Liang, Texas A&M University

2:25 p.m. **Sampling Issues for Largish Tables—**❖Ian Dinwoodie, Duke University**;** Yuguo Chen, University of Illinois at Urbana-Champaign

2:45 p.m. **Ensemble Sampling—**❖Hedibert Lopes, The University of Chicago Graduate School of Business**;** Nicholas Polson, The University of Chicago Graduate School of Business

3:05 p.m. **Interweaving Data Augmentation Schemes for Faster MCMC—**❖Yaming Yu, University of California, Irvine

3:25 p.m. **The Evolutionary Forest—**❖Leman Scotland, Duke University

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

461 CC-257

● ✪ The Current Trend of Bayesian Model Comparison and Variable Selection—Topic-Contributed

Section on Bayesian Statistical Science, ENAR

Organizer(s): Ming-Hui Chen, University of Connecticut

Chair(s): Carlos Carvalho, Duke University

2:05 p.m. **Objective Bayesian Model Selection for a Linear Mixed Model—**❖Dongchu Sun, University of Missouri-Columbia

2:25 p.m. **An Extended BIC for Model Selection—**❖Surajit Ray, Boston University**;** James Berger, Duke University**;** Susie Bayarri, University of Valencia**;** Woncheol Jang, University of Georgia**;** Luis R. Pericchi, University of Puerto Rico, San Juan

2:45 p.m. **Random Effects Selection with Nonparametric Settings—**❖Bo Cai, University of South Carolina**;** David B. Dunson, National Institute of Environmental Health Sciences

3:05 p.m. **Objective Bayesian Variable Selection for Logistic Regression Models with Jeffreys' Prior—**❖Ming-Hui Chen, University of Connecticut**;** Joseph G. Ibrahim, The University of North Carolina at Chapel Hill**;** Sung Duk Kim, University of Connecticut

3:25 p.m. Disc: Dipak Dey, University of Connecticut

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

462 CC-251 D

✪ Reducing Disclosure Risk Through Statistical Methods and Administrative Procedures—Topic-Contributed

Section on Government Statistics, Section on Health Policy Statistics, Social Statistics Section

Organizer(s): Alvan Zarate, National Center for Health Statistics

Chair(s): Alvan Zarate, National Center for Health Statistics

2:05 p.m. **Comparative Evaluation of Four Sensitive Tabular Data Protection Methods Using a Real-Life Table Structure of Complex Hierarchies and Links—**❖Ramesh Dandekar, Energy Information Administration

2:25 p.m. **Implementing a Portfolio Approach to the Protection of Confidential Data—**❖Tim Mulcahy, NORC at the University of Chicago**;** Julia Lane, NORC at the University of Chicago

2:45 p.m. **Matching NCES Data to External Databases To Assess Disclosure Risk—**Elizabeth Steiner, Carnegie Mellon University**;** ❖J. Neil Russell, National Center for Education Statistics**;** Marilyn Seastrom, National Center for Education Statistics

3:05 p.m. **Analytically Valid Microdata Files and Reidentification—**❖William Winkler, U.S. Census Bureau

3:25 p.m. **Measuring Disclosure Risk and an Examination of the Possibilities of Using Synthetic Data in the Individual Income Tax Return Public Use File—**❖Michael Weber, Internal Revenue Service**;** John Czajka, Mathematica Policy Research, Inc.**;** Sonya Vartivarian, Mathematica Policy Research, Inc.

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

463 CC-251 F

Nonparametric and Semiparametric Methods in Brain Imaging Studies—Topic-Contributed

Section on Nonparametric Statistics, International Indian Statistical Association

Organizer(s): R. Todd Ogden, Columbia University

Chair(s): Ranjan Maitra, Iowa State University

2:05 p.m. **Multisubject Independent Component Analysis Using a Maximum Likelihood Approach—**❖Ying Guo, Emory University

2:25 p.m. **Detecting Activations in fMRI Experiments with Maximum Cross-Correlation Statistics—**❖Kinfemichael Gedif, Southern Methodist University**;** William R. Schucany, Southern Methodist University; Richard Gunst, Southern Methodist University**;** Wayne Woodward, Southern Methodist University**;** Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas**;** Patrick Carmack, The University of Texas Southwestern Medical Center at Dallas**;** Qihua Lin, The University of Texas Southwestern Medical Center at Dallas

2:45 p.m. **Thresholding Methods Applied on fMRI Data—**❖Martina Pavlicova, Columbia University

3:05 p.m. **A Bootstrap Resampling Approach: Tests of Significance on Brain Imaging Data—**❖Chung Chang, Columbia University**;** R. Todd Ogden, Columbia University

3:25 p.m. **Bayesian Hierarchical Spatiotemporal Models for fMRI Data—**❖Qihua Lin, The University of Texas Southwestern Medical Center at Dallas**;** Richard Gunst, Southern Methodist University**;** Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas**;** Patrick Carmack, The University of Texas Southwestern Medical Center at Dallas**;** William R. Schucany, Southern Methodist University

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

464 CC-155 F

● ✪ Dimension Reduction That Informs Science—Topic-Contributed

Section on Physical and Engineering Sciences

Organizer(s): Jacqueline M. Hughes-Oliver, North Carolina State University

Chair(s): Jacqueline M. Hughes-Oliver, North Carolina State University

2:05 p.m. **Model Selection and Estimation for Semiparametric Stochastic Mixed Models for Longitudinal Data—**❖Xiao Ni, North Carolina State University**;** Daowen Zhang, North Carolina State University**;** Hao Zhang, North Carolina State University

2:25 p.m. **Shrinkage Inverse Regression for Model-Free Variable Selection—**❖Lexin Li, North Carolina State University**;** Howard D. Bondell, North Carolina State University

2:45 p.m. **Gene Expression Data Analysis Using the Gene Ontology—**❖Jiajun Liu, North Carolina State University**;** Jacqueline M. Hughes-Oliver, North Carolina State University**;** J. Alan Menius, GlaxoSmithKline

3:05 p.m. **Recent Directions in Predictor Selection—**❖Jessica Kraker, University of Wisconsin-Eau Claire**;** Douglas M. Hawkins, The University of Minnesota

3:25 p.m. **Dimension Reduction in Systems Biology—**❖Lei Zhu, GlaxoSmithKline**;** Kwan Lee, GlaxoSmithKline**;** Amit Bhattacharyya, GlaxoSmithKline**;** Edit Kurali, GlaxoSmithKline**;** Amber Anderson, GlaxoSmithKline

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

465 CC-255 F

Innovative Ideas for Teaching Statistics—Topic-Contributed

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

Organizer(s): Patti Collings, Brigham Young University

Chair(s): Kirk Anderson, Grand Valley State University

2:05 p.m. **Teaching Introductory Statistics with a Blended Method Approach—**❖Leonard Gaines, Empire State Development

2:25 p.m. **Teaching Introductory Statistics with Constraints and High Expectations—**❖William Seaver, University of Tennessee

2:45 p.m. **To Service Learn (SL) or Not To Service Learn?—**❖Amy Phelps, Duquesne University

3:05 p.m. **Engaging Students in Elementary Statistics—**❖Greg Knofczynski, Armstrong Atlantic State University**;** Paul Hadavas, Armstrong Atlantic State University**;** Lorrie Hoffman, Armstrong Atlantic State University

3:25 p.m. **Enhancing the Teaching of Statistics with Technology Using the Statistics Online Computational Resource (SOCR)—**❖Nicolas Christou, University of California, Los Angeles**;** Ivo D. Dinov, University of California, Los Angeles**;** Juana Sanchez, University of California, Los Angeles

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

466 CC-251 B

● ✪ Computationally Intensive Methods in AIDS Research II—Topic-Contributed

WNAR, ENAR, Section on Health Policy Statistics, Section on Nonparametric Statistics

Organizer(s): William G. Cumberland, University of California, Los Angeles

Chair(s): Florin Vaida, University of California, San Diego

2:05 p.m. **Nonparametric Tests with Application to RNA Viral Load Decline—**❖Susanne May, University of California, San Diego**;** Victor De Gruttola, Harvard University

2:25 p.m. **Non- and Semiparametric Subset and Model Selection for Multiple Categorical Predictors and Several Outcomes—**❖A. G. DiRienzo, Harvard School of Public Health

2:45 p.m. **Survey of Recombination in the HIV Genome: Hot Spots and Cold Spots—**❖Karin Dorman, Iowa State University**;** Misha L. Rajaram, Iowa State University**;** Marc A. Suchard, University of California, Los Angeles**;** Vladimir N. Minin, University of California, Los Angeles

3:05 p.m. **Numeric EM for Linear and Nonlinear Mixed Effects Models with Censored Responses—**❖Lin Liu, University of California, San Diego**;** Florin Vaida, University of California, San Diego

3:25 p.m. Disc: William G. Cumberland, University of California, Los Angeles

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

467 CC-255 A

● Bayesian Approaches to Clinical Trials—Topic-Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section

Organizer(s): Pulak Ghosh, Georgia State University

Chair(s): Peter F. Thall, The University of Texas M. D. Anderson Cancer Center

2:05 p.m. **Monitoring Late Onset Toxicities in Phase I Trials Using Predicted Risks—**❖Benjamin N. Bekele, The University of Texas M. D. Anderson Cancer Center

2:25 p.m. **Decision Analysis in Support of Clinical Trial Protocol Decisions—**❖Joseph Kahn, Novartis Pharmaceuticals

2:45 p.m. **Could Bayesians and Frequentists Agree When Designing Clinical Trials?—**❖Lurdes Inoue, University of Washington

3:05 p.m. **Bayesian Optimal Design in Phase II Studies—**❖Gary Rosner, The University of Texas M. D. Anderson Cancer Center**;** Peter Mueller, The University of Texas M. D. Anderson Cancer Center**;** Meichun Ding, Amgen Inc.

3:25 p.m. **Incorporating Patient's Characteristics in Cancer Phase I Clinical Trials Using Escalation with Overdose Control—**❖Mourad Tighiouart, Emory University**;** André Rogatko, Emory University**;** Zhiheng Xu, Emory University

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

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

468 CC-355 A

● ✪ Recent Advance in Analysis of Incomplete Data—Contributed

Biometrics Section

Chair(s): Xiaofei Wang, Duke University

2:05 p.m. **Examining Benefits and Drawbacks of Multiple Imputation for Disease Rate and Demographic Data—**❖Irene Helenowski, Northwestern University**;** Hakan Demirtas, University of Illinois at Chicago**;** Chiang-Ching Huang, Northwestern University

2:20 p.m. **Imputation Based on Propensity Score: A Comparative Study of the Penalized Spline Propensity Prediction Method with Alternative Double Robust Estimators—**❖Guangyu Zhang, University of Michigan**;** Roderick J. Little, University of Michigan

2:35 p.m. **Variable Selection with Missing Data in Survival Analysis—**❖Kun Liang, Iowa State University**;** Michael D. Larsen, Iowa State University**;** Terry M. Therneau, Mayo Clinic

2:50 p.m. **Which Missing Value Imputation Method To Use in Expression Profiles: A Comparative Study and Two Selection Schemes—**❖Guy Brock, University of Louisville**;** John Shaffer, University of Pittsburgh**;** Richard Blakesley, University of Pittsburgh**;** Meredith Lotz, University of Pittsburgh**;** George C. Tseng, University of Pittsburgh

3:05 p.m. **Interval Estimation for the Difference in Median Survival Times Based on Multiple Imputation—**❖Maria Kocherginsky, The University of Chicago**;** Theodore G. Karrison, The University of Chicago

3:20 p.m. **Analysis of Longitudinal Data with Informative Dropout—**❖Li Chen, The University of North Carolina at Chapel Hill**;** Danyu Lin, The University of North Carolina at Chapel Hill**;** Donglin Zeng, The University of North Carolina at Chapel Hill

3:35 p.m. **Semiparametric Marginalized Model for Longitudinal Data with a Terminating Event—**❖Mengling Liu, New York University**;** Wenbin Lu, North Carolina State University

469 CC-251 C

Survival Data Analysis I—Contributed

Biometrics Section

Chair(s): Joanna H. Shih, National Cancer Institute

2:05 p.m. **Correlating Large-Scale Biological Data with Censored Survival Data—**❖Karthik Devarajan, Fox Chase Cancer Center

2:20 p.m. **Empirical Likelihood-Based Inference for the Calibration Regression Model with Medical Cost—**❖Yichuan Zhao, Georgia State University

2:35 p.m. **Martingale Residuals for Nested Case-Control Data—**❖Ornulf Borgan, University of Oslo; Bryan Langholz, University of Southern California

2:50 p.m. **Power of Nonparametric Logrank and Wilcoxon Tests with Adjustment for Covariates: A Simulation Study—**❖Honghua Jiang, Eli Lilly and Company; James Symanowski, Nevada Cancer Institute; Sofia Paul, Novartis Pharmaceuticals; Yongming Qu, Eli Lilly and Company; Anothy Zagar, Eli Lilly and Company; Shengyan Hong, Eli Lilly and Company

3:05 p.m. **The Cost of Checking Proportional Hazards—**❖Bryan Shepherd, Vanderbilt University

3:20 p.m. **Nonparametric Estimation of State Occupation, Entry, and Exit Times with Current Status Data—**❖Ling Lan, University of Louisville; Somnath Datta, University of Louisville

3:35 p.m. **Assessing Fit in Cure-Mixture Models—**❖E. Paul Wileyto, University of Pennsylvania; Daniel F. Heitjan, University of Pennsylvania

470 CC-355 C

● ✪ Statistical Issues in Analyzing Clinical Trials Data—Contributed

Biopharmaceutical Section

Chair(s): Yuehui Wu, GlaxoSmithKline

2:05 p.m. **Analysis of Cumulative Distribution of Responders in Clinical Trials—**❖Manuela Buzoianu, Johnson & Johnson PRD; Akiko Okamoto, Johnson & Johnson PRD; Surya Mohanty, Johnson & Johnson PRD; Yi-Wen Ma, Johnson & Johnson PRD

2:20 p.m. **Binary Clinical Trials Data Analysis Using Pairwise Likelihood—**❖Juanmei Liu, University of California, Los Angeles; Peter M. Bentler, University of California, Los Angeles

2:35 p.m. **A Mathematical Comparison of a Randomized Withdrawal Clinical Trial Design and a Parallel Groups Design To Demonstrate Disease Modification—**❖Suzanne Hendrix, Myriad Pharmaceuticals; Scott Horton, Myriad Pharmaceuticals; Alexander Gutin, Myriad Pharmaceuticals

2:50 p.m. **Futility Assessment with Two Correlated Endpoints—**❖Meehyung Cho, sanofi-aventis; Bill Stager, sanofi-aventis

3:05 p.m. **Reporting Quality-of-Life Results Using Percent Change from Baseline Analysis—**❖Jen-Fue Maa, Bristol-Myers Squibb Company; Kao-Tai Tsai, Bristol-Myers Squibb Company; Daniel Seekins, Bristol-Myers Squibb Company; Rozina Khanna, Bristol-Myers Squibb Company

3:20 p.m. **Distributional Approach for Measure of Agreement—**❖Weishi Yuan, U.S. Food and Drug Administration; Tie-Hua Ng, U.S. Food and Drug Administration

3:35 p.m. **Test Homogeneity of Risk Difference Across Subgroups in Clinical Trials—**❖Lanju Zhang, MedImmune, Inc.; Harry Yang, MedImmune, Inc.

471 CC-250 EF

● ✪ Application of Innovative Analysis in Clinical Trials—Contributed

Biopharmaceutical Section

Chair(s): Mandy Bergquist, GlaxoSmithKline

2:05 p.m. **Using Latent Sleepiness To Evaluate an Important Side Effect of Promethazine—**❖Alan Feiveson, National Aeronautics and Space Administration; Matthew Hayat, National Aeronautics and Space Administration; Zalman Vaksman, Wyeth; Lakshmi Putcha, National Aeronautics and Space Administration; Jason L. Boyd, National Aeronautics and Space Administration

2:20 p.m. **The Entropy Correlation Coefficient and Its Application to Clinical Data Analysis—**❖Ronald Pearson, ProSanos Corporation; Jaakko Astola, Tampere University of Technology

2:35 p.m. **Propensity Score Application in Historically Controlled Clinical Trials—**❖Daniel Reyner, Zimmer, Inc

2:50 p.m. **Improving the Delta Method—**❖Paul Duty, Montgomery College; Nancy Flournoy, University of Missouri-Columbia

3:05 p.m. **The Range Disparity Distribution and Its Applications—**❖Lawrence Marinucci, Acorda Therapeutics Inc**;** Tailiang Xie, Brightech International

3:20 p.m. **Preference-Based Analysis for Estimating Treatment Efficacy Among Compliant Patients in a Randomized Clinical Trial—**❖Afisi S. Ismaila, McMaster University**;** Stephen Walter, McMaster University

3:35 p.m. **Bootstrap Test for Assessing the Efficacy of Drug Combinations—**❖Liwen Xi, Johnson & Johnson PRD**;** Guoyong Jiang, Cephalon, Inc.**;** Jianjun Li, Merck & Co., Inc.

472 CC-260
Copulas, Covariances, and Risk—Contributed

Business and Economics Statistics Section

Chair(s): Douglas Noe, Miami University

2:05 p.m. **Efficient Estimation of Elliptical Copula Models—**❖Mei-Mei Zen, National Cheng-Kung University

2:20 p.m. **Bayesian Wavelet Estimation of Copulas for Dependence Modeling—**❖Leming Qu, Boise State University

2:35 p.m. **Statistical Analysis for Financial Ultra-High Frequency Data: A Filtering Approach—**❖Yong Zeng, University of Missouri-Kansas City

2:50 p.m. **The Economic Value of Intelligently Subsampled Realized Covariance Estimation of Asynchronous and Noisy High-Frequency Data—**❖Lada Kyj, Rice University**;** Katherine Ensor, Rice University**;** Barbara Ostdiek, Rice University

3:05 p.m. **Optimal Investment in a Defaultable Bond—**❖Weijian Liang, New York University**;** Peter Lakner, New York University

3:20 p.m. **Portfolio-Tracking Performance When Optimized with Estimation Error—**❖Andrew Siegel, University of Washington

3:35 p.m. **Biased Bootstrap Methods for Semiparametric Models—**❖Mihal Giurcanu, University of Florida

473 CC-255 B
✪ Investing Optimally —Contributed

Business and Economics Statistics Section

Chair(s): Amit Sen, Xavier University

2:05 p.m. **Competitive Inventory Management in Treasury Markets—**❖Rohan Christie-David, University of Louisville**;** William T. Moore, University of South Carolina**;** Arjun Chatrath, University of Portland

2:20 p.m. **Time-Varying Coefficient Model for Corporate Bond Credit Spread—**❖Yuejiao Ma, The Pennsylvania State University

2:35 p.m. **Trading American Stock Options Amidst Market/Model Disparity—**❖Scott Nickleach, University of Pittsburgh

2:50 p.m. **Testing the Informational Efficiency of Municipal Bond Market—**❖Lei Zhang, Syracuse University**;** Chunchi Wu, Syracuse University**;** Raja Velu, Syracuse University

3:05 p.m. **Principal Analysis and Price Dynamics for Sparse Auction Data—**❖Bitao Liu, University of California, Davis**;** Hans-Georg Müller, University of California, Davis

3:20 p.m. **Empirically Confronting Stochastic Singularity: An Application to the Cox, Ingersoll, and Ross Model—**❖Kenneth Roskelley, The University of Arizona**;** Christopher Lamoureux, The University of Arizona

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

474 CC-255 C
● ✪ Regression and Forecasting—Contributed

Business and Economics Statistics Section

Chair(s): Kimberly S. Weems, North Carolina State University

2:05 p.m. **Testing the Equivalence of Regressions for the Capital Asset Pricing Models—**❖Hubert J. Chen, National Cheng Kung University**;** Jevons Lee, Zhejiang University**;** Li-Wei You, National Cheng Kung University

2:20 p.m. **Inferences in Regression with Correlated Residuals—**❖Yue Fang, University of Oregon

2:35 p.m. **Performance Comparison of Simple Forecasting Methods for Macroeconomic Indicators—**❖Bogong T. Li, Bank of America

2:50 p.m. **A Statistical Model of a Firm's Expenditure—**❖Jonathan Hosking, IBM T. J. Watson Research Center**;** Bibhas Chakraborty, University of Michigan

3:05 p.m. **A Comparison of Inference Procedures for the Simple Linear Errors-in-Variables Regression Model—**❖Stephen M. Miller, Bureau of Labor Statistics

3:20 p.m. **Multiple Imputation of Right-Censored Wages in the German IAB-Employment Register Considering Heteroscedasticity—**❖Thomas Buettner, Institute for Employment Research**;** Susanne Raessler, Institute for Employment Research

3:35 p.m. **Measuring Liquidity Costs in Agricultural Futures Markets: Conventional and Bayesian Approaches—**❖Julieta Frank, University of Illinois at Urbana-Champaign**;** Philip Garcia, University of Illinois at Urbana-Champaign

475 CC-254 A

✪ MCMC and Gibbs Sampling—Contributed

IMS

Chair(s): Scotland Leman, Duke University

2:05 p.m. **Using Subsampling in Markov Chain Monte Carlo—**❖James Flegal, The University of Minnesota

2:20 p.m. **Gibbs Sampling for Bayesian Models—**❖Alicia Johnson, The University of Minnesota

2:35 p.m. **Markovian Dynamics in a RAM with Applications to Classification—**❖Zach Dietz, Tulane University

2:50 p.m. **Goodness-of-Fit Tests for Generalized Linear Models When Some Covariates Are Missing—**❖Lei Jin, Texas A&M University**;** Suojin Wang, Texas A&M University

3:05 p.m. **Floor Discussion**

476 CC-255 D

● New Developments in Spatial Modeling—Contributed

Section on Bayesian Statistical Science

Chair(s): Luyan Dai, University of Missouri-Columbia

2:05 p.m. **Point Estimates for Variance-Structure Parameters in Bayesian Analysis of Hierarchical Models—**❖Yi He, sanofi-aventis**;** James S. Hodges, The University of Minnesota

2:20 p.m. **Smoothed ANOVA with Spatial Effects as a Competitor to MCAR—**❖Yufen Zhang, The University of Minnesota**;** Hodges S. James, The University of Minnesota

2:35 p.m. **Bayesian Spatial Models with Repeated Measurements—**❖Xiaoqian Sun, Clemson University

2:50 p.m. **Loglinear Modeling for Point-Referenced Spatial Data—**❖Eric Tassone, Duke University**;** Marie Lynn Miranda, Duke University**;** Alan E. Gelfand, Duke University

3:05 p.m. **Bayesian Modeling of Semicontinuous Spatial Data—**❖Virginia Recta, U.S. Food and Drug Administration**;** James L. Rosenberger, The Pennsylvania State University**;** Murali Haran, The Pennsylvania State University

3:20 p.m. **Sparsity and Smoothness for Disease Rate Mapping via Spatial Bayesian LASSO—**❖Haoda Fu, University of Wisconsin-Madison

3:35 p.m. **Modeling Wind Fields Using Process Convolutions—**❖Margaret Short, University of Alaska Fairbanks

477 CC-251 E

● ✪ Methods for Administrative and National Survey Data—Contributed

Section on Health Policy Statistics

Chair(s): Byron Gajewski, The University of Kansas Medical Center

2:05 p.m. **Evaluation of Consumer Panel Survey Data for Public Health Communication Planning: An Analysis of Annual Survey Data from 1995–2006—**❖William Pollard, Centers for Disease Control and Prevention

2:20 p.m. **Statistical Modeling of Longitudinal Mental Distress Among Rural Seniors Who Participated in the National Population Health Survey—**❖Chandima Karunanayake, University of Saskatchewan**;** Punam Pahwa, University of Saskatchewan

2:35 p.m. **Statistical Methods for Constructing Canadian Growth Curves—**❖Stephane Tremblay, Statistics Canada

2:50 p.m. **Evaluation of New Programs in State Medicaid Agencies—**❖Mark Carpenter, Auburn University

3:05 p.m. **Classification Models for Identifying Chronic Disease Cases and Noncases in Administrative Claims Data—**❖Lisa M. Lix, University of Manitoba**;** William D. Leslie, University of Manitoba**;** Marina Yogendran, Manitoba Centre for Health Policy**;** Richard Baumgartner, National Research Council Canada**;** Christopher Bowman, National Research Council Canada**;** Souradet Shaw, University of Manitoba

3:20 p.m. **The Minimum Level of Sensitivity and Predictive Value Positive in the Evaluation of Health Outcomes with Administrative Data—**❖Yong-Fang Kuo, The University of Texas Medical Branch**;** Tracy Nguyen-Oghalai, The University of Texas Medical Branch

3:35 p.m. **The Impact of Deidentification on Statistical Information in Limited Access Datasets—**❖April Slee, Axio Research**;** Paula Diehr, University of Washington**;** Kenneth Rice, University of Washington

478 CC-155 D

● ✪ Financial Data Mining and Risk—Contributed

Section on Statistical Computing, Business and Economics Statistics Section, Society for Risk Analysis, Section on Statistical Graphics, Section on Nonparametric Statistics

Chair(s): Nozer D. Singpurwalla, The George Washington University

2:05 p.m. **Statistical Methods for Detecting Financial Crimes: Applications and Challenges—**❖Agus Sudjianto, Bank of America**;** Sheela Nair, University of California, Los Angeles

2:20 p.m. **An Efficient Sequential Design Method for Detecting Money Laundering—**❖Xinwei Deng, Georgia Institute of Technology**;** Roshan Joseph, Georgia Institute of Technology**;** Agus Sudjianto, Bank of America**;** Chien-Fu Jeff Wu, Georgia Institute of Technology

2:35 p.m. **Unsupervised Quantile Learning To Identify Principal Direction of Anomaly—**❖Aijun Zhang, University of Michigan**;** Agus Sudjianto, Bank of America**;** Ming Yuan, Georgia Institute of Technology

2:50 p.m. **Rule and Rule Ensemble-Based Methods for Financial Crime Detection—**❖Fernando Cela Diaz, Bank of America**;** Agus Sudjianto, Bank of America

3:05 p.m. **Feature Extraction and Classification to Identify Suspicious Activities—**❖Alireza Darvish, The University of North Carolina at Charlotte**;** Kayvan Najarian, The University of North Carolina at Charlotte

3:20 p.m. **Simulating Goodness-of-Fit: Ensuring Fair Online Auctions—**Andrew Ostarello, Exponent, Inc.**;** ❖Michael Orkin, Exponent, Inc.

3:35 p.m. **The Netflix Challenge for Statisticians—**❖J. Brian Gray, The University of Alabama

479 CC-250 B

● Compensating for Survey Nonresponse and Nonsampling Error—Contributed

Section on Survey Research Methods

Chair(s): Vicki Burt, National Center for Health Statistics

2:05 p.m. **An Assessment of the Effect of Misreporting of Phone Line Information on Key Weighted Estimates from Four National RDD Surveys—**❖Ashley Bowers, University of Michigan**;** Jeffrey Gonzalez, Bureau of Labor Statistics

2:20 p.m. **Improvements in Coverage and Sample Weighting for Telephia's 2007 Attitude and Behavior Survey (TABS) of U.S. Cellular Phone Subscribers—**❖Vicki Pineau, Telephia Inc.**;** Jim Baer, Telephia Inc.**;** Christianne Pang, Telephia Inc.**;** Glenn Atias, Telephia Inc.**;** Elisa Chan, Knowledge Networks, Inc.

2:35 p.m. **Nonresponse in Surveys of the College Educated Revisited—**❖Patrick Flanagan, U.S. Census Bureau**;** Nancy Dexter, U.S. Census Bureau

2:50 p.m. **Nonresponse in the Survey of Industrial Research and Development—**❖Perez Adriana, The University of Texas at Houston Health Science Center

3:05 p.m. **Adjusting for Missing Covariates Using the EM Algorithm for Logistic Regression Models: A Study of the Effect of Childhood Overweight on the Age of Onset of Menses—**❖Yi Liu, The Ohio State University**;** Elizabeth A. Stasny, The Ohio State University**;** Pamela Salsberry, The Ohio State University**;** Patricia Reagan, The Ohio State University

3:20 p.m. **An Evaluation of Basic Calibration Estimators in Presence of Nonresponse—**❖Yves Thibaudeau, U.S. Census Bureau**;** Jun Shao, University of Wisconsin-Madison**;** Jeri Mulrow, National Science Foundation

3:35 p.m. **The Nonparametric Regression with Missing Responses and Its Applications to the U.S. Census—**❖Cheng Yong Tang, Iowa State University**;** Song Xi Chen, Iowa State University

480 CC-250 C

● Methods and Analysis of Failure Time Data in Epidemiological Studies—Contributed

Section on Statistics in Epidemiology

Chair(s): Jayawant Mandrekar, Mayo Clinic

2:05 p.m. **Regression Analysis of a Disease Onset Distribution Using Diagnosis Data—**❖Jessica G. Young, University of California, Berkeley**;** Nicholas P. Jewell, University of California, Berkeley**;** Steven J. Samuels, University at Albany-SUNY

2:20 p.m. **Semiparametric Methods for Estimating Cumulative Treatment Effects**—❖Guanghui Wei, University of Michigan; Douglas Schaubel, University of Michigan

2:35 p.m. **Impact of Duration of Follow-Up Time on Predictors of Cardiovascular Disease in Survival Models**—❖Lei Zhu, Boston University; Michael J. Pencina, Boston University; Ralph B. D'Agostino, Sr., Boston University

2:50 p.m. **Semiparametric Regression with Time-Dependent Coefficient for Failure Time Data Analysis**—❖Zhangsheng Yu, The Ohio State University; Xihong Lin, Harvard School of Public Health

3:05 p.m. **The Exclusion of Prevalent Cases from Incident Dementia Risk Factor Studies Sacrifices Lots of Information**—❖Daniel Tancredi, University of California, Davis

3:20 p.m. **Comparison of Adjusted Survival Curves with Different Reference Populations**—❖Xu Zhang, Georgia State University

3:35 p.m. **Proportional Odds Modeling of Discrete Survival Data with Application to Reproductive Study**—❖Huichao Chen, Emory University; Limin Peng, Emory University; Amita K. Manatunga, Emory University; Michele Marcus, Emory University

Invited Sessions 4:00 p.m.–5:50 p.m.

481 CC-Ballrooms E-J

COPSS Awards and Fisher Lecture—Invited

ASA, Committee of Presidents of Statistics Societies, IMS, ENAR, WNAR, SSC

Organizer(s): Madhuri S. Mulekar, University of South Alabama

Chair(s): Jessica Utts, University of California, Davis

4:00 p.m. **Presentation of Awards**—❖Madhuri S. Mulekar, University of South Alabama

4:20 p.m. **R. A. Fisher, Randomization, and Current Practice in Multicenter Clinical Trials**—❖Marvin Zelen, Harvard School of Public Health

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

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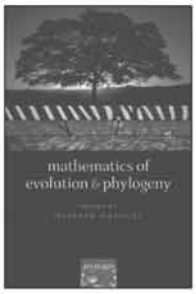

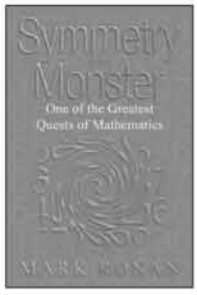

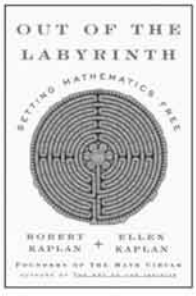

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THURSDAY, AUGUST 2

Tours

TR13 Utah Gold & Silver
9:00 a.m.–5:00 p.m. CC-South Foyer (200 South Street)

Committee/Business Meetings & Other Activities

7:00 a.m.–10:30 a.m. CC-252 A, CC-252 B
Speaker Work Rooms

7:00 a.m.–10:30 a.m. CC-South Foyer
Cyber Center

7:30 a.m.–10:30 a.m. CC-South Foyer
JSM Main Registration and ASA Membership/Special Assistance Desk

8:00 a.m.–10:00 a.m. CC-254 C
Council of Sections Governing Board JSM Meeting, Part 1 (closed)
Chair(s): S. Lynne Stokes, Southern Methodist University

8:00 a.m.–10:30 a.m. CC-South Foyer
ASA Marketplace

8:00 a.m.–6:00 p.m. CC-Main Lobby, Level 2
Salt Lake City Visitors Information Center

10:00 a.m.–11:30 a.m. CC-254 C
Council of Sections Governing Board JSM Meeting, Part 2 (closed)
Chair(s): S. Lynne Stokes, Southern Methodist University

Invited Sessions 8:30 a.m.–10:20 a.m.

482 CC-257
✪ The Role of the ASA in MS Statistician Careers—Invited

Committee on Membership Retention and Recruitment, ENAR, WNAR, Section on Survey Research Methods

Organizer(s): David Banks, Duke University

Chair(s): Mingxiu Hu, Millennium Pharmaceuticals, Inc.

8:35 a.m. **The Evolution of an Engineer—**❖Matthew Pocernich, National Center for Atmospheric Research

9:05 a.m. **Opportunities Offered by the ASA for a Statistician in a Management Role in the Pharmaceutical Industry—**❖Jane B. Porter, Millennium Pharmaceuticals, Inc.

9:35 a.m. **Transitioning into a Career as an MS Statistician: How the ASA Can Help—**❖Monica Johnston, University of California, San Francisco

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

483 CC-251 C
Advances in System Reliability—Invited

Section on Physical and Engineering Sciences, Section on Statisticians in Defense and National Security, Section on Risk Analysis, Section on Quality and Productivity

Organizer(s): Alyson G. Wilson, Los Alamos National Laboratory

Chair(s): Alyson G. Wilson, Los Alamos National Laboratory

8:35 a.m. **Parametric and Nonparametric Flowgraph Models with Application to Bayesian Multistate Systems Reliability—**❖Aparna V. Huzurbazar, University of New Mexico**;** Brian J. Williams, Los Alamos National Laboratory**;** David Collins, University of New Mexico

9:05 a.m. **Integrating System Engineering Methods into Reliability Estimates—**❖Andrew Koehler, Los Alamos National Laboratory

9:35 a.m. **Resource Allocation Strategies for Reliability of Complex Systems—**❖Christine Anderson-Cook, Los Alamos National Laboratory

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

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484 CC-355 F

● ✪ Statistical Validation of Surrogate Endpoints—Invited

Biopharmaceutical Section, Biometrics Section, Committee on Applied Statisticians, WNAR

Organizer(s): Peiqi Chen, Eli Lilly and Company

Chair(s): Stacy Lindborg, Eli Lilly and Company

8:35 a.m. **Unified Approaches for Surrogate Marker Evaluation from Multiple Randomized Clinical Trials—**❖Geert Molenberghs, Hasselt University

9:00 a.m. **Evaluating and Using Surrogate Endpoints in Clinical Trials: A Bayesian Approach—**❖Mary K. Cowles, The University of Iowa**;** Qian Shi, The University of Iowa

9:25 a.m. **Surrogate Endpoint Validation: Statistical Elegance versus Clinical Relevance—**❖Daniel J. Sargent, Mayo Clinic

9:50 a.m. Disc: Sue-Jane Wang, U.S. Food and Drug Administration

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

485 CC-255 E

● ✪ Statistics and Finance—Invited

IMS

Organizer(s): Per A. Mykland, The University of Chicago

Chair(s): Per A. Mykland, The University of Chicago

8:35 a.m. **Large Dimensional Covariance Matrix Estimation for Asset Pricing and Risk Management Using a Factor Model—**❖Jianqing Fan, Princeton University**;** Yingying Fan, Princeton University**;** Jinchi Lv, Princeton University

9:05 a.m. **Do Jumps Matter?—**❖Lan Zhang, University of Illinois at Chicago

9:35 a.m. **Testing for Jumps in a Discretely Observed Process—**❖Yacine Ait-Sahalia, Princeton University**;** Jean Jacod, Universite Pierre and Marie Curie

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

486 CC-151 G

● ✪ Practical Bayesian Nonparametric Methods—Invited

Section on Bayesian Statistical Science, Section on Nonparametric Statistics

Organizer(s): David Draper, University of California, Santa Cruz

Chair(s): Herbert Lee, University of California, Santa Cruz

8:35 a.m. **Bayesian Nonparametric Modeling for Well-Calibrated Location and Scale Inference with Skewed and Heavy-Tailed Data—**❖David Draper, University of California, Santa Cruz

9:00 a.m. **Nonparametric Modeling for Spatial Functional Data Analysis—**❖Alan E. Gelfand, Duke University

9:25 a.m. **Bayesian Semiparametric Modeling Based on Mixtures of Polya Trees—**❖Timothy E. Hanson, The University of Minnesota

9:50 a.m. **Modeling with Infinitely Divisible Moving Averages—**❖Robert L. Wolpert, Duke University

10:15 a.m. **Floor Discussion**

487 CC-255 B

● ✪ Profile Monitoring—Invited

Section on Quality and Productivity, Section on Physical and Engineering Sciences

Organizer(s): Willis Jensen, W.L. Gore & Associates, Inc.

Chair(s): William H. Woodall, Virginia Polytechnic Institute and State University

8:35 a.m. **Profiles: Monitoring the Variance Components—**❖Shilpa Gupta, Arizona State University**;** Douglas C. Montgomery, Arizona State University

9:05 a.m. **Monitoring Correlation Within Nonlinear Profiles Using Mixed Models—**❖Willis Jensen, W.L. Gore & Associates, Inc.**;** Jeffrey B. Birch, Virginia Polytechnic Institute and State University

9:35 a.m. **A General Framework for Monitoring of Dynamic Systems—**❖Kwok-Leung Tsui, Georgia Institute of Technology**;** Wei Jiang, Stevens Institute of Technology**;** Tom Au, AT&T Labs - Research

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

488 CC-255 A

● ✪ Innovative Designs and Analysis in Clinical Trials: Fully Harnessing Patient Information Accrued During a Trial—Invited

Section on Government Statistics, ENAR, Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Yi Cheng, Indiana University South Bend

Chair(s): Yi Cheng, Indiana University South Bend

8:35 a.m. **Adaptive Dose-Finding Designs for Single and Dual Agent Combinations Using Accumulated Data from All Patients—**❖Sumithra J. Mandrekar, Mayo Clinic**;** Daniel J. Sargent, Mayo Clinic

9:05 a.m. **Adaptive Design and Analysis of Clinical Trials—**❖Yu Shen, The University of Texas M. D. Anderson Cancer Center**;** Yi Cheng, Indiana University South Bend

9:35 a.m. **Progress in Using Adaptive Designs for Clinical Trials—**❖Donald A. Berry, The University of Texas M. D. Anderson Cancer Center

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

489 CC-255 D

● ✪ Medication Compliance: New Methods and Applications—Invited

ENAR, WNAR, Section on Health Policy Statistics, Biometrics Section

Organizer(s): Junfeng Sun, University of Nebraska Medical Center; Honghu Liu, University of California, Los Angeles

Chair(s): Junfeng Sun, University of Nebraska Medical Center

8:35 a.m. **Noncompliance with Drug-Dosing Regimens: An Underestimated Bias in Drug Trials and Clinical Practice—**❖Bernard Vrijens, Pharmionic Systems Ltd.

9:05 a.m. **Dose-Timing Intervals of Antiretroviral Medications and Virologic Responses—**❖Honghu Liu, University of California, Los Angeles**;** Loren G. Miller, University of California, Los Angeles**;** Ron D. Hayes, University of California, Los Angeles**;** Carol E. Golin, The University of North Carolina at Chapel Hill**;** Junfeng Sun, University of Nebraska Medical Center**;** Tongtong Wu, University of California, Los Angeles**;** Neil S. Wenger, University of California, Los Angeles

9:35 a.m. **Analyzing the Effects of Compliance Measured with Error in Randomized Trials—**❖Els Goetghebeur, Gent University**;** Stijn Vansteelandt, Ghent University**;** Manoochehr Babanezhad, Ghent University

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

490 CC-255 F

✪ Advances in Statistical Aggregation —Invited

IMS, International Indian Statistical Association

Organizer(s): Florentina Bunea, Florida State University

Chair(s): Florentina Bunea, Florida State University

8:35 a.m. **Aggregation Using Empirical Risk—**❖Sara A. van de Geer, ETH Zurich

9:00 a.m. **Sparsity Bounds in Empirical Risk Minimization—**❖Vladimir Koltchinskii, Georgia Institute of Technology

9:25 a.m. **Aggregating Algorithms for Individual Sequences—**❖Nicolò Cesa-Bianchi, Università degli Studi di Milano

9:50 a.m. **Sparsity Oracle Inequalities for the Lasso—**❖Marten Wegkamp, Florida State University**;** Alexandre Tsybakov, Paris VI**;** Florentina Bunea, Florida State University

10:15 a.m. **Floor Discussion**

491 CC-255 C

● ✪ Statistical Methods and Applications in Genomics—Invited

IMS, Section on Statistics in Epidemiology, Section on Health Policy Statistics, Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Heping Zhang, Yale University

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

8:35 a.m. **PfCluster: A New Profile Cluster Analysis Procedure—**❖Jiayang Sun, Case Western Reserve University**;** Yaomin Xu, The Cleveland Clinic

9:05 a.m. **A Simple and Improved Correction for Population Stratification in Genetic Association Studies—**❖Michael Epstein, Emory University

9:35 a.m. **Prior Elicitation and Variable Selection in Regression Models with High-Dimensional Data—**❖Joseph G. Ibrahim, The University of North Carolina at Chapel Hill**;** Mayetri Gupta, The University of North Carolina at Chapel Hill

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

492 CC-250 C

Network Science—Invited

Section on Statistical Computing, Section on Bayesian Statistical Science

Organizer(s): Edward Wegman, George Mason University; Yasmin H. Said, George Mason University

Chair(s): William F. Szewczyk, National Security Agency

8:35 a.m. **Bayesian Inference for a Longitudinal Social Network Model—**❖Mark S. Handcock, University of Washington

9:05 a.m. **Network Survivability—**❖Nozer D. Singpurwalla, The George Washington University

9:35 a.m. **A Review of Statistical Models for Networks with a Focus on Imputation—**❖Stanley Wasserman, Indiana University**;** Douglas Steinley, University of Missouri-Columbia**;** Garry Robins, University of Melbourne

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

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

493 CC-150 G

● ✪ Consulting from a Distance: Web-Based Analytics for Statistical Consulting—Topic-Contributed

Section on Statistical Consulting, WNAR

Organizer(s): Samaradasa Weerahandi, Time Warner; Edward D. Rothman, University of Michigan

Chair(s): Brady West, University of Michigan

8:35 a.m. **Web-Based Analytics in Marketing—**❖Samaradasa Weerahandi, Time Warner

8:55 a.m. **Use of Remote Consulting in a University Environment—**❖Edward D. Rothman, University of Michigan

9:15 a.m. **Remote Consulting on Linear Mixed Models at a University Consulting Center—**❖Kathleen Welch, University of Michigan**;** Brady West, University of Michigan

9:35 a.m. **How to Move from Desktop to Web Analytics—**❖Dilip Patel, Time Warner

9:55 a.m. Disc: Diane K. Michelson, International SEMATECH Manufacturing Initiative

10:15 a.m. **Floor Discussion**

494 CC-355 B

● ✪ Modeling Data from Brain Imaging Studies—Topic-Contributed

Biometrics Section, WNAR

Organizer(s): R. Todd Ogden, Columbia University

Chair(s): Martina Pavlicova, Columbia University

8:35 a.m. **Dynamic Positron Emission Tomography Data-Driven Analysis Using Sparse Bayesian Learning—**❖John Aston, Academia Sinica**;** Jyh-Ying Peng, Academia Sinica

8:55 a.m. **FMRI Statistical Brain Activation from k-Space Data—**❖Daniel Rowe, Medical College of Wisconsin

9:15 a.m. **State-Space Models for Optical Imaging—**❖Kary Myers, Los Alamos National Laboratory**;** Anthony E. Brockwell, Carnegie Mellon University**;** William F. Eddy, Carnegie Mellon University

9:35 a.m. **Assessing Homogeneity in Brain Regions Using Imaging Data—**❖R. Todd Ogden, Columbia University**;** Huiping Jiang, Columbia University

9:55 a.m. **The Use of Multiscale Methods To Characterize Resting fMRI Data—**❖Nicole Lazar, University of Georgia

10:15 a.m. **Floor Discussion**

495 CC-355 D

● ✪ Repeated Measures and Recurrent Events in Medical Device Studies—Topic-Contributed

Biopharmaceutical Section, WNAR

Organizer(s): Zheng Zhou, Boston Scientific Corporation

Chair(s): Jeng Mah, American Medical Systems

8:35 a.m. **Group-Sequential Analysis of Correlated Binary Data on Repeated Venous Accessions—**❖John Evans, Boston Scientific Corporation**;** Brian P. Johnson, Boston Scientific Corporation**;** So Jung Imm, Boston Scientific Corporation

8:55 a.m. **Longitudinal Data Analysis in Medical Device Clinical Studies—**❖Chang S. Lao, U.S. Food and Drug Administration**;** Harry F. Bushar, U.S. Food and Drug Administration

9:15 a.m. **Comparison of Methods for Analyzing Recurrence Cardiac Arrhythmia Data—**❖Shelby Li, Medtronic Inc.

9:35 a.m. **Assessing Correlation Between Repeated Measurements of Secondary Endpoints in a Medical Device Trial—**❖Lan Pan, Boston Scientific Corporation; Bryan Randall, Boston Scientific Corporation; Alex Shih, Boston Scientific Corporation

9:55 a.m. **Analysis of Recurrent Events Data in Medical Device Clinical Trials—**❖Sarah J. H. Kogut, Beckman Coulter, Inc.

10:15 a.m. **Floor Discussion**

496 CC-251 E

✪ Nonparametric Approaches to Regression and Spatial Modeling—Topic-Contributed

IMS, Section on Nonparametric Statistics, Section on Statistics and the Environment

Organizer(s): Fang Li, Indiana University Purdue University Indianapolis

Chair(s): Weixing Song, Kansas State University

8:35 a.m. **Estimating the Innovation Distribution in Nonparametric Autoregression—**❖Anton Schick, Binghamton University; Ursula Mueller, Texas A&M University; Wolfgang Wefelmeyer, Univeristaet zu Koeln

8:55 a.m. **2-D Wavelet-Based Spectra with Applications in Analysis of Geophysical Images—**❖Brani Vidakovic, Georgia Institute of Technology; Orietta Nicolis, University of Bergamo; Claudio Garutti, University of Padova

9:15 a.m. **A Data-Driven Block Thresholding Approach to Wavelet Estimation—**❖Harrison Zhou, Yale University; Tony Cai, University of Pennsylvania

9:35 a.m. **Bayesian Nonparametric Modeling for Spatial Data Using Dirichlet Processes—**❖Michele Guindani, The University of Texas M. D. Anderson Cancer Center

9:55 a.m. **On Block Thresholding in Wavelet Regression with Long Memory Correlated Noise—**❖Linyuan Li, University of New Hampshire

10:15 a.m. **Floor Discussion**

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497 CC-151 A-C

● ✪ Bayesian Modeling of High-Dimensional Genomic Data—Topic-Contributed

Section on Bayesian Statistical Science, ENAR, Biometrics Section

Organizer(s): Dipak Dey, University of Connecticut

Chair(s): Thomas Santner, The Ohio State University

8:35 a.m. **Using Genomic Scans of Fst To Identify the Footprints of Selection—**❖Kent Holsinger, University of Connecticut

8:55 a.m. **Bayesian Semiparametric Testing and Estimation for High-Dimensional Genetic Data—**❖Richard MacLehose, National Institute of Environmental Health Sciences**;** David B. Dunson, National Institute of Environmental Health Sciences

9:15 a.m. **Bayesian Pathways Studies Using Microarray Data—**❖Lynn Kuo, University of Connecticut**;** Wangang Xie, University of Connecticut**;** Dong-Guk Shin, University of Connecticut**;** Fang Yu, University of Connecticut**;** Yifang Zhao, University of Connecticut**;** Ming-Hui Chen, University of Connecticut

9:35 a.m. **Bayesian Graph Cutting—**❖Bani Mallick, Texas A&M University

9:55 a.m. **Log-Linear Models for Gene and Network Interactions—**❖Valen Johnson, The University of Texas M. D. Anderson Cancer Center**;** Jianhua Hu, The University of Texas M. D. Anderson Cancer Center

10:15 a.m. **Floor Discussion**

498 CC-151 D-F

● ✪ Bayesian Methods in Industrial Applications—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Sujit Ghosh, North Carolina State University

Chair(s): Gentry White, North Carolina State University

8:35 a.m. **A Bayesian Approach to Assessing the Risk of QT Prolongation—**❖Suraj Anand, North Carolina State University**;** Sujit Ghosh, North Carolina State University

8:55 a.m. **Bayesian Nonparametric Random Effects Selection Using the Centered Dirichlet Process—**❖Mingan Yang, National Institute of Environmental Health Sciences**;** David B. Dunson, National Institute of Environmental Health Sciences

9:15 a.m. **Bayesian Estimation of Scram Rate Trends in Nuclear Power Plants—**❖Kaushal Mishra, North Carolina State University**;** Sujit Ghosh, North Carolina State University

9:35 a.m. **The Use of Bayesian Tolerance Intervals for Batch-Release Testing—**❖Richard Lewis, GlaxoSmithKline**;** Steven J. Novick, GlaxoSmithKline

9:55 a.m. **A Joint Modeling Approach for Analyzing Nonignorable Missing Data—**❖Sujit Ghosh, North Carolina State University**;** Liansheng Zhu, Pharmaceutical Product Development, Inc

10:15 a.m. **Floor Discussion**

499 CC-250 E

✪ Ranked Set Sampling I—Topic-Contributed

Section on Nonparametric Statistics, Section on Survey Research Methods

Organizer(s): Omer Ozturk, The Ohio State University

Chair(s): S. Lynne Stokes, Southern Methodist University

8:35 a.m. **Estimating the Distribution Function Using k-tuple Ranked Set Samples—**❖Kaushik Ghosh, New Jersey Institute of Technology**;** Ram C. Tiwari, National Cancer Institute

8:55 a.m. **Distribution-Free Statistical Intervals via Ranked-Set Sampling—**❖Jesse Frey, Villanova University

9:15 a.m. **A Nonparametric Mean Estimator for Judgment Post-Stratified Data—**❖Xinlei Wang, Southern Methodist University**;** Johan Lim, Yonsei University**;** S. Lynne Stokes, Southern Methodist University

9:35 a.m. **Optimal Ranked Set Sampling Estimation Based on Medians from Multiple Set Sizes—**❖Nader Gemayel, The Ohio State University**;** Elizabeth A. Stasny, The Ohio State University**;** Douglas Wolfe, The Ohio State University

9:55 a.m. **Minimum Distance Estimator of Judgment-Ranking Probabilities in a Ranked-Set Sample—**❖Omer Ozturk, The Ohio State University

10:15 a.m. **Floor Discussion**

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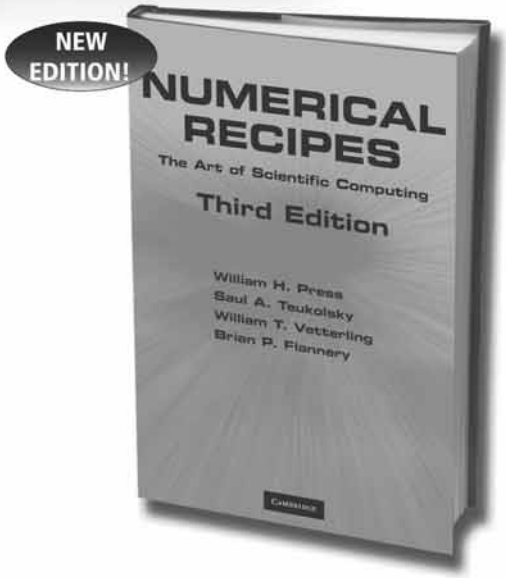

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500 CC-250 A

Creating Materials for an Online Course—Topic-Contributed

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

Organizer(s): F. Michael Speed, Texas A&M University

Chair(s): Benjamin H. Eichhorn, Rider University

8:35 a.m. **Developing and Using Video Instruction in an Online Course—**❖Sue Schou, Idaho State University

8:55 a.m. **Creating Materials for an Online Course—**❖Suzanne Perumean-Chaney, The University of Alabama at Birmingham**;** Mischelle T. Stone, The University of Alabama at Birmingham

9:15 a.m. **Creating Materials for Online Students—**❖Patti Collings, Brigham Young University

9:35 a.m. **Creating Materials for an Online/Distance Course—**❖F. Michael Speed, Texas A&M University**;** Kim Ritchie, Texas A&M University

9:55 a.m. **Creating Materials for an Online Course—**❖Joan Weinstein, Harvard Extension School

10:15 a.m. **Floor Discussion**

501 CC-254 B

Bayesian Methods in Sample Surveys—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Roderick J. Little, University of Michigan

Chair(s): Michael R. Elliott, University of Michigan

8:35 a.m. **Parametric and Semiparametric Model-Based Estimates of the Finite Population Mean for Two-Stage Cluster Samples with Item Nonresponse—**❖Roderick J. Little, University of Michigan**;** Ying Yuan, The University of Texas M. D. Anderson Cancer Center

8:55 a.m. **Bayesian Penalized Spline Model-Based Estimation of the Finite Population Distribution Function for Unequal Probability Samples—**❖Qixuan Chen, University of Michigan**;** Michael R. Elliott, University of Michigan**;** Roderick J. Little, University of Michigan

9:15 a.m. **Simultaneous Credible Intervals for Small-Area Estimation Problems—**❖Nadarjasund Ganesh, University of Maryland

9:35 a.m. **Bayesian Approaches to Sequential Selection of Survey Design Protocols—**❖James Wagner, University of Michigan**;** Trivellore E. Raghunathan, University of Michigan

9:55 a.m. **Floor Discussion**

502 CC-251 A

● ✪ Methods for Inference About Population Structure and Inheritance from Genetic Data—Topic-Contributed

WNAR, Section on Statistics in Epidemiology, Biometrics Section

Organizer(s): Geof Givens, Colorado State University

Chair(s): Ann Lee, Carnegie Mellon University

8:35 a.m. **A Likelihood Method of Estimating Ancestry from Pedigrees—**❖Janet Sinsheimer, University of California, Los Angeles**;** Christopher Plaisier, University of California, Los Angeles**;** Adriana Huertas-Vazquez, University of California, Los Angeles**;** Carlos Aguilar-Salinas, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán Mexico City**;** Teresa Tusie-Luna, National Autonomous University of Mexico**;** Paivi Pajukanta, University of California, Los Angeles**;** Kenneth Lange, University of California, Los Angeles

8:55 a.m. **Cluster Analysis and PCA for Detection of Genetic Variants and Population Structure—**❖Diana Luca, Carnegie Mellon University**;** Kathryn Roeder, Carnegie Mellon University**;** Bernie Devlin, University of Pittsburgh Medical Center

9:15 a.m. **Evaluating Individual Admixture Estimation Through Plasmodes—**❖Laura K. Vaughan, The University of Alabama at Birmingham**;** Jasmin Divers, The University of Alabama at Birmingham**;** Miguel Padilla, The University of Alabama at Birmingham**;** David T. Redden, The University of Alabama at Birmingham**;** Hemant Tiwari, The University of Alabama at Birmingham**;** Daniel Pomp, The University of North Carolina at Chapel Hill**;** David B. Allison, The University of Alabama at Birmingham

9:35 a.m. **Population Structure and Covariate Analysis Based on Pairwise Microsatellite Allele Matching Frequencies—**❖Geof Givens, Colorado State University**;** Isin Ozaksoy, Colorado State University

9:55 a.m. **Uncertainty in Inheritance: P-Values and Confidence Levels—**❖Elizabeth Thompson, University of Washington

10:15 a.m. **Floor Discussion**

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

503 CC-355 C

● ✪ Survival Data Analysis II—Contributed

Biometrics Section

Chair(s): Jun-mo Nam, National Cancer Institute

8:35 a.m. **Modeling Bivariate Survival Times by Frank Copula—**❖Rui Qin, Mayo Clinic**;** Michael P. Jones, The University of Iowa

8:50 a.m. **Nonparametric Inference for Clustered Competing Risks Data—**❖Bingshu Chen, National Institutes of Health**;** Philip S. Rosenberg, National Institutes of Health**;** Joan L. Kramer, National Institutes of Health**;** Mark H. Greene, National Institutes of Health

9:05 a.m. **Pseudospline-Based Flexible Modeling of Survival Data—**❖Zekarias Berhane, Drexel University**;** Lisa Weissfeld, University of Pittsburgh**;** Chung-Chou H. Chang, University of Pittsburgh

9:20 a.m. **Accommodating Deaths in Longitudinal Self-Rated Health for Hematopoietic Stem Cell Transplant Recipients—**❖Brenda F. Kurland, Fred Hutchinson Cancer Research Center; Paul J. Martin, Fred Hutchinson Cancer Research Center**;** Stephanie J. Lee, Fred Hutchinson Cancer Research Center

9:35 a.m. **Variable Importance in Highly Predictive Models—**❖Kyle Rudser, University of Washington**;** Michael LeBlanc, Fred Hutchinson Cancer Research Center**;** Scott Emerson, University of Washington

9:50 a.m. **Low-Structure Discrete Hazard Estimation by Cross-Validated Modified Likelihood—**❖Steven Mongin, The University of Minnesota**;** Timothy R. Church, The University of Minnesota Twin Cities

10:05 a.m. **Development of a Stochastic Model of Salmon Migration Using Random Effects Models of Recapture Data from Tagged Individuals—**❖Steven G. Smith, NOAA Fisheries**;** James R. Faulkner, National Marine Fisheries Service**;** Richard W. Zabel, NOAA Fisheries

504 CC-355 A

● ✪ ROC Estimation and Diagnostic Tests—Contributed

Biometrics Section

Chair(s): Jianrong Wu, St. Jude Children's Research Hospital

8:35 a.m. **Statistical Evaluation of Diagnostic Accuracy in Multiple Diagnostic Markers—**❖Mi-Chia Ma, National Cheng Kung University**;** Kun-Cheng Lin, National Cheng Kung University

8:50 a.m. **Additional Diagnostic Utility of a Variable After the Adjustment of Other Variables—**❖Caixia Li, University of California, San Francisco**;** Ying Lu, University of California, San Francisco

9:05 a.m. **Adjusting for Covariate Effects on Classification Accuracy Using the Covariate-Adjusted ROC Curve—**❖Holly Janes, The Johns Hopkins University**;** Margaret Pepe, Fred Hutchinson Cancer Research Center

9:20 a.m. **Modeling of Prostate Cancer Detection Probability with Applications—**❖Robert Serfling, University of Texas at Dallas

9:35 a.m. **Empirical Likelihood-Based Inference for the Partial Area Under the ROC Curve—**❖Gengsheng Qin, Georgia State University**;** Xiaoping Jin, Centers for Disease Control and Prevention**;** Xiao-Hua (Andrew) Zhou, University of Washington

9:50 a.m. **An ROC Confidence Region Based on Radial Sweep Methods—**❖Michael Schuckers, St. Lawrence University**;** Yordan Minev, St. Lawrence University

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

505 CC-260

Inferences for Stochastic Process and Time-to-Event Data Analysis—Contributed

Biometrics Section

Chair(s): Zhigang Zhang, Oklahoma State University

8:35 a.m. **Hierarchical Spatiotemporal Models for Preterm Birth—**❖Jonathan Norton, Florida State University

8:50 a.m. **Coalescent Theory for a Monoecious Random Mating Population with a Varying Size—**❖Edward Pollak, Iowa State University

9:05 a.m. **Real-Time Modeling of Infectious Disease Outbreaks—**❖Laura White, Boston University**;** Marcello Pagano, Harvard University

9:20 a.m. **Estimation Methods for Successive Times-to-Event Adjusted by Multiple Health-Related Quality-of-Life Scores—**❖Adin-Cristian Andrei, University of Wisconsin-Madison

9:35 a.m. **Parameter Calibration in an Agent-Based Model of Leishmania Major Infection—**❖Garrett Dancik, Iowa State University**;** Karin Dorman, Iowa State University

9:50 a.m. **A Color Image Grand Tour for Exploring Medical Images—**❖Juergen Symanzik, Utah State University**;** Bradley Wallet, Automated Decisions, LLC**;** William Shannon, Washington University in St. Louis

10:05 a.m. **Least Squares Estimation in Linear Regression with Doubly Truncated Data—**❖Xiaodong Luo, Mount Sinai School of Medicine**;** Wei-Yann Tsai, Columbia University

506 CC-355 E

● ✪ Statistical Issues in Microarray Data in Medicine Discovery—Contributed

Biopharmaceutical Section

Chair(s): Yue Wang, Merck & Co., Inc.

8:35 a.m. **Using Information Theory for the Classification of Trends in Dose-Response Microarray Experiments—**❖Luc Bijnens, Johnson & Johnson PRD**;** Dan Lin, Hasselt University**;** Ziv Shkedy, Hasselt University**;** An De Bondt, Janssen Pharmaceutica - JJPRD**;** Ilse Van Den Wyngaert, Janssen Pharmaceutica - JJPRD**;** Tamara Geerts, Janssen Pharmaceutica - JJPRD**;** Timothy Perera, Janssen Pharmaceutica - JJPRD**;** Hinrich Goehlmann, Johnson & Johnson PRD

8:50 a.m. **Using Biological Information To Increase the Sensitivity of Tests for Differential Expression in Low-Dose Ionizing Radiation Studies—**❖Ruixiao Lu, University of California, Davis**;** Susanne R. Berglund, University of California, Davis**;** Alison Santana, University of California, Davis**;** Zelanna Goldberg, University of California, Davis**;** David Rocke, University of California, Davis

9:05 a.m. **Gene Selection: Filtering Microarray Probe Sets Based on Probe Level Consistency—**❖Willem Talloen, Johnson & Johnson PRD**;** Hinrich Goehlmann, Johnson & Johnson PRD**;** Dhammika Amaratunga, Johnson & Johnson PRD**;** Luc Bijnens, Johnson & Johnson PRD

9:20 a.m. **An Improved Classification Procedure for High-Dimension and Highly Noisy Data Using Data Defined Distance and Comparison Test—**❖Shuang Liu, University of California, Davis**;** David Rocke, University of California, Davis

9:35 a.m. **The Trade-Off of Bias and Variability in the Analysis of Affymetrix GeneChip Probe Data—**❖Shibing Deng, Pfizer Inc.

9:50 a.m. **A Comprehensive Mixed-Model Approach for the Analysis of Microarray Gene Expression Data—**❖Jane Chang, Bowling Green State University**;** Jason C. Hsu, The Ohio State University

10:05 a.m. **Basal Gene Expression for Affymetrix Microarray and Its Application in Cancer Microarray Data Mining—**❖Hui-Rong Qian, Eli Lilly and Company

507 CC-150 A-C

● ✪ Business Statistics and Forecasting—Contributed

Business and Economics Statistics Section

Chair(s): David Dickey, North Carolina State University

8:35 a.m. **Mining Spatial Patterns of Best-Performing Branches in Banking Branch Marketing Analysis—**❖Wen Jun Yin, IBM China Research Laboratory**;** Ming Xie, IBM China Research Laboratory**;** Jin Dong, IBM China Research Laboratory**;** Bin Zhang, IBM China Research Laboratory

8:50 a.m. **Comparing Methods Used for Handling Negative Values in Statistical Samples of Business Records—**❖Eric Falk, Ernst & Young

9:05 a.m. **Dynamic Business Model Analysis for Internet-Delivered Business Services—**❖Bonnie Ray, IBM Research

9:20 a.m. **Evaluating Forecasts—**❖Wanli Min, IBM T.J. Watson Research Center**;** Chaitra Nagaraja, University of Pennsylvania

9:35 a.m. **A Mixture of Binary Logistic Regression Analysis on Labor Supply of Mothers with Disabled Children—**❖Zeng-Hua Lu, University of South Australia

9:50 a.m. **A Semiparametric Approach To Estimate the Disagreement Prices Between the Hospitals and Insurers—**❖Sreenivas Konda, Temple University

10:05 a.m. **Reflection on Teaching Business Statistics—**❖Mammo Woldie, Texas Southern University

508 CC-251 D

✪ Stochastic Processes and Related Topics—Contributed

IMS

Chair(s): Catherine M. Crespi, University of California, Los Angeles

8:35 a.m. **An Extension of Fisher's Discriminant Analysis for Stochastic Processes—**❖Hyejin Shin, Auburn University

8:50 a.m. **Uniform Central Limit Theorems for Density Estimators—**❖Richard Nickl, University of Connecticut

9:05 a.m. **Detection of Two-Sided Alternatives in a Brownian Motion Model—**❖Olympia Hadjiliadis, Princeton University/Drexel University; Vincent Poor, Princeton University

9:20 a.m. **Spectral Approaches for Clustering Time Series with Long Memory and Short Memory—**❖Jaydip Mukhopadhyay, University of Connecticut; Nalini Ravishanker, University of Connecticut; Cyr E. M'lan, University of Connecticut; Jonathan Hosking, IBM T. J. Watson Research Center

9:35 a.m. **Estimation of Age of a Galton Watson Process—**❖Satrajit Roychoudhury, Schering Plough Research Institute; Pranab K. Sen, The University of North Carolina at Chapel Hill; Manish C. Bhattacharjee, New Jersey Institute of Technology

9:50 a.m. **Stability of Empirical Minimizers Through Gaussian Approximation—**❖Philippe Berthet, The University of Rennes 1

10:05 a.m. Floor Discussion

509 CC-150 D-F

Bayesian Methods—Contributed

Section on Bayesian Statistical Science

Chair(s): Fei Liu, Duke University

8:35 a.m. **Bayesian Inference Resistant to Outliers Using Super Heavy-Tailed Distributions for the Calculation of Premiums—**❖Alain Desgagne, University of Québec at Montréal; Jean-François Angers, University of Montréal

8:50 a.m. **Redefining Degrees of Freedom for General Hierarchical Linear Models—**❖Yue Cui, The University of Minnesota; James S. Hodges, The University of Minnesota

9:05 a.m. **Empirical Bayes Models of Poisson Clinical Trials—**❖Boris Zaslavsky, U.S. Food and Drug Administration

9:20 a.m. **A New Approach to the Inverse Bayes Formula of Compatible Conditional Distributions—**❖Kun-Lin Kuo, National Chengchi University; Chwan-Chin Song, National Chengchi University; Thomas J. Jiang, National Chengchi University

9:35 a.m. **Bayes Sequential Estimation for a Subclass of Exponential Family of Distributions Under LINEX Loss—**❖Alicja Jokiel-Rokita, Wroclaw University of Technology

9:50 a.m. **Estimation Procedures in the Case of Randomly Forthcoming Data—**❖Ryszard Magiera, Wroclaw University of Technology; Alicja Jokiel-Rokita, Wroclaw University of Technology

10:05 a.m. **Bayesian Analysis of Progressively Type-II Censored Sample from Burr Type-XII Distribution—**❖Younshik Chung, Pusan National University; Seongho Song, University of Cincinnati; Chansoo Kim, Kongju National University; Junghoon Jang, Korea Food and Drug Association

510 CC-250 D

Modeling and Simulation—Contributed

Section on Statistical Computing, Section on Statistical Graphics

Chair(s): Heike Hofmann, Iowa State University

8:35 a.m. **Confirmatory Factor Analysis and Measurement Error: A Monte Carlo Simulation—**❖Bruce Brown, Brigham Young University; Tyson T. Phalp, Myriad Genetics; Petr Blahus, Charles University

8:50 a.m. **Maximum Likelihood–Based Confidence Intervals for Complementary Poisson Rate Parameters with Data Subject to Misclassification—**❖Kent Riggs, Stephen F. Austin State University

9:05 a.m. **Fitting Curves to Nested Confidence Intervals—**❖Bob Blodgett, U.S. Food and Drug Administration

9:20 a.m. **The Semiparametric Exchangeable Model—**❖Stephine Keeton, U.S. Food and Drug Administration

9:35 a.m. **A Parametric Bootstrap Approach for ANOVA with Unequal Variances: Fixed and Random Models—**❖Fei Lu, University of Louisiana at Lafayette**;** Kalimuthu Krishnamoorthy, University of Louisiana at Lafayette; Thomas Mathew, University of Maryland, Baltimore County

9:50 a.m. **Some Binary and Nonbinary Construction Plans for Diallel Cross Designs in Incomplete Blocks—**❖Jeffrey Shaffer, Tulane University**;** Sudesh Srivastav, Tulane University

10:05 a.m. **A Continuing Study on a New Resampling Method To Reduce Small-Sample Bias: An Extension to Multivariate Data—**❖Haiyan Bai, University of Central Florida**;** Wei Pan, University of Cincinnati**;** Stephen Sivo, University of Central Florida

511 CC-250 B

Useful Advice in Teaching Statistics—Contributed

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

Chair(s): Jane Harvill, Baylor University

8:35 a.m. **Teaching Introductory Statistics to Prospective Elementary School Teachers: The Habitat Experience at ETSU—**❖Edith Seier, East Tennessee State University**;** Susan Hosler, East Tennessee State University

8:50 a.m. **Differences in Students' Performance Due to a Statistics Lab Component—**❖Jose H. Guardiola, Texas A&M University, Corpus Christi**;** Duran-Hutchings Nadina, Texas A&M University, Corpus Christi**;** Joseph Champine, Texas A&M University, Corpus Christi

9:05 a.m. **Undergraduate Consulting as an Introductory Course—**❖Jim Bentley, University of Redlands

9:20 a.m. **Mentoring an Undergraduate Research Project—**❖Debra Hydorn, University of Mary Washington

9:35 a.m. **Teaching a 'History of Statistics' Discussion Course—**❖Phyllis Curtiss, Grand Valley State University**;** Kirk Anderson, Grand Valley State University

9:50 a.m. **Writing Assignments in Elementary Statistics Classes—**❖Ananda Jayawardhana, Pittsburg State University

10:05 a.m. **A Random Walk Through ANOVA—**❖Daniel Kaplan, Macalester College

512 CC-251 B

Topics in Environmetrics—Contributed

Section on Statistics and the Environment, WNAR

Chair(s): Veronica J. Berrocal, University of Washington

8:35 a.m. **Nonlinear Forecasts of the Gulf of Maine Ecosystem—**❖Barbara Bailey, San Diego State University**;** Andrew Pershing, University of Maine

8:50 a.m. **Nonparametric Smoothing of Irregularly-Spaced Palaeo Records: Trend Estimation with Application to Climate Change—**❖Patricia Menendez, Swiss Federal Institute for Forest Snow and Landscape Research WSL**;** Sucharita Ghosh, Swiss Federal Institute for Forest Snow and Landscape Research WSL

9:05 a.m. **A Test of Equality of Spectra of Short Memory Independent Gaussian Time Series—**❖Ravi Siddani, University of Maryland, Baltimore County

9:20 a.m. **Temporally Correlated Dirichlet Processes in Pollution Receptor Modeling—**❖Matthew Heaton, Brigham Young University

9:35 a.m. **Estimation of Sea Depth by Data Assimilation with Tsunami Simulation Model—**❖Kazuyuki Nakamura, The Graduate University for Advanced Studies**;** Tomoyuki Higuchi, The Institute of Statistical Mathematics**;** Naoki Hirose, Kyushu University

9:50 a.m. **Bias of Cormack-Jolly-Seber (CJS) Survival Estimators in Release Recapture Studies with Low Sampling Effort—**❖James R. Faulkner, National Marine Fisheries Service**;** Steven G. Smith, NOAA Fisheries

10:05 a.m. **Climate Change Impacts and Models—**❖John Aleong, University of Vermont

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

513 CC-251 F

● Optimal Sample Design—Contributed

Section on Survey Research Methods

Chair(s): Brenda Cox, Battelle

8:35 a.m. **Survey Designs To Optimize Efficiency and Precision for Multiple Objectives: Methods and Applications—**❖Stephen Williams, Mathematica Policy Research, Inc.**;** Frank J. Potter, Mathematica Policy Research, Inc.

8:50 a.m. **Optimization of Nonproportional Samples—**❖Raimund K. Wildner, GfK Group

9:05 a.m. **Sampling Design and Inference for Social Network Data: Estimating Epidemic Potential with Contact Tracing Data—**❖Krista Gile, University of Washington; Mark S. Handcock, University of Washington

9:20 a.m. **Sample Allocation Under a Population Model and Stratified Inclusion Probability Proportional to Size Sampling—**Steven Heeringa, Institute for Social Research; ❖SunWoong Kim, Dongguk University; Peter Solenberger, Institute for Social Research

9:35 a.m. **Comparison of Sample Set Curtailment Procedures—**❖Jason Legg, Iowa State University

9:50 a.m. **A Model-Assisted Design Based on Adaptive Sampling—**❖Ismaila Adeleke, University of Lagos; Raymond Okafor, University of Lagos; Ebenezer Esan, University of Lagos; Athanasius Opara, University of Lagos

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

514 CC-254 A

● Multivariate and Longitudinal Analysis of Survey Data—Contributed

Section on Survey Research Methods

Chair(s): J. Neil Russell, National Center for Education Statistics

8:35 a.m. **Random Forests with Survey Data—**❖Guillermo Mendez, Arizona State University; Sharon L. Lohr, Arizona State University

8:50 a.m. **Multivariate Analysis Techniques on Model-Based Sampling—**Chang Tai Chao, National Cheng Kung University; ❖Feng Min Lin, National Cheng Kung University

9:05 a.m. **A Multivariate Time Series Model for Small Areas in the Dutch Labor Force Survey—**❖Sabine Krieg, Statistics Netherlands; Jan Van den Brakel, Statistics Netherlands

9:20 a.m. **Longitudinal Estimation in Dual-Frame Surveys—**❖Yan Lu, Arizona State University; Sharon L. Lohr, Arizona State University

9:35 a.m. **Joint Modeling of Longitudinal Binary Outcome and Time to Drop-Out: An Application Using Complex Survey Data—**❖Punam Pahwa, University of Saskatchewan; Chandima Karunanayake, University of Saskatchewan

9:50 a.m. **A Method for Bias-Reduction of Sample-Based MLE of the Autologistic Function—**❖Steen Magnussen, Canadian Forest Service; Robert Reeves, Queensland University of Technology

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

515 CC-250 F

● Applications in Public Health and Maternal and Child Health—Contributed

Section on Statistics in Epidemiology, Section on Health Policy Statistics

Chair(s): Sarah Ratcliffe, University of Pennsylvania

8:35 a.m. **Ranking Children Vaccination Coverage Curves with the National Immunization Survey (NIS)—**❖Zhen Zhao, Centers for Disease Control and Prevention; Philip J. Smith, Centers for Disease Control and Prevention

8:50 a.m. **Bayesian Hierarchical Models to Evaluate Translational Research: Connecticut Collaboration for Fall Prevention—**❖Terrence Murphy, Yale University; Heather G. Allore, Yale University; Mary Tinetti, Yale University

9:05 a.m. **Disparity of Mortality from Leading Causes by Socioeconomic Status and Their Geographic Distribution: U.S. Residents, 2000-2004—**❖Jay H. Kim, National Center for Health Statistics

9:20 a.m. **Alternative Models of Calculating Risk of Heat Death Among Individuals Making Covert Border Crossings from Mexico to Arizona—**❖Mary Mays, Arizona State University; Samuel M. Keim, Arizona State University; Kendall Allred, Arizona State University; Jan Jirsak, Arizona State University

9:35 a.m. **A Strategy To Evaluate Noncoverage in a Binational, Population-Based Maternal and Child Health Survey on the U.S.-Mexico Border—**❖Ruben Smith, Centers for Disease Control and Prevention; Jill McDonald, Centers for Disease Control and Prevention; Christopher Johnson, Centers for Disease Control and Prevention

9:50 a.m. **Latent Variable Models for Development and Validation of an Infant Morbidity Index—**❖Xuefeng Liu, Wayne State University; Jeffrey Roth

10:05 a.m. **Birth Weight Distribution: Thinking Outside the Curve—**❖Richard Charnigo, University of Kentucky; Lorie W. Chesnut, The University of Alabama at Birmingham; Tony LoBianco, University of Kentucky

Invited Sessions 10:30 a.m.–12:20 p.m.

516 CC-151 A-C

● Biometrics: A Gold Standard? How Can Statistics as a Field Contribute Toward Finding an Answer?—Invited

Section on Statisticians in Defense and National Security, ENAR, Biometrics Section, Section on Health Policy Statistics

Organizer(s): Sinjini Mitra, The University of Southern California

Chair(s): Michael Schuckers, St. Lawrence University

10:35 a.m. **Biometric Recognition: Applications, Performance, and Challenges—**❖Anil K. Jain, Michigan State University

11:00 a.m. **Statistical Models for Fingerprint Individuality—**❖Sarat Dass, Michigan State University**;** Yongfang Zhu, Michigan State University**;** Anil K. Jain, Michigan State University

11:25 a.m. **Information Fusion in Biometrics—**❖Arun Ross, West Virginia University

11:50 a.m. **Statistical Issues in Biometric Authentication—**❖Stephen Fienberg, Carnegie Mellon University

12:15 p.m. **Floor Discussion**

517 CC-257

● New Development in the Analysis of Medical Data with Complex Structures—Invited

Biometrics Section, SSC, ENAR

Organizer(s): Jianguo Sun, University of Missouri-Columbia

Chair(s): Do-Hwan Park, University of Nevada, Reno

10:35 a.m. **Multivariate Interval-Censored Survival Data: Parametric, Semiparametric, and Nonparametric Models—**❖Philip Hougaard, Lundbeck

11:00 a.m. **Robust Estimation of State Occupancy Probabilities with Interval-Censored Multistate Data—**❖Richard J. Cook, University of Waterloo**;** David Tolusso, University of Waterloo

11:25 a.m. **A Class of Linear Transformation Models Under Interval Censoring—**❖Zhigang Zhang, Oklahoma State University

11:50 a.m. **Inference After Model Selection Using Restricted Permutation Methods—**❖Rui Wang, Harvard School of Public Health**;** Stephen Lagakos, Harvard School of Public Health

12:15 p.m. **Floor Discussion**

518 CC-255 E

Wald Lecture III—Invited

IMS, General Methodology, Section on Bayesian Statistical Science

Organizer(s): Tony Cai, University of Pennsylvania

Chair(s): Dongchu Sun, University of Missouri-Columbia

10:35 a.m. **Working with Inexact Models: The World of Computer Modeling—**❖James Berger, Duke University

11:40 a.m. Disc: L. Mark Berliner, The Ohio State University

12:00 p.m. **Floor Discussion**

519 CC-255 B

● ✪ Recent Advances in Group Randomization Trials—Invited

WNAR, ENAR, Section on Health Policy Statistics, Biometrics Section

Organizer(s): Catherine M. Crespi, University of California, Los Angeles

Chair(s): Weng-Kee Wong, University of California, Los Angeles

10:35 a.m. **Modeling Heterogeneity in Intraclass Correlation—**❖Catherine M. Crespi, University of California, Los Angeles**;** Weng-Kee Wong, University of California, Los Angeles

10:55 a.m. **Breaking the Matches in Community Intervention Trials—**❖Allan Donner, University of Western Ontario

11:15 a.m. **Contamination and Group Randomized Trials—**❖Ziding Feng, Fred Hutchinson Cancer Research Center

11:35 a.m. **Design and Analysis of Pseudo-Cluster Randomized Trials—**❖Mirjam Moerbeek, Utrecht University

11:55 a.m. **Group Randomized Trials in Ethnic Populations—**❖Susan L. Stewart, University of California, San Francisco

12:15 p.m. **Floor Discussion**

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520 CC-151 G

● Topics on Sample Survey Design and Inference in Honor of JNK Rao's 70th Birthday and 50 Years of Contributions—Invited

Section on Survey Research Methods

Organizer(s): Paul S. Levy, RTI International

Chair(s): Partha Lahiri, University of Maryland

10:35 a.m. **Recent Developments in Multiple-Frame Surveys—**❖Sharon L. Lohr, Arizona State University

11:00 a.m. **Rao-Scott Corrections and Beyond—**❖Alastair J. Scott, University of Auckland

11:25 a.m. **Small-Area Estimation: Theory and Practice—**❖Mike A. Hidiroglou, Statistics Canada

11:50 a.m. Disc: Wayne Fuller, Iowa State University

12:10 p.m. **Floor Discussion**

521 CC-355 F

● Some Practical Considerations for Statisticians Designing Clinical Trials—Invited

Statisticians in the Pharmaceutical Industry, ENAR, Biometrics Section, Biopharmaceutical Section

Organizer(s): John W. Stevens, AstraZeneca; Sara H. Hughes, GlaxoSmithKline

Chair(s): Sue-Jane Wang, U.S. Food and Drug Administration

10:35 a.m. **Statistical Considerations in Planning Drug Clinical Trials—**❖H. M. James Hung, U.S. Food and Drug Administration

11:00 a.m. **Performance of Multiple Testing Procedures To Compare Three Doses of a Test Drug and Placebo—**❖Lan Kong, University of Pittsburgh**;** Gary Koch, The University of North Carolina at Chapel Hill**;** Thomas Liu, Amgen Inc.**;** Huei Wang, Amgen Inc.

11:25 a.m. **Choice of the Primary Analysis in Longitudinal Clinical Trials—**❖Craig Mallinckrodt, Eli Lilly and Company

11:50 a.m. **Bioequivalence and the Pharmaceutical Industry—**❖Scott Patterson, GlaxoSmithKline**;** Byron Jones, Pfizer Inc.

12:15 p.m. **Floor Discussion**

522 CC-250 F

National Science Foundation Funded Projects in Undergraduate Education—Invited

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

Organizer(s): Shonda Kuiper, Grinnell College

Chair(s): Ann Cannon, Cornell College

10:35 a.m. **The SUM Project: A Statistics Undergraduate Mentoring (SUM) Program—**❖Julie Legler, St. Olaf College

11:00 a.m. **Content-Rich Statistical Projects for Undergraduate Economics Students—**❖Linda Collins, The University of Chicago

11:25 a.m. **Computing in Statistics: Model Courses and Curricula—**❖Deborah Nolan, University of California, Berkeley**;** Mark Hansen, University of California, Los Angeles**;** Duncan Temple Lang, University of California, Davis

11:50 a.m. **Interdisciplinary Labs Created for a First or Second Course in Statistics—**❖Shonda Kuiper, Grinnell College

12:15 p.m. **Floor Discussion**

523 CC-250 E

● ✪ Dimension Reduction and Information Visualization—Invited

IMS, Section on Nonparametric Statistics, Section on Statistical Graphics

Organizer(s): Ker-Chau Li, University of California, Los Angeles

Chair(s): Ker-Chau Li, University of California, Los Angeles

10:35 a.m. **An RKHS Formulation of the Inverse Regression Dimension Problem—**❖Tailen Hsing, The Ohio State University**;** Haobo Ren, Alcatel-Lucent

11:05 a.m. **Iterative Robust Sliced Inverse Regression for Gene Clustering in Microarray Gene Expression Data Analysis—**❖Han-Ming Wu, Academia Sinica

11:35 a.m. **Matrix Visualization for High-Dimensional Categorical Data Structure with a Cartography Link—**❖Chun-houh Chen, Academia Sinica**;** Sheng Li Tzeng, Academia Sinica**;** Chiun-How Kao, Academia Sinica

12:05 p.m. **Floor Discussion**

524 CC-251 C

Recent Advances in Nonstationary Time Series—Invited

Business and Economics Statistics Section, IMS

Organizer(s): Hernando C. Ombao, University of Illinois

Chair(s): Xiaofeng Shao, University of Illinois

10:35 a.m. **Local Adaptive Estimation for Nonstationary Time Series—**❖Sebastien Van Bellegem, Universite catholique de Louvain

11:05 a.m. **Discrimination of Nonstationary Signals Using Localized Higher-Order Spectra—**❖Hernando C. Ombao, University of Illinois

11:35 a.m. **Time-Dependent Spectral Analysis with Applications to Epileptic EEG Data—**❖Wensheng Guo, University of Pennsylvania

12:05 p.m. **Floor Discussion**

525 CC-151 D-F

● ✪ Risk Estimation Challenges—Invited

Section on Risk Analysis

Organizer(s): Michael E. Tarter, University of California, Berkeley

Chair(s): Duane Steffey, Exponent, Inc.

10:35 a.m. **Risk and Regulatory Policy Assessment Based on Complex Data Sources—**❖Michael E. Tarter, University of California, Berkeley**;** Joseph P. Brown, State of California, Air Toxicology, and Risk Assessment Unit**;** Andrew G. Salmon, State of California, Air Toxicology and Risk Assessment Unit

11:00 a.m. **Estimating Cancer Risks from Exposure to Low Levels of Ionizing Radiation—**❖Ethel Gilbert, National Cancer Institute

11:25 a.m. **Risk and the Early Detection of Disease—**Marvin Zelen, Harvard School of Public Health**;** ❖Sandra Lee, Dana-Farber Cancer Institute

11:50 a.m. Disc: Gretchen G. Moisen, USDA Forest Service

12:10 p.m. **Floor Discussion**

526 CC-255 A

Recent Advances in Statistical Learning and Data Mining—Invited

ASA Interest Group on Statistical Learning and Data Mining, Section on Nonparametric Statistics, Section on Physical and Engineering Sciences

Organizer(s): Xiaotong Shen, The University of Minnesota

Chair(s): Hui Zou, The University of Minnesota

10:35 a.m. **Probability Estimation for Large Margin Classifiers—**❖Junhui Wang, Columbia University**;** Xiaotong Shen, The University of Minnesota**;** Yufeng Liu, The University of North Carolina at Chapel Hill

11:05 a.m. **Screening for Monotone Association—**❖Joseph S. Verducci, The Ohio State University

11:35 a.m. **Lasso Regression: Some Recent Developments—**❖David Madigan, Rutgers University

12:05 p.m. **Floor Discussion**

527 CC-355 E

Recent Outreach from the American Statistical Association to the General Public—Invited

The American Statistician, Section on Statistical Education

Organizer(s): Peter Westfall, Texas Tech University

10:35 a.m. **Garnering Student Interest: Finding Homer Simpson in Homework Assignments—**❖Leonard A. Stefanski, North Carolina State University

11:00 a.m. **Attracting Sports Enthusiasts: Is an .833 Hitter Better Than a .338 Hitter?—**❖Jesse Frey, Villanova University

11:25 a.m. **Recent Public Relations Outreach of the ASA: Actions and Results—**❖Peter Westfall, Texas Tech University**;** Rosanne Desmone, American Statistical Association

11:50 a.m. Disc: Eugene Komaroff, Kessler Medical Rehabilitation Research and Education Center

12:00 p.m. Disc: Thomas Love, Case Western Reserve University

12:10 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

528 CC-250 A

● Statistical Issues in Diagnostic and Prognostic Assays—Topic-Contributed

Section on Statistics in Epidemiology, WNAR

Organizer(s): Estelle Russek-Cohen, U.S. Food and Drug Administration

Chair(s): Lakshmi Vishnuvajjala, U.S. Food and Drug Administration

10:35 a.m. **Time-Dependent Receiver Operating Characteristic Curves for Early Markers of Event Time Outcomes—**❖Yuying Jin, University of Washington; Margaret Pepe, Fred Hutchinson Cancer Research Center; Yingye Zheng, Fred Hutchinson Cancer Research Center

10:55 a.m. **Time Dependence of a Gene-Expression Prognosticator from Modeling Breast Cancer Survival Data—**❖Kit Fun Lau, Celera; John Sninsky, Celera; Trevor Hastie, Stanford University

11:15 a.m. **On Design Issues of Clinical Studies for in vitro Diagnostics—**❖Christoph Berding, Roche Diagnostics GmbH

11:35 a.m. **Assessment of Impact of Protocol Changes on Classification Accuracy—**❖Wei-min Liu, Roche Molecular Systems, Inc.; Wei Wen, Roche Molecular Systems, Inc.; Barbara Brady, Roche Molecular Systems, Inc.; Sung Lee, Roche Molecular Systems, Inc.

11:50 a.m. Disc: Harry F. Bushar, U.S. Food and Drug Administration

12:10 p.m. **Floor Discussion**

529 CC-255 D

● GIS, Map Accuracy, and Statistics—Topic-Contributed

Section on Statistics and the Environment

Organizer(s): Jarrett Barber, University of Wyoming

Chair(s): Linda Young, University of Florida

10:35 a.m. **GIS, Map Accuracy, and Statistics—**❖Michael Goodchild, University of California, Santa Barbara

10:55 a.m. **Error Models in Geographic Information Systems Vector Data Using Bayesian Methods—**❖Kimberly Love, Virginia Polytechnic Institute and State University; Eric P. Smith, Virginia Polytechnic Institute and State University; Stephen Prisley, Virginia Polytechnic Institute and State University; Keying Ye, University of Texas at San Antonio

11:15 a.m. **Using the Linearity of Map Features in Statistical Modeling of Map Positional Error—**❖Jarrett Barber, University of Wyoming

11:35 a.m. **Modeling the Probability Distribution of Positional Errors Incurred by Residential Address Geocoding for a Rural Health Study—**❖Dale Zimmerman, The University of Iowa

11:55 a.m. Disc: Carol Gotway-Crawford, National Center for Environmental Health

12:15 p.m. **Floor Discussion**

530 CC-355 B

● ✪ Survival Analysis in Medical Device Studies—Topic-Contributed

Biopharmaceutical Section, WNAR, ENAR, Biometrics Section

Organizer(s): Peggy Pereda, Boston Scientific Corporation

Chair(s): John Evans, Boston Scientific Corporation

10:35 a.m. **Propensity Score–Adjusted Survival Analysis—**❖Nathan Carter, Boston Scientific Corporation; Ed McMullen, Boston Scientific Corporation; Jennifer Mischke, Boston Scientific Corporation

10:55 a.m. **Time-to-Event Analysis Considerations in the Medical Device Industry—**❖Helen Chmiel, Boston Scientific Corporation

11:15 a.m. **An Application of Propensity Score Analysis in Medical Device Clinical Studies—**❖Wenji Pu, Medtronic Inc.

11:35 a.m. **Assessment of Goodness-of-Fit of Cox Model with Multiple Predictors in Drug Eluting Stent Trial Efficacy Evaluation—**Frank Zhou, Boston Scientific Corporation; Yukiko Imai, Boston Scientific Corporation; ❖Hong Wang, Boston Scientific Corporation

11:55 a.m. Disc: Heng Li, U.S. Food and Drug Administration

12:15 p.m. **Floor Discussion**

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531 CC-255 C

✪ Application of Causal Inference in Health Sciences—Topic-Contributed

ENAR, Biometrics Section, WNAR, Section on Health Policy Statistics, Section on Statistics in Epidemiology

Organizer(s): Sati Mazumdar, University of Pittsburgh

Chair(s): Sati Mazumdar, University of Pittsburgh

10:35 a.m. **A Structural Equation Model for fMRI Data with Mixed Functional and Discrete Responses—**❖Wesley Thompson, University of Pittsburgh

10:55 a.m. **Causal Approaches to Mediation Analyses—**❖Thomas R. Tenhave, University of Pennsylvania**;** Jennifer Faerber, University of Pennsylvania**;** Marshall Joffe, University of Pennsylvania

11:15 a.m. **Confounders in Assessment of Haplotypes for Lung Cancer Risk—**❖Roger Day, University of Pittsburgh

11:35 a.m. **A Longitudinal Mediational Model To Assess the Indirect Effect of Adolescent-Physical Activity in Young Adult-Physical Activity Between Males and Females—**❖Kang Sun, University of Pittsburgh**;** Vincent C. Arena, University of Pittsburgh

11:55 a.m. Disc: Pranab K. Sen, The University of North Carolina at Chapel Hill

12:15 p.m. **Floor Discussion**

532 CC-251 B

● ✪ Methodological Issues in Engineering Applications of Computer Models: A SAMSI Program—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Thomas Santner, The Ohio State University

Chair(s): Sujit Ghosh, North Carolina State University

10:35 a.m. **Resampling for Inverse Problems Involving High-Dimensional Computer Simulators—**❖Herbert Lee, University of California, Santa Cruz**;** Matthew Taddy, University of California, Santa Cruz**;** Bruno Sanso, University of California, Santa Cruz

10:55 a.m. **A Bayesian Analysis of the Thermal Challenge Problem—**❖Fei Liu, Duke University**;** Susie Bayarri, University of Valencia**;** James Berger, Duke University**;** Rui Paulo, ISEG-Technical University of Lisbon**;** Jerry Sacks, National Institute of Statistical Sciences

11:15 a.m. **Bayesian Kalman Filter for Emulation of Complex Computer Models—**❖Gentry White, North Carolina State University**;** Peter Reichert, Swiss Federal Institute of Aquatic Science and Technology

11:35 a.m. **Determining the Pareto Frontier for Multiobjective Optimization of Black Box Functions—**Dianne Bautista, The Ohio State University**;** ❖Thomas Santner, The Ohio State University

11:55 a.m. **Aleatory and Epistemic Uncertainty Quantification for Engineering Applications—**❖Laura Swiler, Sandia National Laboratories**;** Anthony Giunta, Sandia National Laboratories

12:15 p.m. **Floor Discussion**

533 CC-251 F

● Nonparametric and Semiparametric Methods for Data with Measurement Errors—Topic-Contributed

Section on Nonparametric Statistics, Section on Statistics in Epidemiology

Organizer(s): Xiaofeng Wang, The Cleveland Clinic

Chair(s): Xiaofeng Wang, The Cleveland Clinic

10:35 a.m. **Bandwidth Selection for Weighted Kernel Density Estimation—**❖Bin Wang, University of South Alabama

10:55 a.m. **Multivariate Failure Time Data Modeling with Instrumental Variables—**❖Zhaozhi Fan, Memorial University of Newfoundland**;** Xiaofeng Wang, The Cleveland Clinic

11:15 a.m. **Estimating the Distribution Function with Measurement Error in a Complicated Survey—**❖Liang Li, The Cleveland Clinic**;** Tom Greene, The Cleveland Clinic

11:35 a.m. **A New Approach for Measurement Errors in Linear Models—**❖Guan Xing, Bristol-Myers Squibb Company

11:55 a.m. **Floor Discussion**

534 CC-250 D

● Statistical Analysis of Neuronal Data—Topic-Contributed

IMS

Organizer(s): Zhiyi Chi, University of Connecticut

Chair(s): W. John Boscardin, University of California, Los Angeles

10:35 a.m. **Using Point Process Models To Describe Oscillatory Spiking in the Subthalamic Nucleus of Parkinson's Patients—**Uri Eden, Boston University**;** Emery N. Brown, Massachusetts General Hospital**;** Emad Eskandar, Massachusetts General Hospital; ❖Sridevi V. Sarma, Massachusetts Institute of Technology

10:55 a.m. **Modeling and Decoding Multineuronal Responses in the Primate Retina—**❖Liam Paninski, Columbia University

11:15 a.m. **Real-Time Decoding of Nonstationary Motor Cortical Activity—**❖Wei Wu, Florida State University

11:35 a.m. **Jitter Methods for Investigating the Time Scale of Dependencies in Neuronal Firing Patterns—**❖Matthew Harrison, Carnegie Mellon University**;** Asohan Amarasingham, Rutgers University**;** Stuart Geman, Brown University

11:55 a.m. **Variable Selection and Classification Using Computed Tomography (CT) Medical Image Data—**❖Hyun Kim, University of California, Los Angeles**;** Gang Li, University of California, Los Angeles**;** David W. Gertson, University of California, Los Angeles**;** Robert Ochs, University of California, Los Angeles**;** Matthew S. Brown, University of California, Los Angeles**;** Jonathan Goldin, University of California, Los Angeles

12:15 p.m. **Floor Discussion**

535 CC-150 G

● ✪ Estimating the Incidence, Effect, and Cost of New Treatments for Health Outcomes—Topic-Contributed

Section on Health Policy Statistics, ENAR, Biometrics Section, WNAR

Organizer(s): Bonnie Ghosh-Dastidar, RAND Corporation

Chair(s): Yulei He, Harvard Medical School

10:35 a.m. **How Do You Argue Against the Use of a High-Cost Medical Treatment When a 'Quality-of-Life' Measure Is Not Available?—**❖Andrea McAllister, Highmark Inc.

10:55 a.m. **Estimation of Incidence of First-Time-Ever Treatment, Prevalence of Paused Treatment, and Prevalence of Active Treatment from Pharmacoepidemiologic Claims Data—**❖Henrik Stovring, University of Southern Denmark

11:15 a.m. **Mixed Treatment Comparison of Migraine Headache Treatment: Indirect Comparison and Evidence Consistency—**❖Rongwei (Rochelle) Fu, Oregon Health & Science University**;** Kimberly Peterson, Oregon Health & Science University

11:35 a.m. **Effect of Intravenous Insulin Infusion on Coronary Artery Disease—**Samer Ellahham, Innovative Medical Institute/Paragon Cardiovascular Foundation**;** Yasmin H. Said, George Mason University**;** Edward Wegman, George Mason University**;** ❖Rima Allaham, Paragon Cardiovascular Foundation

11:55 a.m. **Update on Cardiometabolic Risk Reduction: Role of the Endocannabinoid System—**❖Samer Ellahham, Innovative Medical Institute/Paragon Cardiovascular Foundation**;** Yasmin H. Said, George Mason University**;** Edward Wegman, George Mason University

12:15 p.m. **Floor Discussion**

Contributed Sessions 10:30 a.m.–12:20 p.m.

536 CC-260

● ✪ Issues Related to Power and Sample Size Calculation—Contributed

Biometrics Section, Section on Teaching Statistics in the Health Sciences

Chair(s): Hulin Wu, University of Rochester

10:35 a.m. **Power and Sample Size Estimation for the Wilcoxon Rank Sum Test—**❖Bernard Rosner, Harvard Medical School**;** Robert Glynn, Brigham and Women's Hospital

10:50 a.m. **Sample Size Calculations in Simple Linear Regression: A New Approach—**❖Marepalli B. Rao, University of Cincinnati**;** Mohammed K. Alam, Kendle International Inc.**;** Subramanyam Kasala, The University of North Carolina at Wilmington**;** Thomas Bradstreet, Merck & Co., Inc.

11:05 a.m. **Why Family-Based Association Makes Sense in a Genome-Wide World: A Comparison of Study Power—**❖David Fardo, Harvard University**;** Christoph Lange, Harvard School of Public Health

11:20 a.m. **Sample Size Calculations for Clinical Trials with Rate of Decline on a Quantitative Trait as the Endpoint**—❖Steven Edland, University of California, San Diego

11:35 a.m. **Mixed-Effects Logistic Model for Association Analysis**—❖Sanjay Shete, The University of Texas M. D. Anderson Cancer Center

11:50 a.m. **Covariate-Modulated False Discovery Rates**—❖Egil Ferkingstad, University of Oslo; Arnoldo Frigessi, University of Oslo; Gudmar Thorleifsson, deCODE genetics; Augustine Kong, deCODE genetics

12:05 p.m. **Regression-Based Association Approach Using Genetic Similarity for Genomewide Association Scans**—❖Jung-Ying Tzeng, North Carolina State University; Sheng-Mao Chang, North Carolina State University; Duncan C. Thomas, University of Southern California; Marie Davidian, North Carolina State University

537 CC-355 C

● ✪ Issues Related to Clinical Trials—Contributed

Biometrics Section, Biopharmaceutical Section

Chair(s): Yichuan Zhao, Georgia State University

10:35 a.m. **Data Monitoring in Clinical Trials Using Prediction**—❖Scott Evans, Harvard University; Lingling Li, Harvard School of Public Health; Lee-Jen Wei, Harvard University

10:50 a.m. **Specifications Based on Pharmacokinetic Evaluation**—❖Jose Casas-Finet, MedImmune, Inc.; Harry Yang, MedImmune, Inc.; Iksung Cho, MedImmune, Inc.; Mark Schenerman, MedImmune, Inc.

11:05 a.m. **The Exact Distribution of the Heterogeneity Statistic in Meta-Analysis**—❖Brad Biggerstaff, Centers for Disease Control and Prevention; Dan Jackson, University of Salford

11:20 a.m. **A Model-Based Assessment of Antitumor Activity for Solid Tumor Xenograft Studies**—❖Jianrong Wu, St. Jude Children's Research Hospital

11:35 a.m. **Subgroup Weighted Association Testing**—❖Michael LeBlanc, Fred Hutchinson Cancer Research Center

11:50 a.m. **Ensemble Methods for Classification of Patients for Personalized Medicine Using High-Dimensional Biomarkers**—❖Hojin Moon, U.S. Food and Drug Administration; Hongshik Ahn, Stony Brook University; Ralph L. Kodell, University of Arkansas for Medical Sciences; Songjoon Baek, U.S. Food and Drug Administration; Chien-Ju Lin, National Center for Toxicological Research; James J. Chen, U.S. Food and Drug Administration

12:05 p.m. **Recursive Estimation Method for Predicting Residual Bladder Urine Volumes to Improve Accuracy of Timed Urine Collections**—❖David Afshartous, University of Miami; Richard Preston, University of Miami

538 CC-355 D

● ✪ Regression Approaches To Analyze Discreet Data in Clinical Trials—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Christine Clark, ICON Clinical Research

10:35 a.m. **Application of the Zero-Inflated Negative Binomial Distribution**—❖Arlene Swern, Merck & Co., Inc.; Hongwei Wang, Merck & Co., Inc.; Qian Dong, Merck & Co., Inc.; Eric C. Kleerup, David Geffen School of Medicine at UCLA

10:50 a.m. **Evaluation of Risk-Benefit in New Drug Development Using a Global Event Intensity Index**—❖Jingli Song, Eli Lilly and Company; Andreas Sashegyi, Eli Lilly and Company; Steve Zheng, Eli Lilly and Company

11:05 a.m. **Regression Models for Multinomial Responses with an Example from PCPT**—❖Kenneth Liu, Merck & Co., Inc.; Alexandra Carides, Merck & Co., Inc.

11:20 a.m. **Mixing Negative Binomial Distribution with Completely Monotonic Functions and Their Applications in Modeling Over-Dispersion Data**—❖Xiaodong Wang, sanofi-aventis; Hanxiang Peng, The University of Mississippi; Ji Zhang, sanofi-aventis

11:35 a.m. **Maximum Likelihood Estimation of the Difference between Correlated Poisson Cough Counts**—❖Xin Yan, University of Missouri-Kansas City; Thomas Bradstreet, Merck & Co., Inc.

11:50 a.m. **Negative Binomial Analysis of Hypoglycemia Rates in Diabetic Patients**—❖Cory Heilmann, Eli Lilly and Company

12:05 p.m. **Multivariate Dose-Response Analysis of Ordinal Response Data**—❖Kao-Tai Tsai, Bristol-Myers Squibb Company; Karl Peace, George Southern University

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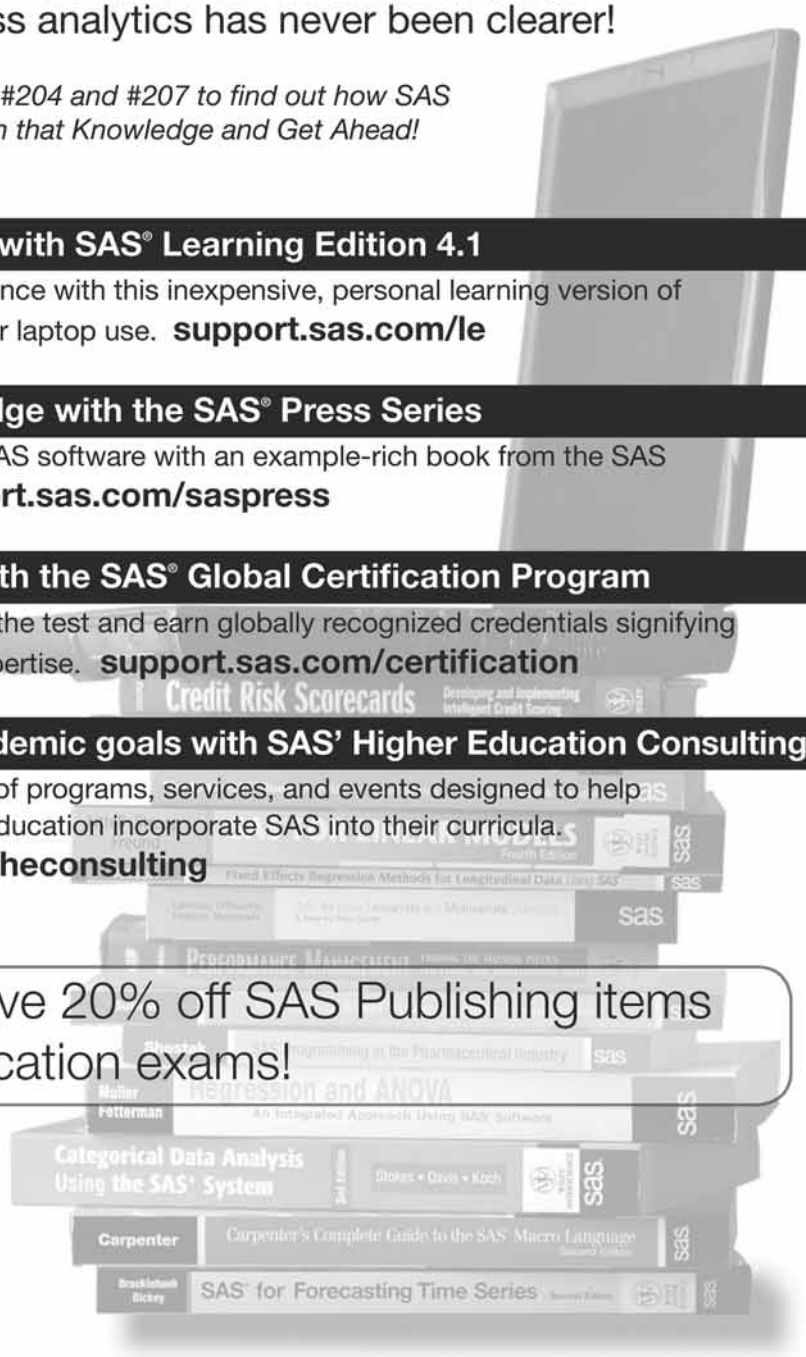

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539 CC-355 A

● ✪ Multiplicity Issues and Possible Solutions in Clinical Trials—Contributed

Biopharmaceutical Section, Biometrics Section

Chair(s): Stephen Gulyas, Eli Lilly and Company

10:35 a.m. **Gate-Keeping Testing Without Tears—**❖Jianjun Li, Merck & Co., Inc.; Devan V. Mehrotra, Merck & Co., Inc.

10:50 a.m. **Generalized Gate-Keeping Procedure—**❖Ariful Haque, Novartis Pharmaceuticals; Sanat Sarkar, Temple University

11:05 a.m. **Multistage Gate-Keeping Procedures with Clinical Trial Applications—**❖Alex Dmitrienko, Eli Lilly and Company; Ajit Tamhane, Northwestern University

11:20 a.m. **Compatible Simultaneous Confidence Intervals for the Holm Procedure and Other Closed Bonferroni-Based Tests for One-Sided Multiple Comparison Problems—**❖Frank Bretz, Novartis Pharmaceuticals; Klaus Strassburger, Deutsches Diabetes-Zentrum DDZ

11:35 a.m. **A Mixture Model Approach for Estimating the Proportion of True Null Hypotheses and Adaptive Control of FDR—**❖Ajit Tamhane, Northwestern University; Jiaxiao Shi, Northwestern University

11:50 a.m. **Evaluating Subgroup Risks in Trials with Many Subgroups: Issues and Potential Solutions—**❖Xiaojiang Zhan, Merck & Co., Inc.; Amarjot Kaur, Merck & Co., Inc.

12:05 p.m. **Statistical Challenges in Proof-of-Concept Studies in Photosensitive Epileptics—**❖Norman Bohidar, Johnson & Johnson PRD; Geoff Edwards, Johnson & Johnson PRD; Liwen Xi, Johnson & Johnson PRD; Surya Mohanty, Johnson & Johnson PRD

540 CC-250 C

● General Issues in Regression—Contributed

ENAR

Chair(s): Yuting Zhang, Amgen Inc.

10:35 a.m. **The Theil-Sen Estimators in Modern Regression—**❖Hanxiang Peng, The University of Mississippi; Xin Dang, University of Mississippi

10:50 a.m. **Efficient Estimation of Population Quantiles in General Semiparametric Regression Models—**❖Arnab Maity, Texas A&M University

11:05 a.m. **Simulation Study Comparing Inverse Probability of Treatment Weighted (IPTW) Estimator and Multiple Regression Model—**❖Jianmin Wang, RTI Health Solutions; William Irish, RTI Health Solutions

11:20 a.m. **Likelihood Ratio Test of Crossover Design Having Unequal Variances—**❖Yoon-Sung Jung, Kansas State University; Dallas Johnson, Kansas State University

11:35 a.m. **Design Based on Interclass Correlation Coefficients—**❖Gheorghe Doros, Boston University

11:50 a.m. **A Locally Weighted Regression Approach to Evaluating the Effects of Smoking Reduction on Birth Weight—**❖Jeff M. Szychowski, The University of Alabama at Birmingham; J. Michael Hardin, The University of Alabama; Michael D. Conerly, The University of Alabama; Lesa L. Woody, The University of Alabama at Birmingham; Wendy S. Horn, The University of Alabama at Birmingham

12:05 p.m. **Modeling Lateral Position and Control in Driving Studies of Elderly Populations—**❖Jeffrey Dawson, The University of Iowa; Joseph Cavanaugh, The University of Iowa; K. D. Zamba, The University of Iowa; Matthew Rizzo, The University of Iowa

541 CC-251 A

● Bayesian Nonparametric Modeling and Applications—Contributed

Section on Bayesian Statistical Science

Chair(s): Yeonseung Chung, The University of North Carolina at Chapel Hill

10:35 a.m. **Comparing Fits in Nonparametric Bayes Item Response Models—**❖Kristin Duncan, San Diego State University

10:50 a.m. **A Semiparametric Bayesian Approach to the Generalized Linear Mixed Effects Model—**❖Jing Wang, Louisiana State University

11:05 a.m. **Bayesian Inference for a Distribution-Valued Stochastic Process—**❖Zhen Wang, The Ohio State University; Steven N. MacEachern, The Ohio State University

11:20 a.m. **Nonparametric Hierarchical Bayes Analysis of Binomial Data Using Berstein Polynomials—**❖Tingting Zhang, Harvard University; Jun S. Liu, Harvard University

11:35 a.m. **Distribution of Random Functional of a Ferguson-Dirichlet Process on the Unit Ball—**❖Thomas J. Jiang, National Chengchi University**;** Kun-Lin Kuo, National Chengchi University

11:50 a.m. **Floor Discussion**

542 CC-150 D-F

● Measurement Issues in Surveys—Contributed

Section on Government Statistics, Section on Survey Research Methods, Social Statistics Section

Chair(s): Steve H. Cohen, National Science Foundation

10:35 a.m. **Comparison of the Income Items from the CPS and ACS—**❖Bruce Webster, Jr., U.S. Census Bureau

10:50 a.m. **The Impact of Converted Refusals upon Survey Estimates: National Health and Nutrition Examination Survey, 1999-2004—**❖Margaret Carroll, National Center for Health Statistics**;** Yinong Chong, National Center for Health Statistics

11:05 a.m. **Precanvass Survey for the 2007 Commodity Flow Survey—**❖Promod Chandhok, Bureau of Transportation Statistics

11:20 a.m. **An Appraisal of the Conduct and Provisional Figures of the Nigerian Population and Housing Census of 2006—**❖Raymond Okafor, University of Lagos

11:35 a.m. **Measuring the Quality of Service to Taxpayers in Volunteer Sites—**❖Kevin Cecco, Internal Revenue Service**;** Ronald Walsh, Internal Revenue Service**;** Rachael Hooker, Internal Revenue Service

11:50 a.m. **Statistical 'Pre- and Post-Processing' as Integrated into Computer Simulations—**❖Turkan Gardenier, Pragmatica Corp.

12:05 p.m. **Floor Discussion**

543 CC-254 A

Nonparametric Inference for Functional Data—Contributed

Section on Nonparametric Statistics, ASA

Chair(s): Sanjay Chaudhuri, National University of Singapore

10:35 a.m. **Functional Density Warping—**❖Zhen Zhang, University of California, Davis**;** Hans-Georg Müller, University of California, Davis

10:50 a.m. **Asymptotic Theory of Bivariate Penalized Splines—**❖Yingxing Li, Cornell University**;** David Ruppert, Cornell University

11:05 a.m. **Local-Moment Polynomial-Smoothed Histograms with Application to Massive and Pre-Binned Datasets—**❖Galen Papkov, Rice University**;** David W. Scott, Rice University

11:20 a.m. **Bayesian Isotonic Density Regression—**❖Lianming Wang, National Institute of Environmental Health Sciences**;** David B. Dunson, National Institute of Environmental Health Sciences

11:35 a.m. **Spline Confidence Band with Mixing Error in Fixed Design—**❖Jing Wang, University of Illinois at Chicago

11:50 a.m. **Some New Normality Tests Using Kernel Density Estimators—**❖Yishi Wang, Western Carolina University

12:05 p.m. **Floor Discussion**

544 CC-254 B

● Data Analysis and Variable Selection—Contributed

Section on Physical and Engineering Sciences, Section on Statistics and Marketing, Section on Teaching Statistics in the Health Sciences, Section on Quality and Productivity

Chair(s): Dachuang Cao, Eli Lilly and Company

10:35 a.m. **Variable Selection for LDA When n < p—**❖Matthew Mitchell, Metabolon

10:50 a.m. **Detecting Multiple Outliers and/or Mean Vector Shifts in Large Samples of Individual Multivariate Observations—**❖Joe Sullivan, Mississippi State University

11:05 a.m. **Bayesian Wavelet-Based Despeckling of Ultrasound Medical Images Using the Gauss-Hermite Expansion—**❖S. M. Mahbubur Rahman, Concordia University**;** M. Omair Ahmad, Concordia University**;** M. N. S. Swamy, Concordia University

11:20 a.m. **Using an Adaptive Control Filter To Predict the Synchronization of Time Series—**❖Morris Morgan, Hampton University**;** Carolyn Morgan, Hampton University

11:35 a.m. **Statistical Aspects of Marketing Mix Models—**❖Igor Mandel, Analytic Partners

11:50 a.m. **Evaluation and Selection of Models for Out-of-Sample Prediction When the Sample Size Is Small Relative to the Complexity of the Data-Generating Process—**❖Hannes Leeb, Yale University

12:05 p.m. **Floor Discussion**

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545 CC-251 E

● Regression—Contributed

Section on Statistical Computing, Section on Statistical Graphics, IMS

Chair(s): James Shine, U.S. Army Topographic Engineering Center

10:35 a.m. **Simple Techniques for Estimation of Additive Rate Regression Models—**❖M. Brent McHenry, Bristol-Myers Squibb Company**;** Stuart R. Lipsitz, Brigham and Women's Hospital**;** Debajyoti Sinha, Medical University of South

10:50 a.m. **Alternative Penalty Functions for Principal Components—**❖Trevor Park, University of Florida

11:05 a.m. **A New Robust Partial Least Squares Regression Method (RoPLS) and Its Robustness—**❖Asuman Turkmen, Auburn University**;** Nedret Billor, Auburn University

11:20 a.m. **Variable Selection in Factor Analysis Regression and Its Application—**❖Zenaida F. Mateo, University of Manitoba

11:35 a.m. **Purposeful Selection of Variables in Logistic Regression: Macro and Simulation Results—**❖Zoran Bursac, University of Arkansas for Medical Sciences**;** C. Heath Gauss, University of Arkansas for Medical Sciences**;** D. Keith Williams, University of Arkansas for Medical Sciences**;** David Hosmer, University of Massachusetts Amherst

11:50 a.m. **A Realization of the Functionalized General Trichotomy in Logistic Regression—**❖Ligong Chen, Center for Prostate Disease Research**;** Yongmei Chen, Center for Prostate Disease Research**;** Jennifer Cullen, Center for Prostate Disease Research

12:05 p.m. **Floor Discussion**

546 CC-251 D

● Statistical Graphics: Methods and Applications—Contributed

Section on Statistical Graphics

Chair(s): Deborah Swayne, AT&T Labs - Research

10:35 a.m. **Visualizing Cluster-Compressed Multivariable and Multialtitude Atmospheric Data—**❖Daniel Carr, George Mason University**;** Amy Braverman, Jet Propulsion Laboratory

10:50 a.m. **An Exploratory Stroll Along the Beach—**❖Charlotte Wickham, University of California, Berkeley

11:05 a.m. **Characterizing Multivariate Data with High-Resolution Human Faces—**❖Dean Nelson, University of Pittsburgh at Greensburg**;** Joe Szurek, University of Pittsburgh at Greensburg

11:20 a.m. **Graphs in Social Science Texts: We Can and Should Do Better—**❖Naomi Robbins, NBR-Graphs**;** Joyce Robbins, Touro College

11:35 a.m. **Longitudinal Multivariate Graphics in the Analysis of Time Management Data—**❖Jessica M. Scott, Brigham Young University**;** Steven A. Wygant, Brigham Young University**;** Bruce Brown, Brigham Young University

11:50 a.m. **Generating Data with Identical Statistics but Dissimilar Graphics: A Follow-Up to the Anscombe Dataset—**❖Sangit Chatterjee, Northeastern University**;** Firat Aikut, Northeastern University

12:05 p.m. **A Note on the Barnett-Cohen Censored Histogram—**❖Jong Kim, Portland State University**;** Bryan G. Schar, U.S. Census Bureau

547 CC-150 A-C

● Estimation, Forecasting, and Hypothesis Testing—Contributed

Social Statistics Section

Chair(s): Nancy Clusen, Mathematica Policy Research, Inc.

10:35 a.m. **Examination of Two Issues Regarding Electronic Essay Scoring—**❖Sandip Sinharay, Educational Testing Service**;** Shelby Haberman, Educational Testing Service**;** Jiahe Qian, Educational Testing Service

10:50 a.m. **Statistical Tests for Differential Functioning in Parametric Item Response Theory: A Monte Carlo Evaluation of Conventional DFIT Methods and a Bootstrap Alternative—**❖Gregory Petroski, University of Missouri-Columbia**;** Steven J. Osterlind, University of Missouri-Columbia

11:05 a.m. **Simulation Results of Bias Estimates for Compositional Data—**❖Don R. Warren, University of Texas at San Antonio

11:20 a.m. **Navigating the Multiplicity of Hypotheses in Evaluating Juror Selections—**❖Bruce Barrett, The University of Alabama

11:35 a.m. **Hypothesis Testing with Lot Quality Assurance Sampling (LQAS) Using the Normal Approximation of the Binomial—**❖David Fitch, Universidad del Valle de Guatemala**;** Roberto Molina Cruz, Universidad Del Valle de Guatemala

11:50 a.m. **Floor Discussion**

548 CC-250 B

● Statistical Methods and Applications in Epidemiology—Contributed

Section on Statistics in Epidemiology

Chair(s): Daniel Reyner, Zimmer, Inc

10:35 a.m. **Application of Johnson System of Distribution in Gene Selection—**❖Florence George, University of South Florida**;** Kandethody Ramachandran, University of South Florida

10:50 a.m. **A Computational Approach to Variable Selection in Canonical Discriminant Analysis—**❖Man Jin, Columbia University

11:05 a.m. **Using Surrogate Outcomes for Improving Power To Detect Gene-Environment Interactions—**❖Tamanna Howlader, Concordia University**;** Michal Abrahamowicz, McGill University**;** Yogendra P. Chaubey, Concordia University

11:20 a.m. **Extension of the Cohort Analysis for Genetic Epidemiology Program To Assess Excess Risk of Cancer—**❖Mei Liu, The University of Texas M. D. Anderson Cancer Center**;** Carol J. Etzel, The University of Texas M. D. Anderson Cancer Center**;** Michael Scheurer, The University of Texas M. D. Anderson Cancer Center**;** Melissa Bondy, The University of Texas M. D. Anderson Cancer Center**;** Sara Strom, The University of Texas M. D. Anderson Cancer Center**;** Christopher I. Amos, The University of Texas M. D. Anderson Cancer Center

11:35 a.m. **Length-Biased Sampling in Cancer Screening with Variable Test Sensitivity—**❖Sonya Heltshe, University of Colorado at Denver and Health Services Center**;** Karen Kafadar, University of Colorado at Denver and Health Services Center

11:50 a.m. **Comparison of Adaptive Gaussian Quadrature, PQL, and Laplace 6 Estimates of Hierarchical Logistic Models When Comparing Small Incident Rates in Cluster-Randomized Trials—**❖Rafael Diaz, California State University, Sacramento

12:05 p.m. **Sequential McNemar Tests with Exact Methods—**❖Jiang Hu, Glotech Inc.**;** Aiyi Liu, National Institutes of Health**;** Chengqing (Alan) Wu, National Institutes of Health

549 CC-255 F

Statistical Methods in Health Science Research—Contributed

Section on Statistics in Epidemiology, Section on Teaching Statistics in the Health Sciences

Chair(s): Peter H. Van Ness, Yale University

10:35 a.m. **Overview of the Odds Ratio and Relative Risk: Inequality, Conversion, Efficiency, and Power of Testing—**❖Peng Liu, U.S. Food and Drug Administration**;** Debra A. Street, U.S. Food and Drug Administration

10:50 a.m. **A Graphical Method for Assessing Mediating Variables Using Brunswik's Lens Model—**❖Matthew P. Spackman, Brigham Young University**;** Dawson Hedges, Brigham Young University**;** Bruce Brown, Brigham Young University

11:05 a.m. **Determining Graft Survival After Clinical Islet Transplantation: Superior Performance of Extended Cox-Based Models—**❖Abdul Salam, University of Alberta**;** Peter Senior, University of Alberta; Abdulkadir Hussein, University of Windsor**;** Patricia M. Campbell, University of Alberta; Kathleen LaBranche, University of Alberta**;** James A.M. Shapiro, University of Alberta

11:20 a.m. **BMI, Alcohol, and Colorectal Cancer—**❖Negasi Beyene, Centers for Disease Control and Prevention

11:35 a.m. **Improving Inference on Diagnostic Tests Without Gold Standard When Auxiliary Information Is Available—**❖Gong Tang, University of Pittsburgh

11:50 a.m. **Comparisons of Statistical Methods in Analyzing Clinical Data Through Empirical Simulations—**❖Yongming Qu, Eli Lilly and Company**;** Lei Xu, University of Wisconsin-Madison**;** Pandurang M. Kulkarni, Eli Lilly and Company

12:05 p.m. **Identifying Patterns of Longitudinal Data Set with Meaningful Inflated Missing Values: A Case Study Combining Data Mining and Statistical Techniques—**❖Hua Fang, University of Nebraska-Lincoln**;** Kimberly A. Espy, University of Nebraska-Lincoln**;** Maria L. Rizzo, Bowling Green State University**;** Honggang Wang, University of Nebraska-Lincoln

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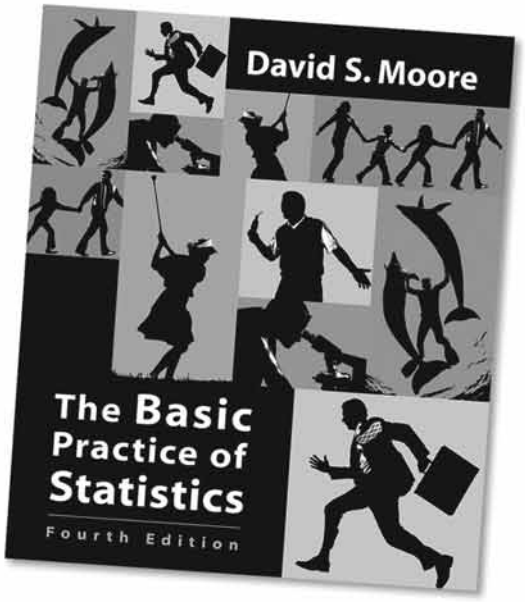

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