General Conference Information

General Program

Association Contacts

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The 20th Annual
GERTRUDE COX SCHOLARSHIP RACE

5k Race and 2.5k Fun Run/Walk at JSM 2009, Washington, DC

The Caucus for Women in Statistics, in conjunction with the ASA, presents the 20th annual Gertrude Cox Scholarship Race at the Joint Statistical Meetings 2009 in Washington, DC. All proceeds will benefit the Gertrude M. Cox Scholarship in Statistics. This year, the race will be sponsored by **RTI International**.

The Race:	Competitive 5k race and a 2.5k fun run/walk, running concurrently
When:	Tuesday, August 4, time to be announced (to start and finish before 8:30 a.m.)
Where:	Location and logistical information will be posted at The Caucus for Women in Statistics web site as it becomes available (*www.caucusforwomeninstatistics.com*) and at The Caucus for Women in Statistics hospitality table at the convention center during JSM 2009
How Much:	The entry fee is $30.00
Registration Procedure:	Those interested in participating are encouraged to register early by mail, but may also register during JSM at the hospitality table for the Caucus for Women in Statistics at the Convention Center, near the registration area. All participants must sign a registration form and waiver. T-shirts for all pre-registered runners will be distributed at the hospitality table.

REGISTRATION FORM (each participant must complete and sign)

_____
Name

_____
Address City

_____
State/Province ZIP/Postal Code Phone

Required for placement and timing in the 5k race: **SEX:** ❑ M ❑ F **Age** _____

EVENT: ❑ 5k Race ❑ 2.5k 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** and mail with registration to:

Anna Nevius, Treasurer
7732 Rydal Terrace
Rockville, MD 20855-2057

We regret to inform that we will not be able to accept registrations online this year. For questions, contact:
Marcia A. Ciol (*marciac@u.washington.edu*) or
Anna Nevius (*anna.nevius@fda.hhs.gov*)

2009 JSM Program Committee

2009 JSM Program Chair, ASA
Wendy L. Martinez
U.S. Department of Defense

International Biometric Society (ENAR)
Lloyd Edwards
The University of North Carolina

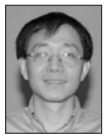
International Biometric Society (WNAR)
Daniel L. Gillen
University of California, Irvine

Institute of Mathematical Statistics (Invited)
Michael Kosorok
The University of North Carolina at Chapel Hill

Institute of Mathematical Statistics (Invited)
Xiaotong Shen
University of Minnesota

Institute of Mathematical Statistics (Contributed)
Elizaveta Levina
University of Michigan

Statistical Society of Canada (SSC)
Peter X. Song
University of Waterloo



International Chinese Statistical Association
Xuming He
University of Illinois at Urbana-Champaign

International Indian Statistical Association
Bhramar Mukherjee
University of Michigan

Council of Chapters, ASA
Gary Gadbury
Kansas State University

General Methodology, ASA
Anna B. Nevius
U.S. Food and Drug Administration

General Methodology, ASA
Mayetri Gupta
Boston University School of Public Health

Committee on Committees, ASA
Patrick Cantwell
U.S. Census Bureau

Invited and Contributed Posters
Lara Schmidt
RAND Corporation

Section on Bayesian Statistics, ASA
Mike Daniels
University of Florida

Biometrics Section, ASA
Wensheng Guo
University of Pennsylvania

Biopharmaceutical Section, ASA
Matilde Sanchez
Arena Pharmaceuticals, Inc.

Business & Economic Statistics Section, ASA
Barbara Rossi
Duke University

Statistical Computing Section, ASA
Robert McCulloch
The University of Texas at Austin

Section on Statistical Consulting, ASA
Stephan Ogenstad
Statogen Consulting

Section on Statistics in Defense and National Security, ASA
Myron J. Katzoff
National Center for Health Statistics

Section on Statistical Education, ASA
Peter Westfall
Texas Tech University

Section on Statistics and the Environment, ASA
Petrutza C. Caragea
Iowa State University

Section on Epidemiology, ASA
Amy H. Herring
The University of North Carolina at Chapel Hill

Section on Government Statistics, ASA
Sunghee Lee
University of California, Los Angeles

Section on Statistical Graphics, ASA
Steven N. MacEachern
The Ohio State University

Section on Health Policy Statistics, ASA
Mary E. Landrum
Harvard Medical School

Section on Statistics in Marketing, ASA
Michael Braun
MIT Sloan School of Management

Section on Nonparametric Statistics, ASA
Simon Sheather
Texas A&M University

Section on Physical & Engineering Sciences, ASA
Jeffery J. Luner
Boeing

Section on Quality & Productivity, ASA
Donald W. McCormack Jr.
SAS Institute, Inc.

Section on Risk Analysis, ASA
Bertrand S. Clarke
The University of British Columbia

Social Statistics Section, ASA
Kathleen S. O'Connor
Centers for Disease Control and Prevention

Section on Statistics in Sports, ASA
Matthew S. Johnson
Baruch College

Section on Survey Research Methods, ASA
Elaine Zanutto
National Analysts Worldwide Research and Consulting

Section on Teaching of Statistics in the Health Sciences, ASA
Carol Bigelow
University of Massachusetts

Local Area Committee

Darryl V. Creel, Chair
RTI International

Nancy Clusen
Mathematica Policy Research

Christopher Cummiskey
RTI International

Christopher Moriarty
National Center for Health Statistics

Lily Trofimovich
General Dynamics Information Technology

Y. Michael Yang
ICF International

Advisory Committee on Continuing Education

Xiaoming Sheng, Chair
University of Utah

Katherine T. Halvorsen
Smith College

Joseph M. Hilbe
Arizona State University

Gordon J. Johnston
SAS Institute, Inc.

Young K. Kim
DP Clinical

Eileen C. King
Procter & Gamble

Ronald E. McRoberts
U.S. Forest Service, North Central Research Station

Scott D. Patterson
Wyeth

Charles Yun Tan
Merck & Co., Inc.

ASA Continuing Education

Rick Peterson
Education Programs Associate

ASA Meetings

Kathleen Wert
Director of Meetings

Donna-Renee Arrington
Meetings Planner

Fay Gallagher
Meetings Planner

American Statistical Association
732 North Washington Street
Alexandria, VA 22314-1943
jsm@amstat.org
www.amstat.org

Seeking a CAREER in STATISTICS?

Washington, DC
August 1–6

Are you nearing graduation and wondering about entry-level jobs?
Are you an experienced statistics professional interested in career information?

Register for the JSM Career Placement Service

What can the **Career Placement Service** do for you?

Each year, more than 120 companies, universities, recruiters, and government agencies search for applicants using the JSM Career Placement Service. The JSM Career Placement Service provides the best opportunity for qualified applicants to meet employers, establish valuable contacts, and learn about organizations employing statisticians.

Career Placement Service Benefits

Applicant reading area—for applicants to review complete job descriptions and contact information for all registered employers.

Visibility to employers—applicants who register by July 16, 2009, will have their information and résumés included in the advance applicant online 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—included with ALL Career Placement Service registrations.

www.amstat.org/meetings/jsm/2009/placement

Organizations Represented at Recent JSM Career Placement Services

Capital One • FDA • DuPont • Eli Lilly and Company • ESPN Media
Google • Novartis • West Point

JSM2009 Washington, DC

Keynote Speakers

Rebecca M. Blank

President's Invited Address

"Measurement Matters: Why Good Statistics Are Important to Understanding the Well-Being of American Families"
Monday, August 3, 4:00 p.m.

Nanny Wermuth

IMS Presidential Address

"On the Development of Insight: Some Examples in the Statistical Sciences"
Monday, August 3, 8:00 p.m.

J. Stuart Hunter

Deming Lecture

"Deming Today"
Tuesday, August 4, 4:00 p.m.

Jerome H. Friedman

Wald Lecture Series

"Fast Sparse Regression and Classification"
Tuesday, August 4, 4:00 p.m.

"Decision Trees and Gradient Boosting"
Wednesday, August 5, 10:30 a.m.

"Predictive Learning via Rule Ensembles"
Thursday, August 6, 10:30 a.m.

Sally C. Morton

ASA Presidential Address

"Statistics: From Evidence to Policy"
Tuesday, August 4, 8:00 p.m.

Noel A.C. Cressie

COPSS Fisher Lecture

"When, Where, and Then Why"
Wednesday, August 5, 4:00 p.m.

Peter Bühlmann

IMS Medallion Lecture I

"Statistics for High-Dimensional Data: Toward More Reliable Results"
Sunday, August 2, 2:00 p.m.

Aad van der Vaart

Le Cam Lecture

"Some Frequentist Results on Posterior Distributions on Infinite-Dimensional Parameter Spaces"
Sunday, August 2, 4:00 p.m.

George Casella

IMS Medallion Lecture II

"From R. A. Fisher to Microarrays: Why 70-Year-Old Theory Is Relevant Today"
Monday, August 3, 8:30 a.m.

Tony Cai

IMS Medallion Lecture III

"Robust and Adaptive Methods for Nonparametric Function Estimation"
Monday, August 3, 10:30 a.m.

Alistair Sinclair

IMS Medallion Lecture IV

"Markov Chain Monte Carlo in Theoretical Computer Science"
Tuesday, August 4, 8:30 a.m.

Gábor Lugosi

IMS Medallion Lecture V

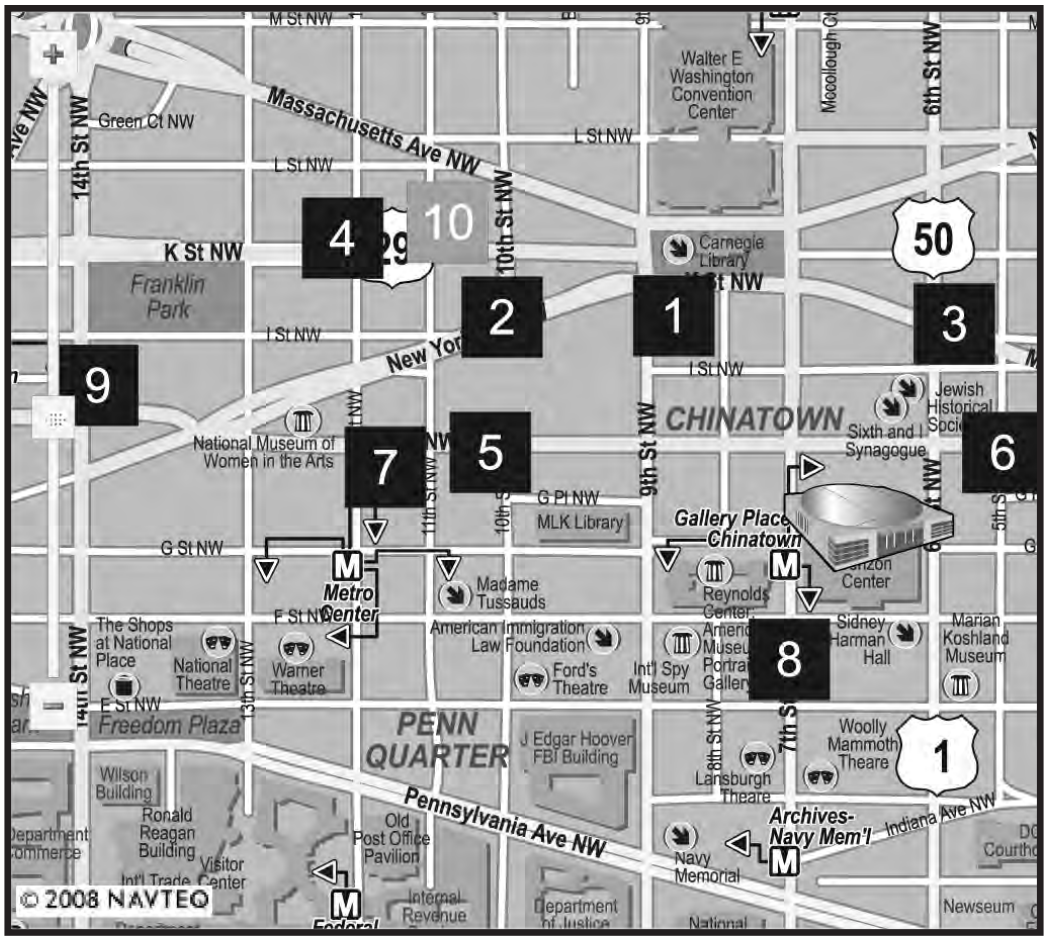
"Combinatorial Problems in Randomized Sequential Prediction"
Wednesday, August 5, 8:30 a.m.

Gareth Roberts

IMS Medallion Lecture VI

"Auxiliary Variables, Perfect Simulation, and Importance Sampling for the Statistical Analysis of Stochastic Processes"
Wednesday, August 5, 2:00 p.m.

Hotel Listing



Headquarter Hotel

1 Renaissance Washington, DC, Hotel (Headquarter Hotel)
999 Ninth Street, NW

Other Conference Hotels

2 Embassy Suites DC
900 Tenth Street, NW

3 Hampton Inn DC Convention Center
901 Sixth Street, NW

4 Four Points by Sheraton
1201 K Street, NW

5 Grand Hyatt Washington
1000 H Street, NW

6 Red Roof Inn-Downtown DC
500 H Street, NW

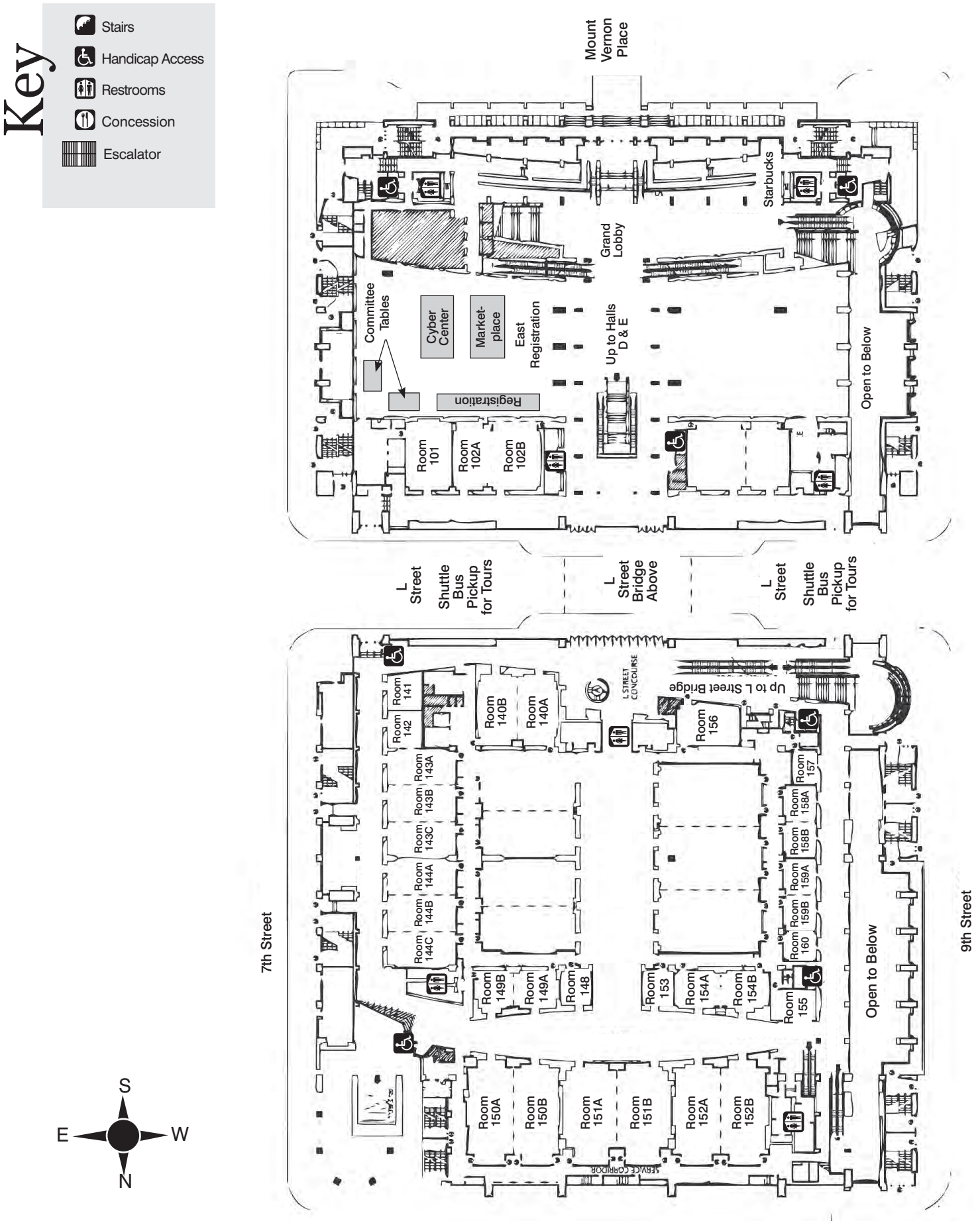
7 Marriott at Metro Center
775 Twelfth Street, NW

8 Hotel Monaco Washington, DC
700 F Street, NW

9 Hilton Garden Inn Washington, DC, Downtown
815 Fourteenth Street, NW

10 Hostelling International-Washington, DC
1009 Eleventh Street, NW

Convention Center

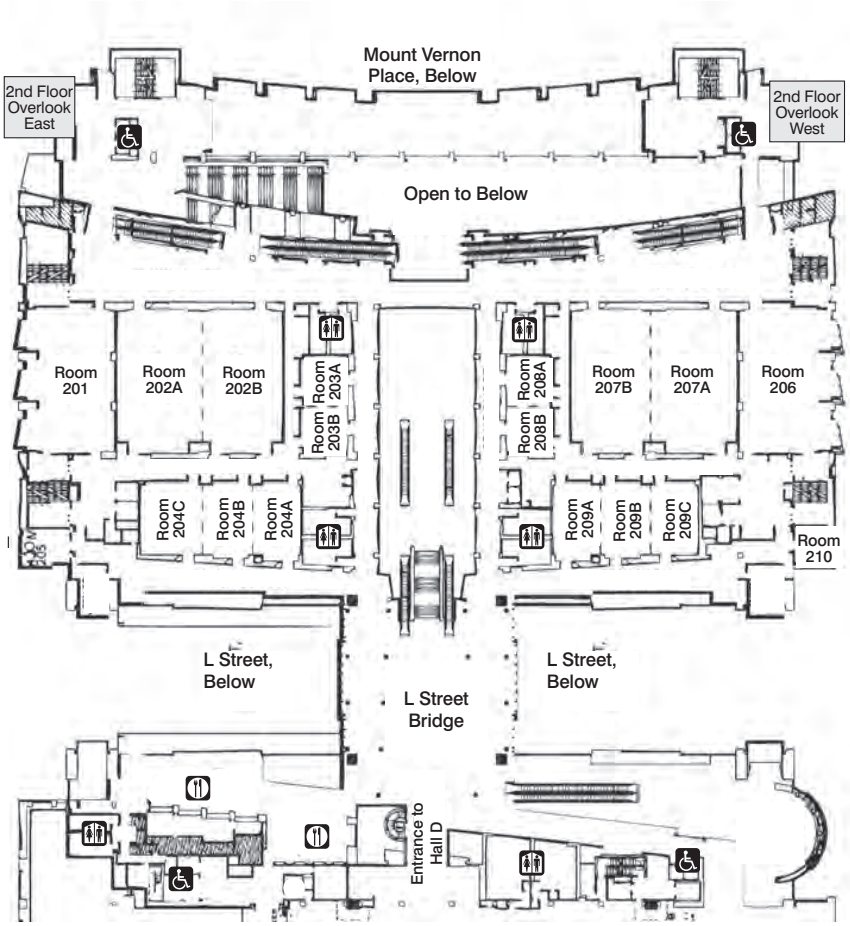


Convention Center

Key

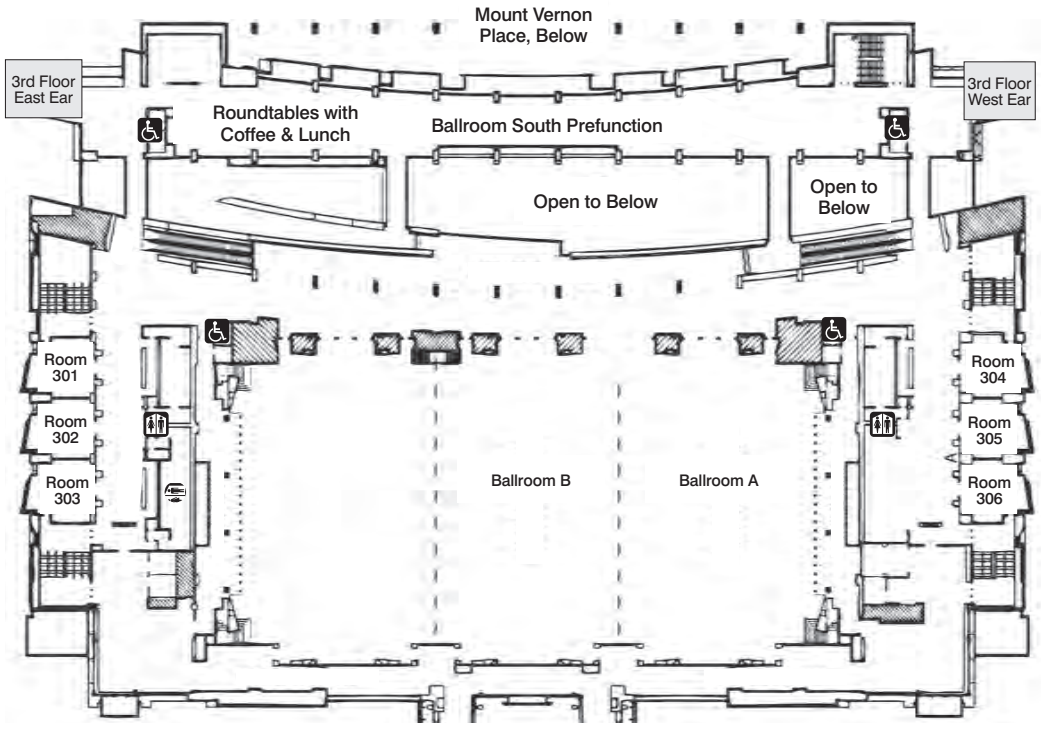
- Stairs
- Handicap Access
- Restrooms
- Concession
- Escalator

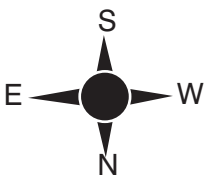
Level 2



Hall D - Career Placement & Exhibit Hall

Level 3





Convention Center

Key

- Stairs
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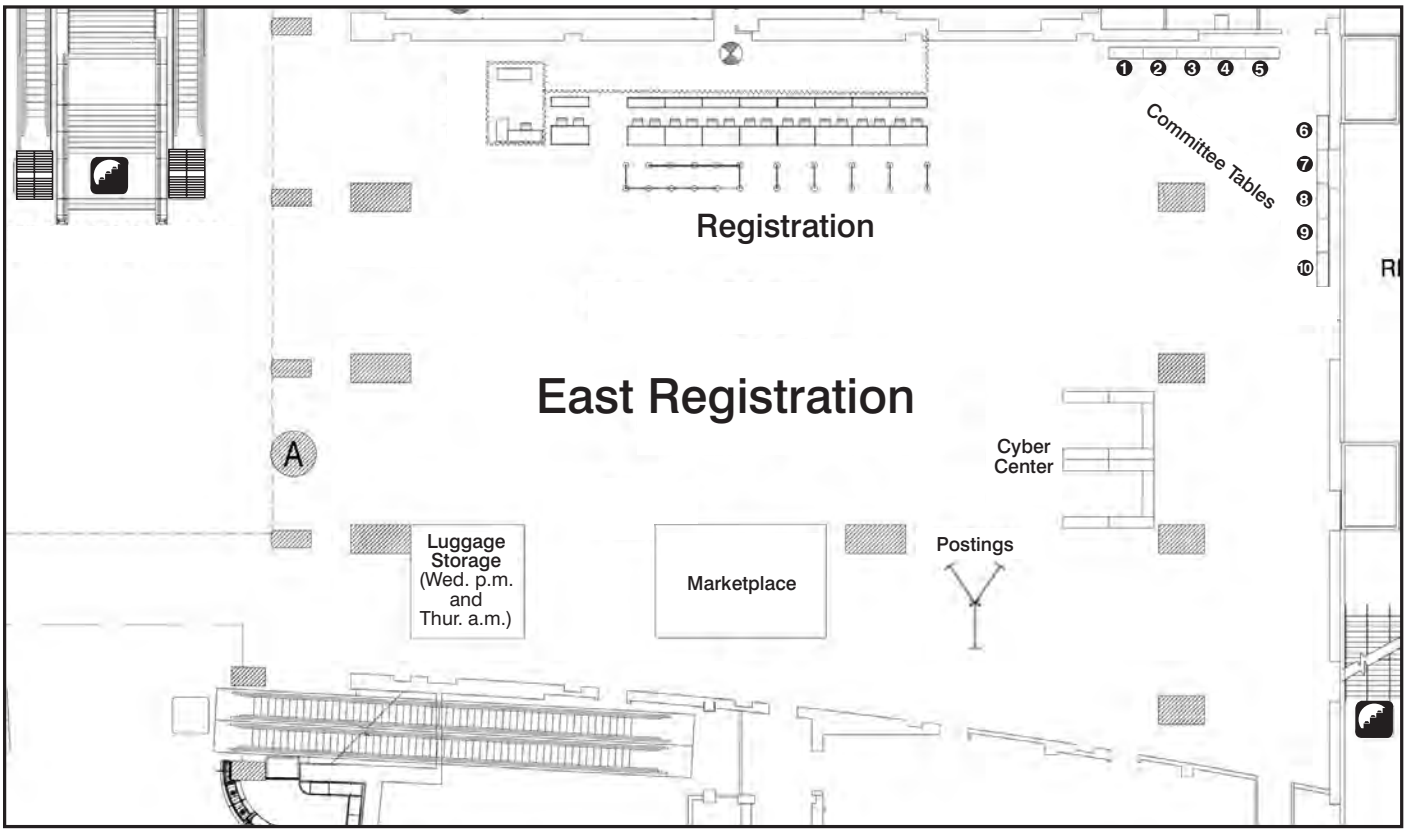
- Escalator



Committee and Society Tables

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

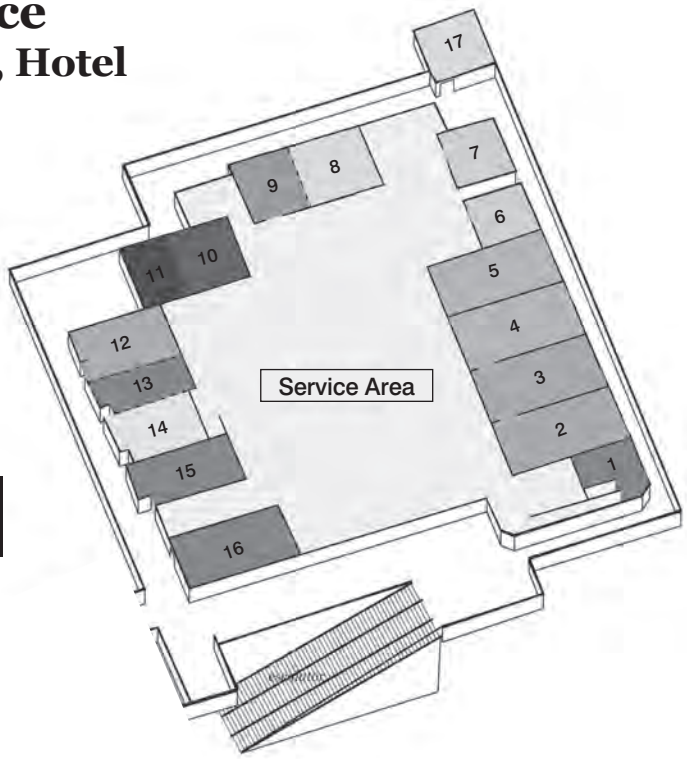
Hotel Floor Plans

Key

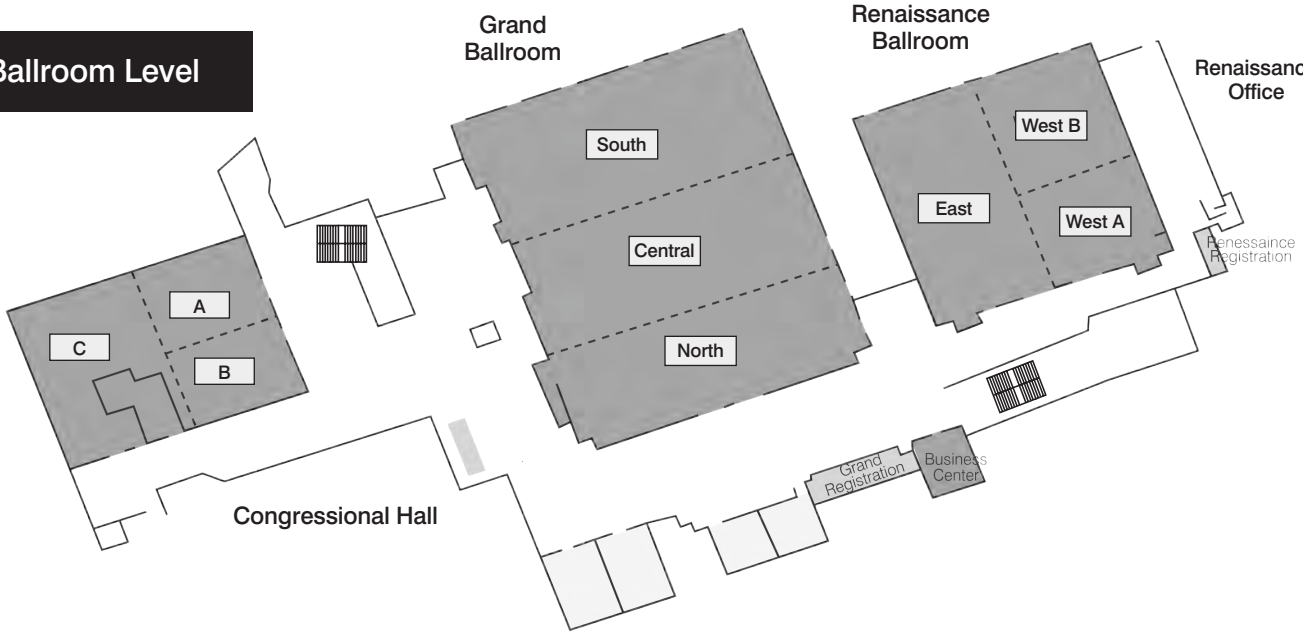
- Stairs
- Handicap Access
- Restrooms
- Concession
- Escalator

Renaissance
Washington, DC, Hotel

Meeting Room Level



Ballroom Level



What You Need to Know

CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

Emergency Telephone Messages

In case of emergency, messages may be left during registration hours by calling (202) 249-4051. These will be posted at the Cyber Center, located in the registration area.

Convention Housing

Renaissance Washington, DC, Hotel	(202) 898-9000
Embassy Suites DC	(202) 739-2001
Hampton Inn DC Convention Center	(202) 842-2500
Four Points by Sheraton	(202) 289-7600
Grand Hyatt Washington	(202) 582-1234
Red Roof Inn-Downtown DC	(202) 289-5959
Marriott at Metro Center	(202) 737-2200
Hotel Monaco Washington, DC	(202) 628-7177
Hilton Garden Inn Washington, DC, Downtown	(202) 783-7800
Hostelling International-Washington, DC	(202) 737-2333

Assistance for Those with Disabilities

Please contact a staff member at the Special Assistance Desk in the registration area of the Walter E. Washington Convention Center if you have a disability that may impede your participation.

Child Care

Services may be organized through Family and Child Care, Inc. With trained and bonded child-care providers, Family and Child Care, Inc., has served the Washington, DC, area for 32 years. For more information, call (202) 723-2051.

The Caucus for Women in Statistics will provide a subsidy toward four hours of babysitting per family for up to 10 families. If you are interested, contact Marcia Ciol at *marciac@u.washington.edu*.

Policies

Electronic Devices

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

Smoking

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

Photographs and Videotaping

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

Recycling

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

JSM Proceedings

Eligibility guidelines and author instructions for JSM 2009 presenters are available at *www.amstat.org/meetings/jsm/2009/index.cfm?fuseaction=proceedings*.

JSM 2010

The 2010 Joint Statistical Meetings will be held in Vancouver, British Columbia, Canada, from July 31 to August 5 at the Vancouver Convention Center. Check out the details at Booth #606 in the exhibit hall.

Plan Ahead! Passports now are required for travel between the United States and Canada. Passport processing times are unpredictable, so get your passport now.

Membership

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

Hours of Operation

Registration and ASA Membership/ Special Assistance/Press Desk

CC – East Registration

JSM registration includes the Program Book and Abstract CD; access to the exhibit hall; and admission to the Opening Mixer, Student Mixer (students only), and Informal Dance Party.

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

Speaker Management Room
CC-154A

Speakers are asked to check in 24 hours prior to their presentations to upload their materials to the speaker management system or confirm their materials were uploaded correctly. Session chairs also should check in to confirm all speakers have uploaded their materials.

Saturday	10:00 a.m. – 6:00 p.m.
Sunday	9:00 a.m. – 7:00 p.m.
Monday – Wednesday	7:00 a.m. – 6:00 p.m.
Thursday	7:00 a.m. – 12:00 p.m.

Career Placement Service
CC – Hall D

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

EXPO 2009
CC – Hall D

Visit publishers, software companies, and recruiters. See state-of-the-art products designed for the statistical community.

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

Cyber Center
CC – East Registration

There are 20 terminals with Internet access available for your emailing needs, as well as three printers. Also, the Walter E. Washington Convention Center has Wi-Fi throughout the building for $15.95 per day. There will be no internal message center this year, so make sure to take advantage of these Internet options.

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

ASA Marketplace
CC – A Lobby

The ASA Marketplace is your store for the official JSM 2009 T-shirt and other JSM and ASA souvenirs.

Saturday	12:00 p.m. – 5:30 p.m.
Sunday – Wednesday	9:00 a.m. – 5:30 p.m.
Thursday	7:30 a.m. – 10:00 a.m.

Introductory Overview Lectures

Sunday, August 2, 4:00 p.m. – 5:50 p.m.
CC- 207B
Session 40 – Largely About Largeness: Models and Views for High-Dimensional Data

Monday, August 3, 8:30 a.m. – 10:20 a.m.
CC-202A
Session 85 – Spatial Data Analysis

Tuesday, August 4, 8:30 a.m. – 10:20 a.m.
CC-202A
Session 241 – Designing Longitudinal Studies

Wednesday, August 5, 2:00 p.m. – 3:50 p.m.
CC-207A
Session 491 – Causal Inference in Statistics

Thursday, August 6, 8:30 a.m. – 10:20 a.m.
CC-207A
Session 534 – Statistical Learning and Data Mining

Late-Breaking Sessions

Monday, August 3, 2:00 p.m. – 3:50 p.m.
CC-202A
Session 187 – Late-Breaking Session I: Policymakers to Get Full Data Coverage of the Nation's Service Sector

Wednesday, August 5, 8:30 a.m. – 10:20 a.m.
CC-202A
Session 392 – Late-Breaking Session II: The Role of Statistics in the Nation's Financial Recovery and Stability

Wednesday, August 5, 10:30 a.m. – 12:20 p.m.
CC-207A
Session 441 – Late-Breaking Session III: Statistics in the New Administration

Washington Visitors Information Center
CC – Main Lobby

Operated by the Walter E. Washington Convention Bureau, this center provides extensive information and referrals for restaurants, tours, and sightseeing. You also can pick up current maps and travel information.

Sunday	9:00 a.m. – 5:00 p.m.
Monday – Thursday	8:00 a.m. – 6:00 p.m.

Career Placement Service

Executive Suite Employers

Abbott Laboratories

Amgen, Inc

Bank of America

Capital One

Clinical Trials & Surveys Corp. (C-TASC)

Eli Lilly and Company

FDA

FDA/Center for Devices and Radiological Health

FDA/Office of Biostatistics

Merck & Co., Inc.

National Security Agency

NORC at the University of Chicago

Novartis Oncology

SAS Institute Inc.

Registered Employers

Axio Research, LLC

Baylor Health Care System

Bell Labs, Alcatel-Lucent

Case Western Reserve University

Energy Information Agency (EIA)

ESPN, Inc.

Exponent

FDA/Center for Veterinary Medicine

IBM T. J. Watson Research Center

Johnson & Johnson

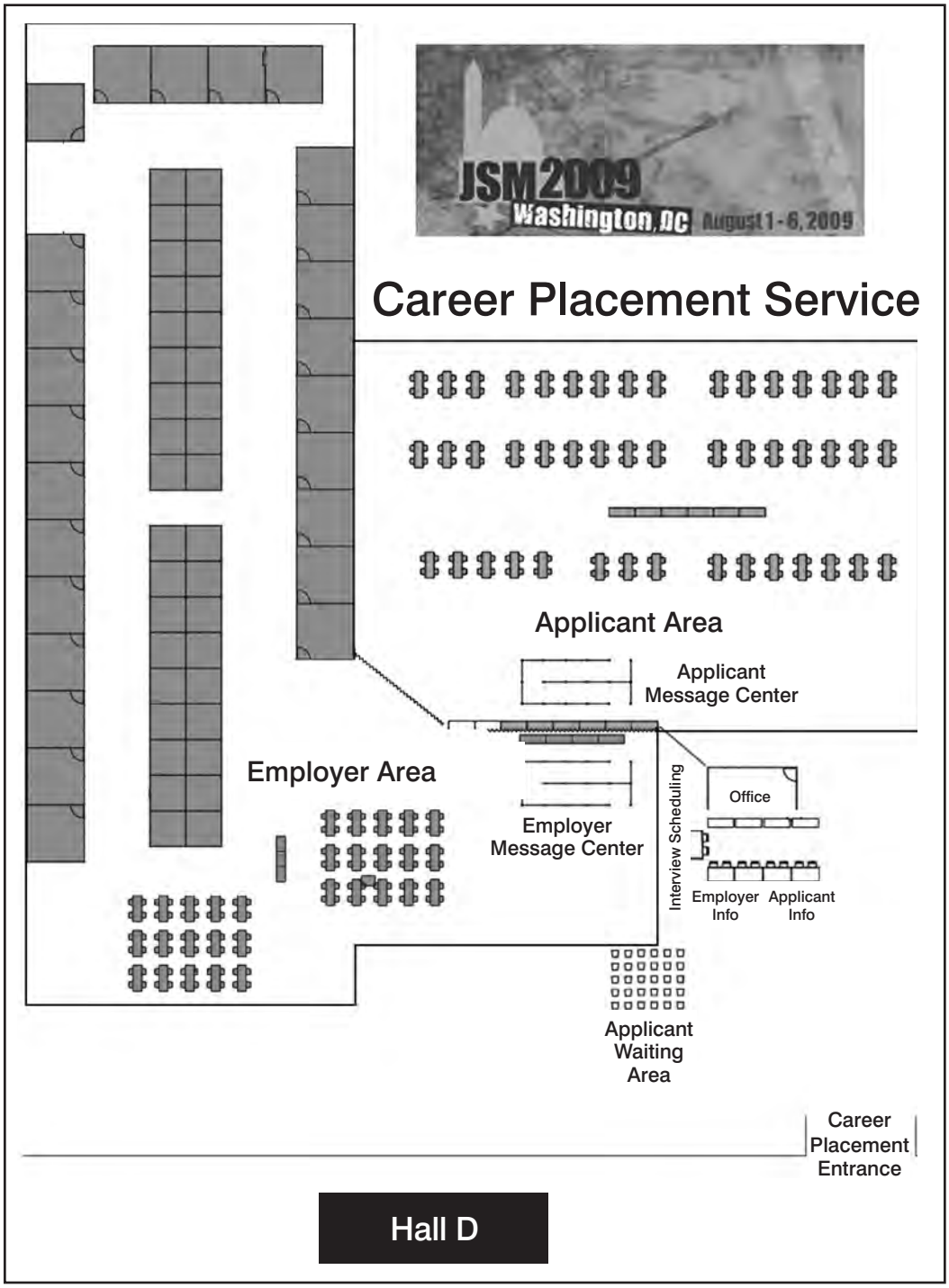
Lawrence Livermore National Laboratory

Monsanto Company

School of Public Health, University of Alberta

Smith Hanley Associates, LLC

Statistics of Income/Internal Revenue Service



Takeda Pharmaceuticals

The Cambridge Group LTD

The EMMES Corporation

University of Manitoba

U.S. Census Bureau

U.S. Consumer Product Safety Commission

VA Center for Health Equity and Promotion

Vanderbilt University Medical Center Department of Biostatistics

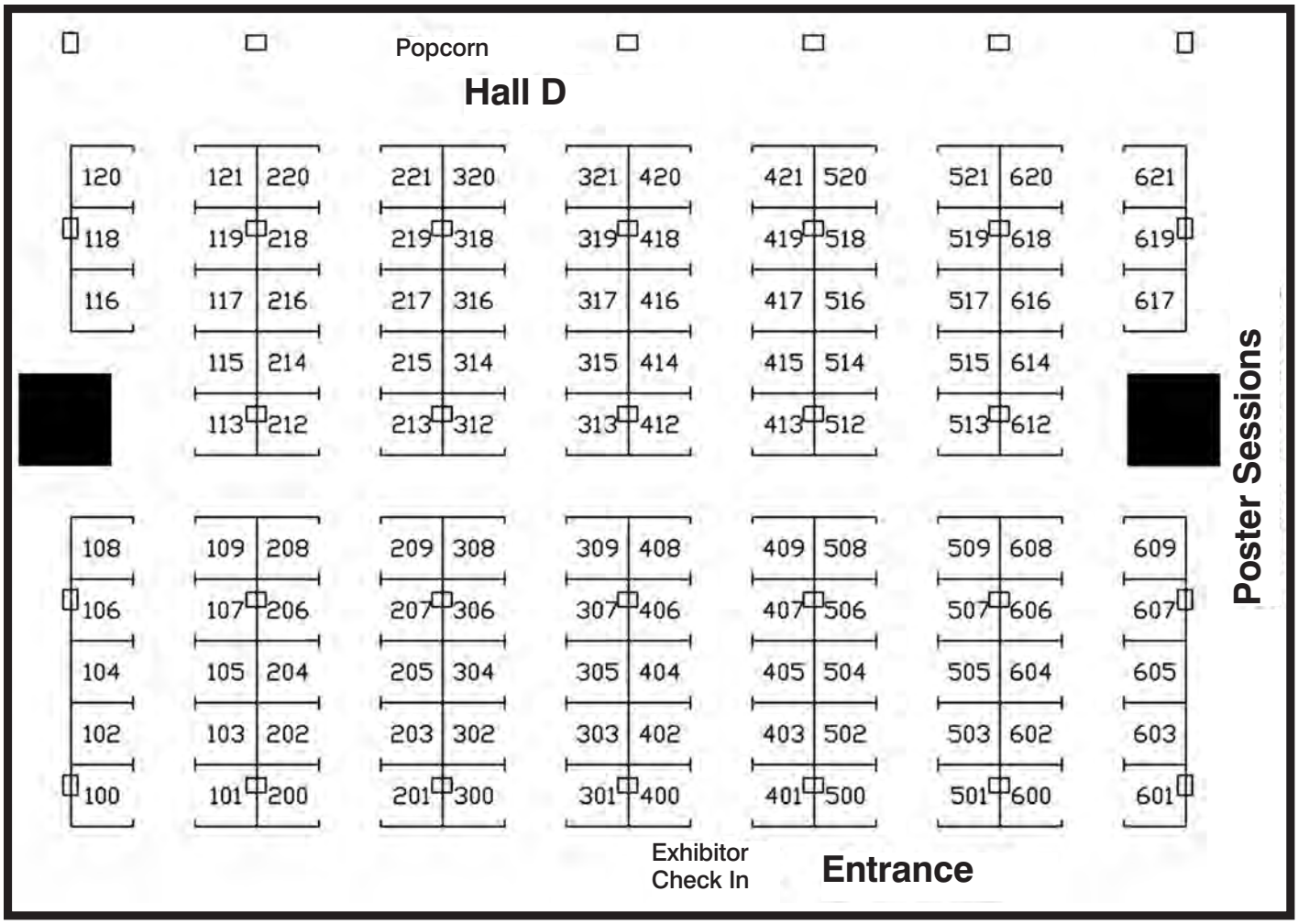
W.L. Gore & Associates, Inc.

Westat

Expo 2009

Key

- Stairs
- Handicap Access
- Restrooms
- Concession
- Escalator



Who's Who at EXPO 2009

Booth	Exhibitor
100	Q^2 Business Intelligence, Inc.
101, 103, 200, 202	Springer
102	Office of United Nations Employment Information & Assistance/U.S. Department of State
105	TIBCO Spotfire
108	IRS - Statistics of Income Division
109	Centers for Disease Control and Prevention/ ATS&R
113	Tech Observer
201, 300	SPSS Inc.
203	The Berkeley Electronic Press
204, 206	REvolution Computing
205, 207, 209, 304, 306, 308	CRC Press-Taylor & Francis Group
208	MedFocus LLC
212	National Center for Health Statistics
213	MacKichan Software
214	Johnson & Johnson
215	Bureau of Labor Statistics
220	Google Inc.
221	Placemart Personnel Service
301, 303, 305, 307	John Wiley & Sons, Inc.
302	Oxford University Press
309	SAGE Publications
312	StatPoint Technologies, Inc.
313	Salford Systems
314	Systat Software, Inc.
315	Statistical Solutions
316	National Institutes of Health, National Cancer Institute
317	Minnesota Population Center
319	American Educational Research Association
320	Substance Abuse and Mental Health Data Archive (SAMHDA)
321	The Cambridge Group Ltd.
400, 402	StatSoft, Inc.
401	W.H. Freeman & Company
403	Eli Lilly and Company

Booth	Exhibitor
404, 406	Cambridge University Press
405	McGraw-Hill/Irwin
407	Hawkes Learning Systems
408	Smith Hanley
409	NCSS
412	Kforce Clinical Research
413	Capital One
414	U.S. Department of Education/Institute of Education Sciences
415	Biostat, Inc.
416	American Association for the Advancement of Science (AAAS)
417	Energy Information Administration (EIA)
418	The Pennsylvania State University
419, 421	National Security Agency
420	The National Academies
500, 502	JMP, a business unit of SAS
501, 503, 505	SAS
504, 506, 508	SAS Publishing
507, 509	SAS Education
512, 514	Minitab Inc.
513, 612	RTI International
515, 517	Cytel Inc.
516, 518, 520	StataCorp
519	statistics.com
521	Abt SRBI
600, 602	American Statistical Association
601	Institute of Mathematical Statistics
603	Statistical Society of Canada
604	Publishers' Book Display
605	ASA-SIAM
606	JSM 2010 Vancouver
607	SIAM
608	U.S. Census Bureau
609	USDA, National Agricultural Statistics Service
614, 616	Brooks/Cole Cengage Learning
617, 619	Pearson
618, 620	ELSEVIER
621	National Center for Health Statistics

Who's Who at EXPO 2009

Abt SRBI (521)
Silver Spring, MD
Abt SRBI is one of the nation's premier full-service research and strategy organizations. Noted for high-quality analytical capabilities with in-house resources for telephone, mail, Internet, and IVR surveys, we ensure timely and actionable research for strategy and decisionmaking. We have 450 stations equipped for computer-assisted telephone interviewing (CATI).

ASA-SIAM (605)
Alexandria, VA
The ASA-SIAM Series on Statistics and Applied Probability is published jointly by the ASA and the Society for Industrial and Applied Mathematics. It provides reasonably priced, high-quality books about topics in statistics and applied probability. Series titles are discounted 20–30% during JSM.

American Association for the Advancement of Science (416)
Washington, DC
Spend a year in Washington, DC, as an AAAS Science & Technology Policy Fellow. Fellows contribute to federal policymaking. Professionals of all career stages work in congressional offices and federal agencies. Applicants must hold a PhD or a master's degree in engineering (three years of post-MS experience). Visit *http://fellowships.aaas.org*.

American Educational Research Association (319)
Washington, DC
As the most prominent international professional organization in the realm of education research, AERA's primary goal is advancing education research and its practical application. Stop by to learn more; meet with staff; and browse the AERA journals, books, and other valuable resources.

American Statistical Association (600, 602)
Alexandria, VA
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 such areas as medicine, computer applications, quality management, analytical research, setting standards for statistics, and promoting statistical education.

The Berkeley Electronic Press (203)
Berkeley, CA
Founded by professors, the Berkeley Electronic Press represents the new standard in scholarly publishing. Our journals feature fast and high-quality peer review, an innovative guest access policy, and prices libraries can easily afford. Our collection of journals in statistics includes *Statistical Applications in Genetics and Molecular Biology*, one of the premier journals in the field. *www.bepress.com/Journals*

Biostat, Inc. (415)
Englewood, NJ
Biostat distributes the world's best-selling meta-analysis program, Comprehensive Meta-Analysis. Stop by for a free trial CD, free papers on meta-analysis, and information about our Wednesday morning Computer Technology Workshop.

Brooks/Cole Cengage Learning (614, 616)
Belmont, CA
Cengage Learning delivers highly customized learning solutions for colleges, universities, professors, students, reference centers, government agencies, corporations, and professionals around the world. These solutions are delivered through specialized content, applications, and services that foster academic excellence and professional development and provide measurable results.

Bureau of Labor Statistics (215)
Washington, DC
The Bureau of Labor Statistics (BLS) is the principal fact-finding agency for the federal government in the broad field of labor economics and statistics. The BLS is an independent national statistical agency that collects, processes, analyzes, and disseminates essential statistical data.

CRC Press-Taylor & Francis Group (205, 207, 209, 304, 306, 308)
Boca Raton, FL
Chapman & Hall/CRC and Taylor & Francis are premier publishers of books and journals in all areas of statistics. Please stop by our booth to pick up a sample copy of a journal or browse our latest books at discounts of up to 25%.

The Cambridge Group Ltd. (321)
Westport, CT
The Cambridge Group Ltd. focuses on careers in biostatistics, clinical data management, clinical systems, SAS programming, regulatory affairs, and more. Opportunities range from entry through executive levels, both permanent and contract, in the pharmaceutical and biotechnology industries.

Cambridge University Press (404, 406)
New York, NY
Cambridge University Press is one of the world's leading publishers of scholarly books and journals in the areas of H&SS. Internationally recognized for the quality and excellence of our products, we publish more than 2,000 titles and 215 journals every year.

Capital One (413)
Richmond, VA
Capital One Financial Corporation (*www.capitalone.com*) is a Fortune 500 company headquartered in McLean, Virginia, with approximately 1,000 locations in the United States. A diversified financial services company, Capital One offers credit cards, auto loans, banking services, personal loans, small business services, and commercial banking products.

Centers for Disease Control and Prevention/ATS&R (109)
Atlanta, GA
The Centers for Disease Control and Prevention is one of 11 operating divisions 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 providing essential human services.

Cytel Inc. (515, 517)
Cambridge, MA
New for JSM 2009, Cytel introduces Siz, the affordable fixed sample size clinical trial design software. The "Introduction to Siz" Computer Technology Workshop on Wednesday afternoon will provide an in-depth look at the first trial software combining design, simulation, and analysis. The Cytel booth will feature new designs and simulations for East Adapt. *www.cytel.com*

Who's Who at EXPO 2009

Eli Lilly and Company (403)
Indianapolis, IN
Eli Lilly and Company 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, more active lives. We are committed to providing answers that matter—through medicine and information—for the world's most urgent medical needs.

ELSEVIER (618, 620)
New York, NY
Elsevier delivers world-class content to statisticians and mathematicians, from journals and textbooks to online solutions. Come browse our new and bestselling books, cutting-edge journals, and online solutions in all areas of statistics. Conference discounts apply, and sample journals and textbook examination copies are available.

Energy Information Administration (417)
Washington, DC
The Energy Information Administration (EIA) is the independent statistical agency of the U.S. Department of Energy. We provide policy-neutral data, forecasts, and analyses to promote sound policymaking, efficient markets, and public understanding regarding energy and its interaction with the economy and environment.

Google Inc. (220)
Mountain View, CA
Google's innovative search technologies connect millions of people with information every day. Founded in 1998 by Stanford PhD students Larry Page and Sergey Brin, Google is 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 (407)
Charleston, SC
Hawkes Learning Systems (HLS) is celebrating 30 years as a company specializing in mathematics software. HLS promotes grade improvement and motivates students by engaging them in the learning process. Students learn more effectively through tutorials, unlimited practice, mastery-based homework, and error-specific feedback.

IRS - Statistics of Income Division (108)
Washington, DC
The Statistics of Income (SOI) Division produces data compiled from tax and information returns filed with the Internal Revenue Service. SOI data include financial information on individuals, businesses, 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.

U.S. Department of Education/Institute of Education Sciences (414)
Washington, DC
As the research arm of the U.S. Department of Education, IES's mission is to provide rigorous evidence on which to ground education practice and policy. IES conducts research and evaluation activities, collects data on all aspects of education, and offers funding/training opportunities. *ies.ed.gov*

Institute of Mathematical Statistics (601)
Beachwood, OH
The Institute of Mathematical Statistics (IMS) is an international professional and scholarly society devoted to the development, dissemination, and application of statistics and probability. The institute currently has about 4,500 members in all parts of the world.

JMP, a business unit of SAS (500, 502)
Cary, NC
JMP is the SAS software designed for dynamic data visualization on the desktop. Interactive, comprehensive, and highly visual, JMP enables you to interact with your data to explore relationships, see hidden trends, dig into areas that interest you, and move in new directions.

JSM 2010 Vancouver (606)
Vancouver, BC, Canada
Visit the Vancouver booth to plan your JSM 2010 trip. Vancouver is an unforgettable convention and vacation destination, where you can enjoy friends and family. Vancouver offers possible pre- and post-visits to Whistler, Victoria, and the Canadian Rockies, as well as a Vancouver-Alaskan Cruise.

John Wiley & Sons, Inc. (301, 303, 305, 307)
Hoboken, NJ
Founded in 1807, John Wiley & Sons, Inc., is an independent, global publisher of print and electronic products. Wiley-Blackwell is the international scientific, technical, medical, and scholarly publishing arm of John Wiley & Sons, with strengths in every major academic and professional field.

Johnson & Johnson (214)
New Brunswick, NJ
Johnson & Johnson, through its operating companies, is the world's most comprehensive and broadly based manufacturer of health care products, as well as a provider of related services, for the consumer, pharmaceutical, and medical devices and diagnostics markets. Johnson & Johnson operating companies employ approximately 113,000 men and women.

Kforce Clinical Research (412)
Tampa, FL
Kforce helps build scalable outsourcing solutions that enable organizations to quickly expand or contract operations, keeping pace with their pipeline's fluctuating demand. We achieve gains for customers through functional outsourcing, permanent placement, and contingent staffing in the areas of site and study management, monitoring, drug safety, and clinical data services.

MacKichan Software (213)
Poulsbo, WA
Scientific WorkPlace and Scientific Word make writing, sharing, and doing mathematics easier. A click of a button allows you to typeset your documents 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; and more.

McGraw-Hill/Irwin (405)
New York, NY
McGraw-Hill/Irwin is the premier provider of textbooks and technology resources across the business and economics disciplines, with specialization in business statistics, business math, and operations management. We publish instructional materials targeted to higher education and professional markets, delivering a wide variety of student and instructor resources.

Who's Who at EXPO 2009

MedFocus LLC (208)
Chicago, IL
MedFocus offers clinical research contract outsourcing and staffing specifically 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. (512, 514)
State College, PA
Minitab 15 is the leading software for statistics education worldwide. It is accurate, reliable, and easy to use, with powerful graphics abilities that let you create stunning and informative graphs. Minitab integrates into curriculums seamlessly and affordably. Minitab is used at more than 4,000 colleges and universities. Free trial. *www.minitab.com*

Minnesota Population Center (317)
Minneapolis, MN
The Minnesota Population Center (MPC) is an interdisciplinary research and training center at the University of Minnesota. MPC is the world's leading developer of harmonized U.S. and international census and survey data. More than 25,000 researchers worldwide have registered to use MPC-produced data sets, which are freely available at *www.ipums.org*.

NCSS (409)
Kaysville, UT
NCSS specializes in statistical data analysis software (NCSS) and sample size/power analysis software (PASS). NCSS and PASS are comprehensive, easy to use, affordable, and fully compatible with Windows Vista. PASS 2008 is now available with power analysis of more than 150 statistical procedures.

National Center for Health Statistics (212)
Hyattsville, MD
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 Center for Health Statistics (621)
Hyattsville, MD
The NCHS Research Data Center (RDC) is in the unique position of being able to provide secure access to the full range of health and vital statistics information collected by the National Center for Health Statistics data systems, while continuing to protect the confidentiality of the respondents and records.

National Security Agency (419, 421)
Ft. Meade, MD
The National Security Agency is a federal government agency that provides foreign signals intelligence to decisionmakers and protects U.S. national security information systems.

Office of United Nations Employment Information & Assistance/U.S. Department of State (102)
Washington, DC
Our office encourages U.S. citizens who have information and professional qualifications in statistics, economics, finance, law, and other fields to compete for challenging positions in the United Nations and other international organizations. We publish a biweekly list of such vacancies and offer advice to job-seekers.

Oxford University Press (302)
New York, NY
Oxford University Press is a leading publisher of books on statistics. Visit us to see our latest titles, including Helden's *Statistics Applied to BioInformatics*, Thomas' *Statistical Methods in Environmental Epidemiology*, and Aitkin's *Statistical Modelling in R*. Receive a 20% discount on all orders placed at the show.

Pearson (617, 619)
Upper Saddle River, NJ
Pearson, the global leader in education and education technology, is committed to providing quality content, assessment tools, and educational services for millions of students and their instructors. Pearson continues to transform education and change the way students learn by offering innovative online resources and learning applications, including MyStatLab and StatCrunch.

The Pennsylvania State University (418)
University Park, PA
The Penn State World Campus 100% online master's degree and graduate certificate programs available in applied statistics improve your research and data analysis expertise and refine and maximize your analytical talents. Study at times and locations convenient to your busy schedule, and have frequent interaction with your professors while never setting foot on campus.

Placemart Personnel Service (221)
Lanoka Harbor, NJ
Placemart Personnel Service specializes in nationwide executive search services in clinical drug and medical product R&D. For more than 40 years, we have been matching jobs and job candidates in biostatistics. Typical positions include directors, managers, project managers, group leaders, biostatisticians, data analysts, and statistical programmers. For details, visit *www.placemart.com*.

Publishers' Book Display (604)
Alexandria, VA
Visit the publishers' book display booth to review books and literature from publishers unable to attend JSM this year. Discounted order forms are available.

Q^2 Business Intelligence, Inc. (100)
Princeton, NJ
Q-Square Business Intelligence (Q^2BI) is the most efficient and innovative global leader in providing high-quality service and reliable solutions to our health care and clinical research partners in drug safety and new drug development. Q^2BI is a certified CDISC solutions provider. Quality work for a quality world.

REvolution Computing (204, 206)
New Haven, CT
REvolution Computing is the leading commercial provider of software and support for the statistical computing language known as "R." REvolution R and REvolution R Enterprise enable statisticians, scientists, and others to create superior predictive models and derive meaning from large sets of mission-critical data in record time. Visit *www.revolution-computing.com* for more information.

Who's Who at EXPO 2009

National Institutes of Health/National Cancer Institute (316)
Bethesda, MD
The National Institutes of Health (NIH) is the primary federal agency for conducting and supporting medical research. NIH scientists investigate prevention, causes, treatments, and cures for diseases. Composed of 27 institutes and centers, the NIH provides leadership and financial support to researchers in every state and throughout the world.

RTI International (513, 612)
Research Triangle Park, NC
Dedicated to improving the human condition, RTI International (*www.rti.org*) provides research and technical expertise to governments and businesses around the world. We work in health and pharmaceuticals, education and training, surveys and statistics, advanced technology, international development, economic and social policy, energy and the environment, and laboratory and chemistry services.

SAGE Publications (309)
Thousand Oaks, CA
SAGE—an independent international publisher in the social sciences, technology, and medicine—provides journals, books, and electronic media of the highest caliber. Please stop by our booth or visit us at *www.sagepub.com*

SAS (501, 503, 505)
Cary, NC
SAS will exhibit its analytical software for statistics, data mining, econometrics, and statistical quality control. Please visit the SAS booth to learn more about SAS 9.2—including the latest in statistical graphics and new software for Bayesian analysis—and meet some of its R&D statisticians.

SAS Education (507, 509)
Cary, NC
SAS' Global Academic Program group can help your university, college, or high school incorporate SAS into your curriculum with our programs, services, and events, many of which are offered free of charge. Our Global Certification group helps you put your SAS skills to the test and can add credibility to your résumé.

SAS Publishing (504, 506, 508)
Cary, NC
Visit to learn more about saving 20% on orders placed or mailed to us by August 28, new SAS documentation titles, new SAS Press titles, and SAS certification guides. SAS Publishing staff is available to answer questions and assist with your orders. Enjoy the conference!

SIAM (607)
Philadelphia, PA
In addition to the ASA-SIAM series, SIAM publishes a variety of other books of interest to JSM attendees. Enjoy 20–30% discounts during JSM. Complete a brief survey at the booth and receive a reusable grocery tote! For more information about the ASA-SIAM series and other SIAM books, visit *www.siam.org/books*.

SPSS Inc. (201, 300)
Chicago, IL
SPSS Inc. is a leading global provider of predictive analytics software and solutions. The company's predictive analytics technology improves business processes by giving organizations consistent control over decisions made every day. Incorporating predictive analytics into their daily operations enables organizations to meet business goals.

StatPoint Technologies, Inc. (312)
Warrenton, VA
STATGRAPHICS Centurion XVI- Insight Through the Language of Statistics. Advanced continuous improvement features, unmatched ease and reliability. Creates vibrant, illustrative graphics revealing critical facts hidden in your data, and then writes interpretive reports explaining your analysis. See optimal direction, make correct decisions, achieve peak performance, reduce costs, increase profits. *www.statgraphics.com/version16.htm*.

Salford Systems (313)
San Diego, CA
Salford Systems develops advanced statistical and data mining software, including the CART decision tree, MARS automated regression, TreeNet boosted decision trees, and Random Forests tree ensembles. Salford Systems strives to make the best academic research easily usable by the practicing data analyst and has recently won several distinguished international honors.

Smith Hanley (408)
New York, NY
Our two divisions—permanent placement and contract staffing—offer targeted recruitment in statistics, biostatistics, SAS programming, data management, market research, health outcomes, and epidemiology. Since 1980, we've provided clients and recruits dedicated service, experience, and insight into industry trends for positions at all levels. Permanent: *www.smithhanley.com*; Contract: *www.smithhanleyconsulting.com*

Springer (101, 103, 200, 202)
New York, NY
Springer is one of the largest international publishers of scientific books (4,000 new books per year), and also publishes more than 1,200 journals. Springer's statistics book program is world-renowned and has produced many bestselling textbooks, monographs, and reference works. Notable publications include the Springer Series in Statistics, Statistics for Biology and Health, and Statistics and Computing.

StatSoft, Inc. (400, 402)
Tulsa, OK
StatSoft, Inc., founded in 1984, is one of the largest producers of enterprise and desktop software for data analysis, data mining, quality control/Six Sigma, and web-based analytics. Its products are used worldwide at most major universities, corporations, and government agencies and are supported with training and consulting services.

StataCorp (516, 518, 520)
College Station, TX
Stata statistical software is a general purpose system intended for use by research professionals. It is available for Windows, Macintosh, and Unix platforms and provides full data management, graphics, statistical, and matrix language capabilities.

Statistical Society of Canada (603)
Ottawa, ON
The Statistical Society of Canada (SSC) encourages the development and use of statistics and probability in Canada. It has four sections: Biostatistics, Business & Industrial Statistics, Probability, and the Survey Section. The SSC also offers two levels of accreditation: Professional Statistician (P.Stat.) and Associate Statistician (A.Stat.).

Who's Who at EXPO 2009

Statistical Solutions (315)
Saugus, MA
Statistical Solutions Ltd., designs, develops, and distributes unique statistical software applications for statisticians, clinical researchers, and data analysts. Each application addresses specific critical issues that arise in the design and statistical analysis of clinical trials, research surveys, and other scientific investigations. Products include nQuery Advisor, Solas for Missing Data, BMDP, and EquivTest.

statistics.com (519)
Arlington, VA
Statistics.com is the leading provider of online courses in statistics. More than 70 courses, introductory to advanced, are taught by distinguished instructors. Typical courses require 15 hours per week over three or four weeks. There are no set times when you have to be online during the weekly lessons.

Substance Abuse and Mental Health Data Archive (320)
Ann Arbor, MI
SAMHDA provides free access to preeminent national data on drug use and mental health and promotes the sharing of these data among researchers, academics, policymakers, service providers, and others. We are an initiative of the Office of Applied Studies and the Substance Abuse and Mental Health Services Administration.

Systat Software, Inc. (314)
Chicago, IL
Systat Software is the developer of the SYSTAT statistics package. SYSTAT 12 is a cutting-edge tool for scientific and social research. It's recently added methods such as mixed model analysis and partial least-squares regression to its broad portfolio of algorithms and features outstanding 2D and 3D graphics. Visit *www.systat.com*.

Tech Observer (113)
Hackensack, NJ
Tech Observer is a global staffing provider for the pharmaceutical, biotechnology, health care, and IT industries. We are headquartered in the USA, with branches in the UK and India. Our expertise includes biostatistics/statistics, clinical SAS, clinical data management, Oracle clinical, 21 CFR part 11 validation, drug safety, and regulatory affairs and IT.

The National Academies (420)
Washington, DC
The National Academies consists of four organizations: the National Academy of Sciences, the National Academy of Engineering, the Institute of Medicine, and the National Research Council. The National Academies bring together committees of experts in science, technology, and medicine, offering unbiased advice to the public and federal government.

TIBCO Spotfire (105)
Somerville, MA
The TIBCO Spotfire enterprise analytics platform offers a visual and interactive experience that helps professionals quickly discover new and actionable insights into information. Distinguished by its speed to gain insight and adapt to specific business challenges, Spotfire rapidly reveals unseen threats and new opportunities, creating significant economic value.

U.S. Census Bureau (608)
Washington, DC
The U.S. Census Bureau's collections include socioeconomic information–2010 Census and American Community Survey—topics such as population, housing, and income; or business and industry statistics. To identify changes or track trends at the local, state, or national levels or to see what's new, please visit our booth. *www.census.gov*.

USDA, National Agricultural Statistics Service (609)
Washington, DC
USDA's National Agricultural Statistics Service (NASS) disseminates data on every facet of U.S. agriculture. The agency conducts surveys and issues 500 reports annually. NASS released the 2007 Census of Agriculture in February 2009, providing the only source of agricultural data for every county in the nation. NASS reports are available at *www.nass.usda.gov*.

W.H. Freeman & Company (401)
New York, NY
W.H. Freeman & Company publishes high-quality textbooks and media in statistics. Visit our booth to learn more about our popular titles for introductory statistics, business statistics, and statistics for the life sciences. Also, view demonstrations of our online teaching and learning solution, StatsPortal.

Continuing Education-at-a-Glance

TIME	COURSE	INSTRUCTOR(S)	COURSE TITLE
Saturday, August 1, 2009			
8:30 a.m. –5:00 p.m.	CE_01C	Philip Hougaard	Analysis of Multivariate Survival Data
8:30 a.m. –5:00 p.m.	CE_02C	Michael Daniels/Joe Hogan	Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis
8:30 a.m. –5:00 p.m.	CE_03C	Douglas C. Montgomery/Bradley A. Jones	Design of Experiments: New Methods and How to Use Them
8:30 a.m. –5:00 p.m.	CE_04C	Annie Qu/Peter Song	Longitudinal Data Analysis: Semiparametric and Nonparametric Approaches
8:30 a.m. –5:00 p.m.	CE_05C	Stephen E. Fienberg	The Analysis of Cross-Classified Categorical Data
8:30 a.m. –5:00 p.m.	CE_06C	Andrea S. Foulkes	Applied Statistical Genetics for Population-Based Association Studies
8:30 a.m.–5:00 p.m.	CE_07C	Yi Tsong	Active Control Clinical Trials
Sunday, August 2, 2009			
8:30 a.m. – 5:00 p.m.	CE_01C	Philip Hougaard	Analysis of Multivariate Survival Data
8:30 a.m. – 5:00 p.m.	CE_08C	William B. Smith/Dallas E. Johnson/ F. Michael Speed	New Developments of Traditional Multivariate Analyses
8:30 a.m. – 5:00 p.m.	CE_09C	David Ruppert/Ciprian Crainiceanu/ Raymond J. Carroll	Semiparametric Regression
8:30 a.m. – 5:00 p.m.	CE_10C	Thomas Mathew/Kalimuthu Krishnamoorthy	Tolerance Intervals: Theory, Applications, and Computation
8:30 a.m. – 5:00 p.m.	CE_11C	Alan Dorfman/Richard Valliant	Model-Based Survey Sampling: Theory and Practice
8:30 a.m. – 5:00 p.m.	CE_12C	Sudipto Banerjee/Andrew O. Finley	Hierarchical Modeling and Analysis of Spatial-Temporal Data: Emphasis in Forestry, Ecology, and Environmental Sciences
8:30 a.m. – 5:00 p.m.	CE_13C	Geert Verbeke/Geert Molenberghs	Models for Discrete Repeated Measures
Monday, August 3, 2009			
8:00 a.m. – noon	CE_14C	David C. Naftel	Methodology for Competing Outcomes: The Analysis of Multiple Mutually Exclusive Endpoints in a Clinical Trial
8:30 a.m. – 5:00 p.m.	CE_15C	Anthony C. Atkinson/Randy D. Tobias	Optimum Experimental Designs
8:30 a.m. – 5:00 p.m.	CE_16C	Frank Bretz/José Pinheiro	Dose-Finding Studies: Methods and Implementation
8:30 a.m. – 5:00 p.m.	CE_17C	Bruno Sansó	Bayesian Inference
8:30 a.m. – 5:00 p.m.	CE_18C	William Q. Meeker	Experiences and Pitfalls in Reliability Data Analysis and Test Planning
8:30 a.m. – 5:00 p.m.	CE_19C	John Cornell/Greg Piepel	Methods for Designing and Analyzing Mixture Experiments
8:30 a.m. – 5:00 p.m.	CE_20C	Paul Allison	Multiple Imputation of Missing Data
1:00 p.m. – 5:00 p.m.	CE_21C	Martin King/Narinder Nangia/Jane Qian	Evaluating Probability of Success for Internal Decisionmaking in Early Drug Development
Tuesday, August 4, 2009			
8:00 a.m. – noon	CE_22C	Mitchell H. Gail/Ruth Pfeiffer	Absolute Risk Prediction
8:30 a.m. – 5:00 p.m.	CE_23C	S. J. Koopman	State Space Time Series Analysis in Practice
8:30 a.m. – 5:00 p.m.	CE_24C	Bimal K. Sinha/Guido Knapp	Statistical Meta-Analysis: Methods and Applications
8:30 a.m. – 5:00 p.m.	CE_25C	Maria Rizzo/Jim Albert	Monte Carlo and Bayesian Computation with R
8:30 a.m. – 5:00 p.m.	CE_26C	Martin Theus/Simon Urbanek	Comprehensive Data Analysis Using Interactive Statistical Graphics
8:30 a.m. – 5:00 p.m.	CE_27C	Athanasios Kottas/Abel Rodriguez	Applied Bayesian Nonparametric Mixture Modeling
8:30 a.m. – 5:00 p.m.	CE_28C	Devan Mehrotra/Alex Dmitrienko/ Keaven Anderson	Analysis of Clinical Trials: Theory and Applications
1:00 p.m. – 5:00 p.m.	CE_29C	Stanislav Kolenikov	Bootstrap for Complex Surveys
Wednesday, August 5, 2009			
8:00 a.m. – 9:45 a.m.	CE_30T	Brian Sullivan	Methods for Multiple Imputation with SOLAS for Missing Data Analysis 3.2
8:00 a.m. – 9:45 a.m.	CE_31T	Jeffrey Pitblado	Survey Data Analysis with Stata
8:00 a.m. – 9:45 a.m.	CE_32T	Fang Chen	Introduction to Bayesian Analysis Using SAS Software
10:00 a.m. – 11:45 a.m.	CE_33T	Michael Borenstein/Hannah R. Rothstein	Meta-Analysis: Concepts and Applications
10:00 a.m. – 11:45 a.m.	CE_34T	Roberto G. Gutierrez	Multilevel and Mixed Models in Stata
10:00 a.m. – 11:45 a.m.	CE_35T	Fang Chen	Introduction to the MCMC Procedure in SAS/STAT Software
1:00 p.m. – 2:45 p.m.	CE_36T	Janet D. Elashoff/Brian Sullivan	Determining Sample Size and Power in Study Planning: nQuery Advisor 7.0
1:00 p.m. – 2:45 p.m.	CE_37T	Mikhail Golovnya	Introduction to CART: Data Mining with Decision Trees
1:00 p.m. – 2:45 p.m.	CE_38T	Yang Yuan	Group Sequential Analysis Using SAS Software
3:00 p.m. – 4:45 p.m.	CE_39T	Mikhail Golovnya	Advances in Data Mining: Jerome Friedman's TreeNet/MART and Leo Breiman's Random Forests
3:00 p.m. – 4:45 p.m.	CE_40T	Anthony An	Using Replication Methods to Analyze Survey Data in SAS Software
3:00 p.m. – 4:45 p.m.	CE_41T	Yannis Jemiai	Introduction to Siz: Cytel's New Software Package for Clinical Trial Design and Analysis

SUNDAY, AUGUST 2

Technical Sessions Key

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Session Number

CC
Walter E. Washington Convention Center

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Room Number

Sponsor	2:00 p.m.	4:00 p.m.
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Biopharmaceutical Section	1 CC-202A 26 CC-201 17 CC-102B 27 CC-102A	43 CC-102B 56 CC-202B 78 CC-203B 79 CC-201
Caucus for Women in Statistics	5 CC-141	
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Section on Statisticians in Defense and National Security		58 CC-143C
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Section on Statistics in Epidemiology	20 CC-204C 34 CC-208A	49 CC-202A
Section on Government Statistics	6 CC-150B 18 CC-209C	57 CC-149A
Section on Statistical Graphics		47 CC-144B
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International Chinese Statistical Association		40 CC-207B 67 CC-143A
International Indian Statistical Association		40 CC-207B
Institute of Mathematical Statistics	10 CC-209A 11 CC-207A 29 CC-159A	6 CC-208A 40 CC-207B 52 CC-206 53 CC-207A
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Journal of Computational and Graphical Statistics		44 CC-209C
Section on Statistics and Marketing		70 CC-160
Section on Nonparametric Statistics	30 CC-157 16 CC-159B	68 CC-208B 42 CC-209A
Section on Risk Analysis		73 CC-153

SUNDAY, AUGUST 2

Technical Sessions Key

15
Session Number

CC
Walter E. Washington Convention Center

104
Room Number

Sponsor	2:00 p.m.	4:00 p.m.
Section on Bayesian Statistical Science	3 CC-209B 37 CC-208B	61 CC-158B 62 CC-158A 76 CC-159B 77 CC-159A
SOC	12 CC-150A	55 CC-149B
Section on Physical and Engineering Sciences	21 CC-143C	74 CC-141
Section on Survey Research Methods	19 CC-149B 33 CC-144C 39 CC-148	46 CC-150A 60 CC-149A 71 CC-144C
Section on Statistical Graphics		40 CC-207B
WNAR	8 CC-202B	40 CC-207B
Committee on Women in Statistics		50 CC-203A

MONDAY, AUGUST 3

Sponsor	8:30 a.m.	10:30 a.m.	2:00 p.m.	4:00 p.m.	8:00 p.m.
American Association of Public Opinion Research		144 CC-101			
American Statistical Association	85 CC-202A		187 CC-202A	234 CC-Ballroom A-B	
Business & Economic Statistics Section	86 CC-208A 104 CC-208B 122 CC-203B 128 CC-Hall D 129 CC-Hall D 130 CC-Hall D	150 CC-141 173 CC-142	212 CC-158A 205 CC-142		
Biometrics Section	101 CC-144C 110 CC-153 111 CC-155	157 CC-204C 162 CC-203B 171 CC-203A	194 CC-150B 221 CC-144C 222 CC-148		
Biopharmaceutical Section	102 CC-150B 103 CC-149A 123 CC-150A	136 CC-202A 149 CC-201 172 CC-204A	204 CC-153 211 CC-144B 224 CC-144A 233 CC-Hall D		
Section on Statistical Consulting			210 CC-143B 230 CC-Hall D 231 CC-Hall D		
Section on Statistical Computing	113 CC-203A	70 CC-143C 141 CC-144C	219 CC-159A		
Committee on Statistics and Disability			209 CC-102A		
Section on Statisticians in Defense and National Security		148 CC-143B	226 CC-L Street Bridge 228 CC-L Street Bridge		
Section on Statistical Education	107 CC-204A	153 CC-143A 169 CC-144A	188 CC-155		
Eastern North American Region of the Intl. Biometric Society	85 CC-202A 96 CC-144A	135 CC-202B 187 CC-202A 213 CC-141	233 CC-Hall D		
Committee on Energy Statistics		140 CC-102B			
Section on Statistics and the Environment	92 CC-159A 117 CC-159B	137 CC-209B 203 CC-209A 218 CC-203B			
Section on Statistics in Epidemiology	91 CC-144B 116 CC-143C	60 CC-204B 168 CC-209A	191 CC-160 217 CC-143C		
Committee on Professional Ethics	97 CC-206				
General Methodology, Section on Statistical Graphics	88 CC-202B				
Section on Government Statistics	106 CC-204C 109 CC-102A 124 CC-L Street Bridge 125 CC-L Street Bridge	152 CC-155 165 CC-149A	206 CC-101		

Technical Sessions Key

15
Session Number

CC
Walter E. Washington Convention Center

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Room Number

MONDAY, AUGUST 3

Technical Sessions Key

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Sponsor	8:30 a.m.	10:30 a.m.	2:00 p.m.	4:00 p.m.	8:00 p.m.
Section on Statistical Graphics			192 CC-149B 227 CC-L Street Bridge		
Section on Health Policy Statistics	89 CC-101	158 CC-160	226 CC-L Street Bridge		
International Chinese Statistical Association	85 CC-202A 87 CC-201 134 CC-Hall D		187 CC-202A		
International Indian Statistical Association	85 CC-202A		187 CC-202A		
Institute of Mathematical Statistics	85 CC-202A 93 CC-204B 94 CC-209B 95 CC-207A 121 CC-209C	146 CC-209C 147 CC-207A	187 CC-202A 197 CC-207A 199 CC-206 201 CC-209B 223 CC-208B		235 CC-Ballroom A-B
JASA, Theory and Methods		145 CC-102A			
Section on Statistics and Marketing	118 CC-209A 131 CC-Hall D		190 CC-143A		
Section on Nonparametric Statistics	112 CC-148 120 CC-160	159 CC-208A 166 CC-208B	189 CC-207B 220 CC-203A		
Section on Quality and Productivity	98 CC-207B				
Section on Risk Analysis	119 CC-141	143 CC-206			
Section on Bayesian Statistical Sciences	100 CC-158A 105 CC-158B 132 CC-Hall D	139 CC-158A 151 CC-158B 164 CC-159A	200 CC-204B 202 CC-204A 225 CC-208A		
Section on Statistics in Sports	133 CC-Hall D				
ASA Special Interest Group on Statistical Learning and Data Mining		138 CC-207B			
Social Statistics Section	90 CC-102B 108 CC-143B 127 CC-L Street Bridge	156 CC-159B	208 CC-204C		
Section on Physical and Engineering Sciences		142 CC-149B	214 CC-149A 226 CC-L Street Bridge		
Section on Survey Research Methods	114 CC-143A / 99 CC-142	154 CC-150A 155 CC-150B 167 CC-148 193 CC-102B 207 CC-201 216 CC-202B 226 CC-L Street Bridge	187 CC-202A 198 CC-158B 229 CC-L Street Bridge		
Statistical Society of Canada	85 CC-202A				
Section on Teaching of Statistics in the Health Sciences			195 CC-159B		
Western North American Region of the Intl. Biometric Society	85 CC-202A 115 CC-149B	135 CC-202B 187 CC-202A 196 CC-150A	232 CC-Hall D		

TUESDAY, AUGUST 4

Sponsor	8:30 a.m.	10:30 a.m.	2:00 p.m.	4:00 p.m.	8:00 p.m.
American Statistical Association	241 CC-202A 242 CC-102B	288 CC-102B			386 CC-Ballroom A-B
Business & Economic Statistics Section	261 CC-143C 267 CC-142	303 CC-158B	344 CC-149A 376 CC-149B		
Biometrics Section	254 CC-204C 276 CC-204B 277 CC-203A	289 CC-201 322 CC-203A 323 CC-203B 356 CC-141 371 CC-203A 373 CC-203B	378 CC-Hall D 379 CC-Hall D 380 CC-Hall D		
Biopharmaceutical Section	252 CC-101 256 CC-204A 280 CC-201	307 CC-204C 324 CC-204B 325 CC-204A	359 CC-142 377 CC-201		
Section on Statistical Consulting		299 CC-158A			
Council of Chapters		291 CC-150A			
Committee on Outreach Education			358 CC-102A		
Section on Statistical Computing	247 CC-143A 270 CC-141	319 CC-149B	354 CC-150B		
Section on Statisticians in Defense and National Security		310 CC-144C			
Deming Lectureship Committee (DEM)				384 CC-Ballroom A-B	
Section on Statistical Education	266 CC-155 281 CC-Hall D 282 CC-Hall D 283 CC-Hall D	290 CC-150B 314 CC-153	367 CC-153		
Eastern North American Region of the International Biometric Society	241 CC-202A 242 CC-102B 268 CC-203B	288 CC-102B 295 CC-202B	350 CC-202B		
Section on Statistics and the Environment	264 CC-158A 274 CC-158B	292 CC-209C	366 CC-159B		
Section on Statistics in Epidemiology	260 CC-150B 257 CC-102A	312 CC-209B 315 CC-102A	340 CC-202A 361 CC-101 362 CC-204A		
Section on Government Statistics	255 CC-144B	309 CC-141 321 CC-144A	345 CC-150A		
Section on Statistical Graphics	271 CC-143B				
Section on Health Policy Statistics	263 CC-144A 285 CC-L Street Bridge		343 CC-143C		
International Indian Statistical Association			349 CC-209B		
International Chinese Statistical Association	241 CC-202A 242 CC-102B	288 CC-102B	341 CC-209C		

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TUESDAY, AUGUST 4

Technical Sessions Key

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Sponsor	8:30 a.m.	10:30 a.m.	2:00 p.m.	4:00 p.m.	8:00 p.m.
International Indian Statistical Association	241 CC-202A 242 CC-102B 246 CC-159B	288 CC-102B			
Institute of Mathematical Statistics	241 CC-202A 242 CC-102B 250 CC-209A 251 CC-207A 279 CC-208B	288 CC-102B 296 CC-207A 298 CC-207B	346 CC-207B 351 CC-206 375 CC-157	385 CC-202A	
Journal of Business & Economic Statistics	244 CC-160				
Memorial			347 CC-204C		
Section on Statistics and Marketing		302 CC-149A	364 CC-143A		
Section on Nonparametric Statistics	243 CC-206 275 CC-208A 286 CC-L Street Bridge	320 CC-157	353 CC-158A 369 CC-158B 370 CC-159A		
Scientific and Public Affairs Advisory Committee	253 CC-157				
Section on Quality and Productivity			368 CC-148 381 CC-L Street Bridge		
Section on Risk Analysis	269 CC-148	305 CC-148	382 CC-L Street Bridge		
Section on Bayesian Statistical Sciences	259 CC-209B 262 CC-209C 278 CC-207B	304 CC-208B 308 CC-206	342 CC-207A 360 CC-209A 372 CC-208A 374 CC-208B		
Section on Statistics in Sports	272 CC-159A				
Social Statistics Section	265 CC-149A	293 CC-144B	355 CC-144A		
Section on Physical and Engineering Sciences	245 CC-153	306 CC-159B 313 CC-159A	383 CC-L Street Bridge		
Section on Survey Research Methods	248 CC-150A 258 CC-144C 273 CC-149B 284 CC-Hall D	301 CC-142 317 CC-143C 327 CC-143B	357 CC-144C 365 CC-144B		
Statistical Society of Canada	241 CC-202A 242 CC-102B	288 CC-102B 297 CC-143A			
The American Statistician		300 CC-101			
Technometrics			348 CC-204B		
Section on Teaching of Statistics in the Health Sciences	287 CC-L Street Bridge	316 CC-155			
Western North American Region of the International Biometric Society	241 CC-202A 242 CC-102B 249 CC-202B	288 CC-102B 311 CC-209A			

WEDNESDAY, AUGUST 5

Sponsor	8:30 a.m.	10:30 a.m.	2:00 p.m.	4:00 p.m.
American Statistical Association	392 CC-202A 403 CC-159A	441 CC-207A	491 CC-207A	
Business & Economic Statistics Section	413 CC-149A 415 CC-149B	462 CC-208A 477 CC-208B 444 CC-209A	510 CC-148 515 CC-153	
Biometrics Section	393 CC-206 411 CC-209A 426 CC-204A 428 CC-208B	460 CC-101 473 CC-203A 474 CC-203B	504 CC-102B 525 CC-203A 526 CC-203B	
Biopharmaceutical Section	412 CC-209B 429 CC-209C 430 CC-102A	463 CC-102B 476 CC-102A	493 CC-202B 505 CC-101 528 CC-201 529 CC-204B	
Section on Statistical Consulting	417 CC-148			
Section on Statistical Computing	395 CC-155 416 CC-153		495 CC-143A 522 CC-141 530 CC-L Street Bridge 531 CC-L Street Bridge	
Committee of Presidents of Statistical Societies				533 CC-Ballroom A-B
Section on Statisticians in Defense and National Security	397 CC-101		517 CC-143B	
Environmental and Ecological Statistics	398 CC-159B			
Section on Statistical Education	418 CC-160	465 CC-149B	509 CC-142	
Eastern North American Region of the International Biometric Society	392 CC-202A 400 CC-208A 403 CC-159A 433 CC-L Street Bridge	467 CC-204A	491 CC-207A 503 CC-202A	
Section on Statistics & the Environment	405 CC-143B 422 CC-144B	461 CC-155	497 CC-159A 532 CC-L Street Bridge	
Section on Statistics in Epidemiology	406 CC-207A 419 CC-207B 437 CC-Hall D 438 CC-Hall D 439 CC-Hall D 440 CC-Hall D	442 CC-204C 464 CC-202A 470 CC-204B	518 CC-102A 520 CC-204C	
General Methodology	399 CC-150B			
Section on Government Statistics		454 CC-143B	513 CC-144B	
Section on Statistical Graphics		471 CC-153		
Section on Health Policy Statistics	425 CC-204B	458 CC-143C		
International Chinese Statistical Association	392 CC-202A 403 CC-159A		491 CC-207A	
International Indian Statistical Association	392 CC-202A 403 CC-159A	445 CC-150A	491 CC-207A	

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WEDNESDAY, AUGUST 5

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Sponsor	8:30 a.m.	10:30 a.m.	2:00 p.m.	4:00 p.m.
International Indian Statistical Association, Reps. for Young Statisticians	434 CC-L Street			
Institute of Mathematical Statistics	392 CC-202A 401 CC-102A 402 CC-201 403 CC-159A 431 CC-L Street Bridge 432 CC-L Street Bridge	452 CC-159B 453 CC-207B 475 CC-160	491 CC-207A 494 CC-206 502 CC-207B 501 CC-209A 527 CC-208A	
JASA, Applications and Case Studies			500 CC-159B	
Section on Statistics and Marketing	396 CC-150A		507 CC-160	
Noether Award Committee		451 CC-144C		
Section on Nonparametric Statistics	424 CC-144A		523 CC-158A	
Scientific and Public Affairs Advisory Committee		459 CC-150B	514 CC-158B	
Section on Quality and Productivity		447 CC-209C		
Section on Risk Analysis			498 CC-150B	
Section on Bayesian Statistical Sciences	410 CC-142 414 CC-143A 427 CC-141	448 CC-158B 455 CC-159A 457 CC-158A	506 CC-209C 511 CC-209B 524 CC-208B	
Section on Statistics in Sports		443 CC-206		
Social Statistics Section	394 CC-204C	469 CC-144A	508 CC-144A	
SPAIG Committee	408 CC-158A			
Section on Physical and Engineering Sciences	407 CC-144C	456 CC-209B	499 CC-143C 516 CC-149B	
Section on Survey Research Methods	409 CC-202B 420 CC-203A 421 CC-203B	466 CC-143A 478 CC-141 479 CC-142	492 CC-150A 512 CC-144C 519 CC-149A	
Statistical Society of Canada	392 CC-202A 403 CC-159A	468 CC-148	491 CC-207A	
Section on Teaching of Statistics in the Health Sciences		450 CC-144B		
Western North American Region of the International Biometric Society	392 CC-202A 403 CC-159A	449 CC-201	491 CC-207A	

THURSDAY, AUGUST 6

Sponsor	8:30 a.m.	10:30 a.m.
American Statistical Association	534 CC-207A	
Business & Economic Statistics Section	550 CC-155 570 CC-153	578 CC-155 587 CC-149B 610 CC-158B
Biometrics Section	552 CC-202A 568 CC-203B 569 CC-208A	574 CC-150A 606 CC-160 607 CC-153 609 CC-148
Biopharmaceutical Section	537 CC-201 547 CC-204B 572 CC-208B	591 CC-144C 592 CC-144B 599 CC-144A
Section on Statistical Consulting		589 CC-159A
Section on Statistical Computing	553 CC-207B 564 CC-205	577 CC-207A 602 CC-210
Section on Statisticians in Defense and National Security		590 CC-206
Section on Statistical Education	557 CC-101 563 CC-210	575 CC-207B
Eastern North American Region of the International Biometric Society	534 CC-207A 542 CC-204C	581 CC-143C
Section on Statistics and the Environment	540 CC-144A	601 CC-208A
Section on Statistics in Epidemiology	555 CC-204A 561 CC-203A	576 CC-150B 600 CC-159B
Section on Government Statistics	567 CC-150B 556 CC-159A	588 CC-204A
Section on Statistical Graphics	539 CC-206	
Section on Health Policy Statistics		579 CC-102A
International Chinese Statistical Association	534 CC-207A	586 CC-142
International Indian Statistical Association	534 CC-207A	
Institute of Mathematical Statistics	534 CC-207A 544 CC-143C 545 CC-143A 558 CC-144C	582 CC-202B 583 CC-202A 608 CC-208B
Memorial	546 CC-149A	
Section on Nonparametric Statistics	566 CC-141	595 CC-203A 605 CC-203B
Section on Quality and Productivity		598 CC-158A
Section on Risk Analysis	549 CC-158A	603 CC-143B
Section on Bayesian Statistical Sciences	535 CC-143B 548 CC-144B 559 CC-142	593 CC-204B 594 CC-204C 611 CC-205
Special Interest Group on Statistical Learning and Data Mining, International Indian Statistical Association		580 CC-201
Social Statistics Section	560 CC-160	585 CC-143A
Section on Physical and Engineering Sciences	538 CC-149B 565 CC-148	604 CC-157
Section on Survey Research Methods	551 CC-150A 554 CC-158B 571 CC-159B	573 CC-102B 596 CC-141
Statistical Society of Canada	534 CC-207A 543 CC-102A	

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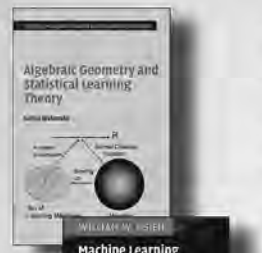

Algebraic Geometry and Statistical Learning Theory
Sumio Watanabe
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Neural Networks and Kernels
William W. Hsieh
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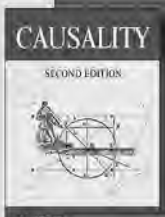

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Second Edition
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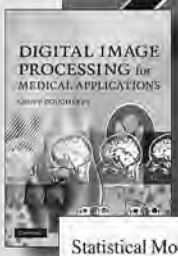

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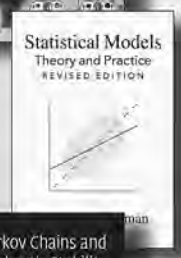
Geoff Dougherty
Hb: $89.00 | Discount: $71.20



Statistical Models
Theory and Practice
Revised Edition
David Freedman
Pb: $40.00 | Discount: $32.00

Markov Chains and Stochastic Stability
Second Edition
Sean Meyn
and Richard L. Tweedie
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Adnan Darwiche
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Statistical Modeling for Biomedical Researchers
A Simple Introduction to the Analysis of Complex Data
Second Edition
William D. Dupont
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A First Course in Statistical Programming with R
W. John Braun
and Duncan J. Murdoch
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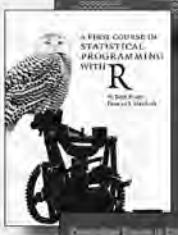

Semiparametric Regression
David Ruppert, M. P. Wand, and R. J. Carroll
Cambridge Series in Statistical and Probabilistic Mathematics
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Theory of Decision under Uncertainty
Itzhak Gilboa
Econometric Society Monographs
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Rick Durrett
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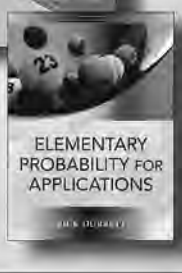

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Descriptions

Session Tag Descriptions

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

THEME ✪
JSM theme sessions are directly relevant to the 2009 JSM theme, "Statistics: From Evidence to Policy." Theme sessions are designed to expand the frontiers of statistical thought, emphasize new directions, and promote interdisciplinary collaboration.

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

Late-Breaking Sessions

Monday, August 3, 2:00 p.m. – 3:50 p.m.
CC-202A
Session 187 – Late-Breaking Session I: Policymakers to Get Full Data Coverage of the Nation's Service Sector

Wednesday, August 5, 8:30 a.m. – 10:20 a.m.
CC-202A
Session 392 – Late-Breaking Session II: The Role of Statistics in the Nation's Financial Recovery and Stability

Wednesday, August 5, 10:30 a.m. – 12:20 p.m.
CC-207A
Session 441 – Late-Breaking Session III: Statistics in the New Administration

THURSDAY, JULY 30

Committee/Business Meetings & Other Activities

7:00 p.m.–9:00 p.m. RH-Meeting Room 2
ASA Board of Directors Executive Committee Working Dinner (closed)
Chair(s): Sally C. Morton, RTI International

FRIDAY, JULY 31

Committee/Business Meetings & Other Activities

7:30 a.m.–8:30 a.m. RH-Meeting Room 4
ASA Board of Directors Breakfast (closed)
Chair(s): Sally C. Morton, RTI International

8:30 a.m.–5:00 p.m. RH-Meeting Room 3
ASA Board of Directors Meeting
Chair(s): Sally C. Morton, RTI International

12:30 p.m.–1:30 p.m. RH-Meeting Room 4
ASA Board of Directors Lunch (closed)
Chair(s): Sally C. Morton, RTI International

6:30 p.m.–7:30 p.m. RH-Suite 1240
JSM Staff and ASA Board of Directors Reception (closed)
Chair(s): Ron Wasserstein, ASA

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

SATURDAY, AUGUST 1

Committee/Business Meetings & Other Activities

7:30 a.m.–8:30 a.m. RH-Meeting Room 4
ASA Board of Directors Breakfast (closed)
Chair(s): Sally C. Morton, RTI International

7:30 a.m.–3:30 p.m. RH-Meeting Room 3
ASA Board of Directors Meeting
Chair(s): Sally C. Morton, RTI International

7:30 a.m.–6:00 p.m. CC-East Registration
Cyber Center

7:30 a.m.–7:30 p.m. CC-East Registration
ASA Membership/Special Assistance/Press Desk

7:30 a.m.–7:30 p.m. CC-East Registration
JSM Main Registration

8:00 a.m.–4:00 p.m. RH-Meeting Room 5
Fostering Diversity in Statistics (closed)
Chair(s): Brian Millen, Eli Lilly and Company

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

9:00 a.m.–12:00 p.m. RH-Renaissance Ballroom West A
Statisticians Working on Complementary and Alternative Medicine (CAM) Studies
Chair(s): Laura Lee Johnson, U.S. Department of Health and Human Services

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

10:00 a.m.–6:00 p.m. CC-154A
Speaker Management Room

11:00 a.m.–12:30 p.m. RH-Meeting Room 6
Annual Meeting of the GCRC Statisticians Lunch (closed)
Organizer(s): James Grady, Universtiy of Texas Medical Branch

12:00 p.m.–1:00 p.m. RH-Meeting Room 4
ASA Board of Directors Lunch (closed)
Chair(s): Sally C. Morton, RTI International

12:00 p.m.–5:30 p.m. CC-East Registration
ASA Marketplace

12:30 p.m.–5:30 p.m. RH-Meeting Room 2
Annual Meeting of the GCRC Statisticians
Organizer(s): James Grady, University of Texas Medical Branch at Galveston

2:00 p.m.–5:30 p.m. RH-Renaissance Ballroom West A
Statistics Education NSF Investigators' Meeting
Organizer(s): Dennis Pearl, The Ohio State University

3:00 p.m.–6:00 p.m. RH-Renaissance Ballroom West B
NISS/SAMSI Affiliates Meeting (closed)
Organizer(s): Alan F. Karr, National Institute of Statistical Sciences

Continuing Education (Fee Events)

CE_01C
Analysis of Multivariate Survival Data
8:30 a.m.–5:00 p.m. CC-204 A & B
ASA
Instructor(s): Philip Hougaard, H. Lundbeck A/S

CE_02C
Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis
8:30 a.m.–5:00 p.m. CC-204C
ASA, Biometrics Section
Instructor(s): Michael J. Daniels, University of Florida; Joseph W. Hogan, Brown University

CE_03C
Design of Experiments: New Methods and How to Use Them
8:30 a.m.–5:00 p.m. CC-102A
ASA, Section on Quality and Productivity
Instructor(s): Douglas C. Montgomery, Arizona State University; Bradley A. Jones, SAS Institute Inc.

CE_04C
Longitudinal Data Analysis: Semiparametric and Nonparametric Approaches
8:30 a.m.–5:00 p.m. CC-101
ASA, Biometrics Section
Instructor(s): Annie Qu, University of Illinois at Urbana Champaign; Peter X.K. Song, University of Michigan

CE_05C
The Analysis of Cross-Classified Categorical Data
8:30 a.m.–5:00 p.m. CC-209C
ASA, Section on Survey Research Methods
Instructor(s): Stephen Fienberg, Carnegie Mellon University

CE_06C
Applied Statistical Genetics for Population-Based Association Studies
8:30 a.m.–5:00 p.m. CC-209 A & B
ASA, Section on Statistics in Epidemiology
Instructor(s): Andrea S. Foulkes, University of Massachusetts

CE_07C
Active Control Clinical Trials
8:30 a.m.–5:00 p.m. CC-102B
ASA
Instructor(s): Yi Tsong, FDA

SUNDAY, AUGUST 2

Tours

TR01 - Annapolis: Highlighting the U.S. Naval Academy
9:00 a.m.–2:00 p.m.

TR02 - Historic Tour of Mt. Vernon
10:00 a.m.–2:00 p.m.

TR04 - Welcome to Washington Tour
10:00 a.m.–2:00 p.m.

TR03 - The Kennedys: A Georgetown Walking Tour
10:00 a.m.–2:00 p.m.

Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. RH-Meeting Room 4
Annual Meeting of the GCRC Statisticians Breakfast
Organizer(s): James Grady, University of Texas Medical Branch at Galveston

7:30 a.m.–9:00 a.m. RH-Meeting Room 7
Committee on Women in Statistics Meeting (closed)
Chair(s): Mari Palta, University of Wisconsin-Madison

7:30 a.m.–10:30 a.m. CC-301
Committee on Publications (closed)
Chair(s): David W. Scott, Rice University

7:30 a.m.–8:30 p.m. CC-East Registration
JSM Main Registration

7:30 a.m.–8:30 p.m. CC-East Registration
ASA Membership/Special Assistance/Press Desk

7:30 a.m.–10:30 p.m. CC-East Registration
Cyber Center

8:00 a.m.–11:00 a.m. CC-Hall D
Exhibitor Move-In

8:00 a.m.–11:00 a.m. RH-Meeting Room 3
COSGB (closed)
Chair(s): Janet Buckingham, Southwest Research Institute

8:00 a.m.–12:00 p.m. CC-302
Advisory Committee on Teacher Enhancement Committee Meeting (closed)
Chair(s): Deborah Rumsey, The Ohio State University

8:30 a.m.–12:00 p.m. RH-Meeting Room 4
Annual Meeting of the GCRC Statisticians
Organizer(s): James Grady, University of Texas Medical Branch at Galveston

9:00 a.m.–10:30 a.m. RH-Meeting Room 7
Caucus for Women in Statistics Executive Committee Meeting (closed)
Organizer(s): Marcia A. Ciol, University of Washington

9:00 a.m.–1:00 p.m. CC-205
IMS Executive Committee Meeting
Organizer(s): Elyse Gustafson, IMS Executive Director; J. Michael Steele, IMS President; Nanny Wermuth, IMS President

9:00 a.m.–5:00 p.m. RH-Meeting Room 2
NISS/ASA Writing Workshop for Junior Researchers
Chair(s): Keith Crank, ASA

9:00 a.m.–5:30 p.m. CC-East Registration
ASA Marketplace

11:30 a.m.–2:00 p.m. RH-Meeting Room 5
Statistica Sinica Editorial Board Meeting (closed)
Organizer(s): Jing-Shiang Hwang, Academia Sinica, Taiwan

11:30 a.m.–2:00 p.m. CC-303
Committee on Committees (closed)
Chair(s): Margo Anderson, University of Wisconsin - Milwaukee

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

12:00 p.m.–1:30 p.m. RH-Meeting Room 3
Journal of Statistics Education Editorial Board Meeting (closed)
Chair(s): William Notz, Technometrics Management Committee

12:00 p.m.–3:00 p.m. RH-Meeting Room 6
Annual Meeting of the GCRC Statisticians Lunch (closed)
Organizer(s): James Grady, University of Texas Medical Branch at Galveston

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

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

1:00 p.m.–6:00 p.m. CC-Hall D
EXPO 2009

1:00 p.m.–6:00 p.m. CC-Hall D
American Statistical Association Booth #101

2:00 p.m.–4:30 p.m. CC-2nd Floor Overlook West
COS Annual Business Meeting
Chair(s): Janet Buckingham, Southwest Research Institute

3:30 p.m.–4:30 p.m. CC-301
The University of North Carolina at Chapel Hill 60th Anniversary Planning Committee (closed)
Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill

4:00 p.m.–5:00 p.m. RH-Meeting Room 3
Meeting of Statistics Without Borders
Chair(s): James J. Cochran, Louisiana Tech University

4:00 p.m.–5:30 p.m. CC-3rd Floor East Ear
2009–2010 Committee Chairs Meeting
Chair(s): Margo Anderson, University of Wisconsin, Milwaukee

4:00 p.m.–6:00 p.m. CC-205
Career Development Seminar: From Evidence to Policy – Careers in Government Statistics
Chair(s): Janet Myhre, Consultant

This event is now scheduled for Tues. Aug. 4 12:00 p.m–2:00 p.m. Off Property
ENAR Executive Committee Meeting (by invitation only)
Organizer(s): Kathy Hoskins, ENAR

5:00 p.m.–6:30 p.m. CC-302
Section on Statistical Learning and Data Mining Business Meeting
Chair(s): Joseph S. Verducci, The Ohio State University

5:00 p.m.–8:00 p.m. RH-Meeting Room 6
International Chinese Statistical Association (ICSA) Board Meeting (closed)
Organizer(s): Ming-Hui Chen, University of Connecticut

5:30 p.m.–7:00 p.m. CC-303
Section on Quality and Productivity Executive Committee Meeting
Chair(s): Martha Gardner, General Electric Global Research

5:30 p.m.–8:00 p.m. RH-Meeting Room 7
Committee on Scientific Freedom and Human Rights Meeting
Chair(s): William Seltzer, Fordham University

5:30 p.m.–8:30 p.m. RH-Meeting Room 5
IMS Council I Meeting
Organizer(s): Elyse Gustafson, IMS Executive Director; J. Michael Steele, IMS President; Nanny Wermuth, IMS President

6:00 p.m.–7:00 p.m. RH-Meeting Room 2
Advisory Committee on Continuing Education Presenter Social (closed)
Chair(s): Xiaoming Sheng, University of Utah

6:00 p.m.–7:30 p.m. RH-Renaissance Ballroom West A
Cancer Center Biostatistics Directors Annual Meeting
Organizer(s): Terry Hyslop, Thomas Jefferson University

6:00 p.m.–8:00 p.m. RH-Meeting Room 4
Committee on Career Development Business Meeting (closed)
Chair(s): Janet Myhre, Claremont McKenna College

6:00 p.m.–8:30 p.m. Off Property
Biometrics Section Executive Committee Meeting (closed)
Chair(s): Daniel Heitjan, University of Pennsylvania

6:30 p.m.–8:30 p.m. CC-2nd Floor Overlook East
Purdue Statistics Department Alumni and Friends Reception
Organizer(s): Sandra Howarth, Purdue Univeristy

7:00 p.m.–8:30 p.m. CC-141
Isolated Statisticians Annual Meeting
Organizer(s): Shonda Kuiper, Grinnell College

8:00 p.m.–10:00 p.m. RH-Meeting Room 3
Google Reception (closed)
Organizer(s): Lysandra Sapp, Google

8:00 p.m.–10:30 p.m. RH-Grand Ballroom
JSM Opening Mixer

Continuing Education (Fee Events)

CE_01C
Analysis of Multivariate Survival Data
8:30 a.m.–5:00 p.m. RH-Renaissance Ballroom West A
ASA
Instructor(s): Philip Hougaard, H. Lundbeck A/S

CE_08C
New Developments of Traditional Multivariate Analyses
8:30 a.m.–5:00 p.m. RH-Meeting Room 16
ASA
Instructor(s): William B. Smith, Lecot Inc.; Dallas E. Johnson, Kansas State University; F. Michael Speed, Texas A&M University

CE_09C
Semiparametric Regression
8:30 a.m.–5:00 p.m. RH-Renaissance Ballroom West A
ASA
Instructor(s): David Ruppert, Cornell University; Ciprian M. Crainiceanu, Johns Hopkins University; Raymond J. Carroll, Texas A&M University

CE_10C
Tolerance Intervals: Theory, Applications, and Computation
8:30 a.m.–5:00 p.m. RH-Meeting Rooms 10 & 11
ASA, Section on Physical and Engineering Sciences
Instructor(s): Thomas Mathew, University of Maryland, Baltimore County; Kalimuthu Krishnamoorthy, University of Louisiana-Lafayette

CE_11C
Model-Based Survey Sampling: Theory and Practice
8:30 a.m.–5:00 p.m. RH-Meeting Room 15
ASA, Section on Survey Research Methods
Instructor(s): Alan H. Dorfman, Bureau of Labor Statistics; Richard Valliant, University of Michigan

CE_12C
Hierarchical Modeling and Analysis of Spatial-Temporal Data: Emphasis in Forestry, Ecology, and Environmental Sciences
8:30 a.m.–5:00 p.m. RH-Meeting Rooms 8 & 9
ASA, Section on Bayesian Statistical Science
Instructor(s): Sudipto Banerjee, The University of Minnesota; Andrew Finley, Michigan State University

CE_13C
Models for Discrete Repeated Measures
8:30 a.m.–5:00 p.m. RH-Meeting Rooms 12,13,14
ASA
Instructor(s): Geert Molenberghs, Hasselt University/Katholieke Universiteit Leuven; Geert Verbeke, Katholieke Universiteit Leuven

Invited Sessions 2:00 p.m.–3:50 p.m.

1 CC-202A

■ ✪ The Statistical Issues Surrounding Progression-Free Survival in Oncology Drug Development—Invited

Biopharmaceutical Section, Biometrics Section
Organizer(s): William D. Bushnell, GlaxoSmithKline; Rajeshwari Sridhara, FDA
Chair(s): Rajeshwari Sridhara, FDA

2:05 p.m. **On Analysis of Progression-Free-Survival**—◆Cong Chen, Merck Research Laboratories

2:25 p.m. **Interval Censoring in Time-to-Progression Data**—◆Zhenming Shun, sanofi-aventis

2:45 p.m. **Central Review of Progression-Free Survival in Phase 3 Oncology Trials**—◆Ohad Amit, GlaxoSmithKline; Frank Mannino, GlaxoSmithKline

3:05 p.m. **Use of Blinded Independent Review for Auditing Purposes**—◆Lori Dodd, National Cancer Institute

3:25 p.m. **Impact of Variability in Progression Assessments on Type I and Type II Errors**—◆Shenghui Tang, FDA; Xiaoping Jiang, FDA; Kun He, FDA; Rajeshwari Sridhara, FDA

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

2 CC-155

■ Efficient Methods for the Analysis of Spatial Data: Computing and Application—Invited

Section on Statistical Computing, Section on Bayesian Statistical Science, Section on Statistics and the Environment, Interface Foundation of North America
Organizer(s): Brian J. Smith, The University of Iowa
Chair(s): Jacob J. Oleson, The University of Iowa

2:05 p.m. **Efficient Methods for the Analysis of Spatial Data: Computing and Application**—◆Murali Haran, Penn State University

2:30 p.m. **Reparameterized and Marginalized Posterior and Predictive Sampling for Complex Bayesian Geostatistical Models**—◆Mary K. Cowles, The University of Iowa; Jun Yan, University of Connecticut; Brian J. Smith, The University of Iowa

2:55 p.m. **Ramps: An R Package for Unified Geostatistical Modeling of Complex Spatio-Temporal Data**—◆Brian J. Smith, The University of Iowa; Jun Yan, University of Connecticut

3:20 p.m. **Combining Data for Efficient Prediction of the Spatial Distribution of Iowa Residential Radon Levels**—◆Jun Yan, University of Connecticut; Mary K. Cowles, The University of Iowa; Brian J. Smith, The University of Iowa

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

You are invited to the

First-Time Attendee

Orientation and Reception

Renaissance Washington, DC, Hotel
Grand Ballroom
Sunday, August 2, 12:30 p.m. – 2:00 p.m.

Open to All First-Timers

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

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

3 CC-209B

■ Recent Advances in Bayesian Model Selection—Invited

Section on Bayesian Statistical Science

Organizer(s): Hani Doss, University of Florida

Chair(s): Michael J. Daniels, University of Florida

2:05 p.m. **Sequential Bayesian Model Selection**—◆David Madigan, Columbia University

2:35 p.m. **Estimation of Large Families of Bayes Factors from Markov Chain Output**—◆Hani Doss, University of Florida

3:05 p.m. **Approaches to Model Selection Using BART**—◆Hugh Chipman, Acadia University

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

4 CC-204B

■ ✪ Innovative Visualization Tools: A Way to Engage Citizens and Influence Policy—Invited

International Statistical Institute, Social Statistics Section, Section on Statistical Graphics, Section on Government Statistics, Interface Foundation of North America

Organizer(s): Juana Sanchez, University of California, Los Angeles; Enrico Giovannini, Organization for Economic Cooperation & Development

Chair(s): Irina Kukuyeva, University of California, Los Angeles

2:05 p.m. **Wikis, Dynamic Charts, Videos, and Other Innovative Tools to Transform Statistics Into Knowledge**—◆Enrico Giovannini, Organization for Economic Cooperation & Development

2:35 p.m. **BalatonTrend: A Multimodal Approach to Visualizing and Communicating Regional Trends Related to Vulnerability and Adaptation**—◆László Pintér, International Institute for Sustainable Development; Livia Bizikova, International Institute for Sustainable Development

3:05 p.m. **Visualizing Statistics in the Netherlands**—◆Edwin de Jonge, Statistics Netherlands

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

5 CC-141

The Gertrude Cox Scholarship: 20 Years of Recognizing Young Women in Statistics—Invited

Caucus for Women in Statistics, Social Statistics Section

Organizer(s): Holly B. Shulman, CDC

Chair(s): Marcia A. Ciol, University of Washington

2:05 p.m. **Methods for Designing Observational Studies from Public Policy to Public Health**—◆Elizabeth A. Stuart, Johns Hopkins Bloomberg School of Public Health

2:25 p.m. **Making a Difference: Providing Statistical Support for NIH-Sponsored Clinical Trials**—◆Marian Ewell, The EMMES Corporation

2:45 p.m. **The Gertrude Cox Race**—◆Stephanie Shipp, Science and Technology Policy Institute

3:05 p.m. **Statistics in a Multidisciplinary Environment**—◆Julia L. Bienias, Consultant

3:25 p.m. **The Gertrude Cox Scholarship: Then and Now**—◆Holly B. Shulman, CDC

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

6 CC-150B

■ The Use of Paradata in Federal Government Surveys—Invited

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

Organizer(s): James M. Dahlhamer, National Center for Health Statistics

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

2:05 p.m. **Modeling the Difference in Interview Characteristics for Different Respondents**—◆John Dixon, Bureau of Labor Statistics

2:25 p.m. **An Evaluation of Nonresponse Bias Using Paradata from a Health Survey**—◆Aaron Maitland, National Center for Health Statistics; Carolina Casas-Cordero, University of Maryland; Frauke Kreuter, University of Maryland

2:45 p.m. **Use of Paradata to Manage a Field Data Collection**—◆Robert Groves, University of Michigan; William Axinn, University of Michigan; James Lepkowski, University of Michigan; Nicole Kirgis, University of Michigan; William Mosher, National Center for Health Statistics

3:05 p.m. **Using the Fraction of Missing Information to Monitor the Quality of Survey Data**—◆James Wagner, University of Michigan

3:25 p.m. **Subunit Nonresponse in the National Health Interview Survey (NHIS): An Exploration Using Paradata**—◆James M. Dahlhamer, National Center for Health Statistics; Catherine M. Simile, National Center for Health Statistics

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

7 CC-207B

■ ✪ Statistics in the Beltway: From Data to Policy—Invited

Washington Statistical Society, Section on Survey Research Methods, Social Statistics Section, Section on Government Statistics

Organizer(s): Karol Krotki, RTI International

Chair(s): Karol Krotki, RTI International

2:05 p.m. **Use of Statistics at the Centers for Disease Control and Prevention and National Cancer Institute: Estimation of the Number of Deaths Associated with Body Weight**—◆Barry I. Graubard, National Cancer Institute; Katherine Flegal, National Center for Health Statistics; David Williamson, Emory University; Mitchell H. Gail, National Cancer Institute

2:35 p.m. **How Numbers Rule: Pitfalls and Practicalities from Health Policy**—◆Joshua Wiener, RTI International

3:05 p.m. **Using Statistical Analyses to Inform Congressional Decisions**—◆Nancy Kingsbury, U.S. Government Accountability Office

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

8 CC-202B

Survival Methods for Robustly Modeling Time-Varying Covariate Effects—Invited

WNAR, Section on Bayesian Statistical Science, Biometrics Section, Biopharmaceutical Section

Organizer(s): Scott Emerson, University of Washington

Chair(s): Scott Emerson, University of Washington

2:05 p.m. **Bayesian Nonparametric Survival Regression Modeling and Inference: A Tale of Handling Survival Curves That Cross**—◆Gary L. Rosner, The University of Texas M.D. Anderson Cancer Center; Wesley O. Johnson, University of California, Irvine; Maria DeIorio, Imperial College; Peter Müller, The University of Texas M.D. Anderson Cancer Center

2:35 p.m. **Inference for Arbitrary Functionals of Survival**—◆Kyle Rudser, The University of Minnesota; Michael LeBlanc, University of Washington; Scott Emerson, University of Washington

3:05 p.m. **Censoring Robust Semiparametric Estimators of Treatment Effects in Regression Models with Censored Data**—◆Adam Boyd, University of California, Denver

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

9 CC-143B

✪ Doubly Robust Estimation for Empirical Policymaking—Invited

Section on Statistical Consulting, Section on Government Statistics

Organizer(s): Eric J. Tchetgen, Harvard University

Chair(s): James Robins, Harvard School of Public Health

2:05 p.m. **Efficient, Stable, and Doubly Robust Estimation with Inverse Weighting**—◆Zhiqiang Tan, Rutgers University

2:30 p.m. **Doubly Robust Ecological Inference**—◆Daniel Rubin, University of California, Berkeley; Mark J. van der Laan, University of California, Berkeley

2:55 p.m. **Logistic Regression in a Semiparametric Model for Case-Control Data**—◆Eric J. Tchetgen, Harvard University; Andrea Rotnitzky, Universidad Di Tella and Harvard University; James Robins, Harvard School of Public Health

3:20 p.m. **Double-Robust and Efficient Methods for Estimating the Causal Effects of a Binary Treatment**—◆Andrea Rotnitzky, Universidad Di Tella and Harvard University; James Robins, Harvard School of Public Health; Mariela Sued, Universidad de Buenos Aires; Quanhong Lei-Gomez, Harvard School of Public Health

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

10 CC-209A

Inference for Orderings: Far-Reaching Extensions of Kendall's Tau—Invited

IMS

Organizer(s): Joseph S. Verducci, The Ohio State University

Chair(s): Doug Wolfe, The Ohio State University

2:05 p.m. **Nonparametric Estimation and Survey Design for Preference Data**—◆Guy Lebanon, Georgia Institute of Technology

2:35 p.m. **The Tau-Path Test: A Generalization of Kendall's Tau Statistic to Test Subpopulation Association**—◆Li Yu, The Ohio State University; Joseph S. Verducci, The Ohio State University

3:05 p.m. **Consensus Ranking Under the Exponential Model**—◆Meila Marina, University of Washington

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

11 CC-207A
IMS Medallion Lecture I—Invited

IMS

Organizer(s): Xiaotong Shen, The University of Minnesota
Chair(s): Bin Yu, University of California, Berkeley

2:05 p.m. **Statistics for High-Dimensional Data: Toward More Reliable Results**—◆Peter Buhlmann, ETH Zurich

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

Invited Panels 2:00 p.m.–3:50 p.m.

12 CC-150A
■ ✪ Building Statistical Capacity Globally—Invited

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

Organizer(s): Nilupa S. Gunaratna, International Nutrition Foundation
Chair(s): Stephen Pierson, ASA

Panelists: ◆Fritz Scheuren, NORC at the University of Chicago
◆Juanita Tamayo Lott, Tamayo Lott Associates
◆James J. Cochran, Louisiana Tech University
◆Siobhan Carey, Central Statistics Office

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

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

13 CC-101
Graphical and Network-Based Models: Applications in Bioinformatics—Topic-Contributed

Biometrics Section, Section on Statistics in Defense and National Security, Interface Foundation of North America

Organizer(s): Sujay Datta, Fred Hutchinson Cancer Research Center
Chair(s): Sujay Datta, Fred Hutchinson Cancer Research Center

2:05 p.m. **Estimating Counts for Queries Without Accessing a Database**—◆Kyongryun Lee, Iowa State University

2:25 p.m. **Hidden Process Models with Applications to fMRI Data**—◆Rebecca Hutchinson, Oregon State University

2:45 p.m. **Inferring Network Sstructure Using Bayesian Structure Learning Techniques**—◆Radhakrishnan Nagarajan, University of Arkansas for Medical Sciences

3:05 p.m. **Statistical Methods for Analysis of Genomic Data with Graphic Structure**—◆Caiyan Li, University of Pennsylvania

3:25 p.m. **Understanding Protein Function on a Genome-Scale Using Networks**—◆Mark Gerstein, Yale University

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

14 CC-144B
■ ✪ Data Confidentiality: Do We Really Want to Disturb a Sleeping Bear?—Topic-Contributed

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

Organizer(s): Ofer Harel, University of Connecticut
Chair(s): Ofer Harel, University of Connecticut

2:05 p.m. **Bayesian Multiscale Multiple Imputation with Implications to Data Confidentiality**—Scott Holan, University of Missouri-Columbia; Daniell Toth, Bureau of Labor Statistics; ◆Marco A.R. Ferreira, University of Missouri-Columbia; Alan F. Karr, National Institute of Statistical Sciences

2:25 p.m. **Summary of Methods and Preliminary Assessment of the SIPP Synthetic Beta, Version 5.0**—◆Gary Benedetto, U.S. Census Bureau; Martha Stinson, U.S. Census Bureau; Melissa Bjelland, Cornell University

2:45 p.m. **Responsible Data Releases**—◆Sanguthevar Rajasekaran, University of Connecticut; Ofer Harel, University of Connecticut; Michael Zuba, University of Connecticut; Gregory Matthews, University of Connecticut; Rob Aseltine, University of Connecticut Health Center

3:05 p.m. **Examining the Robustness of Fully Synthetic Data Techniques for Data with Binary Variables**—◆Gregory Matthews, University of Connecticut; Ofer Harel, University of Connecticut; Rob Aseltine, University of Connecticut Health Center

3:25 p.m. Disc: Rob Aseltine, University of Connecticut Health Center

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

15 CC-143A
Nonlinear Time Series in Economics and Finance—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Michael Levine, Purdue University
Chair(s): Bo Li, Purdue University

2:05 p.m. **Semiparametric Estimation of ARCH(8) Model**—◆Li (Lily) Wang, The University of Georgia; Jianhua Huang, Texas A&M University; Lijian Yang, Michigan State University

2:25 p.m. **Extended Tapered Block Bootstrap for Time Series**—◆Xiaofeng Shao, University of Illinois at Urbana-Champaign

2:45 p.m. **Testing the Linearity Hypothesis in Nonlinear Autoregression**—◆Michael Levine, Purdue University

3:05 p.m. **Investigating Dependence Between Time Series**—◆Hernando Ombao, Brown University

3:25 p.m. Disc: Zhengjun Zhang, University of Wisconsin

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

16 CC-159B

■ ✪ Multi-Scale Methods in Statistics—Topic-Contributed

Section on Nonparametric Statistics

Organizer(s): Thomas C.M. Lee, Chinese University of Hong Kong/Colorado State University

Chair(s): Fang Yao, University of Toronto

2:05 p.m. **Generalized Fiducial Inference for Wavelet Regression**—◆Jan Hannig, The University of North Carolina at Chapel Hill; Thomas C.M. Lee, Chinese University of Hong Kong/Colorado State University

2:25 p.m. **Extension of Hilbert-Huang Transform to Statistical Problems**—◆Hee-Seok Oh, Seoul National University; Donghoh Kim, Sejong University

2:45 p.m. **Probabilistic Modeling and Statistical Inference for Computer Network Traffic**—Stilian Stoev, University of Michigan; ◆George Michailidis, University of Michigan; Joel Vaughan, University of Michigan

3:05 p.m. **Improved SiZer for Time Series**—◆Cheolwoo Park, The University of Georgia; Jan Hannig, The University of North Carolina at Chapel Hill; Kee-Hoon Kang, Hankuk University of Foreign Studies

3:25 p.m. **A Self-Consistency Approach to Wavelet Regression with Irregularly Spaced Data**—◆Thomas C.M. Lee, Chinese University of Hong Kong/Colorado State University; Xiao-Li Meng, Harvard University

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

17 CC-102B

■ Propensity Scores and Bayesian Methods for Historical Controls and Observational Studies—Topic-Contributed

Biopharmaceutical Section, Section on Statistics in Epidemiology, Section on Health Policy Statistics, Section on Statistics in Defense and National Security, Section on Bayesian Statistical Science

Organizer(s): Cindy Yang, FDA

Chair(s): Gosford A. Sawyerr, Purdue Pharma, LP

2:05 p.m. **Power Priors for Adaptive Incorporation of Historical Information in Clinical Trials**—◆Brad Carlin, The University of Minnesota; Brian Hobbs, The University of Minnesota

2:25 p.m. **Describing the Risk of Drug-Specific Toxicities Using Cohort Data: To What Extent Can Associations Be Explained by Channelling or Other Forms of Bias?**—◆Caroline Sabin, University College London

2:45 p.m. **The Performance of Propensity Score Adjustment with Random Covariate for Estimating Treatment Effect in Drug Eluting Stent Data**—◆Yun Lu, Boston Scientific Corporation; Aijun Song, Boston Scientific Corporation; Wei Xu, Boston Scientific Corporation; Yongyi (Alan) Yu, Boston Scientific Corporation

3:05 p.m. **Comparing Covariates Selection in Propensity Score Modeling: A Simulation Study**—◆Jian Huang, Boston Scientific Corporation; Alan Yu, Boston Scientific Corporation; Lan Pan, Boston Scientific Corporation

3:25 p.m. **Propensity Scores in Observational Studies**—◆Michael Gaffney, Pfizer Inc.; Jack Mardekian, Pfizer Inc.

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

18 CC-209C

■ ✪ Hot Research Projects: A Taste of the Future for Future Government Statisticians—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Kevin Cecco, IRS

Chair(s): Kevin Cecco, IRS

2:05 p.m. **OnTheMap: An Innovative Mapping Tool**—◆Matthew Graham, U.S. Census Bureau; Heath Hayward, U.S. Census Bureau

2:25 p.m. **Statistical Consulting Within the Internal Revenue Service**—◆Ronald Walsh, IRS Statistics of Income; Rachael Hooker, IRS Statistics of Income

2:45 p.m. **Recent Developments in Internet Data Collection Methods Used at EIA**—◆Grace E. ONeill, Energy Information Administration

3:05 p.m. **A Fresh Approach to Agricultural Statistics: Data Mining and Remote Sensing**—◆Darcy A. Miller, National Agricultural Statistics Service; Jaki McCarthy, National Agricultural Statistics Service; Audra Zakzeski, National Agricultural Statistics Service

3:25 p.m. Disc: Nancy Gordon, U.S. Census Bureau

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

19 CC-149B

The Impact of Mode and Other Factors on Data Quality—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Maxine M. Denniston, CDC

Chair(s): Andrew White, National Center for Education Statistics

2:05 p.m. **The Effect of Unbounded Interviews on Differential Recall**—◆Eve M. Waltermaurer, State University of New York in New Paltz; Louise-Anne McNutt, State University of New York at Albany

2:25 p.m. **Correlates of Data Quality in the Consumer Expenditure Quarterly Interview Survey**—◆Jennifer Edgar, Bureau of Labor Statistics; Jeffrey Gonzalez, Bureau of Labor Statistics

2:45 p.m. **Comparison of Web-Based versus Paper-and-Pencil Administration of the YRBS: Participation, Data Quality, and Perceived Privacy and Confidentiality by Mode of Data Collection**—◆Maxine M. Denniston, CDC; Nancy D. Brener, CDC; Laura Kann, CDC; Danice K. Eaton, CDC; Tim McManus, CDC; Tonja M. Kyle, Macro International, Inc.; Alice M. Roberts, Macro International, Inc.; Katherine H. Flint, Macro International, Inc.; James G. Ross, Macro International, Inc.

3:05 p.m. **Mode Effects and Data Quality on a Survey of New Businesses**—◆David DesRoches, Mathematica Policy Research, Inc.

3:25 p.m. Disc: Scott Fricker, Bureau of Labor Statistics

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

20 CC-204C

Machine Learning–Based Causal Inference: Toward Robust Black-Box Algorithms for Causal Effects That Preserve Meaningful Statistical Inference—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Alan Hubbard, University of California, Berkeley

Chair(s): Alan Hubbard, University of California, Berkeley

2:05 p.m. **Collaborative Targeted Maximum Likelihood Estimation**—◆Susan Gruber, University of California, Berkeley; Mark J. van der Laan, University of California, Berkeley

2:25 p.m. **Using Super Learner for Robust Model Selection in Causal Effect Estimation**—◆Eric Polley, University of California, Berkeley; Mark J. van der Laan, University of California, Berkeley

2:45 p.m. **Targeted Methods for Biomarker Discovery: The Search for a Standard**—◆Catherine Tuglus, University of California, Berkeley; Mark J. van der Laan, University of California, Berkeley

3:05 p.m. **High-Dimensional Propensity Score Adjustment in Studies of Drug Treatment Effects Using Health Care Claims Data**—◆Jeremy Rassen, Harvard University; M. Alan Brookhart, Brigham and Women's Hospital/Harvard Medical School; Robert J. Glynn, Brigham and Women's Hospital; Jerry Avorn, Harvard University; Helen Mogun, Harvard University; Sebastian Schneeweiss, Harvard University

3:25 p.m. **Targeted Maximum Likelihood Estimation of Treatment-Specific Survival Curve with Right-Censored Data and Covariates in Observational Studies**—◆Farid Jamshidian, University of California, Berkeley; Ori M. Stitelman, University of California, Berkeley; Alan Hubbard, University of California, Berkeley; Mark J. van der Laan, University of California, Berkeley

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

21 CC-143C

Building Emulators for Computer Models: Interface Between Statistics and Applied Statistics—Topic-Contributed

Section on Physical and Engineering Sciences, Section on Statistics in Defense and National Security, Section on Quality and Productivity, Interface Foundation of North America

Organizer(s): C.F. Jeff Wu, Georgia Institute of Technology

Chair(s): Ying Hung, Rutgers University

2:05 p.m. **Treed Gaussian Processes for Computer Model Emulation**—◆Herbert Lee, University of California, Santa Cruz; Robert B. Gramacy, University of Cambridge

2:25 p.m. **A Surrogate-Assisted Method Using Adaptive Multi-Accurate Function**—◆Ray-Bing Chen, National University of Kaohsiung; Weichung Wang, National Taiwan University; Hsu Chia-Lung, National University of Kaohsiung

2:45 p.m. **G-SELC: Optimization by Sequential Elimination of Level Combinations Using Genetic Algorithms and Gaussian Processes**—◆Abhyuday Mandal, The University of Georgia; Pritam Ranjan, Acadia University; C.F. Jeff Wu, Georgia Institute of Technology

3:05 p.m. **Design and Analysis of Computer Experiments with Grouped Factors**—◆Jin Xu, East China Normal University; Peter Z.G. Qian, University of Wisconsin-Madison

3:25 p.m. **Nested Latin Hypercube Designs**—◆Peter Z.G. Qian, University of Wisconsin-Madison

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

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

22 CC-144A

■ Proposal Writing Workshop for Grant Applications to the National Science Foundation—Topic-Contributed

Section on Statistical Education, Section on Government Statistics

Organizer(s): Ginger H. Rowell, National Science Foundation

Chair(s): Pam Arroway, North Carolina State University

Panelists:
◆Ginger H. Rowell, National Science Foundation
◆Dan Maki, National Science Foundation
◆Lee Zia, National Science Foundation

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

23 CC-206

■ ✪ Guiding Young Professionals to Be Successful in Government, Academia, and Industry—Topic-Contributed

Committee on Career Development, Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Subir Ghosh, University of California, Riverside

Chair(s): Amarjot Kaur, Merck & Co., Inc.

Panelists:
◆Dean Follmann, National Institute of Allergy and Infectious Diseases
◆Nancy Geller, National Heart, Lung, and Blood Institute
◆Jagbir Singh, Temple University
◆Sujit Ghosh, North Carolina State University
◆Mani Y. Lakshminarayanan, Merck & Co., Inc.

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

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

24 CC-203A

Variable Selection and Missing Data Methods for Longitudinal Outcomes—Contributed

Biometrics Section, Section on Bayesian Statistical Science

Chair(s): Daniel F. Heitjan, University of Pennsylvania

2:05 p.m. **Latent Class Joint Model of Ovarian Function Suppression and DFS for Premenopausal Breast Cancer Patients**—◆Jing (Jenny) Zhang, Harvard University; Molin Wang, Dana Farber Cancer Institute and Harvard University

2:20 p.m. **Evaluating Binning for Analyzing Mixed Longitudinal Data Measured at Distinct Time Points: A Simulation Study**—◆Xiaoqin Xiong, University of Waterloo; Joel A. Dubin, University of Waterloo

2:35 p.m. **Bayesian Inference of Incomplete Longitudinal Data: A Simple Method to Assess Sensitivity to Nonignorable Dropout**—◆Hui Xie, University of Illinois

2:50 p.m. **Exploratory Longitudinal Factor Analysis**—◆Sherry Lin, University of California, Los Angeles

3:05 p.m. **Variable Selection in Additive Mixed Models for Longitudinal Data**—◆Daowen Zhang, North Carolina State University

3:20 p.m. **Marginal Methods for the Analysis of Longitudinal Data Arising in Clusters with Missing Covariates**—◆Baojiang Chen, University of Washington; Grace Yi, University of Waterloo; Richard Cook, University of Waterloo; Xiao-Hua (Andrew) Zhou, University of Washington

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

25 CC-203B

Meta-Analysis, Sensitivity Analysis, and Latent Variables—Contributed

Biometrics Section, Section on Bayesian Statistical Science

Chair(s): Charles Contant, TIMI Study Group

2:05 p.m. **Bayesian Model-Averaging in Meta-Analysis: Vitamin E Supplementation and Mortality**—◆J. Kyle Wathen, The University of Texas M.D. Anderson Cancer Center; Donald A. Berry, The University of Texas M.D. Anderson Cancer Center

2:20 p.m. **Multiple-Outcome Meta-Analysis Methods: Application to Orthopedics Research**—◆Yan Ma, Weill Medical College of Cornell University; Madhu Mazumdar, Weill Medical College of Cornell University

2:35 p.m. **Retrieving Optimal Information from Parallel Data Using A Mean Coverage Controlled Procedure**—◆Peter Hu, Merck & Co., Inc.; Peggy Wong, Merck & Co., Inc.

2:50 p.m. **The Multivariate Linear Path Model Embedded in the Multiple Indicator and Multiple Causes Model**—◆Youngju Pak, University of Missouri-Columbia; Randy L. Carter, State University of New York at Buffalo

3:05 p.m. **Sensitivity of Logistic and Log-Linear Models in Analysis of Case-Mother/Control-Mother Designs**—◆Jingyuan Yang, The Ohio State University; Shili Lin, The Ohio State University

3:20 p.m. **Biological Plausibility-Compliance Average Causal Effect Instead of Per Protocol in the Prevention of Perinatal Sepsis Randomized Control Trial, South Africa**—◆Elizabeth R. Zell, CDC; Locadiah Kuwanda, Respiratory and Meningeal Pathogen Research Unit; Donald B. Rubin, Harvard University

3:35 p.m. **Recurrent Marker Process Before an Informative Failure Event: A Backward Process Model**—◆Kwun Chuen (Gary) Chan, University of Washington; Mei-Cheng Wang, Johns Hopkins Bloomberg School of Public Health

26 CC-201

■ Bayesian and Adaptive Methods in Clinical Trials—Contributed

Biopharmaceutical Section, Section on Bayesian Statistical Science

Chair(s): Eunhee Hwang, Wyeth Research

2:05 p.m. **Performance of the Bayesian Bootstrap in Two Adaptive Clinical Trials**—◆Les Huson, Cmed Research, UK

2:20 p.m. **Bayesian Approaches to Multiple Endpoints**—◆Kimberly Crimin, Wyeth Research; Robb Muirhead, Pfizer Inc.; Andrew Grieve, King's College London

2:35 p.m. **A Bayesian Approach for Tailored Therapy**—◆Haoda Fu, Eli Lilly and Company

2:50 p.m. **Interim Treatment Selection with a Flexible Selection Margin in Clinical Trial**—◆Yujun Wu, sanofi-aventis; Peng-Liang Zhang, sanofi-aventis

3:05 p.m. **Bayesian Phase I/II Drug-Combination Trial Design in Oncology**—◆Ying Yuan, The University of Texas M.D. Anderson Cancer Center; Guosheng Yin, The University of Texas M.D. Anderson Cancer Center

3:20 p.m. **Development of a Statistical Methodology to Identify Appropriate Historical Controls for Rare Disease Therapies Using Information Generated from the Peer-Reviewed Scientific Literature**—◆Jessica (Jeongsook) L. Kim, FDA; Jean (Chinying) Wang, FDA; Charles Maplethorpe, FDA

3:35 p.m. **Pseudo Maximum Likelihood Approach for Multivariate Longitudinal Data Analysis Subject to Left-Censoring**—◆Ghideon Ghebregiorgis, FDA; Lisa A. Weissfeld, University of Pittsburgh

27 CC-102A

■ Adaptive Group Sequential Designs in Drug and Vaccine Development—Contributed

Biopharmaceutical Section

Chair(s): Phillip Dinh, FDA

2:05 p.m. **Performance Evaluation of Some Sequential Testing Methods with Applications to Vaccine Safety Monitoring**—◆Linmin Gan, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University; Jie Chen, Merck & Co., Inc.

2:20 p.m. **Stopping Boundaries of Flexible Sample Size Design with Flexible Trial Monitoring**—◆Yi He, sanofi-aventis; Zhenming Shun, sanofi-aventis; Yijia Feng, Penn State University

2:35 p.m. **A Group Sequential Design with Potential Futility Stop and Sample Size Adjustment**—◆Xiao J. Sun, Merck Research Laboratories; Joshua Chen, Merck Research Laboratories; Kuang-Kuo (Gordon) Lan, Johnson & Johnson PRD

2:50 p.m. **Finding Critical Values with Prefixed Early Stopping Boundaries and Controlled Type I Error for a Two-Stage Adaptive Design**—◆Jingjing Chen, Temple University; Sanat Sarkar, Temple University; Frank Bretz, Norvartis, Switzerland

3:05 p.m. **Comparison of the Branching Group Sequential Design with Frequent Adaptation Methods in an Equivalence Study**—◆Yevgen Tymofyeyev, Merck & Co., Inc.; James A. Bolognese, Cytel, Inc.; Keaven Anderson, Merck & Co., Inc.

3:20 p.m. **Implementation Issues of Randomization Schemes for Adaptive Clinical Trials**—◆Weili He, Merck & Co., Inc.; Frank (Xiaoyin) Fan, Merck & Co., Inc.; Yevgen Tymofyeyev, Merck & Co., Inc.; Olga M. Kuznetsova, Merck & Co., Inc.; Vikas Patel, Merck & Co., Inc.

3:35 p.m. **Adaptive Dropping Arm Design: Probability Models and Decision Rules**—Yili L. Pritchett, Abbott Laboratories; Shu Han, Abbott Laboratories; ◆Shihua Wen, Abbott Laboratories

28 CC-204A
Model Selection Applications—Contributed

ENAR

Chair(s): Guolian Kang, The University of Alabama at Birmingham

2:05 p.m. **Finding Sequence Motifs with Bayesian Models Incorporating Positional Information**—◆Nak-Kyeong Kim, Old Dominion University; John L. Spouge, The National Center for Biotechnology Information

2:20 p.m. **Analysis of Mediation by Least Squares**—◆David Reboussin, Wake Forest University School of Medicine

2:35 p.m. **Estimation Approaches for Discretely Observed Age-Dependent Branching Processes**—◆Rui Chen, University of Rochester Medical Center; Ollivier Hyrien, University of Rochester

2:50 p.m. **Selecting Variable Selection Methods for Association Studies**—◆Lin Li, Cornell University; Carlos Bustamante, Cornell University

3:05 p.m. **Estimation of Haplotype Effects in Case-Control Studies via Variable Selection: Prospective vs. Retrospective Analysis**—◆Megan Koehler, North Carolina State University; Jung-Ying Tzeng, North Carolina State University

3:20 p.m. **Inconsistent Resampling Methods and Remedies**—◆Mihan C. Giurcanu, University of Louisiana-Lafayette

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

29 CC-159A
Miscellaneous Theory I—Contributed

IMS

Chair(s): Runlong Tang, University of Michigan

2:05 p.m. **Composition Confidence Intervals Offer Better Coverage Than the Delta Method**—◆Paul Duty, Montgomery College; Nancy Flournoy, University of Missouri-Columbia

2:20 p.m. **Confidence Limits and Prediction Limits for a Weibull Distribution Based on the Generalized Variable Approach**—◆Yanping Xia, Southeast Missouri State University; Kalimuthu Krishnamoorthy, University of Louisiana-Lafayette; Yin Lin, University of Louisiana-Lafayette

2:35 p.m. **Confidence Bounds for Multiplicative Comparisons**—◆John Ennis, The Institute for Perception

2:50 p.m. **Data-Based Assessment of Asymptotic Label Identifiability in Mixture Models**—◆Daeyoung Kim, University of Massachusetts Amherst; Bruce G. Lindsay, Penn State University

3:05 p.m. **Distributions That Approximately Follow Benford's and Other Digit Laws**—◆Adam Petrie, The University of Tennessee

3:20 p.m. **Fractals, Multifractals, and Wavelets for Modeling the Data Arising in Experimental Musicology and the Clustering of Musical Performances**—◆Makarand V. Ratnaparkhi, Wright State University

3:35 p.m. **Is Each NPMLE of a Continuous Bivariate Distribution Function with Singly Right-Censored Data Really Inconsistent?**—◆Qiqing Yu, Binghamton University; Chingfu Sen, National SunYat-sen University; Jinlong Huang, National Sun Yat-sen University; Chinsan Lee, Shu-Te University of Technology

30 CC-157
Nonparametric Smoothing—Contributed

Section on Nonparametric Statistics

Chair(s): Tom Wehrly, Texas A&M University

2:05 p.m. **Spline-Backfitted Kernal Smoothing of Partially Linear Additive Model**—◆Shujie Ma, Michigan State University; Lijian Yang, Michigan State University

2:20 p.m. **A Multivariate Likelihood-Tuned Density Estimator**—◆Yeojin Chung, Penn State University; Bruce G. Lindsay, Penn State University

2:35 p.m. **An Efficient Estimator for an Additive Quantile Regression Model**—◆Dawit Zerom, California State University, Fullerton

2:50 p.m. **Changepoint Distribution Estimation in Animal Learning Experiments**—◆Xiaodong Li, Columbia University; Daniel Rabinowitz, Columbia University

3:05 p.m. **Nonparametric Test for Changepoint in Variance Function**—◆Kee-Hoon Kang, Hankuk University of Foreign Studies; Jib Huh, Duksung Woman's University

3:20 p.m. **Minimum Distance Conditional Variance Function Checking**—◆Weixing Song, Kansas State University; Nishantha Samarakoon, Kansas State University

3:35 p.m. **Multivariate Kernel Smoothing with Unconstrained Bandwidth Matrices**—◆José E. Chacón, Universidad de Extremadura

31 CC-160
Data Mining in Graphs and Networks—Contributed

Section on Statistical Learning and Data Mining, Interface Foundation of North America

Chair(s): Xingye Qiao, The University of North Carolina at Chapel Hill

2:05 p.m. **Multi-Mode Networks**—◆Walid Sharabati, Purdue University; Yasmin Said, George Mason University; Edward J. Wegman, George Mason University

2:20 p.m. **Empirical Stationary Correlations for Semi-Supervised Learning on Graphs**—◆Ya Xu, Stanford University

2:35 p.m. **Penalized Likelihood Methods for Estimation of Directed Acyclic Graphs with Applications to Biological Networks**—◆Ali Shojaie, University of Michigan; George Michailidis, University of Michigan

2:50 p.m. **Norm Dependence in Regularized Estimation of Large Covariance Matrices**—◆Iain Johnstone, Stanford University

3:05 p.m. **A Bayesian Model of Smoothing and Connectivity for Event-Related fMRI Time Series**—◆Wesley K. Thompson, University of California, San Diego

3:20 p.m. **Efficient Large Design Space Exploration and Prediction in Computer Microarchitectural Study**—◆Bin Li, Louisiana State University; Lu Peng, Louisiana State University

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

32 CC-158A

■ Extreme Values, Censored Data, and Clustering in Environmental Studies—Contributed

Section on Statistics and the Environment

Chair(s): Daniel Cooley, Colorado State University

2:05 p.m. **A Power Comparison of Generalized Additive Models and the Spatial Scan Statistic Under Simple Alternative Hypotheses**—◆Robin L. Young, Boston University School of Public Health; Janice Weinberg, Boston University School of Public Health; Verónica Vieira, Boston University School of Public Health; Thomas F. Webster, Boston University School of Public Health

2:20 p.m. **Significance Testing with the Pareto Set in Cluster Detection Problems**—◆Ronald Gangnon, University of Wisconsin-Madison

2:35 p.m. **Statistical Inference for Food Webs/Ecological Networks via Bayesian Melding**—◆Grace Chiu, University of Waterloo; Joshua Gould, Dalhousie University

2:50 p.m. **Using Extreme Value Analysis to Predict Pressurized Equipment Life**—Eric Suess, California State University, Hayward; ◆Philip E. Myers, Chevron

3:05 p.m. **Survival Modeling Application in Estimating Response Time for Drinking Water Violation**—◆Jade Freeman, U.S. Environmental Protection Agency

3:20 p.m. **Environmental Risk Evaluation: A Bayesian Hierarchical Approach for Extreme Temperature Over Space and Time**—◆Hongfei Li, IBM T. J. Watson Research Center; Jonathan Hosking, IBM Research Division; Huijing Jiang, Georgia Institute of Technology

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

33 CC-144C

Variance Estimation in Complex Surveys—Contributed

Section on Survey Research Methods

Chair(s): Wendy Barboza, USDA, NASS, RDD

2:05 p.m. **Estimated-Control Post-Stratified Variance Estimators for Proportions**—◆Jill A. Dever, RTI International; Richard Valliant, University of Michigan

2:20 p.m. **Efficacy of Poststratification in Complex Sampling Designs**—◆Ismael Flores Cervantes, Westat, Inc.; Michael J. Brick, Westat, Inc.; Mike Jones, Westat, Inc.

2:35 p.m. **Variance Estimation in Complex Surveys with One PSU per Stratum**—◆Harold Mantel, Statistics Canada; Suzelle Giroux, Statistics Canada

3:05 p.m. **An Investigation of Stratified Jackknife Estimators Using Simulated Establishment Data Under an Unequal Probability Sample Design**—◆Philip Steel, U.S. Census Bureau; Victoria McNerney, U.S. Census Bureau; John Slanta, U.S. Census Bureau

3:20 p.m. **Developing Guidelines Based on CVs for When One-Year Estimates Can Be Used Instead of Three-Year Estimates in the American Community Survey**—◆Michael Ikeda, U.S. Census Bureau

3:20 p.m. **Identification of Functional Forms and Predictor Variables in Generalized Variance Functions for Price Indexes**—◆MoonJung Cho, Bureau of Labor Statistics; John L. Eltinge, Bureau of Labor Statistics

3:35 p.m. **Evaluating the Asymptotic Limits of the Delete-a-Group Jackknife for Model Analyses**—Phillip S. Kott, U.S. Department of Agriculture; ◆Steven T. Garren, James Madison University

34 CC-208A

■ Statistical Methods for Modeling Infectious Disease Risk—Contributed

Section on Statistics in Epidemiology

Chair(s): Akbar Zaidi, CDC

2:05 p.m. **Estimates of US Influenza-Associated Deaths Calculated from Three Poisson Regression Models for the 1976/77 Through the 2004/05 Seasons**—◆Hong Zhou, CDC; William W. Thompson, CDC; Po-Yung Cheng, CDC; Cecile Viboud, Fogarty International Center; Corinne Ringholz, Fogarty International Center; Eric Weintraub, CDC; Joseph Bresee, CDC; David K. Shay, CDC

2:20 p.m. **Modeling Clinical Symptoms as Predictors for Influenza: A Useful Tool for Primary Care Providers**—◆Hector Lemus, San Diego State University; Tabitha Zimmerman, Naval Health Research Center

2:35 p.m. **Using Mathematical Models to Predict the Risk of Listeriosis**—◆Zheng Lu, Virginia Commonwealth University; Chunwang Gao, Iowa State University; Chunwang Gao, Iowa State University

2:50 p.m. **Bootstrap Variance and Bias Correction in the Estimation of HIV Incidence from Surveillance Data with Testing for Recent Infection**—◆Nicole B. Carnegie, University of Washington

3:05 p.m. **Modeling the Incidence of Disease and the Two Sample Capture-Recapture Procedure**—◆Lawrence Lessner, State University of New York/New York State Department of Health

3:20 p.m. **Application of Robust Regression Models for Estimating Influenza-Associated Deaths Using the CDC 122 Cities Mortality Reporting System Data**—◆Po-Yung Cheng, CDC; William W. Thompson, CDC; Rosaline Dhara, CDC; Al Ozonoff, Boston University School of Public Health; Xiaopeng Miao, Boston University School of Public Health; Lynnette Brammer, CDC; Eric Weintraub, CDC; Lenee Blanton, CDC; David K. Shay, CDC

3:35 p.m. **An Application of Generalized Estimating Equations to the Data from Influenza Surveillance in Canada**—◆Shenghai Zhang, Public Health Agency of Canada; Ping Yan, Public Health Agency of Canada

35 CC-158B

Statistical Methods for Modeling Populations in Ecology—Contributed

Section on Statistics and the Environment

Chair(s): Jarrett Barber, University of Wyoming

2:05 p.m. **Acoustic Estimation of Wildlife Abundance: Methodology for Vocal Mammals in Forested Habitats**—◆Steven J. Schwager, Cornell University; Mya E. Thompson, Cornell University; Katharine B. Payne, Cornell University

2:20 p.m. **Joint Modeling of Longitudinal Capture-Recapture and Cross-Sectional Count Data in Wildlife and Fisheries Disease Studies**—◆Matt Ritter, North Carolina State University

2:35 p.m. **Prediction Implications of Nonlinear Mixed-Effects Forest Biometric Models Estimated with a Generalized Error Structure**—◆Shongming Huang, Alberta Government; Shawn X. Meng, Alberta Government; Yuqing Yang, Alberta Government

2:50 p.m. **Multinomial Mixture Model with Heterogeneous Classification Probabilities**—◆Mark D. Holland, The University of Minnesota; Brian R. Gray, U.S. Geological Survey

3:05 p.m. **Analyzing Ecological Momentary Assessment Data: Variation Among Subjects in Baseline Event Rates**—◆Benjamin Neustifter, The University of Georgia; Stephen L. Rathbun, The University of Georgia; Saul Shiffman, University of Pittsburgh

3:20 p.m. **Application of Quadratic Entropy in Measuring Dinosaur Biodiversity**—◆Yueqin Zhao, Eastern Virginia Medical School; Dayanand N. Naik, Old Dominion University

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

36 CC-153

Modern Computation in Experimental Design and Estimation—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Adam Cardinal-Stakenas, Johns Hopkins University

2:05 p.m. **On the Relative (Small Sample) Performance of Several Approaches to Confidence Intervals for a Difference in Means**—◆John McGready, Johns Hopkins Bloomberg School of Public Health

2:20 p.m. **Simulation-Based Simultaneous Confidence Bands for All Contrasts of Three or More Simple Linear Regression Models Over an Interval**—◆Mortaza Jamshidian, California State University, Fullerton; Wei Liu, University of Southampton; Frank Bertz, Novartis Pharma AG

2:35 p.m. **Calculating Standard Error with Parametric Bootstrapping**—◆Anli Lin, Pearson

2:50 p.m. **Efficient Experimental Designs Under a Nonlinear Model for Event-Related fMRI**—◆Ming-Hung Kao, The University of Georgia; Dibyen Majumdar, University of Illinois at Chicago; Abhyuday Mandal, The University of Georgia; John Stufken, The University of Georgia

3:05 p.m. **A Computational Algorithm for Searching Optimal Saturated Two-Level Factorial Designs**—Samad A. Hedayat, University of Illinois at Chicago; ◆Haiyuan Zhu, Merck Research Laboratories

3:20 p.m. **Uniform Design Over Convex Input Domains with Applications to Computer Experiments**—◆Ying-Chao Hung, National Central University; Shih-Chung Chuang, National Central University

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

37 CC-208B

■ Bayesian Diagnostics and Dynamic Models—Contributed

Section on Bayesian Statistical Science

Chair(s): Gilbert Fellingham, Brigham Young University

2:05 p.m. **Bayesian Methods for Detecting Influential Observations When Using the Box-Cox Transformation**—◆Lawrence I. Pettit, Queen Mary University of London; Nalaiyini Sothinathan, Queen Mary University of London

2:20 p.m. **A Bayesian Approach to Detecting Outliers in Circular Data**—◆Karen D.S. Young, University of Surrey; Lawrence I. Pettit, Queen Mary University of London; Nalaiyini Sothinathan, Queen Mary University of London

2:35 p.m. **Detection of Outlying Discrimination Parameters in a Hierarchical IRT Model**—◆Sherwin Toribio, University of Wisconsin-La Crosse; James Albert, Bowling Green State University

2:50 p.m. **Using Mixtures to Model Outliers in Inter-Laboratory Studies**—◆Garritt L. Page, Iowa State University; Stephen B. Vardeman, Iowa State University

3:05 p.m. **Dynamic Logistic Regression and Dynamic Model Averaging for Binary Classification**—◆Tyler H. McCormick, Columbia University; Adrian E. Raftery, University of Washington; David Madigan, Columbia University; Randall Burd, Children's National Medical Center

3:20 p.m. **Fast Bayesian Analysis of Spatial Dynamic Factor Models**—◆Christopher M. Strickland, Queensland University of Technology; Daniel Simpson, Queensland University of Technology; Ian Turner, Queensland University of Technology; Robert Denham, Department of Natural Resources; Kerrie Mengersen, Queensland University of Technology

3:35 p.m. **Efficient Bayesian Estimation for a General Dynamic Mixture Model**—◆Christopher K. Carter, University of New South Wales; Robert J. Kohn, University of New South Wales; Paolo Giordani, Sveriges Riksbank

38 CC-142

Labor Markets and Firm Competitiveness—Contributed

Business and Economic Statistics Section

Chair(s): Matilde Bini, University of Florence

2:05 p.m. **A Wavelet Analysis of the Role of Volatility in Inventories and Sales Growth in the Great Moderation**—◆David J. Doorn, The University of Minnesota-Duluth

2:20 p.m. **Does Trade Liberalization Affect Labor Market Churning?**—◆Hugette Sun, Bureau of Labor Statistics; Mina Kim, Bureau of Labor Statistics

2:35 p.m. **Robust Technological Clusters in Italy**—◆Luigi Biggeri, Italian National Statistical Institute; Matilde Bini, University of Florence; Margherita Velucchi, Università di Firenze

2:50 p.m. **Made in Italy Firms Competitiveness: A Multilevel Longitudinal Approach**—◆Margherita Velucchi, Università di Firenze; Matilde Bini, University of Florence; Tiziana Laureti, University of Naples

3:05 p.m. **Data Analysis of Retail Banking Transactions Combined with Geographic Information**—◆Wenjun Yin, IBM; Li Xia, IBM China Research Laboratory; Ming Xie, IBM China Research Laboratory; Jin Dong, IBM China Research Laboratory

3:20 p.m. **Forecasting of Intermittent Demand Series**—Micheal J. Leonard, SAS Institute Inc.; ◆D. Bruce Elsheimer, SAS Institute Inc.

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

39 CC-148

■ ✪ Estimation Issues in Surveys of Employment, Income, Inflation, and Health-Related Costs—Contributed

Section on Survey Research Methods, Section on Government Statistics

Chair(s): Art Kendall, Consultant

2:05 p.m. **Response Analysis Survey: Examining Reasons for Employment Differences Between the Quarterly Census of Employment and Wages and the Current Employment Statistics Survey**—◆Kristin Fairman, Bureau of Labor Statistics; Maggie Applebaum, Bureau of Labor Statistics; Polly Phipps, Bureau of Labor Statistics; Chris Manning, Bureau of Labor Statistics

2:20 p.m. **Application of Piecewise Quadratic Density Estimator to OES Wage Data**—◆Teresa E. Hesley, Bureau of Labor Statistics; Martha Duff, Bureau of Labor Statistics

2:35 p.m. **Getting to the Top: Reaching Wealthy Respondents in the SCF**—◆Arthur B. Kennickell, Federal Reserve Board

2:50 p.m. **The Effect of Late-Filed Returns on Population Estimates: A Comparative Analysis**—◆Brian Raub, IRS; Cynthia Belmonte, IRS; Paul Arnsberger, IRS; Melissa Ludlum, IRS

3:05 p.m. **An Analysis of e-Commerce and American Consumers**—◆Ephraim Okoro, Howard University; Mohammad Quasem, Howard University

3:20 p.m. **Employment Disability and Health-Related Costs: The Consumer Expenditure Survey and Other National Surveys**—◆Gary G. Huang, ICF Macro International

3:35 p.m. **An Investigation on Response Rate for Best Survey Estimates of Inflation Expectations**—◆Turknur Hamsici, Central Bank of The Republic of Turkey

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

40 CC-207B

Introductory Overview Lecture: Largely About Largeness: Models and Views for High-Dimensional Data—Other

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

Organizer(s): Wendy Martinez, U.S. Department of Defense

Chair(s): Edward J. Wegman, George Mason University

4:05 p.m. **Before Your Very Eyes: Visually Unraveling the Mysteries of High-Dimensional Data**—◆Antony Unwin, Uni Augsburg

4:50 p.m. **A Problem That Is Cracking: Methods for Complex, High-Dimensional Data**—◆David Banks, Duke University

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

Invited Sessions 4:00 p.m.–5:50 p.m.

41 CC-144A

■ Teaching Bayesian Statistics to Nonstatistics Graduate Students—Invited

Section on Statistical Education, Section on Bayesian Statistical Science, Social Statistics Section

Organizer(s): Peter Westfall, Texas Tech University

Chair(s): Joe Fred Gonzalez, Jr., National Center for Health Statistics

4:05 p.m. **Teaching Bayesian Statistics to Researchers in Nursing**—◆Byron J. Gajewski, The University of Kansas

4:30 p.m. **Teaching Bayesian Statistics to Students in Epidemiology and Public Health**—◆Dalene K. Stangl, Duke University

4:55 p.m. **Teaching Bayesian Statistics to Marketing and Business Students**—◆Greg Allenby, The Ohio State University

5:20 p.m. **Evolution of Teaching Bayesian Statistics to Nonstatisticians: A Case Study**—◆Wesley O. Johnson, University of California, Irvine; Jessica M. Utts, University of California, Irvine

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

42 CC-209A

■ Recent Advances in the Applications and Theory of Spline Smoothing—Invited

Section on Nonparametric Statistics

Organizer(s): Lijian Yang, Michigan State University

Chair(s): Lijian Yang, Michigan State University

4:05 p.m. **Bilinear Varying-Coefficient Surface Models with an Application to Death Counts**—◆Brian D. Marx, Louisiana State University

4:30 p.m. **Simultaneous Confidence Band for Nonlinear Additive Autoregression Model via Spline-Backfitted Spline Smoothing**—◆Qiongxia Song, Michigan State University; Lijian Yang, Michigan State University

4:55 p.m. **Simultaneous Confidence Bands for Penalized Spline Estimators**—◆Tatyana Krivobokova, Georg-August-Universitaet Goettingen; Thomas Kneib, Ludwig-Maximilains-Universitaet Muenchen; Gerda Claeskens, Katholieke Universiteit Leuven

5:20 p.m. Disc: Li (Lily) Wang, The University of Georgia

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

43 CC-102B

■ Issues and Challenges in Dichotomizing Continuous Variables in Clinical Trials—Invited

Biopharmaceutical Section, International Chinese Statistical Association

Organizer(s): Steven Snapinn, Amgen, Inc.

Chair(s): Tom Uryniak, AstraZeneca Pharmaceuticals

4:05 p.m. **Issues and Challenges in Dichotomizing Continuous Variables in Clinical Trials**—◆Qi Jiang, Amgen, Inc.; Ivan S.F. Chan, Merck & Co., Inc.

4:30 p.m. **The Use of Responder Analyses in Regulatory Guidance and Professional Society Guidelines**—◆Leonard Oppenheimer, Johnson & Johnson PRD; Zhongxin (John) Zhang, Johnson & Johnson PRD

4:55 p.m. **The Impact of Dichotomization on the Power to Assess a Treatment Effect**—Valerii V. Fedorov, GlaxoSmithKline; ◆Chi-hse Teng, Amylin Pharmaceutical Inc.

5:20 p.m. Disc: Lisa M. LaVange, The University of North Carolina at Chapel Hill

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

44 CC-209C

■ Recent Computational Advances for Computer Models Published in JCGS—Invited

JCGS-Journal of Computational and Graphical Statistics, Interface Foundation of North America

Organizer(s): David A. van Dyk, University of California, Irvine

Chair(s): David A. van Dyk, University of California, Irvine

4:05 p.m. **Fast Statistical Surrogates for Dynamical 3D Computer Models of Brain Tumor**—◆Dorin Drignei, Oakland University

4:55 p.m. **Emulator-Based Model Calibration for High-Dimensional Data**—◆Jonathan Rougier, University of Bristol

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

45 CC-101

■ ✪ The Issue of High Dimensionality and Missing Data in Complex Epidemiological Studies—Invited

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

Organizer(s): Samiran Sinha, Texas A&M University

Chair(s): Clifford Spiegelman, Texas A&M University

4:05 p.m. **Estimating and Ranking the Impact of High-Dimensional Environmental Risk Factors in Environmental Epidemiology Studies**—◆Nicholas P. Jewell, University of California, Berkeley

4:30 p.m. **Missing Covariates in Relative Risk Regression with Current Status Data**—Zhiguo Li, University of Michigan; ◆Bin Nan, University of Michigan

4:55 p.m. **Adjusting for Complex Sampling in Cohort Studies**—◆Rebecca Betensky, Harvard School of Public Health; Matthew Austin, Harvard School of Public Health

5:20 p.m. **The Analysis of Retrospective Family Studies**—◆John Neuhaus, University of California, San Francisco; Alastair Scott, University of Auckland; Chris Wild, University of Auckland

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

46 CC-150A

Handling Survey Case Weights in Model-Based Methods—Invited

Section on Survey Research Methods, Section on Bayesian Statistical Science, Section on Government Statistics

Organizer(s): Michael Elliott, University of Michigan

Chair(s): Sonya Vartivarian, Mathematica Policy Research, Inc.

4:05 p.m. **A Modeler's Perspective on Survey Weights**—◆Roderick J.A. Little, University of Michigan

4:30 p.m. **Accounting for Complex Sample Designs via Mixture Models**—◆Michael Elliott, University of Michigan

4:55 p.m. **Power-Shrinkage: An Alternative Method for Dealing with Excessive Weights**—◆Xiao-Li Meng, Harvard University; Naihua Duan, Columbia University; Chih-nan Chen, Cambridge Health Alliance/Harvard Medical School; Margarita Alegria, Harvard Medical School

5:20 p.m. Disc: Andrew Gelman, Columbia University

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

47 CC-144B

Data Display for Large Complex Data Sets—Invited

Section on Statistical Graphics, Section on Statistics and the Environment, Social Statistics Section, SSC, Section on Government Statistics, Interface Foundation of North America

Organizer(s): William S. Cleveland, Purdue University

Chair(s): Leland Wilkinson, University of Illinois at Chicago

4:05 p.m. **Network and System Visualization in Swift-3D and LiveRAC**—◆Stephen C. North, AT&T Labs - Research; Eleftherios C. Koutsofios, AT&T Labs - Research

4:35 p.m. **Distributed Computing and the Visualization of Huge Data Sets**—◆Lee Edlefsen, REvolution Computing, Inc.

5:05 p.m. **Visualization Databases for the Analysis of Large Complex Data Sets**—◆Saptarshi Guha, Purdue University; William S. Cleveland, Purdue University

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

48 CC-155

■ ✪ Reconciling Large Systems of Accounts and Time Series: Methods and Practice—Invited

Business and Economic Statistics Section

Organizer(s): Baoline Chen, Bureau of Economic Analysis

Chair(s): Estela Bee Dagum, University of Bologna

4:05 p.m. **Reconciliation and Balancing of Accounts and Time Series: From Concepts to a SAS Procedure**—◆Susie Fortier, Statistics Canada; Benoit Quenneville, Statistics Canada

4:35 p.m. **The Compilation of European Quarterly Sector Accounts and Supply, Use, and Input-Output Tables**—◆Roberto Barcellan, European Commission - Eurostat

5:05 p.m. **Reconciling the System of National Accounts for the US and Estimation of Structural Distribution of the Statistical Discrepancy**—◆Baoline Chen, Bureau of Economic Analysis

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

49 CC-202A

■ ✪ Setting Particulate Matter Air Policy Standards: From Statistical Evidence to Federal Policy—Invited

Section on Statistics in Epidemiology, Section on Bayesian Statistical Science, Section on Statistics and the Environment, Section on Government Statistics

Organizer(s): Brian J. Reich, North Carolina State University

Chair(s): Brian J. Reich, North Carolina State University

4:05 p.m. **Statistical Approaches to Quantifying and Checking the Health Effects of Particulate Air Pollution**—◆Scott Zeger, Johns Hopkins University; Francesca Dominici, Johns Hopkins University; Roger D. Peng, Johns Hopkins Bloomberg School of Public Health

4:35 p.m. **Spatial-Temporal Association Between Daily Mortality and Exposure to Ozone and Particulate Matter Using Geocoded Mortality Data**—◆Montserrat Fuentes, North Carolina State University; Eric Kalendra, North Carolina State University; Marie Lynn Miranda, Duke University; Benjamin Strauss, Duke University

4:55 p.m. **Meta-Analyses, Multi-City Studies, Risk, and Benefit-Cost Analyses for the PM NAAQS**—◆Bryan Hubbell, U.S. Environmental Protection Agency

5:20 p.m. Disc: Michelle L. Bell, Yale University

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

50 CC-203A

■ ✪ Experiences of Women Statisticians in the Pharmaceutical Industry, Private Consulting, and University Settings with Special Emphasis on Studies of Women's Health—Invited

Committee on Women in Statistics, Biopharmaceutical Section, Social Statistics Section

Organizer(s): Mari Palta, University of Wisconsin-Madison

Chair(s): Marian R. Fisher, University of Wisconsin-Madison

4:05 p.m. **From a Number Cruncher to Executive Management**—◆Aarti S. Shah, Eli Lilly and Company

4:30 p.m. **Innovations in the Field of Drug Development: From Path Analysis, Benefit-Risk Assessment to Adaptive Trial Design**—◆Yili L. Pritchett, Abbott Laboratories

4:55 p.m. **WISE Women and WISE Statisticians**—◆Sheryl F. Kelsey, University of Pittsburgh

5:20 p.m. Disc: Janet Wittes, Statistics Collaborative, Inc.

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

51 CC-204C

Recent Advances in High-Dimensional Sparse Inference—Invited

ENAR, SSC, Interface Foundation of North America

Organizer(s): Jinchi Lv, University of Southern California

Chair(s): Hui Zou, University of Minnesota

4:05 p.m. **Using the Bootstrap to Quantify the Authority of an Empirical Ranking**—◆Peter G. Hall, The University of Melbourne

4:30 p.m. **Penalized Bregman Divergence for Large Dimensional Regression and Classification**—◆Chunming Zhang, University of Wisconsin-Madison

4:55 p.m. **Large Sample Asymptotics for the Dantzig Selector and Extensions**—◆Lee Dicker, Harvard University; Xihong Lin, Harvard School of Public Health

5:20 p.m. **A Unified Approach to Model Selection and Sparse Recovery Using Regularized Least Squares**—◆Jinchi Lv, University of Southern California; Yingying Fan, University of Southern California

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

52 CC-206

Imaging Analysis—Invited

IMS

Organizer(s): Peihua Qiu, The University of Minnesota

Chair(s): Snigdhansu Chatterjee, The University of Minnesota

4:05 p.m. **Multiscale Adaptive Regression Models for Imaging Data**—◆Hongtu Zhu, The University of North Carolina at Chapel Hill; Yimei Li, The University of North Carolina at Chapel Hill; Joseph G. Ibrahim, The University of North Carolina at Chapel Hill; Dinggang Shen, The University of North Carolina at Chapel Hill

4:30 p.m. **Blind Image Deblurring Using Jump Regression Analysis**—◆Peihua Qiu, The University of Minnesota; Chen Xing, The University of Minnesota

4:55 p.m. **Smoothing Dynamic Positron Emission Tomography Time Courses Using Functional Principal Components**—◆John Aston, University of Warwick; Ci-Ren Jiang, University of California, Davis; Jane-Ling Wang, University of California, Davis

5:20 p.m. **Computational Functional Anatomy**—◆Anqi Qiu, National University of Singapore

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

53 CC-207A

Le Cam Lecture—Invited

IMS, Section on Bayesian Statistical Science

Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill

Chair(s): Jon A. Wellner, University of Washington

4:05 p.m. **Some Frequentist Results on Posterior Distributions on Infinite-Dimensional Parameter Spaces**—◆Aad van der Vaart, Vrije Universiteit Amsterdam

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

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

54 CC-102A

Evaluation of Different Biomarker Development Strategies from a Benefit-Cost Ratio Perspective—Topic-Contributed

Biometrics Section

Organizer(s): Terry Hyslop, Thomas Jefferson University
Chair(s): Scott W. Keith, Thomas Jefferson University

4:05 p.m. **Evaluation of Different Biomarker Development Strategies from a Benefit-Cost Ratio Perspective**—◆Yang Song, Merck Research Laboratories; Cong Chen, Merck Research Laboratories

4:25 p.m. **Dose-Finding Designs in Pediatric Oncology Trials: Safety and Accuracy Considerations**—◆Arzu Onar-Thomas, St. Jude Children's Research Hospital; Zang Xiong, St. Jude Children's Research Hospital

4:45 p.m. **Theoretical and Practical Application of Traditional and Accelerated Titration (AT) Phase I Clinical Trial Designs: The Wayne State University Experience**—Elisabeth I. Heath, Karmanos Cancer Institute; Patricia M. LoRusso, Karmanos Cancer Institute; S. Percy Ivy, National Cancer Institute; Larry Rubinstein, National Cancer Institute; Michaele C. Christian, National Cancer Institute; ◆Lance K. Heilbrun, Karmanos Cancer Institute

5:05 p.m. **Current Issues in Oncology Drug Development, with a Focus on Phase II Trials**—◆Terry Hyslop, Thomas Jefferson University; Daniel Sargent, Mayo Clinic; Jeremy Taylor, University of Michigan

5:25 p.m. **Design of Phase II Cancer Trials for Evaluation of Cytostatic/Cytotoxic Agents**—◆Masha Kocherginsky, The University of Chicago; Ezra Cohen, The University of Chicago; Theodore Karrison, The University of Chicago

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

55 CC-149B

Consortium of Sections Student Paper Awards—Topic-Contributed

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

Organizer(s): Mansour Fahimi, Marketing Systems Group
Chair(s): Mary Gray, American University

4:05 p.m. **Using Multivariate Spatial Statistics in the Modeling of Rate-Based Diffusion Processes: An Extension and Replication of Cohen and Tita**—◆Jeremy R. Porter, Rice University

4:25 p.m. **Extended Bootstrap Bias Corrections with Application to Multilevel Modeling of Sample Survey Data Under Informative Sampling**—◆Solange T. Correa, Brazilian Institute of Geography and Statistics

4:45 p.m. **Adaptive Hierarchical Bayes Estimation of Small-Area Proportions**—◆Benmei Liu, University of Maryland

5:05 p.m. **The Prior Selection and Approximations for the Nested Error Regression Model: Estimation of Finite Population Mean for Small Areas**—◆Santanu Pramanik, NORC at the University of Chicago

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

56 CC-202B

■ Adaptive Dose-Finding Studies—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Frank Bretz, Norvartis, Switzerland
Chair(s): Christy Chuang-Stein, Pfizer Inc.

4:05 p.m. **Adaptive Dose-Ranging Studies: An Update from the PhRMA Working Group**—◆Jose C. Pinheiro, Novartis Pharmaceuticals

4:25 p.m. **Contributions of different design components to the efficiency of an adaptive design in dose ranging studies**—◆Vladimir Dragalin, Wyeth Research

4:45 p.m. **Response Adaptive Dose-Finding Under Model Uncertainty**—◆Bjoern Bornkamp, Dortmund University of Technology

5:05 p.m. **Adaptive Dose-Ranging Study Design to Balance Both Clinical and Operational Considerations**—◆Judith Quinlan, Cytel, Inc.

5:25 p.m. Disc: Sue-Jane Wang, FDA

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

57 CC-150B

■ Advances in the Use of Statistical Methodology in the Legal Setting—Topic-Contributed

Section on Government Statistics

Organizer(s): Weiwen Miao, Haverford College
Chair(s): Weiwen Miao, Haverford College

4:05 p.m. **Robust Peters-Belson–Type Estimators of Measures of Disparity and Their Applications in Employment Discrimination Cases**—◆Hiro Hikawa, The George Washington University; Efstathia Bura, The George Washington University/Vertex Pharmaceuticals, Inc.; Joseph L. Gastwirth, The George Washington University

4:25 p.m. **Advance in the Use of Statistical Methodology in the Legal Setting**—◆Thomas H. Cohen, Bureau of Justice Statistics; Michael D. Sinclair, Bureau of Justice Statistics

4:45 p.m. **How Accurate Are the Power Calculations Relied on by the SEC in Its Regulatory Deliberations?**—◆Efstathia Bura, The George Washington University/Vertex Pharmaceuticals, Inc.; Joseph L. Gastwirth, The George Washington University

5:05 p.m. **Causal Effects of Immutable Characteristics**—◆D. James Greiner, Harvard Law School; Donald B. Rubin, Harvard University

5:25 p.m. **Advance in the Use of Statistical Methodology in the Legal Setting**—◆William Sabol, Bureau of Justice Statistics

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

58 CC-143C

■ ✪ Statistical Topics in the Defense Industry—Topic-Contributed

Section on Statistics in Defense and National Security, Section on Government Statistics

Organizer(s): Myron J. Katzoff, National Center for Health Statistics
Chair(s): Allan T. Mense, Raytheon Missile Systems

4:05 p.m. **Adaptive Design for Bio/Chem Detector Test and Evaluation**—◆C. Shane Reese, Brigham Young University

4:25 p.m. **Families Under Stress: An assessment of data on marriage and divorce in the Military**—◆Beth Ann Griffin, RAND Corporation; John S. Crown, RAND Corporation; Benjamin R. Karney, University of California, Los Angeles

4:45 p.m. **Optimal Experimental Designs for Accelerated Life Tests with Censoring and Constraints**—◆Eric Monroe, Intel Corporation

5:05 p.m. **Design and Analysis of Binary Output Computer Validation Experiments**—◆Patrick S. Chapin, Iowa State University

5:25 p.m. **Fitting Univariate Probability Density Functions to Small Data Sets**—◆Jerry L. Alderman, Raytheon Missile Systems; William C. Thomas, Raytheon Missile Systems

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

59 CC-209B

■ ✪ New Research in Spatial and Environmental Statistics—Topic-Contributed

Section on Statistics and the Environment, Section on Bayesian Statistical Science

Organizer(s): Stephan R. Sain, National Center for Atmospheric Research

Chair(s): Reinhard Furrer, Colorado School of Mines

4:05 p.m. **Fast Calibration of Complex Computer Models**—◆Matthew T. Pratola, Simon Fraser University; Stephan R. Sain, National Center for Atmospheric Research; Derek Bingham, Simon Fraser University

4:25 p.m. **Hierarchical Spatial Random Effects Model for High-Resolution Data from Regional Climate Models**—◆Emily Lei Kang, The Ohio State University; Noel A. Cressie, The Ohio State University; Stephan R. Sain, National Center for Atmospheric Research

4:45 p.m. **Spatial Temporal Data Analysis via Reproducing Kernel Regularization**—◆Javier González Hernández, Universidad Carlos III de Madrid; Alberto Muñoz García, Universidad Carlos III de Madrid; Stephan R. Sain, National Center for Atmospheric Research

5:05 p.m. **Putting Citizen Science to Work: Hierarchical Modeling, Data Mining, High-Dimensional MCMC, and the eBird Database**—◆Benjamin Shaby, Cornell University

5:25 p.m. **Joint Inference for Multivariate Climate Model Data**—◆Steven Geinitz, Colorado School of Mines; Reinhard Furrer, Colorado School of Mines

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

60 CC-149A

■ Overview of Recent Statistical and Methodological Research in the Medical Expenditure Panel Survey (MEPS)—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Trena M. Ezzati-Rice, Agency for Healthcare Research and Quality

Chair(s): Trena M. Ezzati-Rice, Agency for Healthcare Research and Quality

4:05 p.m. **Investigation of Alternative Sampling Procedures for the Medical Expenditure Panel Survey**—Robert M. Baskin, Agency for Healthcare Research and Quality; ◆Steven Machlin, Agency for Healthcare Research and Quality; William Yu, Agency for Healthcare Research and Quality

4:25 p.m. **Evaluation of Design Effects for Selected Estimates in the Medical Expenditure Panel Survey**—◆David Kashihara, Agency for Healthcare Research and Quality; Marc Zodet, Agency for Healthcare Research and Quality

4:45 p.m. **Assessment and Evaluation of Nonresponse Error in the Medical Expenditure Panel Survey**—◆Lap-Ming Wun, Agency for Healthcare Research and Quality; Trena M. Ezzati-Rice, Agency for Healthcare Research and Quality; David Kashihara, Agency for Healthcare Research and Quality

5:05 p.m. **Event Reporting in the Medical Expenditure Panel Survey (MEPS) by Event Type**—◆Frederick Rohde, Agency for Healthcare Research and Quality

5:25 p.m. **Comparison of Fractional Weighted Imputation and Multiple Imputations for Inpatient Hospital Care Expenditures in the Medical Expenditure Panel Survey**—◆Robert M. Baskin, Agency for Healthcare Research and Quality; Robert E. Fay, Westat, Inc.; Trena M. Ezzati-Rice, Agency for Healthcare Research and Quality

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

61 CC-158B

✪ Recent Advances in Bayesian Methods in Spatio-Temporal Models—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Ananda Majumadar, Arizona State University

Chair(s): Dipak K. Dey, University of Connecticut

4:05 p.m. **Mapping Health Data Using ZIP Code in a Spatial-Temporally Misaligned Setting**—◆Li Zhu, Texas A&M Health Science Center; Lance A. Waller, Emory University

4:25 p.m. **Kernel-Based Models for Space-Time Data**—◆Catherine Calder, The Ohio State University; Tao Shi, The Ohio State University; Candace Berrett, The Ohio State University

4:45 p.m. **Using Stochastic Differential Equations in Spatio-Temporal Modeling**—◆Gavino Puggioni, The University of North Carolina at Chapel Hill; Alan E. Gelfand, Duke University

5:05 p.m. **Inferring Likelihoods and Climate System Characteristics from Climate Models and Spatio-Temporal Tracer Data**—◆K. Sham Bhat, Penn State University; Murali Haran, Penn State University; Klaus Keller, Penn State University; Roman Tonkonojenkov, Penn State University

5:25 p.m. **A Generalized Convolution Model for Multivariate Nonstationary Spatial Processes**—◆Anandamayee Majumdar, Arizona State University; Debashis Paul, University of California, Davis; Dianne Bautista, The Ohio State University

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

62 CC-158A

■ Student Paper Competition: Bayesian Modeling and Posterior Consistency—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Michael J. Daniels, University of Florida

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

4:05 p.m. **Bayesian Uncertainty Quantification for Flows in Heterogeneous Subsurfaces Using Multiscale, Multidimensional Models**—◆Anirban Mondal, Texas A&M University; Bani K. Mallick, Texas A&M University; Yalchin Efendiev, Texas A&M University; Akhil Datta-Gupta, Texas A&M University

4:25 p.m. **Benchmarking Finite Population Means Using a Bayesian Regression (Student Paper Competitions)**—◆Ma Criselda S. Toto, Worcester Polytechnic Institute; Balgobin Nandram, Medical College of Georgia

4:45 p.m. **Bayesian Changepoint Analysis with Application to Atomic Force Microscopy and Soft Material Indentation**—◆Daniel Rudoy, Harvard University

5:05 p.m. **Bayesian Inference on Dependence in Multivariate Longitudinal Data**—◆Hongxia Yang, Duke University; David Dunson, Duke University

5:25 p.m. **Posterior Consistency for Some Semiparametric Problems**—◆Yuefeng Wu, North Carolina State University

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

63 CC-157

Multivariate Statistical Methods for Business Cycle Analysis—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Gian Luigi Mazzi, Eurostat

Chair(s): Pablo M. Pincheira, Central Bank of Chile

4:05 p.m. **A Joint Dynamic Bi-Factor Model of the Yield Curve and the Economy as a Predictor of Business Cycles**—Marcelle Chauvet, University of California, Riverside; ◆Zeynep Senyuz, University of New Hampshire

4:25 p.m. **Are There Common Upswings and Downswings Between NAFTA Countries?**—◆Shushanik Papanyan, The University of Texas at Arlington

4:45 p.m. **Obtaining Early Signals About US Recessions: An Application of a New and Efficient Multivariate Real-Time Filter**—◆Marc Wildi, Institute of Data Analysis and Process Design

5:05 p.m. **Structural VAR-Based Estimates of the Euro Area Output Gap: Theoretical Considerations and Empirical Evidences**—◆Gian Luigi Mazzi, Eurostat; James Mitchell, National Institute of Economic and Social Research; Filippo Moauro, Eurostat

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

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

64 CC-204B

Survival Analysis and Joint Modeling—Contributed

Biometrics Section

Chair(s): Mary Sammel, University of Pennsylvania

4:05 p.m. **Jointly Modeling Multiple Longitudinal Measurements and Time-to-Event Data**—◆Paul S. Albert, National Cancer Institute; Joanna H. Shih, National Cancer Institute

4:20 p.m. **A Comparison of MMRM and Other Methods for Handling Dropouts in a Cystic Fibrosis Clinical Trial**—◆Tao Song, Vertex Pharmaceuticals, Inc.; Abdul J. Sankoh, Vertex Pharmaceuticals, Inc.; Qunming Dong, Vertex Pharmaceuticals, Inc.; Cynthia M. DeSouza, Vertex Pharmaceuticals, Inc.

4:35 p.m. **Simulation Study of a Joint Modeling Approach to Assess the Potential Effect of Biomarker Variability on Clinical Outcomes**—◆Feng Gao, Washington University in St. Louis; Philip Miller, Washington University in St. Louis; Mae Gordon, Washington University in St. Louis; Chengjie Xiong, Washington University

4:50 p.m. **Frailty Models with Nonparametric Additive Covariate Functions**—◆Zhangsheng Yu, Indiana University School of Medicine; Xihong Lin, Harvard School of Public Health

5:05 p.m. **Simultaneous Analysis of Survival Time with Cox Proportional Hazards Model and Longitudinal Outcomes with Generalized Linear Mixed Model**—◆Jaeun Choi, The University of North Carolina at Chapel Hill; Jianwen Cai, The University of North Carolina at Chapel Hill; Donglin Zeng, The University of North Carolina at Chapel Hill

5:20 p.m. **A Comparison of Multiple Imputation and Inverse Probability Weighted Estimation for Survival Analysis with Missing Covariates**—Lihong Qi, University of California, Davis; ◆Ying-Fang Wang, University of California, Davis; Yulei He, Harvard Medical School

5:35 p.m. **Longitudinal Bayesian Analysis of Self-Reported Noisy Count Data**—◆Jihey Lee, University of California, Los Angeles; Robert E. Weiss, University of California, Los Angeles

65 CC-204A

General Methodology I—Contributed

Biometrics Section

Chair(s): James Godbold, Mount Sinai School of Medicine

4:05 p.m. **Causal Effect Model Using Matching Methods in Fisher's Experiment Design and Rubin's Causal Model with Small Participants in a Control Group in Quasi-Experimental Data**—◆Gideon D. Bahn, Loyola University Chicago; Kathleen Ruroede, Marianjoy Wheaton Franciscan Healthcare

4:20 p.m. **Hypothesis Testing for Equivalence Defined on Symmetric Open Intervals**—◆Daniel M. Ennis, The Institute for Perception; John Ennis, The Institute for Perception

4:35 p.m. **Asymptotic and Approximate Distributions of Quadratic Form Statistics for Multilocus Association Test**—◆Liping Tong, Loyola University Chicago

4:50 p.m. **Composite Likelihood in Haplotype Sequence Data**—Bruce G. Lindsay, Penn State University; ◆Jianping Sun, Penn State University

5:05 p.m. **Fiducial Inference for a Function of Parameters: Binomial and Poisson Cases**—◆Meesook Lee, University of Louisiana-Lafayette; Kalimuthu Krishnamoorthy, University of Louisiana-Lafayette

5:20 p.m. **Confidence Regions for Parameters of Linear Models**—◆Andrew Rukhin, National Institute of Standards and Technology

5:35 p.m. **All-Pairwise Comparisons Under Unequal Error Variances**—◆Hong Li, Bowling Green State University

66 CC-208A

Miscellaneous Theory II—Contributed

IMS

Chair(s): Frank Jian Guo, University of Michigan

4:05 p.m. **Stirling's Formula and Its Extensions: Heuristic Approaches**—◆Debanjan Bhattacharjee, University of Connecticut

4:20 p.m. **On Hilbert C*-module-Valued Random Variables**—◆Khalil Shafie, University of Northern Colorado

4:35 p.m. **Robust Improper ML for Finite Location-Scale Mixtures**—◆Pietro Coretto, University of Salerno; Christian Hennig, University College London

4:50 p.m. **Modeling Nonhomogeneous Poisson Process with a Periodic or Almost Periodic Intensity Function**—◆Nan Shao, University of California, Riverside; Keh-Shin Lii, University of California, Riverside

5:05 p.m. **Polya Processes with Random Additions: The Geometric Case**—◆Srinivasan Balaji, The George Washington University

5:20 p.m. **Time Series Central Mean Subspace**—◆Jin-Hong Park, College of Charleston

5:35 p.m. **On the Transmuted Weibull Probability Distribution**—◆Gokarna R. Aryal, Purdue University Calumet

67 CC-143A

■ Statistics and Its Interface—Contributed

International Chinese Statistical Association

Chair(s): Zhaohai Li, The George Washington University

4:05 p.m. **Optimal Two-Stage Sequential Design for Case-Control Genetic Association Studies**—◆Lihan K. Yan, The George Washington University; Aiyi Liu, National Institute of Child Health and Human Development; Zhaohai Li, The George Washington University; Gang Zheng, National Heart, Lung, and Blood Institute

4:20 p.m. **Estimation of Lifetime Distribution When Censoring Is Missing**—◆Jiantian Wang, Kean University

4:35 p.m. **China in the World Economy: Dynamic Correlation Analysis of Business Cycles**—◆Jarko Fidrmuc, University of Munich; Iikka Korhonen, Bank of Finland; Ivana Batorova, Comenius University Bratislava

4:50 p.m. **How Is Randomization Going in China?**—◆Wei Li, Peking Union Medical College

5:05 p.m. **The Information in One Prior Relative to Another**—◆Gun Ho Jang, University of Toronto; Michael Evans, University of Toronto

5:20 p.m. **Application of Bayesian Statistics in Medical Device Clinical Trials**—◆Tao Xu, Peking Union Medical College; Wei Li, Peking Union Medical College

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

68 CC-208B

Nonparametric Methods Based on the Bootstrap—Contributed

Section on Nonparametric Statistics

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

4:05 p.m. **On the Estimation of Nonparametric Correlation Coefficients for Clustered Data**—◆Allison M. Deal, The University of North Carolina at Chapel Hill; Haitao Chu, The University of North Carolina at Chapel Hill; Bert O'Neil, The University of North Carolina at Chapel Hill

4:20 p.m. **Assessment of Uncertainty of Nonparametric Median Regression Estimators with Applications to Protein Lysate Arrays**—◆Xingdong Feng, University of Illinois at Urbana-Champaign; Xuming He, University of Illinois at Urbana-Champaign; Jianhua Hu, The University of Texas M.D. Anderson Cancer Center

4:35 p.m. **Observed Confidence Levels for Principal Component Analysis**—◆Alan M. Polansky, Northern Illinois University

4:50 p.m. **The Kernel Reweighting Bootstrap for Spatial Processes**—◆Kristofer Jennings, Purdue University

5:05 p.m. **Estimation of Shift Based on Smoothed Kolmogorov-Smirnov Statistics**—◆Feridun Tasdan, Western Illinois University

5:20 p.m. **Saddlepoint-Based Bootstrap Inference About Smoothing Parameters in Nonparametric and Semiparametric Spline Models**—◆Robert Paige, Missouri University of Science and Technology; Alex Trindade, Texas Tech University

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

69 CC-143B

Assessing Students—Contributed

Section on Statistical Education

Chair(s): Soma Roy, Cal Poly

4:05 p.m. **A Discussion of Open-Book and Closed-Book Exams on Student Achievement in an Introductory Probability and Statistics Course**—◆Robert M. Block, U.S. Air Force Academy

4:20 p.m. **Does Learning to Think Statistically = Learning to Confront Ambiguity? Evidence from Two Schools**—◆Robert H. Carver, Stonehill College; Carolyn P. Dobler, Gustavus Adolphus College

4:35 p.m. **On the Importance and Measurement of Pre-Service Teachers' Efficacy to Teach Statistics: Results and Lessons Learned from the Development and Testing of a GAISE-Based Instrument**—◆Rebecca L. Pierce, Ball State University; Leigh M. Harrell, Virginia Polytechnic Institute and State University; Alejandra Sorto, Texas State University; Teri J. Murphy, Northern Kentucky University; Felicity B. Enders, Mayo Clinic; Lawrence M. Lesser, The University of Texas at El Paso; Randall E. Groth, Salisbury University

4:50 p.m. **Statistical Education: Same Challenge, Different Perspective**—◆Alan Albright, University of Memphis

5:05 p.m. **Honors Introductory Statistics with Student-Led Seminars**—◆Nancy Pfenning, University of Pittsburgh

5:20 p.m. **Telling the Story to Learn the Statistics**—◆A. John Bailer, Miami University; Richard Campbell, Miami University

5:35 p.m. **Automated Individual Student Assessment System**—◆Stanislav Kolenikov, University of Missouri-Columbia

70 CC-160

Advances in Marketing Research Methods—Contributed

Section on Statistics and Marketing

Chair(s): Ty Henderson, The University of Texas at Austin

4:05 p.m. **Predictive Model Evaluation: Basic rules for the marketer**—◆Sam Koslowsky, Harte Hanks

4:20 p.m. **Identification and Isolation of Scale Usage Effects in Segmentation Analyses**—◆Frank Hedler, MarketTools; Norbert Wirth, MarketTools; Dimitri Liakhovitski, MarketTools

4:35 p.m. **Implicit Regression Modeling in Supercritical Pitchfork Bifurcation Approach**—◆Stan Lipovetsky, GfK Custom Research North America

4:50 p.m. **Direct-Marketing Models Based on Unknowingly Biased Campaign Files**—◆Hye-Kyoung Kim, Intellidyn Corp.; Dmitri V. Kuznetsov, Intellidyn Corp.

5:05 p.m. **Estimating the Customer's Wallet: An Empirical Bayes Approach**—◆Siu-Tong Au, AT&T Labs - Research; Changxuan Mao, AT&T Labs - Research

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

71 CC-144C

Data Confidentiality, Data Frames, and Variance Estimates—Contributed

Section on Survey Research Methods

Chair(s): Frank Potter, Mathematica Policy Research, Inc.

4:05 p.m. **Toward Quantifying Disclosure Risk for Area-Level Tables When Public Microdata Exists**—◆Tom Krenzke, Westat, Inc.; David Hubble, Westat, Inc.

4:20 p.m. **Measures of Data Utility for Complex Survey Data**—◆Kyu-Seong Kim, University of Seoul

4:35 p.m. **Investigation of Variance Properties of Noise-Infused Estimates for the Survey of Business Owners**—◆Irene Brown, U.S. Census Bureau; Marilyn Balogh, U.S. Census Bureau; Anthony Caruso, U.S. Census Bureau; Beth Schlein, U.S. Census Bureau; Katherine J. Thompson, U.S. Census Bureau

4:50 p.m. **Data and Metadata from the Terminological Perspective**—◆Daniel W. Gillman, Bureau of Labor Statistics; Frank Farance, Farance Inc.

5:05 p.m. **GeoFrameTM: A Technological Advancement in Field Enumeration (Part 2)**—◆Joseph P. McMichael, RTI International; Brian Evans, RTI International; Leslie Athey, RTI International

5:20 p.m. **General Discrete-Data Modeling Methods for Producing Synthetic Data with Reduced Reidentification Risk That Preserve Analytic Properties**—◆William E. Winkler, U.S. Census Bureau

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

72 CC-142

Recent Advances in Computational Statistical Modeling—Contributed

Section on Statistical Computing, Section on Bayesian Statistical Science, Interface Foundation of North America

Chair(s): Jarad Niemi, Duke University

4:05 p.m. **RE-EM Trees: A New Data Mining Approach to Longitudinal Data**—◆Rebecca J. Sela, New York University; Jeffrey S. Simonoff, New York University

4:20 p.m. **Wrapped Around KS--Type Statistics**—◆Huiyu Qian, Lehigh University; Wei-Min Huang, Lehigh University; Bennett Eisenberg, Lehigh University

4:35 p.m. **Distribution of Clump Statistics for a Collection of Words**—◆Deidra A. Coleman, North Carolina State University; Donald E.K. Martin, North Carolina State University

4:50 p.m. **Random Hypergraph Projection for Text Processing**—◆Elizabeth L. Hohman, Naval Surface Warfare Center; David Marchette, Naval Surface Warfare Center

5:05 p.m. **An Efficient Computational Tool to Detect Genotyping Errors in an Arbitrary Complex Pedigree**—◆Lan Zhu, Oklahoma State University

5:20 p.m. **A Dirichlet Process Model for Changes in the fMRI Visual Field Map**—◆Raymond G. Hoffmann, Medical College of Wisconsin; Pippa Simpson, Medical College of Wisconsin; Daniel B. Rowe, Medical College of Wisconsin

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

73 CC-153

■ ✪ Harmful Substances—Contributed

Section on Risk Analysis

Chair(s): Aleka Kapatou, Consultant

4:05 p.m. **On the Identifiability Issues in Physiologically-Based Toxicokinetics (PBTK) Models**—◆Munni Begum, Ball State University

4:20 p.m. **Decomposition Techniques in the Application of Pesticide Exposure**—◆David Diez, University of California, Los Angeles

4:35 p.m. **Bayesian Approaches for Simultaneous Estimation of BMD with Multiple Chemicals and Multiple Endpoints**—◆Epiphanie Nyirabahizi, Virginia Commonwealth University; Edward L. Boone, Virginia Commonwealth University; Chris Gennings, Virginia Commonwealth University

4:50 p.m. **Comparison of Methods to Predict Radiation Dose**—◆Sally W. Thurston, University of Rochester; Jacqueline P. Williams, University of Rochester

5:05 p.m. **Analysis of Risks and Benefits of Malaria Antibody Testing of Blood Donations in the United States**—◆Hong Yang, FDA; Mark O. Walderhaug, FDA; Richard A. Forshee, FDA; Steven A. Anderson, FDA

5:20 p.m. **Stable Isotope Sourcing Using Sampling**—◆Erik B. Erhardt, University of New Mexico; Edward Bedrick, University of New Mexico

5:35 p.m. **Inference Concerning the Negative Binomial Dispersion Parameter with Applications to Tumor Data**—◆Krishna K. Saha, Central Connecticut State University; Sudhir R. Paul, University of Windsor

74 CC-141

■ Applications and Case Studies—Contributed

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

Chair(s): Jennifer Van Mullekom, DuPont

4:05 p.m. **Stochastic Analysis and Characterization of Roller Measurement Values in a Test Bed**—◆Daniel Heersink, Colorado School of Mines

4:20 p.m. **Using Haar Wavelets and Order Recurrence Plots (ORPs) to Statistically Assess Gait Fatigue**—◆Kristin D. Morgan, Virginia Commonwealth University; Carolyn B. Morgan, Hampton University; Peter Pidcoe, Virginia Commonwealth University; Morris H. Morgan, Hampton University

4:35 p.m. **Testing the Equality of Regression Coefficients Under Multicollinearity**—◆Fransell C. Riley, The University of Texas at Arlington; Chien-Pai Han, The University of Texas at Arlington

4:50 p.m. **Inference and Diagnostics in Nonlinear Structural Equation Models with Applications in Neuroimaging**—◆Klaus K. Holst, University of Copenhagen; Esben Budtz-Jørgensen, University of Copenhagen

5:05 p.m. **Optimal Monitoring Design for Computer Network Traffic**—◆Joel Vaughan, University of Michigan; George Michailidis, University of Michigan; Stilian Stoev, University of Michigan

5:20 p.m. **A Bayesian Model for Assessment of Sulfur in Diesel Fuel at Ultra-Low Levels**—◆William F. Guthrie, National Institute of Standards and Technology; W. Robert Kelly, National Institute of Standards and Technology

5:35 p.m. **A Risk-Adjusted O-E CUSUM with a V-Mask for Monitoring Medical Outcomes**—◆Rena Jie Sun, University of Michigan; John D. Kalbfleisch, University of Michigan

75 CC-148

Applications in Clustered Data, Risk Assessment, and Health Surveys—Contributed

Section on Health Policy Statistics

Chair(s): Yulei He, Harvard Medical School

4:05 p.m. **Analysis of Dyadic Data**—◆Joseph C. Cappelleri, Pfizer Inc.

4:20 p.m. **Power Analysis of Cutoff-Based Designs for Group Randomized Trials**—◆Michael Pennell, The Ohio State University; Erinn Hade, The Ohio State University; David M. Murray, The Ohio State University; Dale Rhoda, Battelle Memorial Institute

4:35 p.m. **A History of Supplements on the National Health Interview Survey**—◆Brenda LaRochelle, CDC; Susan Jack, National Center for Health Statistics

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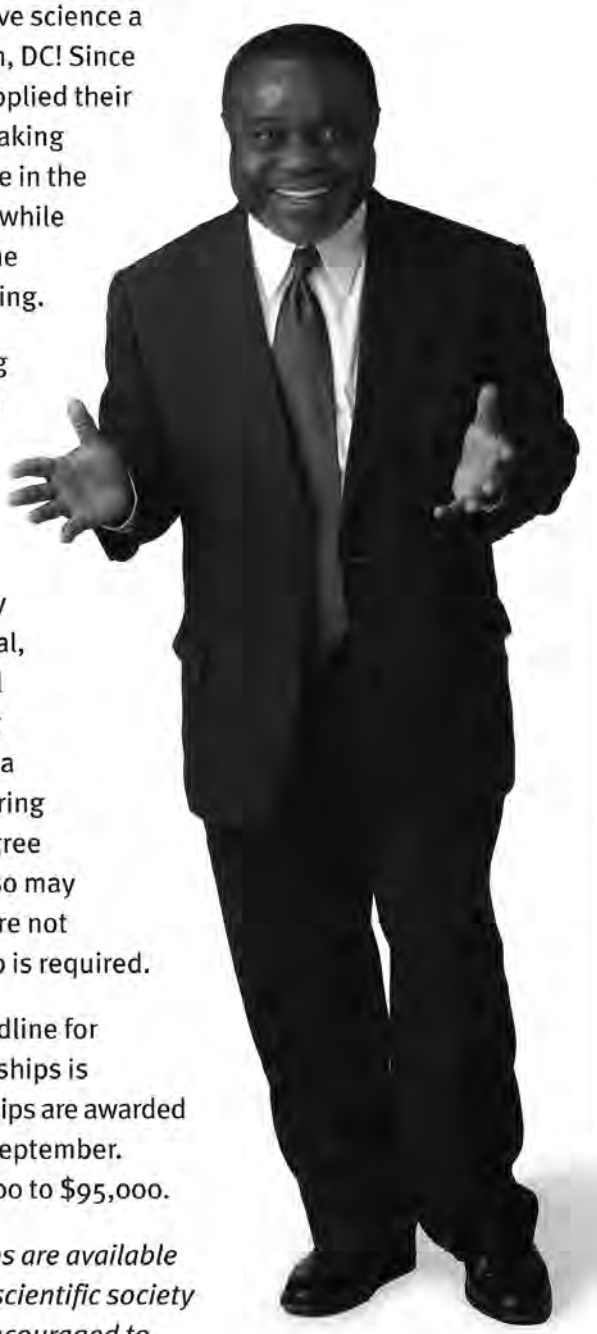

Enhancing Public Policy, Advancing Science Careers

Fred Boadu, JD, PhD

Agricultural Economics, University of Kentucky

2005-2006 AAAS Fellow at the U.S. Department of Agriculture, Food Safety Inspection Service, Office of Policy, Program and Employee Development

Also a 1993-1994 AAAS Fellow at the U.S. Agency for International Development, Bureau for Africa/Bureau for East Asian and Pacific Affairs

Currently a professor and assistant department head for undergraduate student affairs at Texas A&M University, which granted him a faculty development leave to complete his 2005-2006 AAAS Fellowship

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ADVANCING SCIENCE, SERVING SOCIETY

4:50 p.m. **A Model of the Potential Benefit of C-Reactive Protein Measurement in Primary Prevention for Men and Women with Intermediate Risk of Ten-Year First Coronary Heart Disease Events**—◆Rongwei (Rochelle) Fu, Oregon Health & Science University; Craig Fleming, Oregon Health & Science University; Michele Freeman, Oregon Health & Science University; David Buckley, Oregon Health & Science University; Mark Helfand, Oregon Health & Science University

5:05 p.m. **A Comparison of Tree-Based Methods with Logistic Regression to Classify Cardiovascular Disease Risk**—◆Layla Parast, Harvard University; Latha Palaniappan, Palo Alto Medical Foundation; Helena Kraemer, Stanford University; Michael Pencina, Boston University; Ralph D'Agostino, Boston University

5:20 p.m. **Effect of Electronic Prescribing on Medication Error Rates: A Comparison of Poisson Regression Methods**—◆Yolanda Barrón, Weill Medical College of Cornell University; Lisa Kern, Weill Medical College of Cornell University; Erika Abramson, Weill Medical College of Cornell University; Alison Edwards; Rainu Kaushal, Weill Medical College of Cornell University

5:35 p.m. **Different Models in Analyzing Correlated Binary Outcomes and the Impact on Power**—◆Qing Pan, The George Washington University

76 CC-159B

■ Bayesian Biostatistics—Contributed

Section on Bayesian Statistical Science

Chair(s): Robin Jeffries, University of California, Los Angeles

4:05 p.m. **A Bayesian Generalized Non-Linear Predictive Model of Treatment Efficacy Using qMRI**—◆Jincao Wu, University of Michigan; Timothy D. Johnson, University of Michigan

4:20 p.m. **fMRI Meta-Analysis via Bayesian Spatial Point Processes**—◆Jian Kang, University of Michigan; Timothy D. Johnson, University of Michigan; Thomas E. Nichols, GlaxoSmithKline; Tor D. Wager, Columbia University

4:35 p.m. **Bayesian Prescribing Model for Cox-2 Selective NSAIDS**—◆Margaret R. Stedman, Brigham and Women's Hospital; M. Alan Brookhart, Brigham and Women's Hospital/Harvard Medical School

4:50 p.m. **Estimating and Projecting Trends in HIV/AIDS Generalized Epidemics Using Incremental Mixture Importance Sampling**—◆Le Bao, University of Washington; Adrian E. Raftery, University of Washington

5:05 p.m. **Identify Misspecified Gestational Ages in Pre-Term Babies with Bayesian Mixture Models**—◆Guangyu Zhang, University of Maryland; Jennifer D. Parker, National Center for Health Statistics; Nathaniel Schenker, National Center for Health Statistics; Dan Liao, University of Maryland; Hoda Hammad, University of Maryland

5:20 p.m. **Combining Inexactly-Matched Data Sets to Analyze End-of-Life Medical Costs**—◆Roee Gutman, Harvard University; Alan M. Zaslavsky, Harvard Medical School

5:35 p.m. **Dose-Finding in Phase I Clinical Trials with Logistic Joinpoint Regression**—◆Ling Lan, Medical College of Georgia; Grzegorz A. Rempala, Medical College of Georgia

77 CC-159A

■ Bayesian Theory—Contributed

Section on Bayesian Statistical Science

Chair(s): Scotland Leman, Virginia Polytechnic Institute and State University

4:05 p.m. **Adaptive Bayesian Oracle Projection Estimation and Oracle Projection Convergence Rate of Posterior Distribution**—◆Eduard Belitser, Utrecht University

4:20 p.m. **Neutral Noninformative and Informative Gamma, Beta, and Dirichlet Conjugate Priors**—◆Jouni Kerman, Novartis Pharma AG

4:35 p.m. **A Bayesian Approach to Population Parameter Orderings**—◆Feiyi Jia, MED Institute; Gary C. McDonald, Oakland University

4:50 p.m. **Simulation Pseudo-Bias Correction to the Harmonic Mean Estimator of Integrated Likelihoods**—◆Peter Lenk, University of Michigan

5:05 p.m. **Bayesian Analysis of Vector Spline Smoothing**—◆Shawn Ni, University of Missouri; Dongchu Sun, University of Missouri

5:20 p.m. **Asymptotic Confidence Intervals in Ridge Regression**—◆Luis Firinguetti, Universidad del Bío Bío; Gladys Bobadilla, Univesridad de Santiago

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

78 CC-203B

Various Topics in Clinical Trials—Contributed

Biopharmaceutical Section

Chair(s): Ilya A. Lipkovich, Eli Lilly and Company

4:05 p.m. **Dose Reduction Profiles for Combination Drug Studies**—◆John J. Peterson, GlaxoSmithKline

4:20 p.m. **Assessing the Similarity of Bioanalytical Methods**—◆Jason Liao, Merck Research Laboratories

4:35 p.m. **Testing the Stochastic Ordering of Discrete Distributions**—◆Myron N. Chang, University of Florida

4:50 p.m. **Constrain Estimate of Intracluster Correlation for Clustered Binary Data**—◆Hrishikesh Chakraborty, RTI International; Pranab Sen, The University of North Carolina at Chapel Hill

5:05 p.m. **Extension of the Beta-Binomial Model for Cluster Randomized Trials When Adjusting for Baseline**—◆Pamela A. Ohman Strickland, University of Medicine and Dentistry of New Jersey

5:20 p.m. **Shelf Life Determination with Common Intercept**—◆Roswitha E. Kelly, FDA; Jinglin Zhong, FDA; Meiyu Shen, FDA

5:35 p.m. **Now You See It, Now You Don't: Impact of Population Screening Practices on Perceived Efficacy of Cancer Therapies**—◆Margaret A. Au, University of Washington; Ruth Etzioni, Fred Hutchinson Cancer Research Center

79 CC-201

■ Multiple Trials, Multiple Comparison, and Multiple Endpoints—Contributed

Biopharmaceutical Section

Chair(s): Tammy Massie , FDA

4:05 p.m. **Comparison of Multiple Testing Methods in a Trial with Co-Primary Endpoints**—◆Moumita Sinha, Boehringer Ingelheim Pharmaceuticals, Inc.

4:20 p.m. **Combining Multiple Tests in Clinical Trials with Hierarchical Objectives**—◆Alexei A. Dmitrienko, Eli Lilly and Company; Ajit C. Tamhane, Northwestern University; Lingyun Liu, Northwestern University

4:35 p.m. **Simultaneous Critical Values for t-Tests in Very High Dimensions**—◆Hongyuan Cao, The University of North Carolina at Chapel Hill; Michael Kosorok, The University of North Carolina at Chapel Hill

4:50 p.m. **Evaluating Multiple Endpoints in Two Pivotal Trials**—◆Brian L. Wiens, Gilead Sciences, Inc.; Alexei A. Dmitrienko, Eli Lilly and Company

5:05 p.m. **An Efficient Algorithm to Determine the Optimal Two-Stage Randomized Multinomial Designs in Oncology Clinical Trials**—◆Yong Zhang, University of Michigan; William L. Mietlowski, Novartis Oncology; Bee Chen, Novartis Oncology; Yibin Wang, Novartis Oncology

5:20 p.m. **Overall Power for Testing Co-Primary Hypothesis with Multiple Endpoints**—◆Fang Liu, Merck Research Laboratories

5:35 p.m. **Extended Fallback Procedures with Clinical Trial Applications**—◆Yan D. Zhao, Eli Lilly and Company; Alexei A. Dmitrienko, Eli Lilly and Company; Brian L. Wiens, Gilead Sciences, Inc.

MONDAY, AUGUST 3

Tours

TR05 - Welcome to Washington Tour
9:00 a.m.–1:00 p.m.

TR06 - The Kennedys: A Georgetown Walking Tour
9:00 a.m.–1:00 p.m.

TR07 - The Neighborhoods of Washington DC: Not Just the Nation's Capital City
2:00 p.m.–6:00 p.m.

TR08 - Monuments by Moonlight
8:00 p.m.–11:00 p.m.

Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. RH-Meeting Room 19
ASA Development Committee (closed)
Chair(s): Scott Evans, Harvard University

7:00 a.m.–8:30 a.m. RH-Meeting Room 17
Section on Statistical Graphics Business Meeting (closed)
Chair(s): Antony Unwin, Uni Augsburg

7:00 a.m.–8:30 a.m. RH-Meeting Room 18
Technometrics Management Committee Business Meeting (closed)
Chair(s): William Notz, Technometrics Management Committee

7:00 a.m.–8:30 a.m. RH-Meeting Room 4
SPAIG Committee Meeting (closed)
Chair(s): Jai Choi, Medical College of Georgia

7:00 a.m.–8:30 a.m. CC-303
ASA/SIAM Book Series Management Committee (closed)
Chair(s): Martha Aliaga, ASA

7:00 a.m.–8:30 a.m. RH-Meeting Room 5
Section on Statistical Education Executive Committee Meeting (closed)
Chair(s): Robert delMas, The University of Minnesota

7:00 a.m.–8:30 a.m. CC-302
Section on Statistics in Defense and National Security Executive Committee Business Meeting (closed)
Chair(s): Wendy Martinez, U.S. Department of Defense

7:00 a.m.–8:30 a.m. RH-Meeting Room 3
Committee on Statistics in Two-Year Colleges Meeting
Chair(s): Mary Sullivan, Rhode Island College

7:00 a.m.–8:30 a.m. RH-Congressional B
ASA Caucus of Academic Representatives Committee Meeting
Chair(s): Douglas Simpson, University of Illinois at Urbana-Champaign

7:00 a.m.–8:30 a.m. CC-205
Section on Health Policy Statistics Business Meeting
Chair(s): Bonnie Ghosh-Dastidar, RAND Corporation

7:00 a.m.–8:30 a.m. CC-157
Survey Review Committee Annual Meeting
Chair(s): Jonaki Bose, Substance Abuse & Mental Health Services Administration

7:00 a.m.–8:30 a.m. RH-Meeting Room 6
ASA Archives and Historical Materials Annual Committee Meeting
Chair(s): John Paul Deley, Energy Information Administration

7:00 a.m.–9:00 a.m. RH-Meeting Room 7
Social Statistics Section Executive Board Meeting
Chair(s): Allen Schirm, Mathematica Policy Research, Inc.

7:00 a.m.–6:00 p.m. CC-154A
Speaker Management Room

7:00 a.m.–10:00 p.m. CC-East Registration
Cyber Center

7:30 a.m.–8:30 a.m. CC-3rd Floor West Ear
Communications in Statistics Editorial Meeting (closed)
Organizer(s): Narayanaswamy Balakrishnan, McMaster University

7:30 a.m.–9:00 a.m. CC-210
Committee on Membership Retention and Recruitment Meeting (closed)
Chair(s): Mingxiu Hu, Millennium Pharmaceuticals/The Takeda Oncology Company

7:30 a.m.–9:00 a.m. CC-2nd Floor Overlook West
Carnegie Mellon Alumni and Faculty Breakfast
Chair(s): Margaret Smykla, Carnegie Mellon

7:30 a.m.–12:00 p.m. RH-Congressional A
Biopharmaceutical Section Executive Committee Meeting
Chair(s): Anna B. Nevius, FDA

JSM 2009

IMS

Presidential Address

When?
Monday,
August 3, 2009
8:00–9:30 PM

Where?
CC-Ballroom A

IMS President 2008–09, Nanny Wermuth, will deliver the 2009 Presidential Address, *"On the development of insight: some examples in the statistical sciences"*.

Nanny Wermuth

Also this evening:

- Presentation of the 2009 H.C. Carver Award Medal
- Presentation of New IMS Fellows
- Announcement of the 2010 Special Invited Lectures
- Announcement of Laha Award Recipients

Reception immediately following: everyone is welcome

JSM 2009

IMS

Welcome Reception

When?
Monday,
August 3, 2009
5:30–7:00 PM

Where?
CC-149A

Mixer for 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 done so yet, please come along to the reception where we will have application forms available, or you can join online at www.imstat.org

IMS members socializing in Singapore last year

IMS membership is FREE for students!

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

7:30 a.m.–6:00 p.m. CC-East Registration
ASA Membership/Special Assistance/Press Desk

7:30 a.m.–6:00 p.m. CC-East Registration
JSM Main Registration

8:00 a.m.–9:00 a.m. CC-2nd Floor Overlook East
COCGB ISEF Breakfast Meeting
Chair(s): Theresa Utlaut, Intel Corporation

8:00 a.m.–4:00 p.m. RH-Meeting Room 2
Statistics in Support of National Defense
Chair(s): Wendy Martinez, U.S. Department of Defense

8:00 a.m.–5:00 p.m. Off Property
Meeting Within a Meeting Statistics Workshop for K–12 Math and Science Teachers: K–4, 5–8, and 9–12 Strands (closed)
Chair(s): Martha Aliaga, ASA

8:00 a.m.–6:00 p.m. CC-Hall D
Career Placement Service

8:00 a.m.–6:00 p.m. CC-Hall D
Exhibitor Lounge

8:30 a.m.–10:30 a.m. RH-Congressional C
Advisory Committee on Continuing Education Business Meeting (closed)
Chair(s): Xiaoming Sheng, University of Utah

8:30 a.m.–4:30 p.m. Off Property
Beyond AP Statistics (BAPS) Workshop for Experienced Teachers (closed)
Chair(s): Roxy Peck, Cal Poly

9:00 a.m.–10:00 a.m. CC-2nd Floor Overlook East
COCGB Planning Meeting
Chair(s): John Hall, Mathematica Policy Research, Inc.

9:00 a.m.–10:00 a.m. RH-Meeting Room 3
Transportation Statistics Interest Group Annual Meeting
Chair(s): Promod Chandhok, U.S. Department of Transportation

9:00 a.m.–5:30 p.m. CC-East Registration
ASA Marketplace

9:00 a.m.–6:00 p.m. CC-Hall D
EXPO 2009

9:00 a.m.–6:00 p.m. CC-Hall D
American Statistical Association Booth #101

9:00 a.m.–7:00 p.m. CC-154A
Speaker Management Room

10:00 a.m.–11:30 a.m. RH-Congressional B
ASA Caucus of Academic Representatives Meeting
Chair(s): Douglas Simpson, University of Illinois at Urbana-Champaign

10:00 a.m.–12:00 p.m. CC-205
COCGB Executive Committee Meeting (Closed)
Chair(s): John Hall, Mathematica Policy Research, Inc.

10:00 a.m.–12:00 p.m. CC-2nd Floor Overlook West
COCGB Status Committee Meeting (closed)
Chair(s): John Boyer, Chair

10:30 a.m.–2:00 p.m. CC-302
JSM 2010 Program Committee Meeting (closed)
Chair(s): Xuming He, University of Illinois at Urbana-Champaign

12:00 p.m.–1:45 p.m. RH-Meeting Room 18
ASA-Pfizer-University of Connecticut Lunch Meeting: Filming of Distinguished Statisticians
Organizer(s): Nitis Mukhopadhyay, University of Connecticut

12:00 p.m.–2:00 p.m. CC-303
JCGS Editors' Lunch
Chair(s): Janet Wallace, JCGS Editorial Coordinator; David A. van Dyk, University of California, Irvine

12:00 p.m.–2:00 p.m. CC-210
Interface Board Meeting (closed)
Organizer(s): David Marchette, Naval Surface Warfare Center

12:00 p.m.–5:30 p.m. CC-2nd Floor Overlook East
COCGB Status Committee Meeting (Closed)

12:30 p.m.–2:00 p.m. RH-Meeting Room 7
Committee on Gay and Lesbian Concerns in Statistics Business Meeting
Chair(s): Barry Johnson, Statistics of Income, IRS

12:30 p.m.–2:00 p.m. RH-Meeting Room 3
IMS Editors' Luncheon
Organizer(s): Elyse Gustafson, IMS Executive Director; J. Michael Steele, IMS President; Nanny Wermuth, IMS President

12:30 p.m.–2:00 p.m. RH-Meeting Room 4
Statistics in Medicine Editorial Board Meeting (closed)
Organizer(s): Ralph B. D'Agostino, Sr., Boston University

12:30 p.m.–2:00 p.m. RH-Meeting Room 6
Section on Statistical Computing Executive Committee Meeting (closed)
Chair(s): Jose C. Pinheiro, Novartis Pharmaceuticals

2:00 p.m.–4:00 p.m. CC-157
Finance Committee Meeting (closed)
Chair(s): J. Keith Ord, Georgetown University

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

3:00 p.m.–5:00 p.m. RH-Meeting Room 3
CAUSE Activists Meeting
Organizer(s): Dennis Pearl, The Ohio State University

3:00 p.m.–6:00 p.m. CC-301
Section on Government Statistics Executive Board Meeting (closed)
Chair(s): Robert Lussier, Statistics Canada

4:00 p.m.–5:00 p.m. RH-Meeting Room 4
Joint ASA-MAA Committee
Chair(s): Julie Legler, St. Olaf College

4:00 p.m.–5:30 p.m. RH-Meeting Room 19
Section on Statistics and Environment Executive Committee Meeting
Chair(s): Gretchen Moisen, ENVR Chair

4:30 p.m.–6:00 p.m. CC-303
Section on Nonparametric Statistics Executive Committee Meeting (closed)
Chair(s): Doug Wolfe, The Ohio State University

5:00 p.m.–6:00 p.m. CC-141
Journal of Quality Technology Editorial Review Board Meeting (closed)
Organizer(s): Daniel Apley, Northwestern University

5:00 p.m.–6:00 p.m. CC-143A
SIGMEDD Annual Meeting
Chair(s): Greg Campbell, Division of Biostatistics CDRH US FDA

5:00 p.m.–6:30 p.m. CC-101
Section on Statistics in Sports Business Meeting
Chair(s): Gilbert Fellingham, Brigham Young University

5:00 p.m.–6:30 p.m. RH-Meeting Room 5
CDC & ATSDR Statisticians Business Meeting

5:00 p.m.–6:30 p.m. RH-Meeting Room 7
Committee on Student Pro Bono Statistics Business Meeting
Chair(s): Andrea Rau, Purdue University

5:00 p.m.–7:00 p.m. CC-201
NISS/SAMSI Reception

5:00 p.m.–7:00 p.m. CC-209C
Statistical Society of Canada Reception
Organizer(s): Bovas Abraham, University of Waterloo

5:00 p.m.–7:00 p.m. CC-204A
RTI Reception (closed) (Hosted by Sally Morton)
Organizer(s): Paula Sable, RTI International

5:00 p.m.–7:00 p.m. CC-208B
CAUSE Activists Meeting
Chair(s): Dennis Pearl, The Ohio State University; Dennis Pearl, The Ohio State University

5:00 p.m.–7:30 p.m. RH-Meeting Room 17
Committee on Statistics and Disability Annual Meeting
Chair(s): Joan L. Turek, U.S. Department of Health and Human Services

5:00 p.m.–8:00 p.m. CC-202A
Texas A&M University Department of Statistics Aggie Reunion (closed)
Organizer(s): Simon Sheather, Professor and Head of Statistics

5:30 p.m.–6:30 p.m. CC-142
Russian and ex-USSR Statisticians Mixer
Organizer(s): Stanislav Kolenikov, University of Missouri-Columbia

5:30 p.m.–6:30 p.m. CC-3rd Floor East Ear
Caucus for Women in Statistics Business Meeting and Reception
Organizer(s): Marcia Ciol, University of Washington

5:30 p.m.–7:00 p.m. CC-157
Section on Statistics in Epidemiology Executive Committee Meeting (closed)
Chair(s): Philip Rosenberg, National Cancer Insitute; Philip Rosenberg, National Cancer Institute

5:30 p.m.–7:00 p.m. CC-144C
International Indian Statistical Association Mixer and Reception
Organizer(s): Subir Ghosh, University of California, Riverside

5:30 p.m.–7:00 p.m. CC-3rd Floor West Ear
University of Georgia Reception for Alumni and Friends
Organizer(s): John Stufken, The University of Georgia

5:30 p.m.–7:00 p.m. CC-205
Section on Teaching of Statistics in the Health Sciences Business Committee Meeting and Mixer
Chair(s): Patrick Arbogast, Vanderbilt University

5:30 p.m.–7:00 p.m. CC-209A
The University of North Carolina at Chapel Hill Department of Biostatistics and Statistics and Operations Research Alumni Reception
Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill

5:30 p.m.–7:00 p.m. RH-Meeting Room 6
Biometrics Section Mixer and Business Meeting
Chair(s): Daniel Heitjan, University of Pennsylvania

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

5:30 p.m.–7:00 p.m. CC-149A
IMS New Member and Student Welcome Reception
Organizer(s): Elyse Gustafson, IMS Executive Director; J. Michael Steele, IMS President; Nanny Wermuth, IMS President

5:30 p.m.–7:00 p.m. RH-Meeting Room 18
Strategic Planning Meeting
Chair(s): Martha Gardner, General Electric Global Research

5:30 p.m.–7:30 p.m. CC-302
Social Statistics Section Business Meeting
Chair(s): Allen Schirm, Mathematica Policy Research, Inc.

5:30 p.m.–8:30 p.m. RFD Washington, 810 7th St. NW
Section on Health Policy Statistics Business Meeting and Mixer
Chair(s): Susan Paddock, RAND Corporation

6:00 p.m.–7:00 p.m. RH-Suite 1240
ASA President's Invited Speaker Reception (by invitation only)
Chair(s): Sally C. Morton, RTI International

6:00 p.m.–7:30 p.m. RH-Meeting Rooms 12, 13, 14
Korean Statisticians Annual Meeting
Organizer(s): Sin-Ho Jung, Duke University

6:00 p.m.–7:30 p.m. RH-Meeting Room 4
Section on Statistics and the Environment Business Meeting and Mixer
Chair(s): Gretchen Moisen, U.S. Forest Service

6:00 p.m.–7:30 p.m. CC-153
Christian Statisticians' Informal Discussion Group
Organizer(s): James Ward, Sand Point Statistics Group

6:00 p.m.–8:00 p.m. CC-210
Section on Survey Research Methods Executive Committee Meeting
Chair(s): Roderick J.A. Little, University of Michigan

6:00 p.m.–8:00 p.m. RH-Grand Ballroom Central
JSM Student Mixer
Chair(s): Mingxiu Hu, Millennium Pharmaceuticals/The Takeda Oncology Company

6:00 p.m.–8:00 p.m. RH-Meeting Room 3
University of Washington Biostatistics-Statistics Alumni Reception (closed)
Organizer(s): Andrew Zhou, University of Washington Department of Biostatistics

6:00 p.m.–8:00 p.m. CC-2nd Floor Overlook West
Joint Section on Risk Analysis and Statistics in Defense and National Security Meeting and Mixer
Chair(s): Wendy Martinez, U.S. Department of Defense; A. John Bailer, Miami University

6:00 p.m.–9:00 p.m. RH-Meeting Room 16
Eli Lilly Faculty Reception (closed)
Organizer(s): Todd Sanger, Corporate Sponsor; Valerie Ghoston, Eli Lilly

6:00 p.m.–9:00 p.m. Off Property
Pomona College/Claremont Colleges Alumni Dinner
Organizer(s): Donald L. Bentley, Pomona College

6:30 p.m.–7:30 p.m. RH-Grand Ballroom North
ASA Longtime Member Reception
Chair(s): Mingxiu Hu, Millennium Pharmaceuticals/The Takeda Oncology Company

6:30 p.m.–8:00 p.m. CC-202B
CRC Press Reception (closed)
Organizer(s): Nadja English, Chapman & Hall/CRC Press

6:30 p.m.–8:00 p.m. CC-2nd Floor Overlook East
AAAS S&T Policy Fellowships: How to Become a Policy-Savvy Scientist
Organizer(s): Dan Poux, AAAS

7:00 p.m.–8:00 p.m. RH-Meeting Room 7
International Indian Statistical Association Executive Board Meeting (closed)
Organizer(s): Subir Ghosh, University of California, Riverside

7:00 p.m.–9:00 p.m. RH-Meeting Room 2
Southern Methodist University Alumni Social Gathering
Organizer(s): Wayne Woodward, Department of Statistical Science

7:30 p.m.–10:00 p.m. RH-Renaissance Ballroom West B
Joint Statistical Computing Section and Section on Statistical Graphics Meeting and Mixer
Chair(s): Antony Unwin, Uni Augsburg; Jose C. Pinheiro, Novartis Pharmaceuticals

9:30 p.m.–11:00 p.m. CC-Ballroom South Prefunction
IMS Presidential Address Reception
Organizer(s): Elyse Gustafson, IMS Executive Director; J. Michael Steele, IMS President; Nanny Wermuth, IMS President

Continuing Education (Fee Events)

CE_14C
Methodology for Competing Outcomes: The Analysis of Multiple Mutually Exclusive Endpoints in a Clinical Trial
8:00 a.m.–12:00 p.m. RH-Meeting Rooms 12,13,14
ASA, Biometrics Section
Instructor(s): David C. Naftel, The University of Alabama at Birmingham

CE_15C
Optimum Experimental Designs
8:30 a.m.–5:00 p.m. RH-Meeting Room 15
ASA
Instructor(s): Anthony Atkinson, London School of Economics; Randall Tobias, SAS Institute Inc.

CE_16C
Dose-Finding Studies: Methods and Implementation
8:30 a.m.–5:00 p.m. RH-Renaissance Ballroom West A
ASA, Biopharmaceutical Section
Instructor(s): Frank Bretz, Norvartis, Switzerland; Jose C. Pinheiro, Novartis Pharmaceuticals

CE_17C
Bayesian Inference
8:30 a.m.–5:00 p.m. RH-Meeting Room 16
ASA, Section on Bayesian Statistical Science
Instructor(s): Bruno Sanso, University of California, Santa Cruz

CE_18C
Experiences and Pitfalls in Reliability Data Analysis and Test Planning
8:30 a.m.–5:00 p.m. RH-Meeting Rooms 10 & 11
ASA, Section on Physical and Engineering Sciences
Instructor(s): William Q. Meeker, Iowa State University

CE_19C
Methods for Designing and Analyzing Mixture Experiments
8:30 a.m.–5:00 p.m. RH-Meeting Rooms 8 & 9
ASA, Section on Physical and Engineering Sciences
Instructor(s): John A. Cornell, University of Florida; Greg Piepel, Pacific Northwest National Laboratory

CE_20C
Multiple Imputation of Missing Data
8:30 a.m.–5:00 p.m. RH-Renaissance Ballroom West B
ASA
Instructor(s): Paul D. Allison, University of Pennsylvania

CE_21C
Evaluating Probability of Success for Internal Decisionmaking in Early Drug Development
1:00 p.m.–5:00 p.m. RH-Meeting Rooms 12,13,14
ASA, Biopharmaceutical Section
Instructor(s): Martin King, Abbott Laboratories; Narinder Nangia, Abbott Laboratories; Jane Qian, Abbott Laboratories

Roundtables with Coffee 7:00 a.m.–8:15 a.m.

80 CC-Ballroom South Prefunction
Section for Statistical Programmers and Analysts Roundtables with Coffee (fee event)
Section for Statistical Programmers and Analysts
Organizer(s): Chengying Wu, sanofi-aventis

ML01 Improving Health Care Using Data Standards—◆Scott Moseley, Vertex Pharmaceuticals, Inc.

ML02 Publishing an R Package—◆Jason Wilson, Biola University

81 CC-Ballroom South Prefunction
Section on Government Statistics Roundtable with Coffee (fee event)
Section on Government Statistics
Organizer(s): Lisa Blumerman, U.S. Census Bureau

ML03 Managing Surveys in a Disrupted Environment—◆Carol House, National Agricultural Statistics Service

82 CC-Ballroom South Prefunction
Section on Health Policy Statistics Roundtable with Coffee (fee event)
Section on Health Policy Statistics
Organizer(s): Susan Paddock, RAND Corporation

ML04 Challenges in Applying Regression Methods to Preference-Scored Indexes of HRQoL—◆Mari Palta, University of Wisconsin-Madison

83 CC-Ballroom South Prefunction
Section on Statistics in Epidemiology Roundtable with Coffee (fee event)
Section on Statistics in Epidemiology
Organizer(s): Ruth Pfeiffer, National Cancer Institute

ML05 New Methods and Resources for Gerontologic Biostatisticians—◆Peter H. Van Ness, Yale University

84 CC-Ballroom South Prefunction

Section on Statistical Education Roundtable with Coffee (fee event)

Section on Statistical Education

Organizer(s): Tisha L. Hooks, Winona State University

ML06 **Implementing GAISE in Large Classes of Introductory Statistics**—◆Patti B. Collings, Brigham Young University

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

85 CC-202A

Introductory Overview Lecture: Spatial Data Analysis—Other

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

Organizer(s): Wendy Martinez, U.S. Department of Defense

Chair(s): Petrutza Caragea, Iowa State University

8:35 a.m. **Spatial Statistical Thinking**—◆Noel A. Cressie, The Ohio State University

10:00 a.m. **Floor Discussion**

Invited Sessions 8:30 a.m.–10:20 a.m.

86 CC-208A

■ ✪ Statistical Techniques for Estimating DSGE Models and Macroeconomic Policy Analysis—Invited

Business and Economic Statistics Section, Section on Government Statistics

Organizer(s): Atsushi Inoue, North Carolina State University

Chair(s): Barbara Rossi, Duke University

8:35 a.m. **Testing for Identification in Possibly Nonlinear Models**—◆Atsushi Inoue, North Carolina State University; Barbara Rossi, Duke University

9:00 a.m. **DSGE Model-Based Forecasting of Nonmodeled Variables**—◆Frank Schorfheide, University of Pennsylvania; Keith Sill, Federal Reserve Bank of Philadelphia

9:25 a.m. **Statistical Techniques for Estimating DSGE Models and Macroeconomic Policy Analysis**—◆Christopher Otrok, University of Virginia; Eric Young, University of Virginia

9:50 a.m. **Pitfalls in Estimating Asymmetric Effects of Energy Price Shocks**—◆Lutz Kilian, University of Michigan

10:15 a.m. **Floor Discussion**

87 CC-201

Statistics in BioSciences: The ICSA New Journal—Invited

International Chinese Statistical Association

Organizer(s): Xihong Lin, Harvard School of Public Health; Kuang-Kuo (Gordon) Lan, Johnson & Johnson PRD

Chair(s): Xihong Lin, Harvard School of Public Health

8:35 a.m. **Elucidation of Clinical Trial Intervention Effects Using Genomic and Proteomic Discovery Platforms**—◆Ross L. Prentice, Fred Hutchinson Cancer Research Center/University of Washington

9:05 a.m. **Hierarchical Functional Data: Semiparametric and Nonparametric Methods for Modeling Functional Dependence with Application to Colonic Crypt Signaling**—◆Raymond J. Carroll, Texas A&M University

9:35 a.m. **Predicting Future Outcomes via Empirical, Possibly Misspecified Regression Models**—◆Lee-Jen Wei, Harvard University

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

88 CC-202B

■ ✪ Professional Statistics and Graphics with Spreadsheets Using the RExcel Interface

Interface—Invited

General Methodology, Section on Statistical Graphics, Interface Foundation of North America

Organizer(s): Naomi B. Robbins, NBR Graphs; Richard M. Heiberger, Temple University

Chair(s): Naomi B. Robbins, NBR Graphs

8:35 a.m. **RExcel in Introductory and Advanced Statistics Courses**—◆Richard M. Heiberger, Temple University

9:05 a.m. **RExcel: Powerful Statistics Within an Office Software Environment**—◆Erich Neuwirth, University of Vienna

9:35 a.m. **R and Excel in Industrial and Consulting Environments**—◆Christian Ritter, Université catholique de Louvain

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

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89 CC-101

■ ✪ Advancing Health Outcomes Measurement: The NIH Patient-Reported Outcomes Measurement Information System (PROMIS)—Invited

Section on Health Policy Statistics, Social Statistics Section, Biopharmaceutical Section, Section on Government Statistics

Organizer(s): Bryce B. Reeve, National Cancer Institute
Chair(s): James O'Malley, Harvard Medical School

8:35 a.m. **Advancing Health Outcomes Measurement: The NIH Patient-Reported Outcomes Measurement Information System (PROMIS)**—◆Bryce B. Reeve, National Cancer Institute

9:00 a.m. **Challenges and Advantages for PROMIS Instruments for Clinical Studies**—◆Dennis A. Revicki, United BioSource Corporation

9:25 a.m. **Psychometric Evaluation of PROMIS: IRT Calibration, DIF, Scaling, and Validity**—◆Wen-Hung Chen, United BioSource Corporation; Ron D. Hays, University of California, Los Angeles; Bryce B. Reeve, National Cancer Institute

9:50 a.m. Disc: Steven B. Clauser, National Cancer Institute

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

90 CC-102B

■ ✪ O' Privacy, Where Art Thou? Mapping the Landscape of Data Confidentiality—Invited

Social Statistics Section, Committee on Privacy and Confidentiality, Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Aleksandra B. Slavkovic, Penn State University; Adam D. Smith, Penn State University
Chair(s): Aleksandra B. Slavkovic, Penn State University

8:35 a.m. **Rethinking Privacy and Disclosure Limitation from a Cryptographic Perspective**—◆Cynthia Dwork, Microsoft Research

9:00 a.m. **Rethinking the Risk-Utility Tradeoff Approach to Statistical Disclosure Limitation**—◆Stephen Fienberg, Carnegie Mellon University

9:25 a.m. **Rethinking Official Statistical Disclosure Limitation Procedures from a Cryptographic Privacy Perspective**—◆John M. Abowd, Cornell University

9:50 a.m. Disc: Laura Zayatz, U.S. Census Bureau

10:00 a.m. Disc: Marilyn Seastrom, National Center for Education Statistics

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

91 CC-144B

■ ✪ Statistical Approaches for Studying Synergism of Genes and Environment in Epidemiologic Studies—Invited

Section on Statistics in Epidemiology, Section on Bayesian Statistical Science, International Indian Statistical Association

Organizer(s): Brisa Sanchez, University of Michigan
Chair(s): Brisa Sanchez, University of Michigan

8:35 a.m. **The Impact of the Winner's Curse on Parameter Estimation and False Positive Rates in Studies Involving Environmental Exposure Data**—◆Sebastian Zöllner, University of Michigan

9:00 a.m. **Using Nuclear Families to Study Haplotype-by-Environment Interaction**—◆Clarice R. Weinberg, National Institute of Environmental Health Sciences; Min Shi, National Institute of Environmental Health Sciences; David Umbach, National Institute of Environmental Health Sciences

9:25 a.m. **Detecting Gene-Gene Interactions Using Genome-Wide Association Studies in Presence of Population Stratification**—Samsiddhi Bhattacharjee, National Cancer Institute; ◆Nilanjan Chatterjee, National Cancer Institute

9:50 a.m. **Bayesian Methods for Two-Phase Studies of Gene-Environment Interaction**—◆Bhramar Mukherjee, University of Michigan

10:15 a.m. **Floor Discussion**

92 CC-159A

From Climate to Weather: Regionalizing Climate Models—Invited

Section on Statistics and the Environment, Section on Bayesian Statistical Science

Organizer(s): Mark S. Kaiser, Iowa State University
Chair(s): Stephan R. Sain, National Center for Atmospheric Research

8:35 a.m. **Combining Ensembles of Regional Climate Model Output Using Markov Random Field Models**—◆Reinhard Furrer, Colorado School of Mines

9:00 a.m. **Modeling of Precipitation Extremes from Regional Climate Models**—◆Daniel Cooley, Colorado State University; Stephan R. Sain, National Center for Atmospheric Research

9:25 a.m. **Spatial Latent Variable Modeling for Integrating Output from Multiple Climate Models**—◆William F. Christensen, Brigham Young University; Stephan R. Sain, National Center for Atmospheric Research

9:50 a.m. **Statistical Issues in Regionalization of Climate Models**—◆Mark S. Kaiser, Iowa State University; Gene Takle, Iowa State University

10:15 a.m. **Floor Discussion**

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The SSC invites you all to a

RECEPTION

Monday, August 3, 5-7 pm
Lundi 3 août, 17-19 h

La SSC vous y convie tous !

Room 209C
Walter E. Washington
Convention Center

93 CC-204B
Threshold Estimation—Invited
IMS
Organizer(s): Moulinath Banerjee, University of Michigan
Chair(s): Moulinath Banerjee, University of Michigan

8:35 a.m. **Detecting Streaming Motion in Dwarf Spheroidal Galaxies Using Threshold Models**—◆Bodhisattva Sen, Columbia University

9:00 a.m. **Asymptotics of Change-Point--Type Parameter Estimates Under a Changing Sequence of Sampling Distributions**—◆Rui Song, Colorado State University; Moulinath Banerjee, University of Michigan; Michael Kosorok, The University of North Carolina at Chapel Hill

9:25 a.m. **Two Approaches to Thresholding in Functional Neuroimaging**—◆Jonathan Taylor, Stanford University

9:50 a.m. **Tests and Estimates for the Magnitude of Threshold Effects**—◆David Siegmund, Stanford University

10:15 a.m. **Floor Discussion**

94 CC-209B
Semiparametric Model Estimation and Selection—Invited
IMS, International Chinese Statistical Association, International Chinese Statistical Association
Organizer(s): Guang Cheng, Purdue University
Chair(s): Guang Cheng, Purdue University

8:35 a.m. **Large-Sample Theory for Penalized Splines**—◆David Ruppert, Cornell University

9:05 a.m. **Variable Selection for Partially Linear Models with Measurement Errors**—◆Runze Li, Penn State University

9:35 a.m. **On Varying Coefficient Models Stratified by a Functional Covariate**—◆Jianhua Huang, Texas A&M University

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

95 CC-207A
IMS Medallion Lecture II—Invited
IMS, Section on Bayesian Statistical Science
Organizer(s): Xiaotong Shen, The University of Minnesota
Chair(s): Marina Meila, University of Washington

8:35 a.m. **From R. A. Fisher to Microarrays: Why 70-Year-Old Theory Is Relevant Today**—◆George Casella, University of Florida

10:00 a.m. **Floor Discussion**

96 CC-144A
■ ✪ Continued Use of Family Data in Statistical Genetics—Invited
ENAR, Section on Statistics in Epidemiology
Organizer(s): Rui Feng, University of Pennsylvania
Chair(s): Hemant Tiwari, The University of Alabama at Birmingham

8:35 a.m. **An Association Test for Multiple Traits**—◆Heping Zhang, Yale University; Ching-Ti Liu, Boston University; Xueqin Wang, Sun-Yat Sen University; Wensheng Zhu, Yale University

9:00 a.m. **Screening and Replication Using the Same Data Set: Testing Strategies for Family-Based Studies in Which All Probands Are Affected**—◆Christophe Lange, Harvard University

9:25 a.m. **A Weighted Family-Based Genome-Wide Association Strategy**—◆Matthew B. McQueen, University of Colorado

9:50 a.m. **Are Pedigree Data Necessary and Critical in Modern Genomic Studies?**—Robert C. Elston, Case Western Reserve University; ◆Kathleen R. Merikangas, National Institutes of Health

10:15 a.m. **Floor Discussion**

Invited Panels 8:30 a.m.–10:20 a.m.

97 CC-206
■ ✪ Real-Life Ethical Dilemmas Encountered in the Practice of Statistics: Resolution Leading to Policy Change—Invited
Committee on Professional Ethics, Section on Survey Research Methods, Social Statistics Section, Section on Government Statistics
Organizer(s): Donald L. Bentley, Pomona College; Shelley Hurwitz, Harvard Medical School/Brigham and Women's Hospital
Chair(s): Shelley Hurwitz, Harvard Medical School/Brigham and Women's Hospital

Panelists: ◆Peter B. Imrey, Cleveland Clinic Foundation
◆Mark G. Haug, The University of Kansas
◆Barbara A. Bailar, NORC at the University of Chicago
◆Ingram Olkin, Stanford University

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

98 CC-207B

Statistics Groups in Industry: Rise, Decline, and Improvement—Invited

Section on Quality and Productivity

Organizer(s): Donald McCormack, SAS Institute Inc.

Chair(s): Donald McCormack, SAS Institute Inc.

Panelists: ◆Lynne Hare, Consultant
◆Roger Hoerl, General Electric
◆William Kahn, Travelers Insurance
◆Charles Taylor, Procter & Gamble
◆Jose G. Ramirez, W.L. Gore and Associates, Inc.

10:15 a.m. Floor Discussion

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

99 CC-142

Novel Applications of Linear Models in Surveys—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Roderick J.A. Little, University of Michigan

Chair(s): Roderick J.A. Little, University of Michigan

8:35 a.m. **Ratio Estimation of the Mean with Unequal Probability Samples: Hansen, Madow, and Tepping Revisited**—◆Fotios Kokkotos, Trinity Partners LLC; Roderick J.A. Little, University of Michigan

8:55 a.m. **Modified Ratio Estimators in Simple Random Sampling**—◆Evrim Oral, Louisiana State University Health Sciences Center; Cem Kadilar, Hacettepe University

9:15 a.m. **Probability Sample Designs That Impose Linear Models on Sample Data and Provide Best Linear Unbiased Estimators**—◆Stephen Woodruff, Specified Designs

9:35 a.m. **Model-Based Approach to Small Area Estimation of Disability Count and Rate Using Data from the 2006 Participation and Activity Limitation Survey**—◆Valerie Bizier, Statistics Canada

9:55 a.m. **Some Methods of Model-Based Sampling**—◆Sung-Joon Hong, Dongguk University; So-Hyung Park, Dongguk University; Sun-Woong Kim, Dongguk University; Hong-Yup Ahn, Dongguk University; Steven G. Heeringa, University of Michigan

10:15 a.m. Floor Discussion

100 CC-158A

■ Student Paper Competition: Bayesian Inference/Modeling for Non-Gaussian Data—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Michael J. Daniels, University of Florida

Chair(s): Timothy D. Johnson, University of Michigan

8:35 a.m. **Bayesian Modeling of Non-Gaussian Geostatistical Data via Copulas**—◆Souparno Ghosh, Texas A&M University; Bani K. Mallick, Texas A&M University

8:55 a.m. **Bayesian Inference for the Stereotype Regression Model: Application to a Case-Control Study of Prostate Cancer**—◆Jaeil Ahn, University of Michigan; Bhramar Mukherjee, University of Michigan

9:15 a.m. **Robust Bayesian Sample Size Determination for a Binomial Proportion with Application to the Design of Phase II Cancer Clinical Trials**—◆Ming Yang, The University of Iowa

9:35 a.m. **A Generalized Skewed Model for Binary Response Data**—◆Xia Wang, University of Connecticut; Dipak K. Dey, University of Connecticut

9:55 a.m. **A Full Gibbs Sampler for a Multinomial Probit Model with Endogeneity**—◆Lane Burgette, University of Wisconsin-Madison; Erik Nordheim, University of Wisconsin-Madison

10:15 a.m. Floor Discussion

101 CC-144C

■ Inferring Connectivity in the Human Brain—Topic-Contributed

Biometrics Section

Organizer(s): Philip T. Reiss, New York University

Chair(s): Hernando Ombao, Brown University

8:35 a.m. **Modeling Brain Pathways Using Functional Path Analysis**—◆Martin Lindquist, Columbia University

8:55 a.m. **Shrinkage Estimation and Inferential Procedures for Functional Connectivity**—◆Mark Fiecas, Brown University; Hernando Ombao, Brown University; Crystal Linkletter, Brown University; Wesley K. Thompson, University of California, San Diego; Jerome Sanes, Brown University

9:15 a.m. **Permutation Tests for Differential Functional Connectivity**—◆Philip T. Reiss, New York University; Eva Petkova, New York University; Zarrar Shehzad, University of California, Los Angeles; Michael P. Milham, New York University; M.H. Henry Stevens, Miami University

9:35 a.m. **Multiscale Adaptive GEE Methods for Longitudinal Imaging Data**—◆Yimei Li, The University of North Carolina at Chapel Hill; Hongtu Zhu, The University of North Carolina at Chapel Hill; Joseph G. Ibrahim, The University of North Carolina at Chapel Hill; Dinggang Shen, The University of North Carolina at Chapel Hill

9:55 a.m. **Network Analysis on Resting-State fMRI**—◆Sang-Han Lee, Nathan S. Kline Institute for Psychiatric Research; Johan Lim, Seoul National University

10:15 a.m. **Floor Discussion**

102 CC-150B

■ Modeling of Multicenter Trials: Recruitment and Drug Supply—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Vladimir V. Anisimov, GlaxoSmithKline
Chair(s): Valerii Federov, GlaxoSmithKline

8:35 a.m. **Interim Enrollment Adjustment**—◆Valerii V. Fedorov, GlaxoSmithKline; Frank Mannino, GlaxoSmithKline

8:55 a.m. **Predictive Modeling of Recruitment and Drug Supply in Multicenter Trials**—◆Vladimir V. Anisimov, GlaxoSmithKline

9:15 a.m. **Simulating Drug Supply for Adaptive Trials**—◆Nitin R. Patel, Cytel, Inc.

9:35 a.m. **Simulating Clinical Trials in Order to Optimize the Drug Supply**—◆Tom Parke, Tessella

9:55 a.m. **A New Framework for Building an Optimal Clinical Trial Supply Chain**—◆Cosimo Spera, DecisionView

10:15 a.m. **Floor Discussion**

103 CC-149A

■ Postmarket Issues in Medical Devices—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Vandana Mukhi, FDA
Chair(s): Vandana Mukhi, FDA

8:35 a.m. **Reporting of a Standardized Incidence Rate for Recurrent Adverse Events**—◆John C. Evans, Boston Scientific Corporation; Wen Ding, Boston Scientific Corporation; Jian Huang, Boston Scientific Corporation; Vivek Pradhan, Boston Scientific Corporation

8:55 a.m. **Statistical Practice and Post-Market Trials/Databases: Some Perspectives**—◆Gosford A. Sawyerr, Purdue Pharma, LP

9:15 a.m. **Performance Characteristic of a Confidence Interval Approach for Safety Data Monitoring**—◆Huyuan Yang, Boston Scientific Corporation; Haiying Lin, Boston Scientific Corporation; Hiroshi Fujimoto, Boston Scientific Japan K.K

9:35 a.m. **Can We Combine Multiple Condition of Approval Studies?**—◆Shelby Li, Medtronic, Inc.; An Liu, Medtronic, Inc.; Hongyan Qiao, Medtronic, Inc.; Scott McRae, Medtronic, Inc.

9:55 a.m. Disc: Ning Li, FDA

10:15 a.m. **Floor Discussion**

104 CC-208B

Revisions and Regression Effects in Official Time Series—Topic-Contributed

Business and Economic Statistics Section, Section on Government Statistics

Organizer(s): Tucker S. McElroy, U.S. Census Bureau
Chair(s): Peter B. Kenny, PBK Research

8:35 a.m. **A Review of Revisions**—◆Gary Brown, Office for National Statistics; Tullio Buccellato, Office for National Statistics; Nigel Stuttard, Office for National Statistics; Robin Youll, Office for National Statistics

8:55 a.m. **Revision Analysis of Key Economic Indicators: A Comparison Between Euro Area and US Data**—◆Dominique Ladiray, Insee; Gian Luigi Mazzi, Eurostat

9:15 a.m. **Sources of Revisions of Seasonally Adjusted Real-Time Data**—◆Jens Mehrhoff, Deutsche Bundesbank

9:35 a.m. **Investigating Quarterly Trading Day Effects**—◆Kathleen M. McDonald-Johnson, U.S. Census Bureau; David Findley, U.S. Census Bureau; Erica Cepietz, U.S. Census Bureau

9:55 a.m. **Comparison of X-12-ARIMA Trading Day and Holiday Regressors with Country-Specific Regressors**—◆Christopher Roberts, University of Missouri-Columbia; Scott Holan, University of Missouri-Columbia; Brian C. Monsell, U.S. Census Bureau

10:15 a.m. **Floor Discussion**

105 CC-158B

■ ✪ Recent Developments of Bayesian Methods for Missing Data—Topic-Contributed

Section on Bayesian Statistical Science, Biometrics Section, Biopharmaceutical Section

Organizer(s): Ming-Hui Chen, University of Connecticut
Chair(s): Lan Huang, National Cancer Institute

8:35 a.m. **Bayesian Variable Selection Methods Applied to Traffic Fatality Data**—◆Gail Blattenberger, The University of Utah; Richard Fowles, The University of Utah; Peter Loeb, Rutgers University

8:55 a.m. **Learning Bayesian Networks for Discrete Data**—◆Faming Liang, Texas A&M University; Jian Zhang, The University of York

9:15 a.m. **Bayesian Analysis of Spatially Correlated and Repeated Ordinal Response Data with Time-Dependent Missing Covariates**—◆Fang Yu, University of Nebraska Medical Center; Ming-Hui Chen, University of Connecticut; Sudipto Banerjee, The University of Minnesota; Lan Huang, National Cancer Institute; Gregory J. Anderson, University of Connecticut

9:35 a.m. **Bayesian Choice of Links and Computation in Binary Regression Models**—◆Ming-Hui Chen, University of Connecticut; Sungduk Kim, National Institute of Child Health and Human Development; Lynn Kuo, University of Connecticut; Wangang Xie, University of Connecticut

9:55 a.m. **Variable Selection in Joint Model: A Semiparametric Bayesian Approach**—◆Pulak Ghosh, Novartis Pharmaceuticals; Bo Cai, University of South Carolina; Nicole Lazar, The University of Georgia

10:15 a.m. **Floor Discussion**

106 CC-204C

■ ✪ Longitudinal Individual Income Tax Return Sample Design and Analysis and Other Individual Income Tax Return Research—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Michael Weber, IRS
Chair(s): Thomas Petska, IRS

8:35 a.m. **Redesign of SOI's Individual Income Tax Return Edited Panel Sample**—Yan K. Liu, IRS; Gerald Auten, U.S. Department of the Treasury; Michael Strudler, IRS; ◆Valerie Testa, IRS

8:55 a.m. **Can Taxpayer Characteristics Determine the Possibility of Filing Future Tax Returns?**—◆Victoria Bryant, IRS

9:15 a.m. **Analysis of the Distributions of Income, Taxes, and Horizontal and Vertical Equity Using Cross-Section and Panel Data from Individual Tax Returns**—◆Michael Strudler, IRS; Thomas Petska, IRS; Ryan Petska, Ernst and Young LLP

9:35 a.m. **Getting to Know US Taxpayers: Selected Tax Data by Occupation and Industry, Tax Years 2003--2005**—◆Mary Jezek, IRS; Terry Nuriddin, IRS; Mario Fernandez, IRS

9:55 a.m. **Using Sample Data to Reduce Nonsampling Error in Small-Area Estimation**—◆Jana Scali, IRS; Kimberly Henry, IRS; Parthasarathi Lahiri, University of Maryland

10:15 a.m. **Floor Discussion**

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

107 CC-204A

■ Promoting Statistics Education Research—Topic-Contributed

Section on Statistical Education

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

Panelists: ◆Beth Chance, Cal Poly
◆Dennis Pearl, The Ohio State University
◆Pam Arroway, North Carolina State University
◆Sterling Hilton, Brigham Young University

10:15 a.m. **Floor Discussion**

108 CC-143B

■ ✪ Model versus Randomization-Based Inference from Group Randomized Trials—Topic-Contributed

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

Organizer(s): David R. Judkins, Westat, Inc.
Chair(s): David R. Judkins, Westat, Inc.

Panelists: ◆David M. Murray, The Ohio State University
◆Lisa M. LaVange, The University of North Carolina at Chapel Hill
◆Jennifer Hill, New York University
◆Keith E. Muller, University of Florida
◆Stuart Kerachsky, U.S. Department of Education

10:15 a.m. **Floor Discussion**

109 CC-102A

■ ✪ Efforts to Assist Users with American Community Survey Data—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Deborah H. Griffin, U.S. Census Bureau

Chair(s): Susan Schechter, U.S. Census Bureau

Panelists: ◆Deborah H. Griffin, U.S. Census Bureau
◆Lynn Weidman, U.S. Census Bureau
◆Pamela M. Klein, U.S. Census Bureau
◆Robert P. Parker, Consultant on Federal Statistics
◆Jane Traynham, Maryland Department of Planning

10:15 a.m. Floor Discussion

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

110 CC-153

General Methodology II—Contributed

Biometrics Section

Chair(s): Jeffrey R. Wilson, Arizona State University

8:35 a.m. **Testing Noninferiority for Clustered Matched Pair Studies**—◆Jun-mo Nam, National Cancer Institute

8:50 a.m. **Asymptotic Confidence Interval for the Over-Dispersion Parameter with Applications to Biological Count Data**—Krishna K. Saha, Central Connecticut State University; ◆Debaraj Sen, Concordia University; Roger Bilisoly, Central Connecticut State University

9:05 a.m. **The Theil-Sen Estimators in a Multiple Regression Model When Covariates Are Nonrandom**—◆Fang Li, Indiana University-Purdue University Indianapolis; Hanxiang Peng, Indiana University Purdue University Indianapolis

9:20 a.m. **Power Computation in Testing Hardy-Weinberg Equilibrium**—◆Marepalli B. Rao, University of Cincinnati; Subramaniam Venkatesan, University of Cincinnati; Subramanyam Kasala, The University of North Carolina at Wilmington

9:35 a.m. **Single-Stage Simultaneous Confidence Intervals Under Heteroscedasticity**—◆Miin-Jye Wen, National Cheng-Kung University

9:50 a.m. **Statistical Evaluation of Modality Test of Probability Density Function**—◆Mi-Chia Ma, National Cheng Kung University; Hui-Ting Hsu, National Cheng Kung University

10:05 a.m. Floor Discussion

111 CC-155

Zero-Inflated Models and Multi-Stage Models—Contributed

Biometrics Section

Chair(s): Krishna K. Saha, Central Connecticut State University

8:35 a.m. **Dynamic Predicting by Landmarking as an Alternative for Multistate Modeling: An Application to Acute Lymphoid Leukemia Data**—◆Hans C. van Houwelingen, Leiden University Medical Center; Hein Putter, Leiden University Medical Center

8:50 a.m. **Modeling Censored Counts with Excessive Zeros and Within-Subject Correlations in an Animal Study Mimicking Human Ductal Carcinoma in Situ**—◆Hung-Wen Yeh, The University of Kansas Medical Center; Byron J. Gajewski, The University of Kansas; Fariba Behbod, The University of Kansas Medical Center

9:05 a.m. **Latent Class Predictions for Subsequent Analysis**—◆Janne Petersen, Copenhagen University Hospital, Hvidovre; Karen Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health; Klaus G. Larsen, Lundbeck; Ove Andersen, Copenhagen University Hospital, Hvidovre; Esben Budtz-Jørgensen, University of Copenhagen

9:20 a.m. **Use of Zero-Inflated Mixture Models to Compare Antigen-Specific IgE Levels Among Subpopulations of Atopic Dermatitis Patients**—◆Daniel Zaccaro, Rho, Inc.; Brian Armstrong, Rho, Inc.; Natalija Novak, University of Bonn; Thomas Bieber, University of Bonn

9:35 a.m. **Identifying an Optimal Risk Window Length for Self-Controlled Case Series Studies**—Lijing Zhang, Kaiser Permanente Colorado; ◆Stanley Xu, Kaiser Permanente Colorado; Chan Zeng, Kaiser Permanente Colorado ; Jennifer Nelson, Group Health Center for Health Studies; John Mullooly, Kaiser Permanente Northwest; David McClure, Kaiser Permanente Colorado; Jason Glanz, Kaiser Permanente Colorado

9:50 a.m. **Modeling W-Shaped Data**—◆Robert J. Gallop, West Chester University; Randall H. Rieger, West Chester University; Scott McClintock, West Chester University

10:05 a.m. Floor Discussion

112 CC-148

Semiparametric Methods—Contributed

Section on Nonparametric Statistics

Chair(s): F. Michael Speed, Texas A&M University

8:35 a.m. **Two-Sample Semiparametric Proportional Odds Model with Application to ROC Curve**—◆Zhong Guan, Indiana University South Bend; Cheng Peng, University of Southern Maine

8:50 a.m. **Estimating the Error Distribution in Semiparametric Additive Regression**—◆Ursula U. Müller-Harknett, Texas A&M University; Anton Schick, Binghamton University; Wolfgang Wefelmeyer, University of Cologne

9:05 a.m. **Maximum Likelihood Computation for Fitting Semiparametric Mixture Models**—◆Yong Wang, University of Auckland

9:20 a.m. **Efficient Estimation for Generalized Linear Model with Varying Dispersion**—◆Zhi He, University of Illinois at Urbana-Champaign; Douglas Simpson, University of Illinois at Urbana-Champaign

9:35 a.m. **Estimation and Variable Selection for Semiparametric Additive Partial Linear Models**—◆Xiang Liu, University of Rochester Medical Center; Li (Lily) Wang, The University of Georgia; Hua Liang, University of Rochester

9:50 a.m. **Stochastic Ordering Regression: A Semiparametric Approach to Modeling the Stochastic Ordering of Response Variables Conditional on Predictors**—◆Olivier Thas, Ghent University; Jan R. De Neve, Ghent University; Lieven Clement, Ghent University; Jean-Pierre Ottoy, Ghent University

10:05 a.m. **Semiparametric Varying-Coefficient Partially Linear Model with Auxiliary Covariates**—◆Xiaojing Wang, Duke University; Yong Zhou, Academy of Mathematics and Systems Science, Chinese Academy of Sciences

113 CC-203A

✪ Computational Approaches to Hypothesis Testing—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Rebecca Nugent, Carnegie Mellon University

8:35 a.m. **A Generalized F-Test**—◆George R. Terrell, Virginia Polytechnic Institute and State University

8:50 a.m. **Test and Prediction in Multivariate Linear Mixed Models for Multiple Longitudinal Data**—◆Wan-Lun Wang, National Central University; Tsai-Hung Fan, National Central University

9:05 a.m. **Tests for Comparing Several Poisson Means**—◆Jie Peng, St. Ambrose University; Kalimuthu Krishnamoorthy, University of Louisiana-Lafayette

9:20 a.m. **A Multiple-Testing Procedure Based on the Jump Size of the p-Values**—◆Nasrine Bendjilali, University of California, San Francisco; Wei-Min Huang, Lehigh University

9:35 a.m. **General Moments-Based Permutation Tests: A Framework, Method, and Application**—◆Chunxiao Zhou, University of Illinois at Urbana-Champaign; Yongmei (Michelle) Wang, University of Illinois at Urbana-Champaign

9:50 a.m. **On the Behrens-Fisher Problem: A Globally Convergent Algorithm and a Finite-Sample Study of the Wald, LR, and LM Tests**—◆Alexandre Belloni, Duke University; Gustavo Didier, Tulane University

10:05 a.m. **Robust Testing of Variability**—◆Philip H. Ramsey, Queens College of CUNY; Patricia P. Ramsey, Fordham University

114 CC-143A

■ U.S. Census 2010, American Community Survey, and Canadian Census of Agriculture—Contributed

Section on Survey Research Methods, Section on Government Statistics

Chair(s): Stephen M. Miller, Bureau of Labor Statistics

8:35 a.m. **Sample Design for the Census 2010 Experimental Program**—◆Michael Bentley, U.S. Census Bureau

8:50 a.m. **Coverage of the Canadian Census of Agriculture**—◆David A. MacNeil, Statistics Canada

9:05 a.m. **'You Really Have to Puzzle This Out': Checking Residence and Coverage Duplications on a Census 2010 Questionnaire**—◆Laurie Schwede, U.S. Census Bureau; Anissa Sorokin, U.S. Census Bureau; Virginia Wake, U.S. Census Bureau

9:20 a.m. **Overview of Evaluations of the 2010 Census Coverage Measurement Program**—◆Mary H. Mulry, U.S. Census Bureau; Tamara S. Adams, U.S. Census Bureau

9:35 a.m. **Missing Data Methods for CCM Component Error Estimation**—◆Vincent Mule, U.S. Census Bureau; Donald Malec, U.S. Census Bureau; Lynn Imel, U.S. Census Bureau; Nganha Nguyen, U.S. Census Bureau; Michael Moldoff, U.S. Census Bureau

9:50 a.m. **Is There an Undercount of Medicaid Participants in the ACS Field Test?**—◆Brett O'Hara, U.S. Census Bureau

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

115 CC-149B

Sequential Monitoring in Clinical Trials—Contributed

WNAR

Chair(s): Ruixiao Lu, Affymetrix, Inc.

8:35 a.m. **Sequential Monitoring Response-Adaptive Randomized Clinical Trials**—◆Hongjian Zhu, University of Virginia; Feifang Hu, University of Virginia

8:50 a.m. **Estimating Information Growth in Longitudinal Clinical Trials and Settings Leading to Nonmonotonicity**—◆Abigail Shoben, University of Washington; Kyle Rudser, The University of Minnesota; Scott Emerson, University of Washington

9:05 a.m. **Analysis of a Composite Endpoint, with Interim Analysis of Mortality**—◆Roland A. Matsouaka, Harvard School of Public Health; Rebecca Betensky, Harvard School of Public Health

9:20 a.m. **Conditional Estimation After a Phase II Group Sequential Diagnostic Biomarker Study**—◆Joseph S. Koopmeiners, University of Washington; Ziding Feng, Fred Hutchinson Cancer Research Center

9:35 a.m. **Statistical Considerations and Implications of Early Stopping in the JUPITER Trial**—◆Robert J. Glynn, Brigham and Women's Hospital; Paul M. Ridker, Brigham and Women's Hospital

9:50 a.m. **A New Optimality Property of the Holm Multiple Testing Procedure**—◆Alexander Y. Gordon, The University of North Carolina at Charlotte

10:05 a.m. **Multinomial Group Sequential Design with Exact Method**—◆Jiang Hu, FDA; Aiyi Liu, National Institute of Child Health and Human Development; Chengqing Wu, Yale University

116 CC-143C

New Statistical Methods in Epidemiologic Studies—Contributed

Section on Statistics in Epidemiology

Chair(s): Elizabeth R. Zell, CDC

8:35 a.m. **On Testing the Homogeneity of Across Quantile Changing-Point Functions**—◆Nanshi Sha, Columbia University; Ying Wei, Columbia University

8:50 a.m. **Semiparametric Inference for a Two-Stage Outcome-Auxiliary Dependent Sampling Design with Continuous Outcomes**—◆Yuanshan Wu, The University of North Carolina at Chapel Hill; Haibo Zhou, The University of North Carolina at Chapel Hill

9:05 a.m. **Evaluating Prenatal PCB Exposure in Relation to Cognitive Function in Children with a Partial Linear Model**—Haibo Zhou, The University of North Carolina at Chapel Hill; ◆Guoyou Qin, The University of North Carolina at Chapel Hill; Matthew Longnecker, National Institute of Environmental Health Sciences

9:20 a.m. **Empirical Likelihood Methods in Efficient Design and Inference of Randomized Clinical Trials**—◆Xiaoru Wu, Columbia University; Zhiliang Ying, Columbia University

9:35 a.m. **Use of Variance Component Estimators to Assess Predictive Model Stability**—◆Michael Jones, Macquarie University

9:50 a.m. **Using Empirical Likelihood Confidence Regions to Establish Spirometry Limits**—◆Nancy L. Glenn, Texas Southern University

10:05 a.m. **Semiparametric Regression Splines Models for Detecting Effect Modification in Matched Case-Crossover Studies**—◆Inyoung Kim, Virginia Polytechnic Institute and State University; Ho Kim, Seoul National University

117 CC-159B

■ From Earthquakes to Water: Statistical Models and Risk Analysis—Contributed

Section on Statistics and the Environment

Chair(s): Tatiyana V. Apanasovich, Thomas Jefferson University

8:35 a.m. **Evaluation of Earthquake Prediction Models Using Residual Analysis for Spatial Point Processes**—◆Robert A. Clements, University of California, Los Angeles

8:50 a.m. **A Random Effect Epidemic-Type Aftershock Sequence Model**—◆Feng-Chang Lin, University of Wisconsin-Madison

9:05 a.m. **Weather-Based Index Insurance Contract Design**—◆Kenneth Shirley, Columbia University; Daniel Osgood, Columbia University

9:20 a.m. **Application of Branching Models in the Study of Invasive Species**—◆Earvin Balderama, University of California, Los Angeles

9:35 a.m. **Censored data methods for modeling annual peak flood flows**—◆John Grego, The University of South Carolina; Philip Yates, Cal Poly

9:50 a.m. **A Model for Measurements of Lognormally Distributed Environmental Contaminants**—◆Charles B. Davis, EnviroStat

10:05 a.m. **Comparison of ETAS Parameter Estimates Across Different Global Tectonic Zones**—◆Annie Chu, University of California, Los Angeles; Frederic P. Schoenberg, University of California, Los Angeles

118 CC-209A

Understanding Consumer Preferences in a Global Marketplace—Contributed

Section on Statistics and Marketing

Chair(s): Wendy W. Moe, University of Maryland

8:35 a.m. **An International Analysis of New Product Diffusion Speed**—◆Brian Hartman, Texas A&M University; Bani K. Mallick, Texas A&M University; Debabrata (Debu) Talukdar, State University of New York at Buffalo

8:50 a.m. **Daily Gasoline Prices, Stock Market Indexes, Consumer Internet Hits, Automobile Incentives, and Automobile Sales for the Forecasting of Future Short-Term Automobile Model Sales**—◆James Wendelberger, Urban Science Applications, Inc.

9:05 a.m. **Pride and Prejudice: Investigating the Symbolic Properties of Country of Origin in a Land of Crouching Tigers and Hidden Dragons**—Giana Eckhardt, Suffolk University; ◆Terry Elrod, University of Alberta; Luming Wang, University of Alberta

9:20 a.m. **Dynamic Pricing and Asymmetries in Retail Gasoline Markets: What Can They Tell Us About Price Stickiness?**—◆Ana Maria Herrera, Wayne State University; Christopher Douglas, University of Michigan-Flint

9:35 a.m. **Discovering the Banking Customer Groups with Similar Financial Products**—◆Bin Zhang, IBM China Research Laboratory; Jin Yan Shao, IBM China Research Laboratory; Ming Xie, IBM China Research Laboratory; Li Xia, IBM China Research Laboratory; Wenjun Yin, IBM; Jin Dong, IBM China Research Laboratory

9:50 a.m. **Customer Value and Willingness-to-Pay for Eco-Labeled Products**—◆Chen Nai-Hua, Chienkuo Technology University

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

119 CC-141
Variation and Risk—Contributed

Section on Risk Analysis

Chair(s): Chi Wai, UBC

8:35 a.m. **Evaluating Value-at-Risk Models via Quantile Regressions**—◆Luiz Renato Lima, University of Illinois at Urbana-Champaign; Wagner Gaglianone, Central Bank of Brazil; Oliver Linton, London School of Economics

8:50 a.m. **Dual-Time Analytics in Credit Risk Modeling**—◆Aijun Zhang, University of Michigan

9:05 a.m. **Regression Modeling of Count Data: Handling Heavy Tails**—◆Sarah LaRocca, Johns Hopkins University; Seth D. Guikema, Johns Hopkins University

9:20 a.m. **Percentile-Based Power Preserving Estimate of Standard Deviation**—◆Yvonne Zubovic, Indiana University Purdue University Fort Wayne; Chand Chauhan, Indiana University Purdue University Fort Wayne

9:35 a.m. **Play Against Random Past Strategy and Its Application in Expert-Selection Problem**—◆Mingfei Li, Bentley University

9:50 a.m. **Accurate Two-Sided Tolerance Limits for the Normal Random Effects Model**—◆Shun-Yi Chen, Tamkang University

10:05 a.m. **On the Asymptotic Distribution of Likelihood Ratio Test When Parameters Lie on the Boundary**—◆Leonid Kopylev, U.S. Environmental Protection Agency; Bimal Sinha, University of Maryland, Baltimore County

120 CC-160
Nonparametric Estimation and Testing—Contributed

Section on Nonparametric Statistics

Chair(s): David B. Dahl, Texas A&M University

8:35 a.m. **Nonparametric Derivative Estimation and the Computation of Posterior Probabilities for Nanoparticle Characteristics**—◆Richard Charnigo, University of Kentucky; Mathieu Francoeur, University of Kentucky; Patrick Kenkel, University of Kentucky; M. Pinar Menguc, University of Kentucky; Benjamin K. Hall, University of Kentucky; Cidambi Srinivasan, University of Kentucky

8:50 a.m. **Parameter Estimation in Two-Sample Location-Scale Families**—◆Cornelis Potgieter, University of Johannesburg; Fred Lombard, University of Johannesburg

9:05 a.m. **Second-Order Properties of Distribution Tails and Estimation of Tail Exponents in Random Difference Equations**—◆Changryong Baek, The University of North Carolina at Chapel Hill; Vladas Pipiras, The University of North Carolina at Chapel Hill; Patrice Abry, ENS Lyon; Herwig Wendt, Purdue University

9:20 a.m. **More on the Estimation of True Positive Rate in FDR Study**—◆Ping-Shi Wu, Lehigh University; Wei-Min Huang, Lehigh University

9:35 a.m. **A Multivariate Median Based on the Minimum Spanning Tree**—◆Amber E. Weyand, The University of Tennessee; Adam Petrie, The University of Tennessee

9:50 a.m. **Simultaneous Closeness Among Order Statistics to Population Quantiles**—Narayanaswamy Balakrishnan, McMaster University; Katherine Davies, University of Manitoba; ◆Jerome P. Keating, The University of Texas at San Antonio; Robert L. Mason, Southwest Research Institute

10:05 a.m. **Chung-Smirnov Property for Bernstein Estimators of Distribution Functions**—◆Alexandre Leblanc, University of Manitoba

121 CC-209C
Miscellaneous Methodology I—Contributed

IMS

Chair(s): Seo Young Park, The University of North Carolina at Chapel Hill

8:35 a.m. **Censoring by Death: A Study of the Normal-Normal Mixture Model**—◆Michael Freiman, University of Pennsylvania; Dylan Small, University of Pennsylvania

8:50 a.m. **The Generalized Linear Mixed Model with Multinomial Data**—◆John Aleong, University of Vermont

9:05 a.m. **Bias Reduction in Generalized Nonlinear Models**—◆Ioannis Kosmidis, University of Warwick; David Firth, University of Warwick

9:20 a.m. **On Functional Logistic Regression Models**—◆Gery Geenens, The University of Melbourne; Peter G. Hall, The University of Melbourne

9:35 a.m. **Finite Mixture of Heteroscedastic Single Index Models**—◆Peng Zeng, Auburn University

9:50 a.m. **An Almost Nonparametric Model for Missing Covariates in Parametric Regression**—◆Byungtae Seo, Texas Tech University

10:05 a.m. **A Theil-Type Estimate in a Linear Mixed Model**—◆Hanxiang Peng, Indiana University Purdue University Indianapolis

122 CC-203B

Unit Roots and Cointegration—Contributed

Business and Economic Statistics Section

Chair(s): Ka S. Man, Western Illinois University

8:35 a.m. **Density Functions of Multivariate Augmented Dickey Fuller Tests with Cross-Sectional Dependence**—◆Roy Cerqueti, University of Macerata; Claudio Lupi, University of Molise; Mauro Costantini, University of Vienna

8:50 a.m. **A Frequency Domain Approach for Testing for Second-Order Stationarity**—◆Yogesh Dwivedi, Texas A&M University

9:05 a.m. **Bootstrap Tests of Stationarity**—◆Tara M. Sinclair, The George Washington University; James Morley, Washington University in St. Louis

9:20 a.m. **Cointegration Vector Estimation by DOLS for a Three-Dimensional Panel**—◆Luis Melo, Central Bank of Colombia; John Leon, Inter American Development Bank; Dagoberto Saboya, Central Bank of Colombia

9:35 a.m. **Unit Root Testing and Estimation in Nonlinear ESTAR Model with Non-Normal Error**—◆David Peel, Lancaster University ; Umair Khalil, University of Peshawar; Fazli Qadir, University of Peshawar

9:50 a.m. **Cross-Sectional Dependence Robust Block Bootstrap Panel Unit Root Tests**—◆Stephan Smeekes, Maastricht University; Franz C. Palm, Maastricht University; Jean-Pierre Urbain, Maastricht University

10:05 a.m. **Bootstrap Unit Root Tests by a Simple Approach**—◆Guodong Li, The University of Hong Kong

123 CC-150A

■ Issues in Phase II and Dose-Ranging Trials—Contributed

Biopharmaceutical Section, Section on Bayesian Statistical Science

Chair(s): Yu-Ling Chang, FDA

8:35 a.m. **Brick Tunnel Randomization: A Way to Accommodate a Problematic Allocation Ratio in Adaptive Design Dose-Finding Studies**—◆Olga M. Kuznetsova, Merck & Co., Inc.; Yevgen Tymofyeyev, Merck & Co., Inc.

8:50 a.m. **A Comparison of False Negative Rates from Dose-Response Relationship Test Only with Dose-Response Relationship Test Along with a Pairwise Test**—◆Mohammad Rahman, FDA

9:05 a.m. **Convergence of Best Intention Adaptive Designs in Dose-Finding Experiments**—◆Yuehui Wu, GlaxoSmithKline; Valerii V. Fedorov, GlaxoSmithKline

9:20 a.m. **Modeling Heterogeneity and Its Effect on Design Parameters in Phase II Clinical Trials**—◆Christopher N. Barnes, University of Louisville; Shesh N. Rai, University of Louisville

9:35 a.m. **Consonant Closed Test Procedures in Dose-Response Study**—◆Bushi Wang, University of California, Riverside; Xinping Cui, University of California, Riverside

9:50 a.m. **A Hierarchical Bayesian Approach for Controlled Phase II Cancer Trials in Heterogeneous Diseases**—◆Lanjia Lin, Florida State University; Jyotirmoy Dey, Novartis Pharmaceuticals; Lumay Chiang, Novartis Oncology

10:05 a.m. **An Alternative to the Peto Analysis for Two-Year Carcinogenicity Studies and to Tarone's Test for Trend on Censored Survival Data**—◆Arthur Roth, AJR Statistical Consulting

Longtime Member Reception

BY INVITATION ONLY

Monday, August 3
6:30 p.m. – 7:30 p.m.
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Poster Presentations 8:30 a.m.–10:20 a.m.

124 CC-L Street Bridge

■ Topic-Contributed Oral Poster Presentations: Government Health Statistics—Topic-Contributed

Section on Government Statistics
Organizer(s): Sunghee Lee, University of California, Los Angeles
Chair(s): Lara Schmidt, RAND Corporation

Applications and case studies

01 **Analysis of zero-inflated data from the OSHA worksite inspection system**—◆Jia Li, National Institute for Occupational Safety and Health; Scott Henn, National Institute for Occupational Safety and Health; Aaron Sussell, National Institute for Occupational Safety and Health

Government statistics

02 **Trends in the Prevalence of Selected Chronic Health Conditions Among US Adults by Sociodemographic Characteristics: NHIS 1997–2007**—◆Abera Wouhib, CDC; Meena Khare, CDC

03 **Prevalence of Pregnant Women in the United States from Continuous NHANES (1999–2006)**—◆Lisa B. Mirel, CDC; Lester R. Curtin, CDC; Jaime Gahche, CDC; Vicki L. Burt, National Center for Health Statistics

Sampling and survey methodology

04 **Estimating Variance Components for Health Examination Surveys**—◆Te-Ching Chen, CDC; Lester R. Curtin, CDC

Government statistics

05 **Modifying the Three-Process Model of Alertness for Accelerometer Data and Its Correlation with Sleep**—◆James Slaven, National Institute for Occupational Safety and Health; John M. Violanti, State University of New York at Buffalo; Ja K. Gu, National Institute for Occupational Safety and Health; Michael E. Andrew, National Institute for Occupational Safety and Health; Luenda E. Charles, National Institute for Occupational Safety and Health; Bryan Vila, Washington State University; Cecil Burchfiel, National Institute for Occupational Safety and Health

06 **Estimating Extreme Percentiles for BMI: Minimum Sample Size Required and Sensitivity to Kurtosis**—◆Lester R. Curtin, CDC; Te-Ching Chen, CDC

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Contributed Oral Poster Presentations—Contributed

Section on Government Statistics
Chair(s): Lara Schmidt, RAND Corporation

Government statistics

07 **Sole Proprietor Income Tax Noncompliance: Changes from 1988 to 2001**—◆Katherine L. Fox, IRS; Janice T. Hu, IRS

08 **Obtaining User Needs While Protecting Individually Identifiable Data for the Survey of Earned Doctorates**—◆Stephen Cohen, National Science Foundation; Mark Fiegener, National Science Foundation

09 **Monitoring Monthly State Estimation Using Time Series Analysis and Review System (STARS) Tables**—◆Jennifer Oh, Bureau of Labor Statistics; Richard Tiller, Bureau of Labor Statistics

Social and behavioral science

10 **Tracking the Changes in CPI-W: History of Wage Earner and Clerical Worker Occupations**—◆Mary Lynn Schmidt, Bureau of Labor Statistics

Applications and case studies

11 Designing Sample Panel for the Federal Reserve's Quarterly Report of Credit Card Interest Rates—◆Lisa Chen, Federal Reserve Board

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Contributed Oral Poster Presentations—Contributed

Section for Statistical Programmers and Analysts

Spatial statistics, spatio-temporal modeling, GIS

12 Two Algorithms of Searching Spatially Continuous Mark Clusters in Marked Point Process—◆Huaguo Wang, QinetiQ North America/Technology Solutions Group/PSI; Michael Schucking, QinetiQ North America/Technology Solutions Group/PSI

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Contributed Oral Poster Presentations—Contributed

Social Statistics Section

Chair(s): Lara Schmidt, RAND Corporation

Longitudinal data, repeated measurements, and meta-analysis

13 Sample Size and Power Calculations for Correlations Between Bivariate Longitudinal Data—◆Warren S. Comulada, University of California, Los Angeles; Robert E. Weiss, University of California, Los Angeles

Policy and Statistics

14 Using Regression and Queuing Theory to Establish Voting Machine Allocation Laws—◆Theodore Allen, The Ohio State University; Fritz Scheuren, NORC at the University of Chicago; Mikhail Bernshteyn, Sagata Ltd.

Social and behavioral science

15 Mixed Models and Q-Connectivity Graphs for Dynamics of Social Interactions—◆Burcu Eke, Arizona State University; Sharon Lohr, Arizona State University

16 Development of Linear Matrix Model: Application of Ecological Model for Longitudinal Study of Bosnian Refugees' Adaptation—◆Lisa M. Willoughby, Saint Louis University; Ian H. Redmount, Saint Louis University; Hisako Matsuo, Saint Louis University; Wai Hsien Cheah, Southern Illinois University Edwardsville; Ajlina Karamehic-Muratovic, Missouri Institute of Mental Health; Terry J. Tomazic, Saint Louis University

17 Variable Selection for Propensity Models—◆Bing Yu, University of Toronto; Guanglei Hong, University of Toronto

18 Identification, Inference, and Sensitivity Analysis for Causal Mediation Effects—Kosuke Imai, Princeton University; Luke Keele, The Ohio State University; ◆Teppei Yamamoto, Princeton University

Applications and case studies

19 Modeling Item-Response Data with Fatigue—◆Oliver Entine, University of Pennsylvania

20 The Potential for Formal Statistical Analysis to Assist Courts with Relatively Small Data Set—◆Joseph L. Gastwirth, The George Washington University; Qing Pan, The George Washington University

Linear models, GLMs, parametric methods

21 Modeling Mexican Return Migration Decisions—◆Claudia P. Masferrer, The University of Texas at Austin

Social and behavioral science

22 Modeling Social Interaction and Collaboration Among Graduate Students—◆Ranran Wang, University of Washington; Mark S. Handcock, University of Washington

Applications and case studies

23 An Experimental Constrained Model of Stereotype Threat—◆Maria Cohenour, University of Oklahoma; Robert Terry, University of Oklahoma

Policy and Statistics

24 Simultaneous Statistical Inference in Evaluating Teacher Performance—◆Bing Han, RAND Corporation

Social and behavioral science

25 Tell Me Who's Your Friend and I'll Tell You Who You Are—◆Andrew Gelman, Columbia University; Johannes Ruf, Columbia University; Amal Moussa, Columbia University; Tian Zheng, Columbia University; Tom DiPrete, Columbia University; Julien Teitler, Columbia University

Incomplete data analysis, imputation methods

26 Using Income Imputation Techniques to Improve Evaluation of Outreach Efforts for Low-Income Medicare Beneficiaries—◆Frank Funderburk, Centers for Medicare and Medicaid Services; Christopher Koepke, Centers for Medicare and Medicaid Services; Thomas Kickham, Centers for Medicare and Medicaid Services

Social and behavioral science

27 From RCTs to Evidence Grading Schemes: The Current State of Evidence-Based Practice in Social Sciences—Robert Boruch, University of Pennsylvania; ◆Ning Rui, University of Pennsylvania

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Topic-Contributed Oral Poster Presentations: Special Adjustments for Official Time Series—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Brian C. Monsell, U.S. Census Bureau

Chair(s): Lara Schmidt, RAND Corporation

Time series, wavelet analysis, signal processing

28 **Update on the Development of X-13A-S**—◆Brian C. Monsell, U.S. Census Bureau

29 **Detecting Stock Calendar Effects in US Census Bureau Inventory Series**—◆Natalya Titova, U.S. Census Bureau; Brian C. Monsell, U.S. Census Bureau

30 **Constructing an Easter Regressor for a Stock Series in X-12-ARIMA**—Julian Chow, Office for National Statistics; ◆Begona Martin, Office for National Statistics; Kevin Moore, Office for National Statistics

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Topic-Contributed Oral Poster Presentations: Software for Seasonal Adjustment and Benchmarking—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Brian C. Monsell, U.S. Census Bureau

Chair(s): Lara Schmidt, RAND Corporation

Time series, wavelet analysis, signal processing

31 **PROC TSRAKING: An In-House SASÆ Procedure for Balancing Time Series**—◆Joana Bérubé, Statistics Canada; Susie Fortier, Statistics Canada

32 **Recent Developments in Statistics Canada's Time Series Processing System: Transition to SASÆ PROC X12**—◆Michel Ferland, Statistics Canada; Susie Fortier, Statistics Canada

33 **X-12-ARIMA vs. PROC X12: The UK Experience**—◆Gary Brown, Office for National Statistics; Emma Hooper, Office for National Statistics; David Rose, SAS Institute Inc.

34 **Simplifying Seasonal Adjustment Using X-12-ARIMA with Win X-12 and X-12-Graph**—◆Demetra Lytras, U.S. Census Bureau

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Contributed Oral Poster Presentations—Contributed

Business and Economic Statistics Section

Chair(s): Lara Schmidt, RAND Corporation

Computational statistics, numerical methods, simulation

35 **Optimal Forecasting with Conditionally Heteroskedastic Factor Analyzed Hidden Markov Models**—◆Mohamed Saidane, University of Montpellier II; Christian Lavergne, University of Montpellier II

Business, financial, and marketing statistics

36 **The Determinants of Economic Growth in ECOWAS Countries**—Brian W. Sloboda, U.S. Postal Service; ◆Kalamogo Coulibaly, U.S. Postal Service; Yaya Sissoko, Indiana University of Pennsylvania

Time series, wavelet analysis, signal processing

37 **Efficiently Forecasting Thousands of Employment Series for Sub-State Areas**—◆David E. Byun, Bureau of Labor Statistics; Thomas Evans, Bureau of Labor Statistics

Computational statistics, numerical methods, simulation

38 **The Virtues of VAR Forecast Pooling: A DSGE Model-Based Monte Carlo Study**—◆Steffen Henzel, Ifo Institute for Economic Research; Johannes Mayr, Ifo Institute for Economic Research

Reliability and survival modeling, risk analysis

39 **A Copula Model for Dependent Competing Risks**—◆Ralf Wilke, University of Nottingham; Simon Lo, University of Freiburg

Bootstrap, resampling methods

40 **Sieve Bootstrap Prediction Intervals for Multivariate ARMA Models**—◆Purna Mukhopadhyay, The University of Kansas Medical Center; V. A. Samaranayake, Missouri University of Science and Technology

Time series, wavelet analysis, signal processing

41 **Modeling Hourly Real-Time Electricity Load in the MISO Market**—◆Prasenjit Shil, Ameren Services; V. A. Samaranayake, Missouri University of Science and Technology; Asitha Edirisingha, Missouri University of Science and Technology

Applications and case studies

42 **Modeling Hourly Day-Ahead Electricity Demand in the MISO Market**—◆V. A. Samaranayake, Missouri University of Science and Technology; Prasenjit Shil, Ameren Services; Asitha Edirisingha, Missouri University of Science and Technology

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

Business, financial, and marketing statistics

43 **Modeling Conditional Variance Functions in Nonparametric Transfer Function Models**—◆Jun M. Liu, Georgia Southern University

44 **Dynamic Pricing the Revenue Insurance Contracts: A Time-Varying Copula Model**—◆Ying Zhu, North Carolina State University; Sujit Ghosh, North Carolina State University; Barry Goodwin, North Carolina State University

Semiparametric and nonparametric methods

45 **Asymptotic Efficiency and Finite-Sample Properties of the Generalized Profiling Estimation of the Parameters in Ordinary Differential Equations**—◆Xin Qi, Yale University; Hongyu Zhao, Yale University; Hongyu Zhao, Yale University

Business, financial, and marketing statistics

46 **Foreign Direct Investment in Mobile Technology: An Exploratory Study in Emerging African Market**—Charles A. Malgwi, Bentley University; ◆Olumayokun Soremekun, Bentley University; Dominique Haughton, Bentley University

47 **A New Way of Gini Coefficient Decomposition and Its Application to the Chinese National Macro-Economy Data**—◆Xu Cao, Southwestern University of Finance and Economics

Transportation statistics

48 **Network Analysis of U.S. Domestic Air Transportation Network**—◆Guangying Hua, Bentley University; Yingjie Sun, Boston University; Dominique Haughton, Bentley University

Spatial statistics, spatio-temporal modeling, GIS

49 **Space-Time Modeling and Boundary Analysis of European Unemployment Rates**—◆Kevin Bartz, Harvard University

Business, financial, and marketing statistics

50 **A Longitudinal Study of Nigerian Stock Prices**—◆Dallah Hamadu, University of Lagos; Ismaila Adeleke, University of Lagos

Linear models, GLMs, parametric methods

51 **Restricted Linear Models: Which Estimator Performs Better?**—◆Luis Frank, University of Buenos Aires

Economics, game theory

52 **Do Laspeyres Preferences Still Hold True? An Evaluation of the Expenditure Weights from the Consumer Price Index**—◆Joshua Klick, Bureau of Labor Statistics

Computational statistics, numerical methods, simulation

53 **Improving Prediction Accuracy of Logistic Regression**—◆Zhiyuan Dong, University of Cincinnati; Martin Levy, University of Cincinnati; Yan Yu, University of Cincinnati

Business, financial, and marketing statistics

54 **Investment Strategy and Decisions**—Les Yen, University of Phoenix; ◆Gretchen Colon-Miranda, University of Phoenix/NVA

Bayesian statistics, hierarchical models

55 **The Application of the Bayesian Statistics in Portfolio Selection: Background and Case Study of the S&P 500 Yearly Returns**—◆Isaac Kpodonou, University of the District of Columbia

Spatial statistics, spatio-temporal modeling, GIS

56 **Cautionary Tales on Spatial Weights**—◆Jerry Platt, University of Redlands

Business, financial, and marketing statistics

57 **Nonlinear Models of the Bond/Commodity Price Interaction: Evidence from Daily Data**—◆Yuliya V. Yurova, University of Illinois at Chicago; Houston H. Stokes, University of Illinois at Chicago

58 **Efficient Quantile Regression**—◆Yoonsuh Jung, The Ohio State University; Yoonkyung Lee, The Ohio State University; Steven N. MacEachern, The Ohio State University

Economics, game theory

59 **Recession Statistics 101**—Les Yen, University of Phoenix; ◆Heather Posey, University of Phoenix/NVA

Mathematical statistics, distribution theory, robust statistics

60 **Variable Selection, Constrained and Shrinkage Estimation in Multivariate Regression Models**—◆Ejaz S. Ahmed, University of Windsor; Severien Nkurunziza, University of Windsor

Computational statistics, numerical methods, simulation

61 **Searching for the Perfect Storm: Regime Switching Correlations and Value at Risk**—◆Lu Zhang, Penn State University

Business, financial, and marketing statistics

62 **A Model of Leadership and Team Processes: A Multivariate Application**—◆Andrea Roofe, Florida International University

Semiparametric and nonparametric methods

63 **Volatility and Jump Dynamics in US Energy Futures Markets**—◆Carl J. Bjursell, George Mason University; James E. Gentle, George Mason University; George H.K. Wang, George Mason University

Business, financial, and marketing statistics

64 **A Statistician Hedges Options**—◆James Delaney, Temple University

65 Modeling Uncertainty in Daily Asset Returns Using ARCH/GARCH Models—◆Linda Njoh, Baylor University; Jane L. Harvill, Baylor University

131 CC-Hall D

Contributed Oral Poster Presentations—Contributed

Section on Statistics and Marketing

Chair(s): Lara Schmidt, RAND Corporation

Business, financial, and marketing statistics

66 The Benefits of Portfolio Rebalancing and How They Can Be Achieved—◆Yaqing Si, Iowa State University

Health policy, epidemiology, public health

67 Determining Optimal Sample Amounts for Bucketed Mailings in Over-the-Counter Pharmaceutical Marketing—◆Martin B. Selzer, KMK Consulting

Mathematical statistics, distribution theory, robust statistics

68 On Optimal Stopping Rules of Mixtures of Regression Lines—◆Ping-Hung Hsieh, Oregon State University

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Contributed Oral Poster Presentations—Contributed

Section on Bayesian Statistical Science

Chair(s): Lara Schmidt, RAND Corporation

Bayesian statistics, hierarchical models

69 Bayesian Estimation in Nonstandard Finite Mixture Models with Application to an Exposure Data Set—◆Miranda L. Lynch, University of Rochester School of Medicine and Dentistry; Sally W. Thurston, University of Rochester

70 In Search of Sasquatch—◆Jennifer B. Emerson, Texas Tech University; Robert F. Martin, Federal Reserve Board; Bo He, The University of Texas; Clyde Martin, Texas Tech University

71 Elicitation of Prior Distributions for Bayesian Phylogeny—◆Xiting Yang, Carnegie Mellon University/FDA; Joseph Kadane, Carnegie Mellon University

Reliability and survival modeling, risk analysis

72 Bayesian Inference for Power Low Processes with Applications in Repairabble Systems—◆Maristela D. Oliveira, Universidade Federal da Bahia; Gustavo L. Gilardoni, Universidade De Brasilia; Enrico A. Colosimo, Universidade Federal de Minas Gerais

Bayesian statistics, hierarchical models

73 Bayesian Normal Mixture Modeling: A Case Study in CT Scanning—◆Clair L. Alston, Queensland University of Technology; Kerrie Mengersen, Queensland University of Technology

74 A Comparison of Minimum Description Length Scores for Bayesian Networks—◆Jason LaCombe, University of Rochester Medical Center; Anthony Almudevar, University of Rochester Medical Center

75 Bayesian Analysis and Classification of Two Quantitative Diagnostic Tests with False Negatives and No Gold Standard—◆Jingyang Zhang, The University of Iowa; Kathryn Chaloner, The University of Iowa; Jack Stapleton, The University of Iowa

76 Modeling Prior Knowledge in Developing a Bayesian Network—◆Futoshi Yumoto, American Institutes for Research; Rochelle E. Tractenberg, Georgetown University Medical Center

77 Dangers of Transforming 'Noninformative' Prior Distributions—◆John W. Seaman, III, Baylor University; John W. Seaman, II, Baylor University; James Stamey, Baylor University

78 Nonparametric Bayesian Modeling of Scaled Item Response Data—Kristin Duncan, San Diego State University; ◆José S. Fuentes, San Diego State University

Reliability and survival modeling, risk analysis

79 Bayesian Parametric Survival Alternatives with Biopharmaceutical Applications—◆Lindsay A. Renfro, Baylor University

Bayesian statistics, hierarchical models

80 Two-Class Prediction with Model Selection and Averaging—◆Wensong Wu, University of South Carolina; Edsel A. Pena, University of South Carolina

81 Bayesian Method for Misclassified Multinomial Data with Prior Information and External Data—◆Yi Qian, Amgen, Inc.; Deukwoo Kwon, National Cancer Institute; Jeesun Jung, Indiana University School of Medicine

82 An Application of the Spatial Bayesian Variable Selection to fMRI Time-Series Data—◆Kuo-Jung Lee, The University of Minnesota-Twin Cities

Modeling in Ecology

83 Parameter Updating Suppression Scheme for Wireless Sensor Networks—◆Kristian Lum, Duke University

Bayesian statistics, hierarchical models

84 Individual-Level Residual Diagnostics for Bayesian Structural Equation Models—◆Abbie Stokes-Riner, University of Rochester; Sally W. Thurston, University of Rochester

85 Improving Predictions of Dwarf Mistletoe Incidence in Black Spruce Using Bayesian Hierarchical Models—◆Ephraim Hanks, Utah State University; Mevin B. Hooten, Utah State University; Frederick A. Baker, Utah State University

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Contributed Oral Poster Presentations—Contributed

Section on Statistics in Sports

Chair(s): Lara Schmidt, RAND Corporation

Sports, art, entertainment

86 **Predicting the Atlanta Falcons Play-Calling Using Discriminant Analysis**—◆Erik L. Heiny, Utah Valley University; David Blevins, Gaston Community College

87 **National Football League Regular Season Team Statistics vs. Winning Performance and Playoff Level Success: A Multivariate Exploratory Analysis**—◆Charles Fisk, U.S. Department of Defense

88 **Explaining Success in Baseball: The Local Correlation Approach**—Jeff Hamrick, Boston University; ◆John Rasp, Stetson University

89 **The Rise and (Inevitable) Fall of Baseball's Grand Slam**—◆Julia Seaman, Genentech, Inc.; Elaine Allen, Babson College

90 **A Brief Review of Statistical Applications in Cricket Data**—Ananda Manage, Sam Houston State University; ◆Nandun S. Ranwala, Sam Houston State University; Danush Wijekularathna, Sam Houston State University

91 **Determination and Analysis of Factors Determining the Outcomes of National Football League Games**—◆Christopher Cohea, CEC Statistical Consulting; Mark E. Payton, Oklahoma State University

134 CC-Hall D

Contributed Oral Poster Presentations—Contributed

International Chinese Statistical Association, Section on Government Statistics

Chair(s): Lara Schmidt, RAND Corporation

Health policy, epidemiology, public health

92 **Statistical Consideration on the Guidance for Diagnostic Devices in China**—◆Sun Yi, The Chinese Academy of Medical Sciences; Wei Li, Peking Union Medical College

Biometrics, bioinformatics, computational biology

93 **Incorporating Biological Knowledge Into Hierarchical Clustering with a Rank-Two Ellipse Seriation in Gene Expression Profiles**—Han-Ming Wu, Tamkang University; ◆Chun-Fu Tsao, Tamkang University

Medical devices

94 **Comparison of Different Statistical Analysis Strategy on Evaluating Drug Eluting Stent Trial**—Wei Li, Peking Union Medical College; ◆Yang Wang, National Center for Cardiovascular Diseases

Biometrics, bioinformatics, computational biology

95 **Design of Multi-User, Multi-Tasking Needs, Multi-Treatment-Allocation Support in a Web-Based Minimization Random Allocation System**—Wei Li, Peking Union Medical College; ◆Zheng Wang, National Center for Cardiovascular Diseases; Yi Sun, National Center for Cardiovascular Diseases

96 **Sample Size Estimation in Microarray Experiments**—◆Wei-Jiun Lin, National Central University; James Chen, National Center for Toxicological Research

Invited Sessions 10:30 a.m.–12:20 p.m.

135 CC-202B

■ After Celebration of the 100th Anniversary of Hardy-Weinberg Law—Invited

ENAR, WNAR

Organizer(s): Gang Zheng, National Heart, Lung, and Blood Institute

Chair(s): Joseph L. Gastwirth, The George Washington University

10:35 a.m. **A Heterozygote-Homozygote Test of Hardy-Weinberg Equilibrium Using Related Individuals**—◆Janet S. Sinsheimer, University of California, Los Angeles; Jin Zhou, University of California, Los Angeles; Kenneth Lange, University of California, Los Angeles; Jeanette Papp, University of California, Los Angeles

11:00 a.m. **Current Applications of the Hardy-Weinberg Law**—◆Bruce Weir, University of Washington

11:25 a.m. **Hardy-Weinberg Equilibrium and Genetic Disequilibrium Mapping**—◆Abigail Matthews, Rockefeller University; Yuanyuan Shen, Chinese Academy of Sciences; Zhe Liu, Chinese Academy of Sciences; Jurg Ott, Rockefeller University/Chinese Academy of Sciences

11:50 a.m. Disc: Dmitri Zaykin, National Institute of Environmental Health Sciences

12:10 p.m. **Floor Discussion**

136 CC-202A

■ ✪ Recent Advances in Missing Data and Causal Inference—Invited

Biopharmaceutical Section, Section on Statistics in Epidemiology

Organizer(s): Recai M. Yucel, State University of New York at Albany

Chair(s): Recai M. Yucel, State University of New York at Albany

10:35 a.m. **Every Missing Not at Random Model for Incomplete Data Has a Missing at Random Counterpart with Equal Fit**—◆Geert Molenberghs, Hasselt University/ Katholieke Universiteit Leuven; Michael G. Kenward, London School of Hygiene and Tropical Medicine; Geert Verbeke, Katholieke Universiteit Leuven; Caroline Beunckens, Hasselt University; Cristina Sotto, Hasselt University

11:00 a.m. **Causal Modeling When the Treatment Is a Latent Class**—◆Joseph L. Schafer, Penn State University; Joseph Kang, Northwestern University

11:25 a.m. **The Infinite Dimension of the Data Revealed by a Perfectly Executed Measurement of a Scalar Variable**—◆Constantine Frangakis, Johns Hopkins University

11:50 a.m. Disc: Donald B. Rubin, Harvard University

12:10 p.m. **Floor Discussion**

137 CC-209B

■ Assessing and Modeling Spatial Variability and Uncertainty—Invited

Section on Statistics and the Environment, Section on Bayesian Statistical Science

Organizer(s): Ronald McRoberts, U.S. Forest Service

Chair(s): Mary C. Christman, University of Florida

10:35 a.m. **Modeling Soil Type Spatial Distribution Using Markov Random Fields**—◆Gerard B.M. Heuvelink, Wageningen University; R. Murray Lark, Rothamsted Research

11:00 a.m. **Inferential Effects of Using Spatial Natural Resource Data from Independent Sources**—◆Ronald McRoberts, U.S. Forest Service

11:25 a.m. **An Adaptive Predictive Process Modeling Approach for Large Spatial-Temporal Data Sets**—◆Andrew Finley, Michigan State University; Sudipto Banerjee, The University of Minnesota; Alan E. Gelfand, Duke University

11:50 a.m. **A Closer Look at Statistical Inference with Geographically Weighted Regression Models**—◆Carol Gotway Crawford, CDC; Linda J. Young, University of Florida

12:15 p.m. **Floor Discussion**

138 CC-207B

Recent Advances in Statistical Learning and Computing for Massive High-Dimensional Data—Invited

ASA Special Interest Group on Statistical Learning and Data Mining, Interface Foundation of North America

Organizer(s): Hui Zou, University of Minnesota

Chair(s): Jinchi Lv, University of Southern California

10:35 a.m. **Forward-Lasso Adaptive Shrinkage**—◆Gareth James, University of Southern California; Peter Radchenko, University of Southern California

11:05 a.m. **Partial Correlation Estimation by Joint Sparse Regression Models**—◆Ji Zhu, University of Michigan; Jie Peng, University of California, Davis; Pei Wang, Fred Hutchinson Cancer Research Center; Nengfeng Zhou, University of Michigan

11:35 a.m. **On Localized Dimension Reduction and Variable Selection**—◆Xiangrong Yin, The University of Georgia; Qin Wang, The University of Georgia; Bing Li, Penn State University; Zhihui Tang, Penn State University

12:05 p.m. **Floor Discussion**

139 CC-158A

■ ✪ Contemporary Bayesian Generalized Linear Models—Invited

Section on Bayesian Statistical Science

Organizer(s): Sourish Das, Duke University

Chair(s): Santanu Pramanik, NORC at the University of Chicago

10:35 a.m. **Generalized Linear Models for a Correlation Matrix in Longitudinal Data**—◆Michael J. Daniels, University of Florida

11:00 a.m. **Nonparametric Bayes Random Effects Modeling Using Kernel Local Partition Processes**—◆David Dunson, Duke University

11:25 a.m. **Bayesian Analysis of Longitudinal Binary Data Using Multivariate Bridge and Other Random Effects Models**—◆Bani K. Mallick, Texas A&M University; Souparno Ghosh, Texas A&M University; Debajyoti Sinha, Florida State University; Stuart Lipsitz, Brigham and Women's Hospital

11:50 a.m. **Power Filter for Dynamic Models**—◆Sourish Das, Duke University; Dipak K. Dey, University of Connecticut

12:15 p.m. **Floor Discussion**

140 CC-102B

✪ From Oil Wells to Windmills: Can the Federal Statistical System Adapt to Changing Needs for Energy Data?—Invited

Committee on Energy Statistics

Organizer(s): Janice Lent, Energy Information Administration
Chair(s): Nagaraj K. Neerchal, University of Maryland, Baltimore County

10:35 a.m. **Effect of Energy Import Costs on U.S. Real Gross Domestic Income**—◆Marshall B. Reinsdorf, Bureau of Economic Analysis

11:00 a.m. **Meeting Energy Data Needs in a Changing Energy Environment**—◆Janice Lent, Energy Information Administration

11:25 a.m. **Characterization, Evaluation, and Management of Prospective Benefits, Costs, and Risks in the Development of New Statistical Programs for Energy**—◆John L. Eltinge, Bureau of Labor Statistics; Polly Phipps, Bureau of Labor Statistics

11:50 a.m. Disc: Edward Blair, University of Houston

12:10 p.m. **Floor Discussion**

141 CC-144C

Case Studies in Complex Bayesian Computation—Invited

Section on Statistical Computing, Section on Bayesian Statistical Science

Organizer(s): Carlos M. Carvalho, The University of Chicago
Chair(s): Carlos M. Carvalho, The University of Chicago

10:35 a.m. **Adaptive Mixture Modeling Metropolis Methods for Bayesian Analysis of Nonlinear State-Space Models**—◆Jarad Niemi, Duke University; Mike West, Duke University

11:05 a.m. **Orthant-Normal Shrinkage Priors in Regression**—◆Christopher Hans, The Ohio State University

11:35 a.m. **Particle Learning and Smoothing**—◆Hedibert F. Lopes, The University of Chicago; Carlos M. Carvalho, The University of Chicago; Nicholas Polson, The University of Chicago; Michael Johannes, Columbia Business School

12:05 p.m. **Floor Discussion**

142 CC-149B

■ Are the Paradigms for Design of Experiments Changing?—Invited

Section on Physical and Engineering Sciences, International Indian Statistical Association, Section on Quality and Productivity

Organizer(s): Philip J. Ramsey, University of New Hampshire
Chair(s): Philip J. Ramsey, University of New Hampshire

10:35 a.m. **Are the Paradigms for Design of Experiments Changing?**—◆Bradley A. Jones, SAS Institute Inc.

11:00 a.m. **Comparing Computer-Generated Designs: Are G-Optimal Designs the Best Choice?**—◆Douglas C. Montgomery, Arizona State University

11:25 a.m. **Model Robust and Model Discriminating Designs**—◆Christopher Nachtsheim, The University of Minnesota

11:50 a.m. Disc: Geoff G. Vining, Virginia Polytechnic Institute and State University

12:10 p.m. **Floor Discussion**

143 CC-206

■ ✪ It's a Dangerous World—Invited

Section on Risk Analysis, Social Statistics Section, Section on Government Statistics

Organizer(s): Bertrand Clarke, The University of British Columbia/University of Miami
Chair(s): Bertrand Clarke, The University of British Columbia/University of Miami

10:35 a.m. **Uses and Generalizations of the Incremental Cost Effectiveness Ratio (ICER) in CE Health Studies**—◆Andres Christen, Center for Mathematical Research; Peter Müller, The University of Texas M.D. Anderson Cancer Center; Tina Shih, The University of Texas M.D. Anderson Cancer Center

11:00 a.m. **Terrorist Risk Assessment**—◆Alyson Wilson, Iowa State University

11:25 a.m. **Model Risk in the Analysis of Personal Credit**—◆Robert Stine, The Wharton School

11:50 a.m. **Out of Sight, Out of Mind: The Statistical Whitewashing of Chronic Occupational Disease**—◆Adam M. Finkel, University of Medicine and Dentistry of New Jersey

12:15 p.m. **Floor Discussion**

144 CC-101

Factors Affecting the Accuracy of the 2008 Presidential Election Polling—Invited

American Association of Public Opinion Research, Section on Survey Research Methods, Social Statistics Section

Organizer(s): Paul J. Lavrakas, Consultant

Chair(s): Trevor Thompson, The Associated Press

10:35 a.m. **Election Polling Challenges: Cell Phones, the Bradley Effect, and Voter Turnout**—◆Scott Keeter, Pew Research Center

10:55 a.m. **Methodological Issues in ABC News 2008 Pre-Election Polling**—Gary Langer, ABC News; ◆Jon Cohen, The Washington Post

11:15 a.m. **Limitations of Recorded-Voice Telephone Polling in Election 2008: Is This Method of Data Collection Doomed in 2012?**—◆Jay H. Leve, SurveyUSA

11:35 a.m. **Inferences from Matched Samples in the U.S. National Elections from 2004 to 2008**—◆Douglas Rivers, YouGov Polimetrix

11:55 a.m. Disc: Paul J. Lavrakas, Consultant

12:15 p.m. **Floor Discussion**

145 CC-102A

JASA, Theory and Methods Invited Session—Invited

JASA, Theory and Methods

Organizer(s): Leonard A. Stefanski, North Carolina State University

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

10:35 a.m. **Prediction in Measurement Error Models**—Raymond J. Carroll, Texas A&M University; ◆Aurore Delaigle, University of Bristol; Hall Peter, The University of Melbourne

11:15 a.m. Disc: Jianqing Fan, Princeton University

11:35 a.m. Disc: John Staudenmayer, University of Massachusetts

11:55 a.m. Rejoinder: Aurore Delaigle, University of Bristol

12:10 p.m. **Floor Discussion**

146 CC-209C

Semiparametric Methods with High-Dimensional Data—Invited

IMS, International Chinese Statistical Association, Biometrics Section, Biopharmaceutical Section, Interface Foundation of North America

Organizer(s): Donglin Zeng, The University of North Carolina at Chapel Hill

Chair(s): Donglin Zeng, The University of North Carolina at Chapel Hill

10:35 a.m. **Identification of Cancer-Associated Gene Pathways from Analysis of Expression Data**—◆Shuangge Ma, Yale University; Michael Kosorok, The University of North Carolina at Chapel Hill

11:05 a.m. **Variable Selection in Nonparametric Additive Models**—◆Jian Huang, The University of Iowa; Joel Horowitz, Northwestern University; Fengrong Wei, The University of Iowa

11:35 a.m. **Variable Selection Using the Seamless L0 (SEAL) Method**—◆Xihong Lin, Harvard School of Public Health

12:05 p.m. **Floor Discussion**

147 CC-207A

IMS Medallion Lecture III—Invited

IMS, Section on Government Statistics

Organizer(s): Xiaotong Shen, The University of Minnesota

Chair(s): Bernard W. Silverman, St. Peter's College, University of Oxford

10:35 a.m. **High-Dimensional Inference: From Sparse Signals Recovery to Covariance Matrix Estimation**—◆Tony Cai, University of Pennsylvania

12:00 p.m. **Floor Discussion**

Invited Panels 10:30 a.m.–12:20 p.m.

148 CC-143B

✪ Protecting Individual Privacy in the Struggle Against Terrorism—Invited

Section on Statistics in Defense and National Security, Social Statistics Section

Organizer(s): Myron J. Katzoff, National Center for Health Statistics

Chair(s): Lawrence H. Cox, National Center for Health Statistics

Panelists: ◆Daniel Weitzner, Massachusetts Institute of Technology

◆Michael L. Cohen, Committee on National Statistics

◆Betty Chemers, National Academy of Sciences

◆Herb Lin, National Academy of Sciences

12:15 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

149 CC-201

■ Practical Considerations for Handling Missing Data in Controlled Clinical Trials—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Abdul J. Sankoh, Vertex Pharmaceuticals, Inc.
Chair(s): Abdul J. Sankoh, Vertex Pharmaceuticals, Inc.

10:35 a.m. **Practical Statistical Considerations for Handling Dropouts in Longitudinal Clinical Trials**—◆Cynthia M. DeSouza, Vertex Pharmaceuticals, Inc.; Abdul J. Sankoh, Vertex Pharmaceuticals, Inc.

10:55 a.m. **Comparison of Methods for Handling Dropouts in Longitudinal Ordered Categorical Data**—◆Mohamed Alosh, FDA

11:15 a.m. **Developing an Analytic Road Map for Incomplete Longitudinal Clinical Trial Data**—◆Adam Meyers, Lilly USA, LLC

11:35 a.m. **Endpoint Selection in the Presence of Missing Data**—◆Guoxing (Greg) Soon, FDA

11:55 a.m. Disc: Lee-Jen Wei, Harvard University

12:15 p.m. **Floor Discussion**

150 CC-141

Advances in Time Series Econometrics—Topic-Contributed

Business and Economic Statistics Section, Section on Government Statistics

Organizer(s): Barbara Rossi, Duke University
Chair(s): Robert P. Lieli, The University of Texas at Austin

10:35 a.m. **The Moving Blocks Bootstrap for Panel Linear Regression Models with Individual Fixed Effects**—◆Silvia Goncalves, University of Montreal

10:55 a.m. **Heteroskedasticity, Autocorrelation, and Spatial Correlation Robust Inference in Linear Panel Models with Fixed Effects**—◆Tim Vogelsang, Michigan State University

11:15 a.m. **The Propagation of Regional Recessions**—◆Michael Owyang, Federal Reserve Bank of Saint Louis; James Hamilton, University of California, San Diego

11:35 a.m. **Local GMM Estimation of Time Series Models with Conditional Moment Restrictions**—◆Nikolay Gospodinov, Concordia University; Taisuke Otsu, Yale University

11:55 a.m. **Sensitivity of Impulse Responses to Small Low-Frequency Co-Movements: Reconciling the Evidence on the Effects of Technology Shocks**—Nikolay Gospodinov, Concordia University; ◆Alex Maynard, University of Guelph; Elena Pesavento, Emory University

12:15 p.m. **Floor Discussion**

151 CC-158B

■ Monte Carlo and Sequential Analyses: Methods and Applications—Topic-Contributed

Section on Bayesian Statistical Science, Interface Foundation of North America

Organizer(s): Mike West, Duke University
Chair(s): Raquel Prado, University of California, Santa Cruz

10:35 a.m. **Adaptive Design for Model Selection**—◆Fei Liu, University of Missouri-Columbia; Fan Li, Duke University; David Dunson, Duke University

10:55 a.m. **Targeted Sequential Resampling from Large Data Sets in Mixture Modeling**—◆Ioanna Manolopoulou, Statistical and Applied Mathematical Sciences Institute

11:15 a.m. **Particle Learning DSGE Models**—◆Francesca Petralia, Duke University; Carlos M. Carvalho, The University of Chicago; Hedibert F. Lopes, The University of Chicago; Hao Chen, Duke University

11:35 a.m. **Particle Stochastic Search for High-Dimensional Variable Selection**—◆Minghui Shi, Duke University

11:55 a.m. **Sequential Learning in Dynamic Graphical Models**—◆Hao Wang, Duke University; Craig Reeson, Duke University

12:15 p.m. **Floor Discussion**

152 CC-155

■ ✪ The NHIS Linked Data Files: A Data Resource for Health Outcomes to Health Policy—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Kimberly Lochner, National Center for Health Statistics
Chair(s): Christine S. Cox, National Center for Health Statistics

10:35 a.m. **Socioeconomic Differences in Life Expectancy**—◆Kimberly Lochner, National Center for Health Statistics; Van L. Parsons, National Center for Health Statistics; Nathaniel Schenker, National Center for Health Statistics; Gloria Wheatcroft, National Center for Health Statistics; Elsie R. Pamuk, National Center for Health Statistics

10:55 a.m. **Using Linked Survey and Administrative Data to Build Imputational Models to Adjust Survey Estimates of Medicaid Coverage**—◆Michael Davern, University of Minnesota; Jacob A. Klerman, Abt Associates Inc.; Jeanette K. Ziegenfuss, Mayo Clinic

11:15 a.m. **Are Expenditures Higher for Those Entering Medicare at Age 65 Having Been Previously Uninsured?**—◆Sandra L. Decker, National Center for Health Statistics; Jalpa A. Doshi, University of Pennsylvania; Amy E. Knaup, University of Maryland; Daniel E. Polsky, University of Pennsylvania

11:35 a.m. **One More Step: NHIS-Linked Mortality Data Combined with EPA Air Quality Data**—◆Jennifer D. Parker, National Center for Health Statistics; Nataliya Kravets, NOVA Research Company; Kimberly Lochner, National Center for Health Statistics; Tracey Woodruff, University of California, San Francisco

11:55 a.m. Disc: Elsie R. Pamuk, National Center for Health Statistics

12:15 p.m. **Floor Discussion**

153 CC-143A

Statistical Literacy 2009—Topic-Contributed

Section on Statistical Education

Organizer(s): Milo Schield, W.M. Keck Statistical Literacy Project

Chair(s): Milo Schield, W.M. Keck Statistical Literacy Project

10:35 a.m. **Statistical Challenges in Medical Research: What Consumers Need to Know**—◆Ronald R. Gauch, Marist College

10:55 a.m. **The Cult of Statistical Significance**—◆Stephen T. Ziliak, Roosevelt University; Deirdre N. McCloskey, University of Illinois at Chicago

11:15 a.m. **Spinning Heads and Spinning News: Statistics in the Media**—◆Rebecca Goldin, Statistical Assessment Service/George Mason University

11:35 a.m. **Know Your Chances: A Curriculum to Help Students Become Better Consumers of Statistics**—◆Steven Woloshin, Dartmouth Institute for Health Policy and Clinical Practice; Lisa Schwartz, Dartmouth Institute for Health Policy and Clinical Practice

11:55 a.m. **Academic Civic Engagement: What's the Downside?**—◆Paul Roback, St. Olaf College

12:15 p.m. **Floor Discussion**

154 CC-150A

Improving Coverage Intervals for Survey-Weighted Estimates—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Phillip S. Kott, U.S. Department of Agriculture

Chair(s): Jill A. Dever, RTI International

10:35 a.m. **Speeding Up the Asymptotics When Constructing One-Sided Coverage Intervals for Survey-Weighted Estimates**—◆Phillip S. Kott, U.S. Department of Agriculture

10:55 a.m. **Estimation Using Gaussian Replicates of the Pivotal Based on the Weighted Quasi-Score Vector**—◆Avi Singh, NORC at the University of Chicago; Claude Nadeau, Statistics Canada

11:15 a.m. **Empirical Likelihood--Based Calibration Methods for Missing Data Problems**—◆Jing Qin, National Institute of Allergy and Infectious Diseases

11:35 a.m. **Confidence Intervals for Proportion Estimates in Complex Samples: An Application to NAEP**—◆Andreas Oranje, Educational Testing Service

11:55 a.m. Disc: Mary E. Thompson, University of Waterloo

12:15 p.m. **Floor Discussion**

155 CC-150B

■ American Community Survey: Design and Usability Issues—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Michael Beaghen, U.S. Census Bureau

Chair(s): Rachel Harter, NORC at the University of Chicago

10:35 a.m. **Options for Allocating the American Community Survey Sample**—◆Don Keathley, U.S. Census Bureau; Steven P. Hefter, U.S. Census Bureau

10:55 a.m. **Evaluation of the Effectiveness of the American Community Survey Family Equalization Project**—◆Mark E. Asiala, U.S. Census Bureau

11:15 a.m. **Using Sub-County Population Estimates as Controls in Weighting for the American Community Survey**—◆Keith A. Albright, U.S. Census Bureau

11:35 a.m. **Usability of the American Community Survey Estimates of the Group Quarters Population for Substate Geographies**—◆Michael Beaghen, U.S. Census Bureau; Sharon Stern, U.S. Census Bureau

11:55 a.m. **Assessment of Data Quality Filtering on the Reliability of Multi-Year Estimates in American Community Survey Data Products**—◆Michael D. Starsinic, U.S. Census Bureau

12:15 p.m. **Floor Discussion**

156 CC-159B

New Directions in Social and Educational Statistics—Topic-Contributed

Social Statistics Section

Organizer(s): Sandip Sinharay, Educational Testing Service
Chair(s): Patty Becker, University of Michigan

10:35 a.m. **A Matrix Time Series Model for Dynamic Social Networks**—◆Xiaoyue Niu, University of Washington; Peter Hoff, University of Washington

10:55 a.m. **Dimensionality Analysis for NELS:88 Data: The Effects of Complex Assessment Design on Modeling Growth**—◆Jiahe Qian, Educational Testing Service; Xueli Xu, Educational Testing Service

11:15 a.m. **Latent Regression Modeling in Educational Surveys: A Simulation Study from the National Assessment of Educational Progress (NAEP)**—◆Yue Jia, Educational Testing Service; Lei Ye, Educational Testing Service; Xueli Xu, Educational Testing Service

11:35 a.m. **Application of Multidimensional Item Response Theory Models to Report Diagnostic Scores in Educational Testing**—◆Sandip Sinharay, Educational Testing Service; Shelby J. Haberman, Educational Testing Service

11:55 a.m. Disc: Matthew S. Johnson, Teachers College

12:15 p.m. **Floor Discussion**

157 CC-204C

Penalized Regression and Spline Models—Topic-Contributed

Biometrics Section, Biopharmaceutical Section

Organizer(s): Li Qin, Fred Hutchinson Cancer Research Center
Chair(s): Pang Du, Virginia Polytechnic Institute and State University

10:35 a.m. **Penalized Regression, Mixed Effects Models, and Appropriate Modeling**—◆Nancy E. Heckman, The University of British Columbia; Richard Lockhart, Simon Fraser University; Jason D. Nielsen, Carleton University

10:55 a.m. **Statistical Inference for Dynamic Models with the Generalized Profiling Method**—◆Jiguo Cao, Simon Fraser University; David Campbell, Simon Fraser University; Giles Hooker, Cornell University; Jianhua Huang, Texas A&M University; James O. Ramsay, McGill University

11:15 a.m. **Penalized Least Squares for Single Index Models**—◆Tao Huang, University of Virginia; Heng Peng, The Hong Kong Baptist University

11:35 a.m. **Generalized Spline Mixed-Effects Models with Applications in AIDS Clinical Trials**—◆Anna Liu, University of Massachusetts Amherst; Hua Liang, University of Rochester

11:55 a.m. **Nonparametric Spectral Analysis with Applications to Seizure Characterization Using EEG Time Series**—◆Li Qin, Fred Hutchinson Cancer Research Center; Yuedong Wang, University of California, Santa Barbara

12:15 p.m. **Floor Discussion**

158 CC-160

✪ Health Policy Statistics Student Paper Awards—Topic-Contributed

Section on Health Policy Statistics, Section on Bayesian Statistical Science

Organizer(s): Susan Paddock, RAND Corporation
Chair(s): Susan Paddock, RAND Corporation

10:35 a.m. **Learning from Near Misses in Medication Errors: A Bayesian Approach**—◆Jessica A. Myers, Johns Hopkins University; Francesca Dominici, Johns Hopkins University; Laura Morlock, Johns Hopkins University

10:55 a.m. **Sensitivity Analyses for Omitted Variable Bias in Multiple Regression in a Study of Right Heart Catheterization**—◆Carrie Hosman, University of Michigan; Ben B. Hansen, University of Michigan

11:15 a.m. **Surrogate Screening Models for Determining Low Physical Activity in the Cardiovascular Health Study**—◆Sandrah P. Eckel, Johns Hopkins Bloomberg School of Public Health; Karen Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health; Paulo H. Chaves, Johns Hopkins Bloomberg School of Public Health; Linda P. Fried, Columbia University; Thomas A. Louis, Johns Hopkins Bloomberg School of Public Health

11:35 a.m. **Nonparametric Inference Procedure for Percentiles of the Random Effects Distribution in Meta-Analysis**—◆Rui Wang, Harvard University; Lu Tian, Stanford University; Tianxi Cai, Harvard University; Lee-Jen Wei, Harvard University

11:55 a.m. **Identification of Ovarian Cancer Symptoms in Health Insurance Claims Data**—◆Sean Devlin, University of Washington; Paula Diehr, University of Washington; Robyn Andersen, Fred Hutchinson Cancer Research Center/University of Washington; William Lafferty, University of Missouri

12:15 p.m. **Floor Discussion**

159 CC-208A

Quantile Regression: New Research Directions—Topic-Contributed

Section on Nonparametric Statistics

Organizer(s): Lan Wang, The University of Minnesota

Chair(s): Yunming Mu, Portland State University

10:35 a.m. **New Robust Statistical Procedures for Semiparametric Regression Models**—◆Bo Kai, Penn State University; Runze Li, Penn State University; Hui Zou, University of Minnesota

10:55 a.m. **Quantile Regression for Medical Cost Data**—◆Huixia (Judy) Wang, North Carolina State University; Xiao-Hua (Andrew) Zhou, University of Washington

11:15 a.m. **Single-Index Quantile Regression**—◆Yan Yu, University of Cincinnati; Tracy Z. Wu, JPMorgan Chase Bank; Keming Yu, Brunel University

11:35 a.m. **Locally Weighted Censored Quantile Regression**—◆Lan Wang, The University of Minnesota; Huixia (Judy) Wang, North Carolina State University

11:55 a.m. **Quantile Regression: New Research Directions**—◆Mi-Ok Kim, Cincinnati Children's Hospital Medical Center

12:15 p.m. **Floor Discussion**

160 CC-204B

■ ✪ Study Designs for Diagnostic Devices—Topic-Contributed

Section on Statistics in Epidemiology, Biopharmaceutical Section

Organizer(s): Estelle Russek-Cohen, FDA; Jane Fryland, Genentech, Inc.

Chair(s): Lori Dodd, National Cancer Institute

10:35 a.m. **Tips for Designing Studies Evaluating Medical Tests: An FDA Statistical Perspective**—◆Kristen L. Meier, FDA; Estelle Russek-Cohen, FDA

10:55 a.m. **Biomarker-Guided Modification to Existing Treatments**—◆Rong Tang, FDA; Estelle Russek-Cohen, FDA

11:15 a.m. **Different Schemes of Verification Bias in Evaluating Medical Tests**—◆Marina V. Kondratovich, FDA

11:35 a.m. **Design Issues for Studies of Diagnostic Devices Involving Readers**—◆Thomas E. Gwise, FDA

11:55 a.m. **EFM-CAD Study Designs**—◆Bipasa Biswas, FDA; Gene Pennello, FDA

12:15 p.m. **Floor Discussion**

Topic-Contributed Panels 10:30 a.m.–12:20 p.m.

161 CC-153

Statistics in Business Schools: The Future?—Topic-Contributed

ASA Special Interest Group on Statistics in Business Schools

Organizer(s): J. Keith Ord, Georgetown University

Chair(s): Janice Derr, FDA

Panelists: ◆Mark Berenson, Montclair State University
◆John McKenzie, Babson College
◆J. Keith Ord, Georgetown University

12:15 p.m. **Floor Discussion**

Contributed Sessions 10:30 a.m.–12:20 p.m.

162 CC-203B

Case-Control Studies and Experimental Designs—Contributed

Biometrics Section, Section on Government Statistics

Chair(s): Jodi Lapidus, Consultant

10:35 a.m. **Optimal Experimental Designs for Determining Optimal Levels of Fertilizer**—◆Wade Brorsen, Oklahoma State University; Francisca G.C. Richter, Federal Reserve Bank of Cleveland

10:50 a.m. **Likelihood-Based Hypothesis Test from an Outcome-Dependent Enriched Sample**—Qing Kang, North Dakota State University; ◆Christopher I. Vahl, North Dakota State University

11:05 a.m. **Linear Model Selection for Nearly Replicated Data**—◆Andrew Neath, Southern Illinois University Edwardsville; Zugui Zhang, The University of Iowa; Joseph Cavanaugh, The University of Iowa

11:20 a.m. **Sample Size Calculation with Weighted Sign Tests for Paired Comparisons of Clustered Data**—◆Fan Hu, Southern Methodist University; Chul W. Ahn, The University of Texas Southwestern Medical Center at Dallas; William Schucany, Southern Methodist University

11:35 a.m. **Optimum Duration Designs for Phase II Oncology Trials**—◆Ying Lu, University of California, San Francisco; Shenghua K. Fan, California State University, East Bay

11:50 a.m. **New Adaptive Procedure to Control the False Discovery Rate**—◆Fang Liu, Temple University

12:05 p.m. **Optimal Two-Stage Design When Adapting Between k Sample Sizes**—◆Hong Wan, Merck & Co., Inc.; Susan Ellenberg, University of Pennsylvania; Keaven Anderson, Merck & Co., Inc.

163 CC-144B

Programming Methodology—Contributed

Section for Statistical Programmers and Analysts, Interface Foundation of North America

Chair(s): Bob Derr, SAS Institute Inc.

10:35 a.m. **Creating a More Efficient Way to Review Tables, Figures, and Listings (TFLs)**—◆Sandra Althouse, Eli Lilly and Company; Xuejing Mao, Eli Lilly and Company

10:50 a.m. **Adaptive Design: New Tasks for a Statistical Analyst**—◆Natalie C. Hall, Eli Lilly and Company

11:05 a.m. **Recursive Sparse Estimation Using a Gaussian Sum Filter**—◆Michael Rotkowitz, The University of Melbourne; Lachlan Blackhall, The Australian National University

11:20 a.m. **A Tree-Based Algorithm for Identifying Subgroups of Subjects with Treatment Effect**—◆Ilya A. Lipkovich, Eli Lilly and Company; Alexei A. Dmitrienko, Eli Lilly and Company; Jonathan Denne, Eli Lilly and Company; Gregory Enas, Eli Lilly and Company

11:35 a.m. **Open Source Adaptive Design Software in a Regulated Environment: A Case Study**—◆Keaven Anderson, Merck & Co., Inc.

11:50 a.m. **Automatic Variable Shrinkage and Selection via Confidence Regions**—◆Funda Gunes, North Carolina State University; Howard D. Bondell, North Carolina State University

12:05 p.m. **Using ANOVA-Simultaneous Principal Component Analysis (ASCA) in Clinical Studies for Psoriasis**—◆Suyan Tian, Rockefeller University; Mayte Suárez-Fariñas, Rockefeller University

164 CC-159A

MCMC, Sampling Algorithms, and Approximations in Bayesian Inference—Contributed

Section on Bayesian Statistical Science

Chair(s): Lawrence I. Pettit, Queen Mary University of London

10:35 a.m. **A Multi-Scale Adaptive Metropolis Algorithm**—◆Matthew J. Heaton, Duke University; Scott Schmidler, Duke University

10:50 a.m. **Bayesian Inference for the Inverse Problem and Applications**—◆Huei-Wen Teng, Penn State University

11:05 a.m. **A Note on the Algorithmic Convergence of Posterior Simulation for Mixtures of Logistic Regression Model**—◆Joy (Yang) Ge, Merck Research Laboratories; Wenxin Jiang, Northwestern University

11:20 a.m. **Orthogonal Data Augmentation for Bayesian Model Averaging**—◆Joyee Ghosh, The University of North Carolina at Chapel Hill; Merlise A. Clyde, Duke University

11:35 a.m. **A New Algorithm to Generate Samples from the Repulsion Potts Model**—◆Dai Feng, Merck Research Laboratories; Luke Tierney, The University of Iowa

11:50 a.m. **Bayesian Variable Selection via Perfect Sampling with Approximate Bounds**—◆Cheongeun Oh, New York University

12:05 p.m. **A Derivative-Free Approach to Approximation of Computationally Expensive Posterior Densities**—◆Nikolay Bliznyuk, Harvard School of Public Health

165 CC-149A

■ Employment and Business Statistics—Contributed

Section on Government Statistics, Section on Survey Research Methods

Chair(s): Hyokyoung (Grace) Hong, Baruch College

10:35 a.m. **Research on Quarterly Benchmarking for the Current Employment Statistics (CES) survey**—◆Victoria Battista, Bureau of Labor Statistics; Chris Manning, Bureau of Labor Statistics; Kenneth W. Robertson, Bureau of Labor Statistics

10:50 a.m. **Using Current Employment Statistics (CES) Survey Data to Estimate Employment in Expanding and Contracting Establishments: Preliminary Results and Issues**—◆Kenneth W. Robertson, Bureau of Labor Statistics

11:05 a.m. **Numbers as Pictures: Examples of Data Visualization from the Business Employment Dynamics Program**—◆Charles M. Carson, Bureau of Labor Statistics

11:20 a.m. **Size Class Dynamics: Small and Large Firms in the 2008 Recession**—◆Jessica G. Helfand, Bureau of Labor Statistics

11:35 a.m. **Dynamics of Business Growth**—◆Carol Leming, Bureau of Labor Statistics

11:50 a.m. **Improving the Job Openings and Labor Turnover Survey's Sampling Procedure**—◆Sarah E. Goodale, Bureau of Labor Statistics; Darrell Greene, Bureau of Labor Statistics

12:05 p.m. **The Impact of High Variances at the Lowest Aggregate Levels on the CPI's All-US-All-Items Variance**—◆Owen Shoemaker, Bureau of Labor Statistics

166 CC-208B

Nonparametric Methods for Statistical and or Temporal Data—Contributed

Section on Nonparametric Statistics

Chair(s): James A. Calvin, Texas A&M University

10:35 a.m. **Monitoring Spatial Clusters Globally in Spatio-Temporal Monitoring**—◆Dan J. Spitzner, University of Virginia

10:50 a.m. **Discrete-Time Survival Trees and Forests with Time-Varying Covariates**—◆Denis Larocque, HEC Montréal; Imad Bou-Hamad, HEC Montréal; Hatem Ben-Ameur, HEC Montréal

11:05 a.m. **Detailed Sales Forecasting and Promotion Analysis for Retail Providers**—◆Sungil Kim, Georgia Institute of Technology; Nicoleta Serban, Georgia Institute of Technology

11:20 a.m. **Random Forests versus Logistic Regression: A Comparison Using Real and Simulated Data**—◆Kathy L. Gray, California State University, Chico

11:35 a.m. **Large-Scale Functional-Spatial Correlation**—◆Huijing Jiang, Georgia Institute of Technology; Nicoleta Serban, Georgia Institute of Technology

11:50 a.m. **Wavelet Function Estimation for Right-Censored Data**—◆Jeong-Ran Lee, Seoul National University; Hee-Seok Oh, Seoul National University

12:05 p.m. **Nonparametric Estimation of the Variogram and Its Spectrum**—◆Chunfeng Huang, Indiana University; Tailen Hsing, University of Michigan; Noel A. Cressie, The Ohio State University

167 CC-148

Advances in Survey Weighting—Contributed

Section on Survey Research Methods

Chair(s): Jeri M. Mulrow, National Science Foundation

10:35 a.m. **A Simulation Study of Alternative Weighting Class Adjustments for Nonresponse When Estimating a Population Mean from Complex Sample Survey Data**—◆Brady T. West, University of Michigan

10:50 a.m. **An Evaluation of Sample Weighting in an RDD Survey with Multiple Population Controls**—◆Kennon R. Copeland, NORC at the University of Chicago; Meena Khare, CDC; Nadarajasundaram Ganesh, NORC at the University of Chicago; Zhen Zhao, CDC

11:05 a.m. **Evaluation of Randomization-Based Estimation and Inference Methods**—◆Randall K. Powers, Bureau of Labor Statistics; John L. Eltinge, Bureau of Labor Statistics

11:20 a.m. **An Empirical Study of Nonresponse Adjustment Methods for the Survey of Doctorate Recipients**—◆Fan Zhang, National Science Foundation; Stephen Cohen, National Science Foundation; Donsig Jang, Mathematica Policy Research, Inc.; Amang Sukasih, Mathematica Policy Research, Inc.; Sonya Vartivarian, Mathematica Policy Research, Inc.

11:35 a.m. **A Simulation Study to Compare Weighting Methods for Survey Nonresponses**—◆Amang Sukasih, Mathematica Policy Research, Inc.; Donsig Jang, Mathematica Policy Research, Inc.; Sonya Vartivarian, Mathematica Policy Research, Inc.; Stephen Cohen, National Science Foundation; Fan Zhang, National Science Foundation

11:50 a.m. **Design and Weighting Issues for the Dual-Frame Household Panel Survey 'Labor Market and Social Security'**—◆Hans Kiesl, Institute for Employment Research

12:05 p.m. **Overview of Software That Will Produce Sample Weight Adjustments**—◆Michael B. Witt, RTI International

168 CC-209A

■ Applications in Cancer Epidemiology—Contributed

Section on Statistics in Epidemiology

Chair(s): Motomi Mori, Oregon Health & Science University

10:35 a.m. **Alcohol Consumption, BMI, and Colorectal Cancer and Mortality Follow-Up**—◆Negasi T. Beyene, CDC

10:50 a.m. **Treatment Effects under Early Detection**—◆Shih-Yuan Lee, University of Michigan; Alexander Tsodikov, University of Michigan

11:05 a.m. **Parametric and Nonparametric Analysis of Breast Cancer for Censored and Uncensored Data**—Chris P. Tsokos, University of South Florida; ◆Chunling Cong, University of South Florida

11:20 a.m. **Simulation Study of Hierarchical Modeling for Estimating Cancer Risks of Individual Genetic Variants**—◆Marinela Capanu, Memorial Sloan-Kettering Cancer Center; Colin B. Begg, Memorial Sloan-Kettering Cancer Center

11:35 a.m. **A Generalized Self-Consistency Approach for Joint Modeling Survival and Binary Data**—◆Chen Hu, University of Michigan; Alexander Tsodikov, University of Michigan

11:50 a.m. **A Stayer-Mover Mixture Markov Model for Disease Transitions in Early-Staged Breast Cancer Treated with Breast-Conserving Therapy (BCT)**—◆Wei-Ting Hwang, University of Pennsylvania; Neha Vapiwala, University of Pennsylvania; Lawrence J. Solin, Albert Einstein Medical Center

12:05 p.m. **A Correspondence Analysis on First-Time Registries in the Breast Cancer Screening Program in Central Portugal**—◆Bruno C. de Sousa, Centre for Malaria and Tropical Diseases; Vitor Rodrigues, LPCC; Elisa Duarte, University of Minho; Dário Cruz, University of Coimbra

169 CC-144A

Teaching Statistical Inference—Contributed

Section on Statistical Education

Chair(s): Byron J. Gajewski, The University of Kansas

10:35 a.m. **Misconceptions and Properties of Friedman's Test**—◆Philip Turk, West Virginia University; Roy St. Laurent, Northern Arizona University

10:50 a.m. **A New Paradigm for Testing: Tests Yielding Confidence Sets**—◆Dan Voss, Wright State University

11:05 a.m. **Hartley F-max Statistic for Unequal Sample Sizes**—◆William Warde, Oklahoma State University; Guohui Yang, Oklahoma State University

11:20 a.m. **Confidence Intervals Using SOCR**—◆Nicolas Christou, University of California, Los Angeles; Ivo D. Dinov, University of California, Los Angeles

11:35 a.m. **Bedtime for Student's t-Test?**—◆Jim Bentley, University of Redlands

11:50 a.m. **Accuracy in Parameter Estimation for Group Effects in Longitudinal Models: Sample Size Planning for Narrow Confidence Intervals**—◆Ken Kelley, University of Notre Dame; Joseph R. Rausch, Cincinnati Children's Hospital Medical Center

12:05 p.m. **A Course Template for Statistical Inferential Reasoning**—◆William S. Rayens, University of Kentucky

170 CC-143C

Computational Advances in Multivariate Advances—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Patrick Breheny, The University of Iowa

10:35 a.m. **Inference for Multivariate Normal Mixtures and Its Applications**—◆Xianming Tan, Penn State University

10:50 a.m. **Difference in Causal Effects of Class Size on Academic Achievement Between Black and Other Students: Multivariate Instrumental Variable Estimators with Tennessee Class Size Data MAR**—◆Yongyun Shin, Virginia Commonwealth University

11:05 a.m. **Analysis of Multivariate Skew Normal Models with Incomplete Data**—◆Tsung-I Lin, National Chung Hsing University; Hsiu-Jung Ho, National Chung Hsing University; Chiang-Ling Chen, National Chung Hsing University

11:20 a.m. **Multivariate Analysis in Planetary Science: Understanding Jupiter's Atmosphere**—◆Irina Kukuyeva, University of California, Los Angeles; Amy Braverman, Jet Propulsion Laboratory; Padma Yanamandra-Fisher, Jet Propulsion Laboratory; Jan de Leeuw, University of California, Los Angeles; Amy Simon-Miller, NASA Goddard Space Flight Center

11:35 a.m. **A New Approach to Cholesky-Based Covariance Regularization in High Dimensions**—◆Adam J Rothman, University of Michigan; Elizaveta Levina, University of Michigan; Ji Zhu, University of Michigan

11:50 a.m. **Computing Marginal eCDFs in Bivariate Correlated Data with Missing Values**—◆Irene B. Helenowski, Northwestern University; Hakan Demirtas, University of Illinois at Chicago

12:05 p.m. **Correlation Estimation in the Downton's Bivariate Exponential Distribution Using Incomplete Samples**—◆Qinying He, Southwestern University of Finance and Economics; Haikady N. Nagaraja, The Ohio State University

171 CC-203A

Spatio-Temporal and High-Dimensional Data—Contributed

Biometrics Section, Interface Foundation of North America

Chair(s): Inna Chervoneva, Thomas Jefferson University

10:35 a.m. **Testing Local Differences in Placental Shapes Using Weighted Fourier Analysis**—◆Jia Cao, Columbia University; Shubing Wang, Merck & Co., Inc.; Ian McKeague, Columbia University

10:50 a.m. **A Spatio-Temporal Transmission Model to Model the Spread of Bluetongue in Europe**—◆Christel Faes, Hasselt University; Marc Aerts, Hasselt University

11:05 a.m. **Longitudinal Image Analysis of Tumor/Brain Change in Contrast Uptake Induced by Radiation**—◆Xiaoxi Zhang, Pfizer Inc.; Timothy D. Johnson, University of Michigan; Roderick J.A. Little, University of Michigan; Yue Cao, University of Michigan

11:20 a.m. **Generalized Volterra Model of Neural Population Dynamics for Hippocampal Prostheses**—◆Dong Song, University of Southern California; Theodore W. Berger, University of Southern California

11:35 a.m. **Generalized Additive Models with Spatio-Temporal Data**—◆Xiangming Fang, East Carolina University; Kung-Sik Chan, The University of Iowa

11:50 a.m. **State Space and Hidden Markov Models of Human Colon Cancer Involving Multiple Pathways**—◆Wai-Yuan Tan, University of Memphis; Y.W. Yan, The University of Memphis

12:05 p.m. **Floor Discussion**

172 CC-204A

■ Missing Data in Clinical Trials—Contributed

Biopharmaceutical Section

Chair(s): Kallappa M. Koti, FDA

10:35 a.m. **Handling Missing Data in Diabetes Studies with Rescue**—◆Yu Chen, Merck & Co., Inc.; Bret Musser, Merck Research Laboratories

10:50 a.m. **Quantile Regression for the Decline of Lung Function in COPD Patients: A Longitudinal Study with Drop-Out**—◆Dacheng Liu, Boehringer Ingelheim Pharmaceuticals, Inc.

11:05 a.m. **Analysis of Dichotomized Responses in Longitudinal Studies with Missing Data**—◆Kaifeng Lu, Merck & Co., Inc.

11:20 a.m. **Comparison of Missing Data Approaches on Noninferiority Clinical Trials in Treatment of HIV Infection**—◆Xia Xu, Merck Research Laboratories

11:35 a.m. **Examining the Extent and the Impact of Missing Data in Oncology Clinical Trials**—◆Mark Rothmann, FDA

11:50 a.m. **Estimating Treatment Effects in Randomized Clinical Trials with Noncompliance and Missing Outcomes**—◆Yan Zhou, University of Michigan

12:05 p.m. **Comparison of Right and Interval Censoring Methods in Analysis of Time to Progression in Presence of Asymmetry and Missed Assessments**—◆Somesh Chattopadhyay, FDA; Shenghui Tang, FDA; Rajeshwari Sridhara, FDA

173 CC-142

Inequality and Wage Differentials—Contributed

Business and Economic Statistics Section

Chair(s): Carla Inclan, Freddie Mac

10:35 a.m. **What Differentiates Between Women and Men in the Labor Market**—◆Edna Schechtman, Ben Gurion University of the Negev; Shlomo Yitzhaki, Central Bureau of Statistics; Yulanda Geva, Central Bureau of Statistics

10:50 a.m. **Multiple Imputation for Top-Coded Wages in German Social Security Register Data**—◆Thomas Büttner, Institute for Employment Research; Susanne Rässler, Otto-Friedrich University Bamberg

11:05 a.m. **Are Job Centers More Effective When Caseloads Are Reduced? An Evaluation of a Regional Pilot Project**—◆Katja Wolf, Institute for Employment Research; Barbara Hofmann, Institute for Employment Research; Gerhard Krug, Institute for Employment Research

11:20 a.m. **Establishment Wage Differentials and Occupational Employment**—◆Jane G. Osburn, Bureau of Labor Statistics

11:35 a.m. **Interpreting the Cumulative Frequency Distribution of Socioeconomic Data**—◆Othmar W. Winkler, Georgetown University

11:50 a.m. **An Efficient Algorithm for the Computation of the Gini Coefficient of the Generalized Beta Distribution of the Second Kind**—◆Monique Graf, Swiss Federal Statistical Office

12:05 p.m. **Floor Discussion**

Speaker with Lunch 12:30 p.m.–1:50 p.m.

174 CC-301

Section on Statistics in Sports Speaker with Lunch (fee event)—Speaker with Lunch

Section on Statistics in Sports

Organizer(s): Scott Evans, Harvard University

ML07 **Rating the Competition: Lessons from the World of Tournament Chess**—◆Mark Glickman, Boston University School of Public Health

Roundtables with Lunch 12:30 p.m.–1:50 p.m.

175 CC-Ballroom South Prefunction

Biopharmaceutical Section Roundtables with Lunch (fee event)

Biopharmaceutical Section

Organizer(s): Dionne Price, FDA

ML08 **Pooling versus No Pooling of Safety Data from Clinical Trials**—◆Vipin Arora, Takeda Pharmaceuticals

ML09 **Data-Monitoring Committees: What Is the Scope of the Information the DMC Can Review?**—◆Dennis W. King, STATKING Consulting, Inc.

ML10 **Statistical Analyses of HIV Drug Resistance**—◆David B. Hall, Boehringer Ingelheim Pharmaceuticals, Inc.

ML11 **Design and Analysis Issues for FDA Medical Device Submissions**—◆Gary Kamer, FDA

ML12 **Randomization Strategies in Multicenter Trials**—◆Olga M. Kuznetsova, Merck & Co., Inc.

ML13 **The Use of Decision Analysis in Clinical Trials**—◆Telba Irony, FDA

176 CC-Ballroom South Prefunction

Business and Economic Statistics Section Roundtable with Lunch (fee event)

Business and Economic Statistics Section

Organizer(s): Graham Elliott, University of California, San Diego

ML14 **What Makes the Introductory Course in Applied Statistics for Business Students Different?**—◆John McKenzie, Babson College

177 CC-Ballroom South Prefunction

Section on Bayesian Statistical Science Roundtable with Lunch (fee event)

Section on Bayesian Statistical Science

Organizer(s): Alyson Wilson, Iowa State University

ML15 **Teaching Bayes to Undergraduates: Challenges and Lessons Learned**—◆Brani Vidakovic, Georgia Tech/Emory University

178 CC-Ballroom South Prefunction

Section on Government Statistics Roundtable with Lunch (fee event)

Section on Government Statistics

Organizer(s): Lisa Blumerman, U.S. Census Bureau

ML16 **Communicating Statistics to Nontechnical Audiences**—◆Leonard M. Gaines, Empire State Development

179 CC-Ballroom South Prefunction

Section on Health Policy Statistics Roundtable with Lunch (fee event)

Section on Health Policy Statistics

Organizer(s): Susan Paddock, RAND Corporation

ML17 **Predicting Health Care Costs of Individual Patients**—◆Xiao-Hua (Andrew) Zhou, University of Washington

180 CC-Ballroom South Prefunction
Section on Physical and Engineering Sciences Roundtables with Lunch (fee event)
Section on Physical and Engineering Sciences
Organizer(s): George Ostrouchov, Oak Ridge National Laboratory

ML18 The Many Forms of Reliability Data—◆David C. Trindade, Sun Microsystems, Inc.
ML19 Integrating Computer and Other Types of Experiments—◆Thomas Santner, The Ohio State University

181 CC-Ballroom South Prefunction
Section on Statistical Education Roundtables with Lunch (fee event)
Section on Statistical Education
Organizer(s): Tisha L. Hooks, Winona State University

ML20 Using Computer-Based Teaching Materials Effectively—◆Dale Berger, Claremont Graduate University
ML21 The Partnership of Industry and Academia in Providing Internship Opportunities for Undergraduate Statistics Majors—◆Eileen King, Miami University
ML22 Challenges in Developing an Online Service Course—◆Brant Deppa, Winona State University

182 CC-Ballroom South Prefunction
Section on Statistical Graphics Roundtable with Lunch (fee event)
Section on Statistical Graphics, Section on Government Statistics
Organizer(s): Heike Hofmann, Iowa State University

ML23 Wouldn't That Be Cool? Sharing Streams of Consciousness About Visualization on the Bleeding Edge—◆Dan Rope, SPSS

183 CC-Ballroom South Prefunction
Section on Statistics in Defense and National Security Roundtable with Lunch (fee event)
Section on Statistics in Defense and National Security
Organizer(s): Jeffrey L. Solka, Naval Surface Warfare Center

ML24 Syndromic Surveillance: Issues and Its Evolution—◆Henry Rolka, CDC

184 CC-Ballroom South Prefunction
Section on Statistics and Marketing Roundtable with Lunch (fee event)
Section on Statistics and Marketing
Organizer(s): Wolfgang S. Jank, University of Maryland

ML25 Online User-Generated Content—◆Wendy W. Moe, University of Maryland

185 CC-Ballroom South Prefunction
Section on Survey Research Methods Roundtables with Lunch (fee event)
Section on Survey Research Methods
Organizer(s): Michael Elliott, University of Michigan

ML26 Fitting Models and Estimating Model Parameters Using Data from Complex Surveys—◆Jean Opsomer, Colorado State University; Jay Breidt, Colorado State University
ML27 Health Surveys and the Survey Statistician—◆Novie Younger, Tropical Medicine Research Institute, Jamaica

186 CC-Ballroom South Prefunction
Social Statistics Section Roundtables with Lunch (fee event)
Social Statistics Section
Organizer(s): Joseph J. Salvo, NYC Department of City Planning

ML28 Removing the Veil from Publicly Released Polls: What Is the Statistician's Role in the Fight to Improve Statistical Literacy?—◆Stephen J. Dienstfrey, Independent Consultant
ML29 Can We Teach Data Users to Use Survey Data Wisely?—◆Deborah H. Griffin, U.S. Census Bureau

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

Special Presentation 2:00 p.m.–3:50 p.m.

187 CC-202A

Late-Breaking Session I: Policymakers to Get Full Data Coverage of the Nation's Service Sector—Other

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

Organizer(s): Mark Wallace, Service Sector Statistics Division

Chair(s): Dennis Fixler, Bureau of Economic Analysis

Panelists:
- ◆Barry Bosworth, The Brookings Institution
- ◆Carol Corrado, The Conference Board/Economic Programs
- ◆Robert Vastine, Coalition of Service Industries
- ◆Mark Wallace, Service Sector Statistics Division

3:40 p.m. Floor Discussion

Invited Sessions 2:00 p.m.–3:50 p.m.

188 CC-155

■ Statistics in the Research Methods Courses—Invited

Section on Statistical Education, Social Statistics Section

Organizer(s): Peter Westfall, Texas Tech University

Chair(s): Jessica M. Utts, University of California, Irvine

2:05 p.m. **Statistics for Business Researchers**—◆Sam Woolford, Bentley University; Richard Cleary, Bentley University

2:30 p.m. **Challenges in Teaching Advanced Statistical Methods for Observational Studies in a Subject-Matter Context**—◆Mari Palta, University of Wisconsin-Madison

2:55 p.m. **Turning our GAISE Toward Departments of Psychology**—◆Patricia C. Rutledge, Allegheny College

3:20 p.m. **Stealth Statistics: Teaching Research Methods in Graduate Nursing Education**—◆Mary Mays, Arizona State University

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

189 CC-207B

Parzen's Legacy on Modern Nonparametric Statistics—Invited

Section on Nonparametric Statistics, Section on Bayesian Statistical Science, Interface Foundation of North America

Organizer(s): Todd Ogden, Columbia University

Chair(s): H. Joseph Newton, Texas A&M University

2:05 p.m. **Functional Data Analysis Using Dirichlet Processes**—◆Alan E. Gelfand, Duke University

2:30 p.m. **Manny Parzen and Reproducing Kernel Hilbert Spaces**—◆Grace Wahba, University of Wisconsin-Madison

2:55 p.m. **A RKHS Framework for Functional Data Analysis**—◆Randy Eubank, Arizona State University

3:20 p.m. Disc: Jeffrey Hart, Texas A&M University

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

190 CC-143A

■ ✪ New Tricks for Old Media: What Measurement and Method Tell Us About Traditional Media Consumption and Effectiveness—Invited

Section on Statistics and Marketing, Social Statistics Section

Organizer(s): David A. Schweidel, University of Wisconsin-Madison

Chair(s): Erin McClintic Tanenbaum, Nielsen Claritas

2:05 p.m. **Harnessing Statistical Techniques to Model Television Audiences Using Return-Path Set Top Box Data**—◆Pete Doe, Nielsen Connections

2:30 p.m. **Aural Choice**—◆Ty Henderson, The University of Texas at Austin

2:55 p.m. **Understanding ESPN Across Media**—◆Glenn B. Enoch, ESPN, Inc.

3:20 p.m. **Reexamining Television Tuning Behavior**—◆David A. Schweidel, University of Wisconsin-Madison

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

191 CC-160

■ ✪ Statistical Issues in Building and Evaluating Genetic Risk Predictors—Invited

Section on Statistics in Epidemiology, Biopharmaceutical Section

Organizer(s): Peter Kraft, Harvard School of Public Health

Chair(s): Peter Kraft, Harvard School of Public Health

2:05 p.m. **The Value of Single Nucleotide Polymorphisms in Projecting Breast Cancer Risk**—◆Mitchell H. Gail, National Cancer Institute; Ruth Pfeiffer, National Cancer Institute

2:30 p.m. **Statistical Evaluation of Prognostic Genetic Models: Beyond the ROC Curve**—◆Nancy Cook, Brigham and Women's Hospital

2:55 p.m. **Kernel Machine Approach to Testing the Significance of Multiple Markers for Risk Prediction**—◆Tianxi Cai, Harvard University

3:20 p.m. Disc: Daniel Schaid, Mayo Clinic

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

192 CC-149B

■ ✪ Making Statistics Go Viral: Visualizing Illness in Social Networks—Invited

Section on Statistical Graphics, Social Statistics Section, Section on Statistics in Epidemiology, Section on Risk Analysis, Interface Foundation of North America

Organizer(s): Stanley Wasserman, Indiana University
Chair(s): Stanley Wasserman, Indiana University

2:05 p.m. **Statistical Analysis and Visualization of Large-Scale Interpopulation Contagion**—◆Alessandro Vespignani, Indiana University

2:30 p.m. **Using Diffusion Principles to Understand Disease Spread**—◆Thomas W. Valente, University of Southern California

2:55 p.m. **Network Visualizations for Diffusion Studies**—◆James Moody, Duke University; Jeff Smith, Duke University

3:20 p.m. Disc: Ann McCranie, Indiana University

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

193 CC-102B

■ ✪ Rigorous Foundations of Data Confidentiality in Statistical Databases—Invited

Section on Survey Research Methods, Committee on Privacy and Confidentiality

Organizer(s): Aleksandra B. Slavkovic, Penn State University; Adam D. Smith, Penn State University
Chair(s): John M. Abowd, Cornell University

2:05 p.m. **Taking the Hard Work Out of Privacy: Interactive Data Analysis with End-to-End Privacy Guarantees for All**—◆Frank McSherry, Microsoft Research

2:30 p.m. **Integrating Differential Privacy with Statistical Theory**—◆Adam D. Smith, Penn State University

2:55 p.m. **Differentially Private Categorical Data Analysis**—◆Aleksandra B. Slavkovic, Penn State University; Ivan Simeonov, Penn State University; Duy Vu, Penn State University

3:20 p.m. **Valid Statistical Analysis for Logistic Regression with Multiple Sources**—◆Robert Hall, Carnegie Mellon University; Stephen Fienberg, Carnegie Mellon University; Yuval Nardi, Carnegie Mellon University; Aleksandra B. Slavkovic, Penn State University

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

194 CC-150B

New Developments in Dimension Reduction—Invited

Biometrics Section, Biopharmaceutical Section, International Chinese Statistical Association

Organizer(s): Wensheng Guo, University of Pennsylvania
Chair(s): Xiangrong Yin, The University of Georgia

2:05 p.m. **Likelihood-Based Sufficient Dimension Reduction for Regression**—◆R. Dennis Cook, The University of Minnesota

2:35 p.m. **Dimension Reduction for Non-Elliptically Distributed Predictors**—◆Bing Li, Penn State University

3:05 p.m. **A Binary Response Transformation Expectation Method in Dimension Reduction**—◆Li-Xing Zhu, Hong Kong Baptist University; Liping Zhu, East China Normal University

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

195 CC-159B

■ Best Teaching Practices for Statistics in Translational Research—Invited

Section on Teaching of Statistics in the Health Sciences, Social Statistics Section

Organizer(s): Carol Bigelow, University of Massachusetts Amherst
Chair(s): Carol Bigelow, University of Massachusetts Amherst

2:05 p.m. **Building Bridges: Making Statistical Issues Accessible to the Biomedical and Translational Researcher**—◆Taylor Pressler, The Ohio State University

2:30 p.m. **Analytic Perspectives for Translational Research: Controlling for the Uncontrollable**—◆Deborah V. Dawson, The University of Iowa; Clark M. Stanford, The University of Iowa

2:55 p.m. **Duke Medicine Online Core in Clinical Research: Customized Environment for Practicing Health Professionals**—◆Steven C. Grambow, Duke University; Cynthia Coffman, Duke University Medical Center; Lawrence H. Muhlbaier, Duke University; Linda S. Lee, Duke University; Haiyan Zhou, Duke University; William E. Wilkinson, Duke University

3:20 p.m. **Sending Someone Else to Find the Needle in the Haystack: Defining a Dialogue Between Translational Scientists and Statisticians**—◆Andrea S. Foulkes, University of Massachusetts

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

196 CC-150A

Outcome-Dependent Sampling Designs—Invited

WNAR

Organizer(s): Jonathan Schildcrout, Vanderbilt University

Chair(s): Jonathan Schildcrout, Vanderbilt University

2:05 p.m. **A Likelihood Approach for Case-Control Family Data**—◆Yingye Zheng, Fred Hutchinson Cancer Research Center; Patrick Heagerty, University of Washington

2:25 p.m. **Analysis of Two-Phase Studies in the Presence of Participation Bias**—◆Sebastien Haneuse, Group Health Center for Health Studies

2:45 p.m. **Accounting for Animal Movement in Estimation of Resource Selection Functions: Sampling and Data Analysis**—James D. Forester, Harvard University; Hae Kyung Im, The University of Chicago; ◆Paul J. Rathouz, The University of Chicago

3:05 p.m. **Outcome-Dependent Sampling Studies for Longitudinal Binary Response Data with Time-Varying Covariates**—◆Patrick Heagerty, University of Washington; Jonathan Schildcrout, Vanderbilt University

3:25 p.m. Disc: John Neuhaus, University of California, San Francisco

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

197 CC-207A

Recent Advances and the Future of Statistics—Invited

IMS

Organizer(s): Xiaotong Shen, The University of Minnesota

Chair(s): Michael Kosorok, The University of North Carolina at Chapel Hill

2:05 p.m. **Back to the Future: Do Recent Developments Tell Us Anything About the Future of Statistics?**—◆Jon A. Wellner, University of Washington

2:45 p.m. **The Future of Indirect Evidence**—◆Brad Efron, Stanford University

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

198 CC-158B

✪ New Developments in Model Selection—Invited

SSC, Biopharmaceutical Section, International Chinese Statistical Association

Organizer(s): Jiahua Chen, The University of British Columbia
Chair(s): Peter X.K. Song, University of Michigan

2:05 p.m. **Feature Selection in GLM with Large Model Spaces**—◆Jiahua Chen, The University of British Columbia; Zehua Chen, National University of Singapore

2:30 p.m. **Composite Likelihood Information Criterion for Model Selection in High-Dimensional Data**—◆Xin Gao, York University; Peter X.K. Song, University of Michigan

2:55 p.m. **Model Selection Bias in Genome-Wide Genetic Studies**—◆Lei Sun, University of Toronto

3:20 p.m. Disc: Pengfei Li, University of Alberta

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

199 CC-206

Cosmology and Astrophysics—Invited

IMS, Section on Bayesian Statistical Science, Section on Government Statistics

Organizer(s): Anirban DasGupta, Purdue University
Chair(s): Anirban DasGupta, Purdue University

2:05 p.m. **Nonparametric Estimation of Filaments**—◆Larry Wasserman, Carnegie Mellon University

2:35 p.m. **Detection of Weak Lensing: A Statistical Challenge to Unveil the Dark Side of the Universe**—◆Laura Cayon, Purdue University

3:05 p.m. **Coherent Statistical Calibration of High-Energy Photon Detectors**—◆David A. van Dyk, University of California, Irvine; Vinay Kashyap, Harvard-Smithsonian Center for Astrophysics; Hyunsook Lee, Harvard-Smithsonian Center for Astrophysics; Rima Izem, Harvard University

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

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

200 CC-204B

■ ✪ Student Paper Competition: Bayesian Genomics and Genetics—Topic-Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section, Section on Government Statistics

Organizer(s): Michael J. Daniels, University of Florida
Chair(s): Tanzy Love, Carnegie Mellon University

2:05 p.m. **A Nonparametric Empirical Bayes Framework for Simultaneous Significance Testing**—◆Ryan Martin, Purdue University; Surya T. Tokdar, Carnegie Mellon University; Surya T. Tokdar, Carnegie Mellon University

2:25 p.m. **Bayesian Analysis of Array CGH Data**—◆Xiaowei Wu, Rice University; Hongxiao Zhu, The University of Texas M.D. Anderson Cancer Center; Marek Kimmel, Rice University

2:45 p.m. **Alternative Bayesian Hierarchical Modeling in Imaging Genetics**—◆Jie Shen, University of California, Irvine; Hal Stern, University of California, Irvine

3:05 p.m. **Bayesian Mixture Modeling Using a Hybrid Sampler with Application to Protein Subfamily Identification**—◆Youyi Fong, University of Washington; Jon Wakefield, University of Washington; Kenneth Rice, University of Washington

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

201 CC-209B

■ ✪ Algebraic Methods—Topic-Contributed

IMS

Organizer(s): Ian H. Dinwoodie, Duke University
Chair(s): Ian H. Dinwoodie, Duke University

2:05 p.m. **Algebraic Methods in Statistics**—◆Ahmad S. Yasamin, Statistical and Applied Mathematical Sciences Institute

2:25 p.m. **Conditional Independence Models via Filtrations**—◆Simon Lunagomez, Duke University; Sayan Mukherjee, Duke University; Robert L. Wolpert, Duke University

2:45 p.m. **Trek Separation for Gaussian Graphical Models**—◆Seth Sullivant, North Carolina State University

3:05 p.m. **Design of Experiments and Inference of Biochemical Networks**—◆Reinhard Laubenbacher, Virginia Bioinformatics Institute; Brandilyn Stigler, Southern Methodist University

3:25 p.m. **Discretization of Time Series Data**—◆Paola Vera-Licona, Rutgers University; Elena S. Dimitrova, Clemson University; John McGee, Radford University; Reinhard Laubenbacher, Virginia Bioinformatics Institute

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

202 CC-204A

■ ✪ Applications of Bayesian Statistics and Information Theory—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Refik Soyer, The George Washington University

Chair(s): Refik Soyer, The George Washington University

2:05 p.m. **Estimating the Population Utility Function: A Parametric Bayesian Approach**—◆Rasim M. Musal, Texas State University

2:25 p.m. **Bayesian Inference in Abandonment Processes of Call Centers**—◆Tevfik Aktekin, The George Washington University

2:45 p.m. **Prior Information Allocation for Collinear Regression**—◆Ehsan S. Soofi, University of Wisconsin-Milwaukee; Nader Ebrahimi, Northern Illinois University

3:05 p.m. **A Short Note on Bayesian Analysis of Dynamic Probit Models**—◆Minje Sung, Ajou University; Refik Soyer, The George Washington University

3:25 p.m. **Detection of Outliers in Bayesian Factor Analysis Using Information Complexity**—◆Hamparsum Bozdogan, The University of Tennessee

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

203 CC-209A

Statistical Methods and Theory for Spatial and/or Temporal Data—Topic-Contributed

Section on Statistics and the Environment, Section on Statistics in Defense and National Security, SSC, Interface Foundation of North America

Organizer(s): Jun Zhu, University of Wisconsin-Madison

Chair(s): Jun Zhu, University of Wisconsin-Madison

2:05 p.m. **A Block Bootstrap Under Long-Range Dependence**—◆Dan Nordman, Iowa State University

2:25 p.m. **On Nonparametric Variance Estimation for Second-Order Statistics of Inhomogeneous Spatial Point Processes**—◆Yongtao Guan, Yale University

2:45 p.m. **Local Whittle Estimator for Anisotropic Random Fields**—◆Chae Young Lim, Michigan State University; Hongwen Guo, Educational Testing Service; Mark M. Meerschaert, Michigan State University

3:05 p.m. **Time-Frequency Methods for Space-Time Models**—◆Peter F. Craigmile, The Ohio State University

3:25 p.m. **Understanding Past Temperature Reconstruction by Integrating Different Sources**—◆Bo Li, Purdue University; Douglas Nychka, National Center for Atmospheric Research; Caspar Ammann, National Center for Atmospheric Research

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

204 CC-153

Statistical Analysis of Medical Device Data—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Yao Huang, FDA

Chair(s): Yao Huang, FDA

2:05 p.m. **Optimizing Decision Rules for Trial Device Responder Identification**—◆Jeng Mah, Regulatory and Clinical Research Institute, Inc.

2:25 p.m. **Meta-Analysis of Time-to-Event Survival Curves in Drug Eluting Stent Data**—◆Hsini Liao, Boston Scientific Corporation; Hong Wang, Boston Scientific Corporation; Yun Lu, Boston Scientific Corporation

2:45 p.m. **Analysis of Repeated-Measures Score Data Obtained from Patient Questionnaires in Medical Device Studies**—◆Chang S. Lao, FDA

3:05 p.m. **Modeling Heterogeneity Across Sites in One-Arm Study**—◆Chul H. Ahn, FDA

3:25 p.m. **The Effect of Biodegradability on Drug Release Behavior in Drug Eluting Stents**—◆Shanti Gomatam, FDA

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

205 CC-142

Trends and Forecasts in Time Series—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Tucker S. McElroy, U.S. Census Bureau

Chair(s): Stuart Scott, Bureau of Labor Statistics

2:05 p.m. **Equivalent Reproducing Kernels for Smoothing Spline Predictors**—◆Silvia Bianconcini, University of Bologna; Estela Bee Dagum, University of Bologna

2:25 p.m. **An Assessment of Trend Estimation Methods**—◆Yorghos Tripodis, Boston University

2:45 p.m. **The CES/JOLTS Divergence: How to Apply the Monthly Alignment Method to Help Close the Gap**—Jeannine M. Mercurio, Bureau of Labor Statistics; ◆Edmond Cheng, Bureau of Labor Statistics

3:05 p.m. **Issues in Trend Estimates for Official Statistics**—◆Begoña Martín, Office for National Statistics; Duncan Elliott, Office for National Statistics;

Peter Meszaros, Statistics Canada; Craig McLaren, UK Office for National Statistics

3:25 p.m. **Kernel Singular Spectrum Analysis: Nonlinear Forecasting Using a Linear Method**—◆Theodore Alexandrov, University of Bremen

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

206 CC-101

■ ✪ Response Strategies for Establishment Surveys in the Economic Programs Directorate, U.S. Census Bureau—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Ruth E. Detlefsen, U.S. Census Bureau

Chair(s): Shirin A. Ahmed, U.S. Census Bureau

2:05 p.m. **Response Improvement Strategies for the 2007 Economic Census**—◆Ruth E. Detlefsen, U.S. Census Bureau; Shirin A. Ahmed, U.S. Census Bureau

2:25 p.m. **Effectiveness of the Account Manager Program for the 2007 Economic Census**—Robert Marske, U.S. Census Bureau; ◆Michael J. Hartz, U.S. Census Bureau

2:45 p.m. **Strategies to Improve Response Rates for Current Economic Programs**—◆Robert J. Reinard, U.S. Census Bureau

3:05 p.m. **Improving Response Rates for the 2007 Census of Government Employment**—◆Kerstin K. Edwards, U.S. Census Bureau; Kenneth L. Long, U.S. Census Bureau; Grace O'Neill, Energy Information Administration; Carma Hogue, U.S. Census Bureau

3:25 p.m. Disc: Nancy Bates, U.S. Census Bureau

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

207 CC-201

■ ✪ Challenges Related to The American Community Survey Three-Year Estimates—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Anthony Tersine, U.S. Census Bureau

Chair(s): Lars Lyberg, Statistics Sweden

2:05 p.m. **The Quality of ACS Estimates for Small Population Groups**—◆Alfredo Navarro, U.S. Census Bureau; Michael D. Starsinic, U.S. Census Bureau

2:25 p.m. **Measurement of Geographic Mobility Using Three-Year Estimates from the American Community Survey**—◆Joseph J. Salvo, NYC Department of City Planning; A. Peter Lobo, NYC Department of City Planning; Joel A. Alvarez, NYC Department of City Planning

2:45 p.m. **Improving the Utility of Three-Year ACS Data: A Transportation Perspective**—◆Elaine Murakami, Federal Highway Administration; Ed Christopher, Federal Highway Administration

3:05 p.m. Disc: Graham Kalton, Westat, Inc.

3:25 p.m. Disc: Ken Hodges, Nielsen Claritas

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

208 CC-204C

■ ✪ Measuring Poverty: New Research Findings—Topic-Contributed

Social Statistics Section, Section on Government Statistics

Organizer(s): Kathleen S. Short, U.S. Census Bureau

Chair(s): Rebecca M. Blank, Under Secretary of Commerce for Economic Affairs, U.S. Department of Commerce

2:05 p.m. **Cohabitation and Child Care in a Poverty Measure**—◆Kathleen S. Short, U.S. Census Bureau

2:25 p.m. **Measuring MOOP with SIPP/MEPS**—◆Sharon I. O'Donnell, U.S. Census Bureau

2:45 p.m. **National Academy of Sciences--Based Poverty Thresholds: The Details of Alternatives and Choices in Specification**—◆Thesia I. Garner, Bureau of Labor Statistics

3:05 p.m. **Experimental Poverty Measures: Geographic Adjustments from the American Community Survey and BEA Price Parities**—◆Trudi Renwick, U.S. Census Bureau

3:25 p.m. Disc: Constance F. Citro, The National Academies

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

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

209 CC-102A

■ ✪ How Post-Traumatic Stress Disorder (PTSD) Is Changing Disability Among Returning Veterans: What Can We Do?—Topic-Contributed

Committee on Statistics and Disability, Section on Government Statistics

Organizer(s): Michele Connolly, Sweetgrass Consulting, LLC

Chair(s): Joan L. Turek, U.S. Department of Health and Human Services

Panelists:
- ◆Michele Connolly, Sweetgrass Consulting, LLC
- ◆Paula Schnurr, Veterans Affairs National Center for Posttraumatic Stress Disorder
- ◆Ronald Manderscheid, SRA International
- ◆Cille Kennedy, U.S. Department of Health and Human Services

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

210 CC-143B

■ So You Want to Be an Expert Witness?—Topic-Contributed

Section on Statistical Consulting

Organizer(s): Christopher H. Schmid, Tufts Medical Center

Chair(s): Joseph C. Cappelleri, Pfizer Inc.

Panelists:
- ◆Christopher H. Schmid, Tufts Medical Center
- ◆Elaine Allen, Babson College
- ◆Harold Feldman, University of Pennsylvania
- ◆Jeffrey Ginsberg, Kenyon and Kenyon

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

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

211 CC-144B

■ Statistical Issues in Clinical Trials—Contributed

Biopharmaceutical Section

Chair(s): Ghideon Ghebregiorgis, FDA

2:05 p.m. **Comparison of Methods for Meta-Analysis with Sparse Events Using Patient-Year Data**—Yang Zhao, Purdue University; ◆Hongwei Wang, Merck & Co., Inc.; Arlene Swern, Merck & Co., Inc.

2:20 p.m. **Assessing Regression Modeling with Ordinal Repeated Responses**—◆Kao-Tai Tsai, Bristol-Myers Squibb Company

2:35 p.m. **EWOC 3.0: Interactive Software for Dose Escalation in Cancer Phase I Clinical Trials**—◆Zhiheng Xu, Emory University; Mourad Tighiouart, Emory University; Andre Rogatko, Cedars-Sinai Medical Center; Lin Pan, Emory University

2:50 p.m. **Design and Analysis Issues with Vector of Binary Events as Primary Outcome**—◆Edward J. Mascha, Cleveland Clinic Foundation

3:05 p.m. **Married to Mantel-Haenszel? Consider a Minimum-Risk Affair!**—◆Devan V. Mehrotra, Merck Research Laboratories

3:20 p.m. **Weighted Kernel Fisher Discriminant Analysis for Integrating Genomic and Clinical Data with Application to Cancer Prediction**—◆Jemila S. Hamid, Hospital for Sick Children; Celia M.T. Greenwood, University of Toronto; Joseph Beyene, University of Toronto

3:35 p.m. **Study of Oncologic Treatment Effect Differences Between Gender and Age Groups**—◆Weishi Yuan, FDA; Yu-Ling Chang, FDA; Rajeshwari Sridhara, FDA

212 CC-158A

New Approaches in Econometrics—Contributed

Business and Economic Statistics Section

Chair(s): Tatevik Sekhposyan, The University of North Carolina at Chapel Hill

2:05 p.m. **Tests for Causality Between Two Infinite-Order Vector Autoregressive Series**—◆Chafik Bouhaddioui, United Arab Emirates University; Jean-Marie Dufour, McGill University

2:20 p.m. **Efficient Nonparametric IV Estimation of Local Average Treatment Effects Using the Estimated Propensity Score and a Test for Unconfoundedness**—◆Robert P. Lieli, The University of Texas at Austin; Stephen Donald, The University of Texas at Austin; Hsu Yu-Chin, The University of Texas at Austin

2:35 p.m. **Score Test--Based on GEL in the Presence of Weakly Identified Nuisance Parameters**—◆Saraswata Chaudhuri, The University of North Carolina at Chapel Hill

2:50 p.m. **Wald Tests for Detecting Multiple Structural Changes in Persistence**—◆Mohitosh Kejriwal, Purdue University; Pierre Perron, Boston University; Jing Zhou, BlackRock, Inc.

3:05 p.m. **Dynamic Factors in Periodic Time-Varying Regression Models**—◆Marius Ooms, Vrije Universiteit Amsterdam; Virginie Dordonnat, Electricité de France; Siem Jan Koopman, Vrije Universiteit Amsterdam

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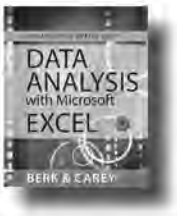

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3:20 p.m. **Detecting and Testing Change Points in Nonparametric Models Based on Series Estimation Methods**—◆Yingxing Li, Cornell University; Haiqiang Chen, Cornell University

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

213 CC-141
Advances in Survival Analysis—Contributed

ENAR

Chair(s): Russ Roegner, U.S. Consumer Product Safety Commission

2:05 p.m. **Cox Regression Methodology Applied to the Analysis of Multivariate Survival Response Data**—◆Shulamith T. Gross, Baruch College; Catherine Huber-Carol, Université Paris Descartes

2:20 p.m. **Long-Term Survivor Models and Two-Component Mixture Models**—Wonkuk Kim, University of South Florida; ◆Bong-Jin Choi, University of South Florida; Yong Xu, University of South Florida

2:35 p.m. **Joint Modeling of Longitudinal and Time-to-Event Data with Random Changepoints**—◆Chengjie Xiong, Washington University; Yuan Xu, Washington University

2:50 p.m. **Estimation of Overall Survival in an Illness-Death Model with Application to the Vertical Transmission of HIV-1**—Halina Frydman, New York University; ◆Michael Szarek, ImClone Systems

3:05 p.m. **Joint Modeling of Longitudinally Measured Dialysis Reuse and Time-to-Death in the HEMO Study**—◆Abdus Sattar, University of Pittsburgh; Lisa A. Weissfeld, University of Pittsburgh; Christos Argyropoulos, University of Pittsburgh Medical Center; Mark Unruh, University of Pittsburgh

3:20 p.m. **Improved Survival Modeling Using a Piecewise Exponential Approach**—◆Gang Han, Moffitt Cancer Center; Michael J. Schell, Moffitt Cancer Center; Jongphil Kim, Moffit Cancer Center

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

214 CC-149A
■ Experimental Designs—Contributed

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

Chair(s): Abhyuday Mandal, The University of Georgia

2:05 p.m. **Choosing a Strength Three Orthogonal Array to Estimate Interactions**—◆Robert W. Mee, The University of Tennessee

2:20 p.m. **24-Run Hadamard Designs for Estimation and Detection of Interactions**—◆Yingfu F. Li, University of Houston-Clear Lake

2:35 p.m. **Saturated Row-Column Designs and Their Applications**—◆Xianggui Qu, Oakland University

2:50 p.m. **Quantile Estimation with Computer Experiments**—◆Scott Vander Wiel, Los Alamos National Laboratory; Jim Gattiker, Los Alamos National Laboratory

3:05 p.m. **Comparison of Screening Methods in the Presence of Interactions**—◆Danel Draguljic, The Ohio State University; Dave Woods, University of Southampton; Angela Dean, The Ohio State University; Susan Lewis, University of Southampton

3:20 p.m. **Bayesian-Inspired Minimum Aberration Two- and Four-Level Designs**—◆Roshan J. Vengazhiyil, Georgia Institute of Technology; Mingyao Ai, Peking University; C.F. Jeff Wu, Georgia Institute of Technology

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

215 CC-209C
Clustering and Variable Selection in High-Dimensional Data—Contributed

Section on Statistical Learning and Data Mining, Interface Foundation of North America

Chair(s): Matthias Katzfuss, The Ohio State University

2:05 p.m. **Conditional Subspace Clustering of Skill Mastery Infomation**—◆Elizabeth Ayers, Carnegie Mellon University

2:20 p.m. **Discovering Homogeneous Geographic Areas Using Clustering**—◆Jin Yan Shao, IBM China Research Laboratory; Bin Zhang, IBM China Research Laboratory; Ming Xie, IBM China Research Laboratory; Li Xia, IBM China Research Laboratory; Wenjun Yin, IBM; Jin Dong, IBM China Research Laboratory

2:35 p.m. **Clustering High-Dimension, Low Sample–Size Data**—◆Jeongyoun Ahn, The University of Georgia; Youngjoo Yoon, The University of Georgia

2:50 p.m. **Image Segmentation by SUP Clustering Algorithm**—◆Ting-Li Chen, Institute of Statistical Science, Academia Sinica

3:05 p.m. **Effect of Number of Clusters, Cluster Size, and Correction for Chance Agreement on the Shape of Similarity Indexes in Cluster Analysis**—◆Ahmed N. Albatineh, Nova Southeastern University

3:20 p.m. **Penalization Methods for Simultaneous Supervised Clustering and Variable Selection**—◆Dhruv Sharma, North Carolina State University; Howard D. Bondell, North Carolina State University; Hao (Helen) Zhang, North Carolina State University

3:35 p.m. **Relations Between Quantitative and Categorical Variables: New Aspects**—◆Igor Mandel, Telmar Group Inc.; Boris Mirkin, University of London

216 CC-202B

Innovations in Imputation Methods—Contributed

Section on Survey Research Methods, Section on Bayesian Statistical Science

Chair(s): Paul J. Lavrakas, Consultant

2:05 p.m. **Posterior predictive checking of imputation models**—◆Yulei He, Harvard Medical School; Alan M. Zaslavsky, Harvard Medical School

2:20 p.m. **Analyses Based on Combining Similar Information from Multiple Surveys**—◆Georgia Roberts, Statistics Canada; David Binder, Statistics Canada (Retired)

2:35 p.m. **Performance of Sequential Imputation Method in Multilevel Settings**—◆Enxu Zhao, New York State Department of Health; Recai M. Yucel, State University of New York at Albany

2:50 p.m. **The Practice of Imputation Methods with Structural Equation Models**—◆Cherie J. Alf, Iowa State University; Michael D. Larsen, Iowa State University; Frederick O. Lorenz, Iowa State University

3:05 p.m. **Imputation of Gaps in Transaction Sequences**—◆Robin Lee, NORC at the University of Chicago; Michael P. Cohen, NORC at the University of Chicago; Fritz Scheuren, NORC at the University of Chicago

3:20 p.m. **Imputation of Income, Poverty, and Medicaid Status in the Ohio Family Health Survey**—◆Ronaldo Iachan, Macro International, Inc.; Bo Lu, The Ohio State University; Thomas Duffy, Macro International, Inc.

3:35 p.m. **Imputation of Nominal Variables Using Gaussian-Based Routines**—◆Recai M. Yucel, State University of New York at Albany

217 CC-143C

New Developments in Epidemiologic Methods—Contributed

Section on Statistics in Epidemiology

Chair(s): Arkendra De, FDA

2:05 p.m. **Improvement in Performance by Combining Biomarkers in Diagnostic Medicine**—◆Aasthaa Bansal, University of Washington; Margaret Pepe, University of Washington

2:20 p.m. **An Estimating Equations Approach for Latent Transition Models with Latent Class Predictors in Drug Use Epidemiology**—◆Beth A. Reboussin, Wake Forest University School of Medicine; Nicholas Ialongo, Johns Hopkins Bloomberg School of Public Health

2:35 p.m. **Nonparametric Incidence Estimation from Prevalent Cohort Data**—◆Marco Carone, Johns Hopkins Bloomberg School of Public Health; Masoud Asgharian, McGill University; Mei-Cheng Wang, Johns Hopkins Bloomberg School of Public Health; Daniel Scharfstein, Johns Hopkins Bloomberg School of Public Health

2:50 p.m. **Evaluation of Medical Diagnostic Systems with Multiple Heterogeneous Biomarkers**—◆Carol Y. Lin, CDC; Lance A. Waller, Emory University; Robert H. Lyles, Emory University

3:05 p.m. **Assessing Risk of a Factor Using Impact Numbers in a Case-Control Study**—◆Khairul Islam, Wayne State University; Tanweer J. Shapla, Eastern Michigan University

3:20 p.m. **Multilevel Modeling with Scaled Weights vs. Models Based on Generalized Estimating Equations (GEE) with Bootstrap Variance Estimation**—◆Alomgir Hossain, University of Saskatchewan; Punham Pahwa, University of Saskatchewan

3:35 p.m. **Estimating Equations**—Alan J. Lee, University of Auckland; ◆Alastair Scott, University of Auckland; Chris Wild, University of Auckland

218 CC-203B

■ From Meteorology to Weather—Contributed

Section on Statistics and the Environment, Section on Bayesian Statistical Science

Chair(s): Devin Johnson, National Marine Mammal Laboratory

2:05 p.m. **Bayesian Graphical Models for Multivariate Spatial Data with Application to Environmental Data**—◆Kathryn M. Irvine, Montana State University; Alix Gitelman, Oregon State University

2:20 p.m. **Inter-Annual Modeling and Seasonal Forecasting of Intermountain Snowpack Dynamics**—◆James B. Odei, Utah State University; Mevin B. Hooten, Utah State University; Jiming Jin, Utah State University

2:35 p.m. **Bayesian Hierarchical Modeling for Paleoclimate Reconstruction from Geothermal Data**—◆Jenny Brynjarsdottir, The Ohio State University; L. Mark Berliner, The Ohio State University

2:50 p.m. **Exploring a Possibly Increasing Trend of Hurricane Activity by a SiZer Approach**—◆Jesper Rydén, Uppsala University

3:05 p.m. **Tree-Ring--Based Climate Reconstruction**—◆Matthew Schofield, Columbia University; Richard Barker, University of Otago

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

219 CC-159A

Advances in the Implementation and Analysis of Monte Carlo Methods—Contributed

Section on Statistical Computing, Section on Bayesian Statistical Science, Interface Foundation of North America

Chair(s): Yongyun Shin, Virginia Commonwealth University

2:05 p.m. **Reconstructing the Energy Landscape of a Distribution from Monte Carlo Samples**—◆Qing Zhou, University of California, Los Angeles; Wing H. Wong, Stanford University

2:20 p.m. **Gibbs Ensemble for Incompatible Conditional Models**—◆Yuchung J. Wang, Rutgers University-Camden

2:35 p.m. **Two Case Studies of Power Analysis for Clinical Trial Designs by Using Simulations**—◆Junxiang Luo, Eli Lilly and Company

2:50 p.m. **Computer-Aided Reasoning in Statistics**—◆Leif Johnson, The University of Minnesota

3:05 p.m. **Random Graph Models for Inference: The Devil Is in the Details**—◆Elizabeth A. Beer, Johns Hopkins University; Carey E. Priebe, Johns Hopkins University; Edward R. Scheinerman, Johns Hopkins University

3:20 p.m. **Distribution of Spaced Seed Statistics Through Minimal Markov Chain Embedding**—◆KeTrena S. Phipps, North Carolina State University; Donald E.K. Martin, North Carolina State University

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

220 CC-203A

Nonparametric Estimation—Contributed

Section on Nonparametric Statistics

Chair(s): Huiyan Sang, Texas A&M University

2:05 p.m. **A Theil-Type Estimate in Multiple Linear Regression and Its Asymptotics**—◆Gang Shen, Purdue University

2:20 p.m. **Nonparametric Regression Analysis of SPD Matrices**—◆Ying Yuan, The University of North Carolina at Chapel Hill; Hongtu Zhu, The University of North Carolina at Chapel Hill; J. Steve Marron, The University of North Carolina at Chapel Hill; Dinggang Shen, The University of North Carolina at Chapel Hill

2:35 p.m. **The ed Method for Nonparametric Density Estimation and Diagnostic Checking**—◆Ryan P. Hafen, Purdue University; William S. Cleveland, Purdue University

2:50 p.m. **Simultaneous Confidence Bands for Mean Response Functions and Their Derivatives**—◆Benjamin K. Hall, University of Kentucky; Richard Charnigo, University of Kentucky; Cidambi Srinivasan, University of Kentucky

3:05 p.m. **Regularity of Irregularity**—◆Brani Vidakovic, Georgia Tech/Emory University; Kichun S. Lee, Georgia Institute of Technology

3:20 p.m. **Approximation of Likelihood by the Projection Pursuit Regression for Multi-Parameter Distributions**—◆Ahmet Sezer, Anadolu University

3:35 p.m. **Regularized Estimation in AFT Models with High-Dimensional Covariates**—◆Liping Huang, University of Kentucky; Mai Zhou, University of Kentucky; Arne C. Bathke, University of Kentucky

221 CC-144C

Neuroimaging Analysis—Contributed

Biometrics Section, Interface Foundation of North America

Chair(s): Robert Krafty, University of Pittsburgh

2:05 p.m. **Design Effects with Generalized Linear Mixed Effects Model**—◆Qiaohao Zhu, University of Alberta

2:20 p.m. **Signal Extraction in Noisy Images: Improvements to Wavelet-Based False Discovery Rate Methods**—◆Joel O'Hair, Southern Methodist University; Wayne A. Woodward, Southern Methodist University; Richard F. Gunst, Southern Methodist University; William Schucany, Southern Methodist University

2:35 p.m. **NMR Peak Alignment Through Lineshape Modeling and Dynamic Programming**—◆Cheng Zheng, Purdue University; Shucha Zhang, Purdue University; Daniel Raftery, Purdue University; Olga Vitek, Purdue University

2:50 p.m. **The Effects of Preprocessing on fMRI Data**—◆Daniel B. Rowe, Medical College of Wisconsin

3:05 p.m. **Semiparametric Modeling for Activation in Language Processing with fMRI Data**—◆Namhee Kim, The Ohio State University; Prem K. Goel, The Ohio State University

3:20 p.m. **Spatial Clustering of Response Curves from Multi-Subject fMRI Studies**—◆Lucy Robinson, Columbia University; Martin Lindquist, Columbia University

3:35 p.m. **QTL Mapping on Shape**—◆Guifang Fu, Penn State University

222 CC-148

Applied Longitudinal Data Analysis—Contributed

Biometrics Section

Chair(s): Benjamin Leiby, Thomas Jefferson University

2:05 p.m. **Comparison of Prediction Interval Methods for a One-Way Random Effects Model**—◆Jamie M. Baldwin, Info Tech, Inc.; Ramon Littell, University of Florida

2:20 p.m. **Summarizing Response: When 'Effect Over Time' Doesn't Actually Capture an Intervention's Effect in Longitudinal Data**—Rochelle E. Tractenberg, Georgetown University Medical Center; ◆Kang-Hsien Fan, Georgetown University; Anne-Michelle Noone, Georgetown University; Kathryn Sandberg, Georgetown University Medical Center

2:35 p.m. **Cost-Efficient Designs for Longitudinal Mixed Effects Models**—◆Martijn Berger, Maastricht University

2:50 p.m. **Maximum Likelihood Estimation of Unconstrained Parameterization for the Covariance of Multivariate Longitudinal Data**—◆Chulmin Kim, Rochester Institute of Technology

3:05 p.m. **Assessing Agreement with Repeated Measures for Random Observers**—◆Chia-Cheng Chen, North Carolina State University; Huiman Barnhart, Duke University

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

223 CC-208B

Statistical Genetics and Computational Biology—Contributed

IMS

Chair(s): Adam J Rothman, University of Michigan

2:05 p.m. **Competing Risks with Missing Covariates: Effect of Matching Haplotypes on BMT Patients**—◆Thomas Scheike, University of Copenhagen

2:20 p.m. **Classification Model Based on Permanent Process with Application to Microarray Analysis**—◆Jie Yang, University of Illinois at Chicago

2:35 p.m. **Robust DNA Copy Number Estimation and SNP Genotype Calling: A Single Array Approach**—◆Wenjiang Fu, Michigan State University; Lin Wan, Peking University; Kelian Sun, Michigan State University; Qi Ding, Michigan State University; Ming Li, Michigan State University; Yalu Wen, Michigan State University; Yuehua Cui, Michigan State University; Robert C. Elston, Case Western Reserve University; Minping Qian, Peking University

2:50 p.m. **Genotype Calling Accuracy Varies with the Arrays in the Joint Calling Procedure**—◆Yalu Wen, Michigan State University; Ming Li, Michigan State University; Wenjiang Fu, Michigan State University

3:05 p.m. **Quality Control of Affymetrix SNP Arrays by Imputation of Damaged Area**—◆Ming Li, Michigan State University; Wenjiang Fu, Michigan State University; Yalu Wen, Michigan State University

3:20 p.m. **Nonparametric Estimation of Gene-Wise Variance for Microarray Data**—◆Yue Niu, Princeton University

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

224 CC-144A

■ Repeated Measures and Longitudinal Data Analysis—Contributed

Biopharmaceutical Section

Chair(s): Mohamed Alosh, FDA

2:05 p.m. **The Gradient Function for Checking Goodness-of-Fit of the Random-Effects Distribution in Mixed Models**—◆Geert Verbeke, Katholieke Universiteit Leuven; Geert Molenberghs, Hasselt University/ Katholieke Universiteit Leuven

2:20 p.m. **Longitudinal Structural Mixed Models and Causal Inference in Surgical Trials with Noncompliance**—◆Colleen Sitlani, University of Washington; Patrick Heagerty, University of Washington

2:35 p.m. **Handling Baseline Responses in Repeated Measures Analyses with Data Missing at Random**—◆Phillip Dinh, FDA; Peiling Yang, FDA

2:50 p.m. **Weighted Fourier Analysis of Longitudinal Data**—◆Shubing Wang, Merck & Co., Inc.; Christopher Tong, Merck & Co., Inc.

3:05 p.m. **Missing Data Imputation for Estimating Time-to-Event from Longitudinal Continuous Data**—◆Lei Xu, Merck & Co., Inc.; Kaifeng Lu, Merck & Co., Inc.; Bret Musser, Merck Research Laboratories; Devan V. Mehrotra, Merck Research Laboratories

3:20 p.m. **Spatio-Temporal Modeling of Electrical Muscle Resistance of Patients with Amyotrophic Lateral Sclerosis Using Generalized Additive Mixed Model**—◆Catherine Stamoulis, Harvard Medical School; Seward Rutkove, Harvard Medical School

3:35 p.m. **Statistical Models for Analyzing Recurrent Events with Application to Hypoglycemia Data in Diabetes Clinical Trials**—◆Xiaodan Wei, sanofi-aventis; Yujun Wu, sanofi-aventis; Peng-Liang Zhao, sanofi-aventis

225 CC-208A

■ Bayesian Variable Selection and Genomics—Contributed

Section on Bayesian Statistical Science

Chair(s): Fei Liu, University of Missouri-Columbia

2:05 p.m. **Impact of Informative Prior in Discrete Bayesian Graphical Models: Application to Genome-Wide Association Studies**—◆Jinnan Liu, Samuel Lunenfeld Research Institute of Mount Sinai Hospital; Laurent Briollais, Samuel Lunenfeld Research Institute of Mount Sinai Hospital; Adrian Dobra, University of Washington; Helene Massam, York University

2:20 p.m. **A Bayesian Semiparametric Hierarchical Model for Analyzing Differential Expression in Sequence-Based Gene Expression Data**—◆Soma S. Dhavala, Texas A&M University; Bani K. Mallick, Texas A&M University

2:35 p.m. **Hierarchical Bayesian Variable Selection for Genetic Association**—◆Deukwoo Kwon, National Cancer Institute

2:50 p.m. **Seeking Higher-Order Chromatin Domains in Mouse Stem Cells via Hidden Markov Models**—◆Jessica L. Larson, Harvard University; Guocheng Yuan, Harvard University

3:05 p.m. **Bayesian Variable Selection in Generalized Gaussian Process Models**—◆Terrance D. Savitsky, Rice University; Marina Vannucci, Rice University; Naijun Sha, The University of Texas at El Paso

3:20 p.m. **Understanding Inference from Stochastic Search Variable Selection with Different Priors: How Much Evidence Is There?**—◆Michael D. Swartz, The University of Texas M.D. Anderson Cancer Center

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

Poster Presentations 2:00 p.m.–3:50 p.m.

226 CC-L Street Bridge

Invited Poster Oral Presentations: Statistics in Policy—Invited

Section on Statistics in Defense and National Security, Section on Health Policy Statistics, Section on Survey Research Methods, Section on Physical and Engineering Sciences

Organizer(s): Lara Schmidt, RAND Corporation

Chair(s): Lara Schmidt, RAND Corporation

QC, operation research, risk assessment

01 **Exploratory Data Analysis at the Boundary of Statistics and Engineering Design Optimization**—◆Theodore Allen, The Ohio State University; Mikhail Bernshteyn, Sagata Ltd.; Ravishankar Rajagopalan, The Ohio State University

Defense and National Security

02 **Planning Surveillance for a Stockpile That Might Degrade**—◆Scott Vander Wiel, Los Alamos National Laboratory; C. Shane Reese, Brigham Young University; Alyson Wilson, Iowa State University; Todd Graves, Los Alamos National Laboratory

Graphics, visualization

03 **Scatterplots for Sampling Weighted Data**—◆Thomas Lumley, University of Washington

Defense and National Security

04 **Disclosure Limitation Techniques for Tabular Data**—◆Joe Fred Gonzalez, Jr., National Center for Health Statistics

Health policy, epidemiology, public health

05 **The Relationship Between Reliability and Misclassification in Physician Quality and Cost Profiles**—◆John L. Adams, RAND Health; Ateev Mehrotra, RAND Health; J. William Thomas, University of Southern Maine; Elizabeth A. McGlynn, RAND Health

Sampling and survey methodology

06 **Innovative Guidance for the Design of New Surveys or Major Revisions of Existing Surveys**—◆Jeri M. Mulrow, National Science Foundation

227 CC-L Street Bridge

Topic-Contributed Oral Poster Presentations: Data Expo 2009—Topic-Contributed

Section on Statistical Graphics

Organizer(s): Hadley Wickham, Rice University

Chair(s): Lara Schmidt, RAND Corporation

Graphics, visualization

07 **Data Expo 2009: Flight Delays—Through a Glass Lately**—◆Waqas A. Malik, Uni Augsburg; Antony Unwin, Uni Augsburg

08 **Data Expo 2009: Congestion in the Sky: Visualizing Domestic Airline Traffic with SAS**—◆Rick Wicklin, SAS Institute Inc.; Robert Allison, SAS Institute Inc.

09 **Data Expo 2009: Minimizing the Probability of Experiencing a Flight Delay**—Tanujit Dey, College of William & Mary; ◆David Phillips, College of William & Mary; Patrick Steele,

10 **Data Expo 2009: What Airline Is Best for You?**—◆Nathan Yau, University of California, Los Angeles

11 **Data Expo 2009: Comparing SFO and OAK**—◆Charlotte Wickham, University of California, Berkeley

12 **Data Expo 2009: Taking Off!**—◆Heike Hofmann, Iowa State University

13 **Data Expo 2009: On the Use of Dynamic Information Displays for Multidimensional Space-Time Data Exploration**—◆Jose J. Hernandez, W.R. Grace

14 **Data Expo 2009: Make a Smart Choice on Booking Your Flight!**—◆Yu-Hsiang Sun, Case Western Reserve University

15 **Data Expo 2009: Airline Data for Raleigh-Durham International**—◆Michael T. Crotty, SAS Institute Inc.

16 **Data Expo 2009: The Airplane Data Set … What's the Big Deal?**—◆Michael Kane, Yale University

17 **Data Expo 2009: Kaleidoscope Graphs**—◆Mario A. Morales, Hunter College

18 **Data 2009: Airline On-Time Performance**—◆Hadley Wickham, Rice University

19 **Data Expo 2009: What Airlines Would You Avoid for Your Next Flight?**—◆Haolai Jiang, Western Michigan University; Jung-Chao Wang, Western Michigan University

228 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

Section on Statistics in Defense and National Security

Chair(s): Lara Schmidt, RAND Corporation

Defense and National Security

20 **Opinion Pooling on Maps**—◆Jonathan Wilson, San Diego State University; Kristin Duncan, San Diego State University

Mathematical statistics, distribution theory, robust statistics

21 **Expected and Observed Fisher Information in Variance Estimation for Maximum Likelihood Estimates**—◆Xumeng Cao, Johns Hopkins University; James C. Spall, Johns Hopkins University Applied Physics Laboratory

Experimental design

22 **An Efficient Approach for Finding Optimal Resource Allocations in a Missile Reliability Study**—◆Jessica Chapman, St. Lawrence University; Max Morris, Iowa State University; Christine Anderson-Cook, Los Alamos National Laboratory

Bootstrap, resampling methods

23 **Fixed-Width Confidence Bands for ROC Curves with a Generalized False Positive Interval**—◆Daniel Katz, Johns Hopkins University Applied Physics Laboratory; Jacob Boon, Johns Hopkins University Applied Physics Laboratory; Michael Miller, Johns Hopkins University Applied Physics Laboratory; Austin DiOrio, Johns Hopkins University Applied Physics Laboratory

229 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

SSC

Statistical Analysis of Text

24 **A Stylometric Analysis Method with Semiparametric Bayesian Approach**—◆Paramjit S. Gill, The University of British Columbia

230 CC-Hall D

■ Topic-Contributed Oral Poster Presentations: Experiences in Consulting at Virginia Tech—Topic-Contributed

Section on Statistical Consulting

Organizer(s): Laura J. Freeman, Virginia Polytechnic Institute and State University

Chair(s): Lara Schmidt, RAND Corporation

Statistical consulting

25 **A Comparative Statistical Analysis for Forest Service Trail Tread Width**—◆Laura J. Freeman, Virginia Polytechnic Institute and State University

26 **Using Meteorological Data to Predict Ozone Levels in Rural Areas**—◆John Szarka, Virginia Polytechnic Institute and State University; Nels Johnson, Virginia Polytechnic Institute and State University

27 **Predicting Mortality in Infants**—◆Mark Seiss, Virginia Polytechnic Institute and State University

28 **Ecological Application of Changepoint Models**—◆Jonathan Duggins, Virginia Polytechnic Institute and State University; Dong-Yun Kim, Virginia Polytechnic Institute and State University; Sue Newman, South Florida Water Management District; Eric Smith, Virginia Polytechnic Institute and State University

29 **Survey Design for Evaluating the Role of International Students in Domestic Engineering Graduate Programs**—◆Anne Ryan, Virginia Polytechnic Institute and State University; Stephanie U. Balko; Veronica Bobb, Virginia Polytechnic Institute and State University

231 CC-Hall D

Contributed Oral Poster Presentations—Contributed

Section on Statistical Consulting

Chair(s): Lara Schmidt, RAND Corporation

Experimental design

30 **Testing for Co-Directional and Anti-Directional Interactions Using Union-Intersection and Intersection-Union Methods**—◆Julia L. Sharp, Clemson University; Patrick D. Gerard, Clemson University

Statistical consulting

31 **Testing Equal Protection of the Law: Unequal Quanta of Evidence in Drunken Driving Prosecutions in New Jersey**—◆Ayako Kambara, Applied Statistical Consulting, LLC

32 **A Student Perspective: My Learning Experience in a University Statistical Consulting Center**—◆Whitney B. Miner, Grand Valley State University; Phyllis J. Curtiss, Grand Valley State University

33 A Case Study of Fitting and Comparing Nonlinear Parameters for Predicting Poultry Contamination—◆Andy Mauromoustakos, University of Arkansas; Min Li, University of Arkansas

232 CC-Hall D

Contributed Oral Poster Presentations—Contributed

WNAR

Biometrics, bioinformatics, computational biology

34 Detecting Subclusters in Outliers by Cluster Analysis—◆Dongseok Choi, Oregon Health & Science University; Zhixin Kang, The University of North Carolina at Pembroke; Carrie Nielson, Oregon Health & Science University; Eric Orwoll, Oregon Health & Science University; George Tiao, The University of Chicago

233 CC-Hall D

■ Contributed Oral Poster Presentations: New Statistical Developments Advancing Biopharmaceutical Research—Contributed

Biopharmaceutical Section, ENAR

Chair(s): Yang Yang, FDA

Social and behavioral science

35 Analyzing Quality-of-Life Data—◆Robert Norton, California State University, East Bay; Yan Yan Zhou, California State University, East Bay

Clinical trials, drug discovery

36 Post-Randomization Subgroup: A Tale of Analysis in Early Responders—◆Yue Shentu, Merck & Co., Inc.

Applications and case studies

37 Rank-Based Adjustment of Baseline Imbalance in Assessing BOTOXÆ Dose-Dependent Response of Reducing Urinary Urge Incontinence in a Phase II Trial—◆Jihao Zhou, Allergan Pharmaceuticals, Inc.; Thomas Lin, Allergan Pharmaceuticals, Inc.; Corneliar Haag-Molkenteller, Allergan Pharmaceuticals, Inc.; Catherine Thompson, Allergan Pharmaceuticals, Inc.; Grace Daniell, Allergan Pharmaceuticals, Inc.; Anand Patel, Allergan Pharmaceuticals, Inc.; Brenda Jenkins, Allergan Pharmaceuticals, Inc.

Clinical trials, drug discovery

38 A Fixed Study Design with Conditional Serial Assessment of Co-Primary Endpoints: An Application to a Single-Arm Pilot Oncology Trial—◆Jonathan Mahnken, The University of Kansas Medical Center; Jo Wick, The University of Kansas Medical Center; Byron J. Gajewski, The University of Kansas; Matthew S. Mayo, The University of Kansas Medical Center

Incomplete data analysis, imputation methods

39 NOCF! The future in Missing Data—◆Herbert Thijs, Hasselt University

QC, operation research, risk assessment

40 Nonparametric Tolerance Interval Approach for Specifications—◆Meiyu Shen, FDA; Yi Tsong, FDA

Clinical trials, drug discovery

41 The Impact of Bioavailability on the Continual Reassessment Method—◆Jessica E. Pruszynski, Baylor University; Anna McGlothlin, Eli Lilly and Company; John W. Seaman, II, Baylor University

Biometrics, bioinformatics, computational biology

42 Visual Diagnostics for Pharmacokinetic Models—◆Xiaoyong Sun, Iowa State University; Dianne Cook, Iowa State University

Applications and case studies

43 Guidelines for the Analysis of FDG-PET Imaging Biomarkers—◆Patricia English, Pfizer Inc.; David Raunig, Pfizer Inc.; Santos Carvajal-Gonzalez, Pfizer Inc.; Yanwei Zhang, Pfizer Inc.

Longitudinal data, repeated measurements, and meta-analysis

44 Recurrent Events Data Analysis in Medical Device Trials—◆Cathy Zeng, Medtronic, Inc.

Reliability and survival modeling, risk analysis

45 A Comparison of Statistical Approaches for Cluster Randomized Trials with Survival Outcomes—◆Margaret R. Stedman, Brigham and Women's Hospital; David Gagnon, Boston University School of Public Health; Robert Lew, Boston University; Elena Losina, Boston University; Daniel Solomon, Brigham and Women's Hospital; M. Alan Brookhart, Brigham and Women's Hospital/ Harvard Medical School

Clinical trials, drug discovery

46 Biased Results from Single-Arm Phase II Cancer Clinical Trials: Simulations Based on a Large Clinical Trial—◆Hui Tang, Mayo Clinic; Nathan R. Foster, Mayo Clinic; Richard M. Goldberg, The University of North Carolina at Chapel Hill; Daniel Sargent, Mayo Clinic

47 Evaluation of the Randomized Placebo-Phase Design for Clinical Trials—◆Stephanie L. Shook, University of Pittsburgh; Howard Rockette, University of Pittsburgh

Mathematical statistics, distribution theory, robust statistics

48 Zero-Modified Negative Binomial Distribution as a Robust Family for Modeling Count Data—◆Qian Dong, Merck & Co., Inc.; Hongwei Wang, Merck & Co., Inc.; Arlene Swern, Merck & Co., Inc.; Eric C. Kleerup, University of California, Los Angeles

Incomplete data analysis, imputation methods

49 **Comparison of Proportions of Composite Outcomes with Missing Values in their Components**—◆Xianbin Li, FDA; Brian S. Caffo, Johns Hopkins Bloomberg School of Public Health

Semiparametric and nonparametric methods

50 **A Semiparametric Survival Model**—◆Ying Zhang, Merck Research Laboratories

Bayesian statistics, hierarchical models

51 **A Comparison Study of General Linear Mixed Model and Permutation Tests in Group-Randomized Trials Under Non-Normal Error Distributions**—◆Dongyue Fu, Quintiles, Inc.; David M. Murray, The Ohio State University; Seok Wong, University of Memphis

Biometrics, bioinformatics, computational biology

52 **Design of Experiments for Genetic Network Identification**—◆Theodore Allen, The Ohio State University; Cenny Taslim, The Ohio State University; Mario Lauria, The Telethon Institute of Genetics and Medicine

Clinical trials, drug discovery

53 **Optimal Treatment Allocation for a 2-Period, M Treatment Clinical Trial with Fixed Subject Total**—◆Theodore C. Lystig, Boehringer Ingelheim Pharmaceuticals, Inc.

Experimental design

54 **Efficacy with a Diamond Response Design**—◆Charlie H. Goldsmith, McMaster University

Clinical trials, drug discovery

55 **Analysis of ITT Duration of Response**—◆Ritwik Sinha, Bristol-Myers Squibb Company; Tai-Tsang Chen, Bristol-Myers Squibb Company; Chao Zhu, Bristol-Myers Squibb Company

56 **Predicting Analysis Times in Event-Driven Clinical Trials Based on Blinded Data with Event-Reporting Lag**—◆Jianming Wang, Amgen, Inc.; Chunlei Ke, Amgen, Inc.; Qi Jiang, Amgen, Inc.

57 **Estimation of Treatment Retention: The Peak-Trough Ratio**—◆William J. Coar, Gilead Colorado, Inc.; Darrin Despain, Gilead Colorado, Inc.; Brian L. Wiens, Gilead Sciences, Inc.

58 **What If the Data Were Not Missing?**—◆K. F. Yee, Akros Pharma Inc.

59 **Beta-Mapping and Beta-Regression for Changes of Ordinal-Rating Measures on Likert Scales: A Comparison Among Multiple Treatment Groups**—◆Kelly H. Zou, Pfizer Inc.; Martin O. Carlsson, Pfizer Inc.

Biometrics, bioinformatics, computational biology

60 **A Semiparametric Copula Method on Building Oncology Association Network with Multiple Pathways, Genotypes, and Phenotypes**—Le Bao, University of Washington; Zhou Zhu, Pfizer Inc.; ◆Jingjing Ye, Pfizer Inc.

Clinical trials, drug discovery

61 **Making Decisions in Bioequivalence Studies: A Statistical Contribution**—◆Arminda L. Siqueira, Universidade Federal de Minas Gerais; Daniela M. Braga, Agência Nacional de Saúde Suplementar - Ministério da Saúde; Paula R. Chellini, Centro de Pesquisa em Biotecnologia

62 **Gender Differences in QTcF Based on Moxifloxacin Data**—◆Moh-Jee C. Ng, FDA; Joanne Zhang, FDA; Lihan K. Yan, The George Washington University; Qianyu Dang, FDA

Clinical Trial Designs

63 **Sample Size Determination in Clinical Trials with Multiple Co-Primary Binary Endpoints**—◆Takashi Sozu, Osaka University; Tomoyuki Sugimoto, Osaka University Graduate School of Medicine; Toshimitsu Hamasaki, Osaka University Graduate School of Medicine

64 **A Modified Group Sequential Design on Three-Arm Noninferiority Trials with Binary Endpoints**—◆Gang Li, GlaxoSmithKline; Shan Gao, Techdata LLC

Clinical trials, drug discovery

65 **A Likelihood-Based Model Adequacy Test of the Four-Parameter Logistic Model for Data with No Replicate Response**—◆Wijith P. Munasinghe, Kansas State University; Kurex Sidik, Pfizer Global Research & Development

QC, operation research, risk assessment

66 **Risk Assessment of Drug Product Content Uniformity Release Failure: A Bayesian Approach**—◆David J. LeBlond, Abbott Laboratories

Pharmacokinetics and pharmacodynamics

67 **Two Methods of Estimating Kel and Half-Life, Pharmacokinetic Considerations, and Statistical Tools**—◆Peng Chai, MDS Pharma Services

Clinical trials, drug discovery

68 **A Bayesian Approach for Tailored Therapy Strategy: Hidden Markov Mixture ITP Model for Predicting Patient Response to Therapy**—◆Wei Chen, University of Michigan; Haoda Fu, Eli Lilly and Company

69 **Analysis of Recurrent Events Could Be Superior to the Time-to-First Event in Assessment of Drug Therapy in Patients with Arrhythmias**—◆Hussein Al-Khalidi, STATKING Consulting, Inc.

Biometrics, bioinformatics, computational biology

70 **Power and Sample Size Planning as Function of Correlation and Odds Ratio for Exact McNemar Test**—John D.S. Hwang, B.R.S.I.; ◆James Lee, Daiichi Sankyo Pharma Development

Computational statistics, numerical methods, simulation

71 Using STATLIA for Bioassay Evaluation in Regulatory Environment—◆Lev Sirota, FDA; Boris G. Zaslavsky, FDA

Clinical trials, drug discovery

72 A Multi-Stage, Model-Free Test of Synergy in Drug Combinations—◆Colleen Kelly, Exponent, Inc.; Ping Feng, National Base for Drug Clinical Trials; Toana Kawashima, Fred Hutchinson Cancer Research Center; Anja Wilmes, Victoria University of Wellington; John Miller, Victoria University of Wellington

Biometrics, bioinformatics, computational biology

73 Using Hierarchical Group Filters in High-Throughput Analysis to Improve the True Positive Discovery Rate—◆Shesh N. Rai, University of Louisville; Christopher N. Barnes, University of Louisville

Clinical Trial Designs

74 R Package for Practitioners: 'Robust Priors in Clinical Trials'—◆Jairo A. Fuquene, University of Puerto Rico

Clinical trials, drug discovery

75 The Relative Efficiency of Volumetric Neuroimaging Measures as Outcomes in Clinical Trials—◆Steven D. Edland, University of California, San Diego

76 Analyses of 'Favorite Data Sets from Drug Research' by Undergraduate Students—◆Sarah Downing, John Carroll University; Thomas H. Short, John Carroll University

Bayesian statistics, hierarchical models

77 A Bayesian Approach to Dose-Response Assessment and Synergy—◆Violeta G. Hennessey, The University of Texas M.D. Anderson Cancer Center

Clinical trials, drug discovery

78 Experiences in Outsourcing—◆Jennifer E. Hamer-Maansson, AstraZeneca Pharmaceuticals

79 Surrogate Biomarkers in Prediction of Treatment Effect of Progression-Free Survival and Overall Survival in Non-Small Cell Lung Cancer: A Case Study—◆Linda Sun, Merck & Co., Inc.; Cong Chen, Merck Research Laboratories

Biometrics, bioinformatics, computational biology

80 Impact of Covariates on Feature Selection in Microarray Analysis—◆Elizabeth McClellan, Southern Methodist University; Monnie McGee, Southern Methodist University; Richard Scheuermann, Pathology U.T. Southwestern Medical Center

Invited Sessions 4:00 p.m.–5:50 p.m.

234 CC-Ballroom A-B

✪ ASA President's Invited Address—Invited

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

Organizer(s): Sally C. Morton, RTI International

Chair(s): Sally C. Morton, RTI International

4:05 p.m. Measurement Matters: Why Good Statistics Are Important to Understanding the Well-Being of American Families—◆Rebecca M. Blank, Under Secretary of Commerce for Economic Affairs, U.S. Department of Commerce

5:30 p.m. Floor Discussion

235 CC-Ballroom A-B

IMS Presidential Address—Invited

IMS

Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill

Chair(s): Jianqing Fan, Princeton University

8:00 p.m. Presentation of Awards—◆Nanny Wermuth, Chalmers/Gothenburg University

8:30 p.m. On the Development of Insight: Some Examples in the Statistical Sciences—◆Nanny Wermuth, Chalmers/Gothenburg University

9:15 p.m. Floor Discussion

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

TUESDAY, AUGUST 4

Tours

TR09 - The Kennedys: A Georgetown Walking Tour
9:00 a.m.–1:00 p.m.

TR10 - The Neighborhoods of Washington, DC: Not Just the Nation's Capital City
9:00 a.m.–1:00 p.m.

TR11 - Welcome to Washington Tour
2:00 p.m.–6:00 p.m.

Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. RH-Meeting Room 6
Membership Surveys Committee Annual JSM Meeting
Chair(s): Tim Keyes, General Electric

7:00 a.m.–8:30 a.m. CC-2nd Floor Overlook East
Journal Business Meeting
Chair(s): Amy Prisco, Wiley

7:00 a.m.–8:30 a.m. CC-205
ASA Committee on Minorities in Statistics Business Meeting (Closed)
Chair(s): Brian Millen, Eli Lilly and Company

7:00 a.m.–8:30 a.m. RH-Meeting Room 17
Committee on Professional Ethics
Chair(s): Thomas Petska, IRS

7:00 a.m.–8:30 a.m. RH-Meeting Room 2
Sequential Analysis Journal: Editorial Board Breakfast Meeting (closed)
Organizer(s): Nitis Mukhopadhyay, University of Connecticut

7:00 a.m.–8:30 a.m. RH-Meeting Room 4
Business and Economic Statistics Section Executive Committee Meeting (closed)
Chair(s): Stuart Scott, Bureau of Labor Statistics

7:00 a.m.–8:30 a.m. CC-303
Technometrics Editorial Board Meeting (closed)
Chair(s): David M. Steinberg, Tel Aviv University

7:00 a.m.–8:30 a.m. CC-2nd Floor Overlook West
Friends and Alumni of Brigham Young University Open House Breakfast
Organizer(s): Del Scott, Department of Statistics

7:00 a.m.–10:00 a.m. CC-302
Section on Physical and Engineering Sciences Executive Committee Meeting (closed)
Chair(s): Thomas Loughin, Simon Fraser University Surrey; Tom Loughin, Simon Fraser University Surrey

7:00 a.m.–10:00 a.m. CC-301
Editorial Board: Statistics in Biopharmaceutical Research (closed)
Chair(s): Joseph Heyse, Merck Research Laboratories

7:00 a.m.–6:00 p.m. CC-154A
Speaker Management Room

7:00 a.m.–10:00 p.m. CC-East Registration
Cyber Center

7:30 a.m.–8:30 a.m. RH-Meeting Room 7
Statistics Surveys Online Journal
Chair(s): Wendy Martinez, U.S. Department of Defense

7:30 a.m.–10:00 a.m. RH-Meeting Room 5
COC Annual Business Meeting
Chair(s): John Hall, Mathematica Policy Research, Inc.

7:30 a.m.–4:30 p.m. CC-East Registration
JSM Main Registration

7:30 a.m.–4:30 p.m. CC-East Registration
ASA Membership/Special Assistance/Press Desk

8:00 a.m.–12:00 p.m. RH-Renaissance Ballroom East
Committee of Presidents of Statistical Societies (closed)
Organizer(s): Jessica M. Utts, University of California, Irvine

8:00 a.m.–5:00 p.m. Off Property
Meeting Within a Meeting Statistics Workshop for K–12 Math and Science Teachers: Visit to the U.S. Census Bureau and JSM (closed)
Chair(s): Martha Aliaga, ASA

8:00 a.m.–6:00 p.m. CC-Hall D
Career Placement Service

8:00 a.m.–6:00 p.m. CC-Hall D
Exhibitor Lounge

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

8:30 a.m.–10:00 a.m. RH-Meeting Room 3
JASA Business Meeting (closed)
Chair(s): David Banks, Duke University

9:00 a.m.–5:30 p.m. CC-East Registration
ASA Marketplace

9:00 a.m.–6:00 p.m. CC-Hall D
EXPO 2009

9:00 a.m.–6:00 p.m. CC-Hall D
American Statistical Association Booth #101

11:00 a.m.–12:30 p.m. RH-Meeting Room 3
JASA Reviews Editors Meeting (closed)
Chair(s): Dalene K. Stangl, Duke University

12:30 p.m.–2:00 p.m. CC-210
Deming Luncheon
Chair(s): Nicholas I. Fisher, University of Sydney

12:30 p.m.–1:30 p.m. RH-Meeting Room 2
IMS Business Meeting
Organizer(s): Elyse Gustafson, IMS Executive Director; J. Michael Steele, IMS President; Nanny Wermuth, IMS President

12:30 p.m.–2:00 p.m. RH-Meeting Room 4
JABES Management Committee Business Meeting
Chair(s): Jean Opsomer, Colorado State University

12:30 p.m.–2:00 p.m. RH-Meeting Room 6
SBSS Business Meeting
Chair(s): Joseph G. Ibrahim, The University of North Carolina at Chapel Hill

12:30 p.m.–2:00 p.m. RH-Meeting Room 3
JASA Associate Editors Meeting
Chair(s): David Banks, Duke University

12:30 p.m.–2:00 p.m. RH-Meeting Room 17
JCGS Management Committee (closed)
Chair(s): JLynn Palmer, The University of Texas M.D. Anderson Cancer Center

12:30 p.m.–2:30 p.m. RH-Meeting Room 5
TAS Editors' Lunch
Chair(s): Janet Wallace, The American Statistician; John Stufken, The University of Georgia

12:30 p.m.–4:30 p.m. CC-2nd Floor Overlook West
ENAR RAB/RECOM Lunch Meeting (by invitation only)
Organizer(s): Kathy Hoskins, ENAR

1:00 p.m.–2:30 p.m. CC-303
Current Index to Statistics Management Committee
Chair(s): James E. Gentle, George Mason University

1:30 p.m.–3:30 p.m. CC-302
COC Traveling Course Meeting
Chair(s): Glenn White, Ernst & Young, LLP

2:00 p.m.–3:00 p.m. CC-Ballroom A-B
ASA Presidential Address and Awards Session Rehearsal (closed)

3:00 p.m.–4:30 p.m. CC-303
George Mason University Alumni Reception CANCELLED
Organizer(s): William F. Rosenberger, George Mason University

4:00 p.m.–5:30 p.m. RH-Meeting Room 3
Improving Student Performance with Mastery-Based Statistics Software
Organizer(s): Brittany Walker, Hawkes Learning Systems

4:00 p.m.–5:30 p.m. CC-303
Committee on Applied Statisticians Social Mixer
Chair(s): Lei Zhu, GlaxoSmithKline

4:00 p.m.–6:00 p.m. RH-Renaissance Ballroom East
COC Workshop and Reception
Chair(s): John Hall, Mathematica Policy Research, Inc.

4:30 p.m.–6:00 p.m. CC-301
Biometrics Editorial Board Meeting (closed)
Organizer(s): Marie Davidian, North Carolina State University

5:00 p.m.–6:30 p.m. CC-302
Discussion Group
Organizer(s): Susan Ellenberg, University of Pennsylvania

5:00 p.m.–7:00 p.m. CC-102A
North Carolina State University, Department of Statistics
Organizer(s): Pam Arroway, North Carolina State University

5:00 p.m.–8:00 p.m. RH-Meeting Room 2
IMS Council II Meeting
Organizer(s): Elyse Gustafson, IMS Executive Director; J. Michael Steele, IMS President; Nanny Wermuth, IMS President

5:30 p.m.–6:30 p.m. CC-3rd Floor East Ear
Caucus for Women in Statistics Business Meeting and Reception
Organizer(s): Marcia A. Ciol, University of Washington

5:30 p.m.–6:30 p.m. RH-Meeting Room 4
Section on Statistics and Marketing Business Meeting
Chair(s): Olivier Toubia, Columbia Business School

5:30 p.m.–6:30 p.m. RH-Meeting Room 5
Business and Economic Statistics Section Business Meeting
Chair(s): Stuart Scott, Bureau of Labor Statistics

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

5:30 p.m.–7:00 p.m. RH-Meeting Room 7
Section on Nonparametric Statistics Business Meeting
Chair(s): Doug Wolfe, The Ohio State University

5:30 p.m.–7:00 p.m. CC-157
Statistics in Epidemiology Mixer
Chair(s): Philip Rosenberg, National Cancer Insitute; Philip Rosenberg, National Cancer Institute

5:30 p.m.–7:00 p.m. RH-Meeting Room 6
Section on Statistical Consulting Business Meeting
Chair(s): Bruce A. Craig, Purdue University

5:30 p.m.–7:00 p.m. CC-207B
Biopharmaceutical Section Annual Business Meeting and Mixer
Chair(s): Anna B. Nevius, FDA

5:30 p.m.–7:30 p.m. CC-209A
University of Michigan Biostatistics/Statistics Joint Alumni Reception
Organizer(s): Roderick Little, University of Michigan; Vijay Nair, University of Michigan

5:30 p.m.–7:30 p.m. CC-149A
Joint Q&P/SPES Business Meeting and Mixer
Chair(s): Thomas Loughin, Simon Fraser University Surrey; Tom Loughin, Simon Fraser University Surrey

5:30 p.m.–7:30 p.m. Off Property
Penn State Alumni Dinner
Chair(s): Bruce Lindsay, Penn State University

5:30 p.m.–7:30 p.m. Off Property-1640 Rhode Island Ave.
Committee on Gay and Lesbian Concerns Reception with Guest Speaker
Organizer(s): Barry Johnson, Bureau of Labor Statistics

5:30 p.m.–7:30 p.m. CC-160
Section on Government Statistics Business Meeting
Chair(s): Robert Lussier, Statistics Canada

5:30 p.m.–8:30 p.m. CC-206
SBSS Mixer
Chair(s): Joseph G. Ibrahim, The University of North Carolina at Chapel Hill

6:00 p.m.–8:00 p.m. CC-2nd Floor Overlook East
Wisconsin Reception
Organizer(s): Kam Tsui, Department of Statistics

6:00 p.m.–8:00 p.m. RH-Meeting Room 17
Rice University Department of Statistics
Organizer(s): Katherine Ensor, Department of Statistics

6:00 p.m.–8:00 p.m. CC-205
Stanford University Statistics Department Alumni Reunion
Organizer(s): James Gareth, University of Southern California

6:00 p.m.–8:30 p.m. CC-2nd Floor Overlook West
ASA Committee on Minorities in Statistics Reception
Chair(s): Brian Millen, Eli Lilly and Company

6:30 p.m.–7:30 p.m. CC-Ballroom A-B
2009 New Fellows Reception (by invitation only)
Chair(s): John H. Thompson, National Opinion Research Center

6:30 p.m.–8:00 p.m. RH-Meeting Room 5
Joint Reception of Business and Economic Statistics Section and Section on Statistics and Marketing
Chair(s): Stuart Scott, Bureau of Labor Statistics; Olivier Toubia, Columbia University

6:30 p.m.–8:00 p.m. CC-303
The George Washington University Department of Statistics Alumni Reception
Organizer(s): Reza Modarres, The George Washington University

7:00 p.m.–7:30 p.m. CC-Ballroom A-B
2009 ASA New Fellows Group Picture (closed)

9:30 p.m.–12:00 a.m. RH-Congressional Ballroom A & B
JSM Informal Dance Party

Continuing Education (Fee Events)

CE_22C
Absolute Risk Prediction
8:00 a.m.–12:00 p.m. RH-Renaissance Ballroom West A
ASA, Biometrics Section
Instructor(s): Mitchell H. Gail, National Cancer Institute; Ruth Pfeiffer, National Cancer Institute

CE_23C
State Space Time Series Analysis in Practice
8:30 a.m.–5:00 p.m. RH-Meeting Rooms 12, 13, 14
ASA, Business and Economic Statistics Section
Instructor(s): Siem Jan Koopman, Vrije Universiteit Amsterdam

CE_24C
Statistical Meta-Analysis: Methods and Applications
8:30 a.m.–5:00 p.m. RH-Meeting Room 16
ASA
Instructor(s): Bimal Sinha, University of Maryland, Baltimore County; Guido Knapp, Dortmund University of Technology

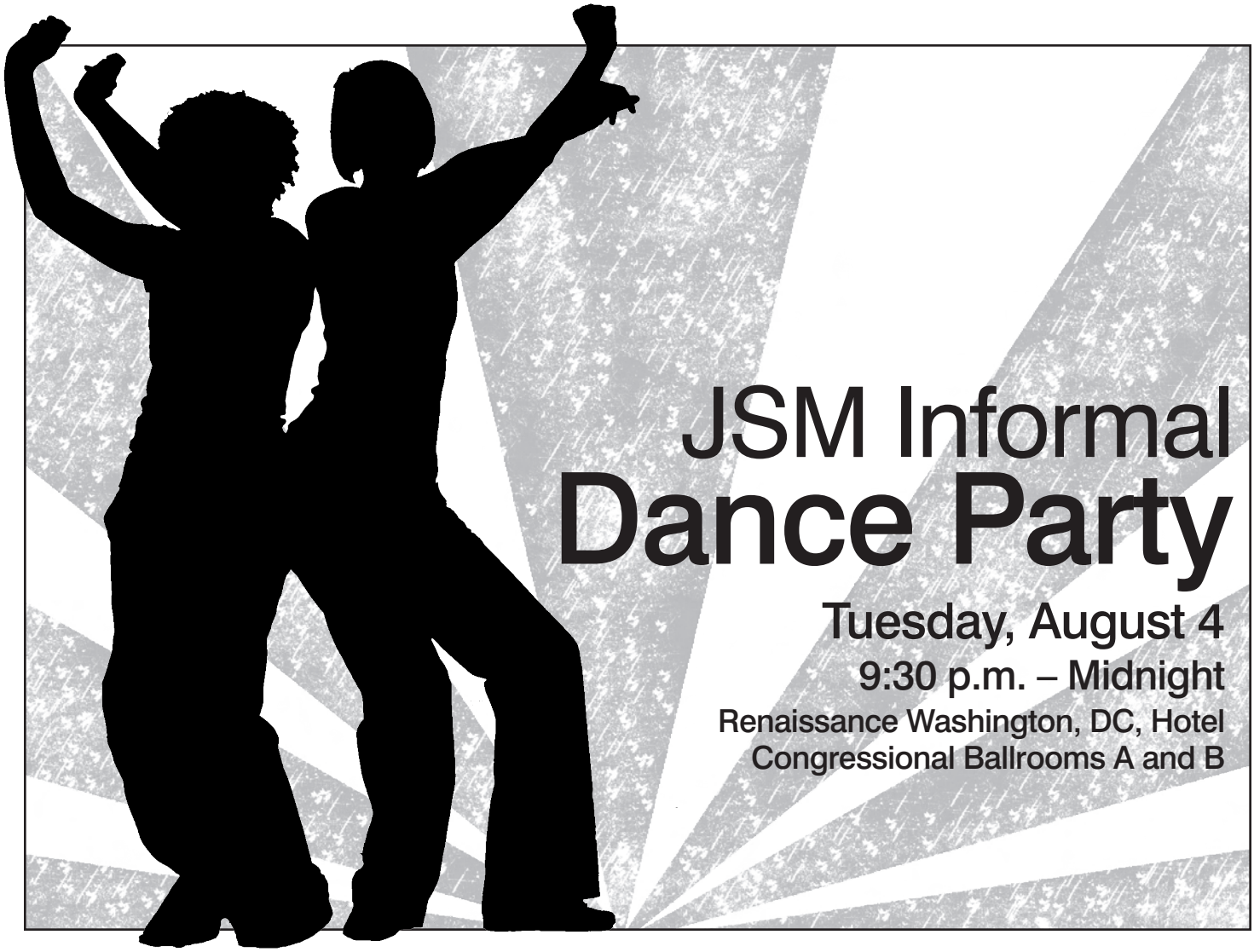
CE_25C
Monte Carlo and Bayesian Computation with R
8:30 a.m.–5:00 p.m. RH-Meeting Rooms 8 & 9
ASA, Section on Physical and Engineering Sciences
Instructor(s): Maria Rizzo, Bowling Green State University; James Albert, Bowling Green State University

CE_26C
Comprehensive Data Analysis Using Interactive Statistical Graphics
8:30 a.m.–5:00 p.m. RH-Meeting Room 15
ASA, Section on Statistical Graphics
Instructor(s): Martin Theus, Telefonica 02-Germany GmbH & Co. OHG; Simon Urbanek, AT&T Labs

CE_27C
Applied Bayesian Nonparametric Mixture Modeling
8:30 a.m.–5:00 p.m. RH-Meeting Rooms 10 & 11
ASA, Section on Bayesian Statistical Science
Instructor(s): Athanasios Kottas, University of California, Santa Cruz; Abel Rodriguez, University of California, Santa Cruz

CE_28C
Analysis of Clinical Trials: Theory and Applications
8:30 a.m.–5:00 p.m. RH-Renaissance Ballroom West B
ASA, Biopharmaceutical Section
Instructor(s): Devan V. Mehrotra, Merck Research Laboratories; Alexei A. Dmitrienko, Eli Lilly and Company; Keaven Anderson, Merck & Co., Inc.

CE_29C
Bootstrap for Complex Surveys
1:00 p.m.–5:00 p.m. RH-Renaissance Ballroom West A
ASA, Section on Survey Research Methods
Instructor(s): Stanislav Kolenikov, University of Missouri-Columbia



Roundtables with Coffee 7:00 a.m.–8:15 a.m.

236 CC-Ballroom South Prefunction
Section for Statistical Programmers and Analysts Roundtables with Coffee (fee event
Section for Statistical Programmers and Analysts
Organizer(s): Chengying Wu, sanofi-aventis

TL01 How to Make Programming Fun—◆Colin (Lin) Chen, Fannie Mae

TL02 Reproducible Research—◆John D. Cook, The University of Texas M.D. Anderson Cancer Center

TL03 It All Starts with Statistical Programming—◆Nancy Wang, MDS Pharma Services; Peng Chai, MDS Pharma Services

TL04 Issues Around Repeated and Random Statements and Considering the Time as Class versus Continuous Variable—◆Radhi F. Abdulnabi, Ovation Pharmaceuticals, Inc

237 CC-Ballroom South Prefunction
Section on Government Statistics Roundtable with Coffee (fee event)
Section on Government Statistics
Organizer(s): Lisa Blumerman, U.S. Census Bureau

TL05 The Interaction of the Statistician with the Subject Matter Expert: Statistics as a Chameleon Discipline—◆Margaret D. Carroll, National Center for Health Statistics

238 CC-Ballroom South Prefunction
Section on Health Policy Statistics Roundtables with Coffee (fee event)
Section on Health Policy Statistics
Organizer(s): Susan Paddock, RAND Corporation

TL06 Predictive Modeling of Health Care Outcomes for Underwriting and Disease Management: Industry's Lessons, Trends, Comparative Studies—◆Ognian K. Asparouhov, MEDAI, Inc.

239 CC-Ballroom South Prefunction
Section on Statistical Education Roundtables with Coffee (fee event)
Section on Statistical Education
Organizer(s): Tisha L. Hooks, Winona State University

TL07 The Basics of the Survey of Attitudes Toward Statistics—◆Marjorie E. Bond, Monmouth College

240 CC-Ballroom South Prefunction
Section on Statistics and the Environment Roundtable with Coffee (fee event)
Section on Statistics and the Environment
Organizer(s): Petrutza Caragea, Iowa State University

TL08 If Scientists Agreed to Collect Data However We Wanted, Would We Know What to Tell Them?—◆Mark S. Kaiser, Iowa State University

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

241 CC-202A
Introductory Overview Lecture: Designing Longitudinal Studies—Other
ASA, ENAR, IMS, SSC, WNAR, International Chinese Statistical Association, International Indian Statistical Association
Organizer(s): Wendy Martinez, U.S. Department of Defense
Chair(s): Radu Herbei, The Ohio State University

8:35 a.m. How Many Subjects and How Many Measurements? The Design of Longitudinal Studies—◆Donna L. Spiegelman, Harvard School of Public Health

10:00 a.m. Floor Discussion

242 CC-102B
ASA College Stat Bowl I—Other
ASA, ENAR, IMS, SSC, WNAR, International Chinese Statistical Association, International Indian Statistical Association
Organizer(s): Stephanie Cano, The University of Texas at San Antonio
Chair(s): Stephanie Cano, The University of Texas at San Antonio

Invited Sessions
8:30 a.m.–10:20 a.m.

243 CC-206
✪ New Development in Empirical Likelihood and Its Application—Invited

Section on Nonparametric Statistics

Organizer(s): Yichuan Zhao, Georgia State University

Chair(s): Song Yang, National Institutes of Health

8:35 a.m. **Semiparametric Hybrid Empirical Likelihood Inference for Two-Sample Studies with Censored Data**—◆Hua Liang, University of Rochester

9:00 a.m. **Full Likelihood Inferences in the Cox Model**—◆Jian-Jian Ren, University of Central Florida

9:25 a.m. **Empirical Likelihood Inference for Regression Model of Mean Quality-Adjusted Lifetime with Censored Data**—◆Hongkun Wang, University of Virginia; Yichuan Zhao, Georgia State University

9:50 a.m. **Empirical Likelihood Confidence Intervals for the Ratio and Difference of Two Hazard Functions**—◆Yichuan Zhao, Georgia State University; Meng Zhao, Georgia State University

10:15 a.m. **Floor Discussion**

244 CC-160
■ ✪ Macroeconomic Forecasting—Invited

JBES-Journal of Business & Economic Statistics, Section on Risk Analysis

Organizer(s): Serena Ng, Columbia University

Chair(s): Serena Ng, Columbia University

8:35 a.m. **Macroeconomic Forecasting**—◆David Reifschneider, Board of Governors

9:00 a.m. **The Production of ECB Staff Macroeconomic Projections**—◆Demosthenes Ioannou, European Central Bank

9:25 a.m. **Forecasting Global Economic Conditions at the IMF**—◆Thomas F. Helbling, International Monetary Fund

9:50 a.m. **Economic Projections at the Bank of Canada**—◆Stephen Murchison, Bank of Canada

10:15 a.m. **Floor Discussion**

245 CC-153
■ ✪ Advanced Reliability Methods with Applications—Invited

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

Organizer(s): I-Li Lu, The Boeing Company

Chair(s): Ranjan Paul, The Boeing Company

8:35 a.m. **Using Accelerated Life Tests Results to Predict Product Field Reliability**—◆William Q. Meeker, Iowa State University; Luis A. Escobar, Louisiana State University; Yili Hong, Iowa State University

9:00 a.m. **The Development of Advanced Reliability Methods for Aircraft Maintenance Optimization Process**—◆I-Li Lu, The Boeing Company; Anbessie A. Yitbarek, The Boeing Company; Ranjan Paul, The Boeing Company; Elizabeth A. Whalen, The Boeing Company; Shuying Zhu, The Boeing Company

9:25 a.m. **Reliability in Supercomputing: A Million Processors Cooperating to Solve One Problem**—◆George Ostrouchov, Oak Ridge National Laboratory; Thomas J. Naughton, III, Oak Ridge National Laboratory; Stephen L. Scott, Oak Ridge National Laboratory

9:50 a.m. **Detection of Nuclear Material Entering Ports: An Analytic Framework for Data and Policy Analysis**—◆Siddhartha Dalal, RAND Corporation

10:15 a.m. **Floor Discussion**

246 CC-159B
■ ✪ New Developments in Survey Sampling—Invited

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

Organizer(s): Gauri S. Datta, The University of Georgia

Chair(s): William R. Bell, U.S. Census Bureau

8:35 a.m. **Cross-Validation in Survey Estimation: Model Selection and Variance Estimation**—◆Jean Opsomer, Colorado State University

9:00 a.m. **Bayesian Benchmarking with Applications to Small Area Estimation**—◆Gauri S. Datta, The University of Georgia; Malay Ghosh, University of Florida; Rebecca Steorts, University of Florida; Jerry J. Maples, U.S. Census Bureau

9:25 a.m. **A Bayesian Adjustment for a Selection Bias in Genetics**—◆Balgobin Nandram, Medical College of Georgia

9:50 a.m. **New Developments in Model-Based Small Area Estimation**—◆Danny Pfeffermann, Hebrew University/University of Southampton

10:15 a.m. **Floor Discussion**

247 CC-143A

Advances in Spatial and Spatio-Temporal Modeling—Invited

Section on Statistical Computing, Section on Bayesian Statistical Science, Biometrics Section, Section on Statistics and the Environment, Social Statistics Section, Interface Foundation of North America

Organizer(s): Jonathan R. Stroud, The George Washington University
Chair(s): Cari Kaufman, University of California, Berkeley

8:35 a.m. **Multilevel Adaptive Sampling for Inverse Problems**—◆Dave Higdon, Los Alamos National Laboratory; J. David Moulton, Los Alamos National Laboratory

9:00 a.m. **Conditional Simulation of Spatial-Temporal Random Fields**—◆Michael Stein, The University of Chicago

9:25 a.m. **A Class of Nonlinear Spatio-Temporal Dynamic Models**—◆Christopher Wikle, University of Missouri-Columbia

9:50 a.m. **The Other World of Large Spatial Data Sets in the Geosciences**—◆Douglas Nychka, National Center for Atmospheric Research

10:15 a.m. **Floor Discussion**

248 CC-150A

■ ✪ Recent Advances in Small-Area Statistics—Invited

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

Organizer(s): Ansu Chatterjee, The University of Minnesota
Chair(s): Parthasarathi Lahiri, University of Maryland

8:35 a.m. **Model and Variable Selection in Hierarchical Small Area Models**—◆Michael D. Larsen, Iowa State University; Lu Lu, Iowa State University

9:00 a.m. **Small Area Estimation Under Fay-Herriot Models with Nonparametric Estimation of Error Variances**—◆Domingo Morales, University Miguel Hernández de Elche; Wenceslao González-Manteiga, University of Santiago de Compostela; Isabel Molina, University Carlos III de Madrid; María J. Lombardía, University of Santiago de Compostela; Laureano Santamaría, University Miguel Hernández de Elche

9:25 a.m. **Extended Small Area Models for Analysis of Nonlinear Effects and Extremes**—◆Snigdhansu Chatterjee, The University of Minnesota

9:50 a.m. **Small Area Estimation for Population Counts in the German Census 2011**—◆Ralf T. Münnich, University of Trier; Jan P. Burgard, University of Trier; Martin Vogt, University of Trier

10:15 a.m. **Floor Discussion**

249 CC-202B

New Frontiers in Survival Analysis and Clinical Trials—Invited

WNAR, Section on Bayesian Statistical Science, Biopharmaceutical Section

Organizer(s): Gang Li, University of California, Los Angeles
Chair(s): Ying Lu, University of California, San Francisco

8:35 a.m. **Gamma Frailty Transformation Models for Multivariate Survival Times**—◆Joseph G. Ibrahim, The University of North Carolina at Chapel Hill; Donglin Zeng, The University of North Carolina at Chapel Hill; Qingxia Chen, Vanderbilt University

9:00 a.m. **Joint Models for Longitudinal and Survival Data**—◆Jeremy Taylor, University of Michigan

9:25 a.m. **Causal Inference for Randomized Clinical Trials with a Survival Outcome and All-or-None Treatment Noncompliance**—◆Gang Li, University of California, Los Angeles

9:50 a.m. Disc: Ian McKeague, Columbia University

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

250 CC-209A

High-Dimensional Genetic Data—Invited

IMS

Organizer(s): Debashis Paul, University of California, Davis
Chair(s): Debashis Paul, University of California, Davis

8:35 a.m. **Regularized Multivariate Regression for Identifying Master Predictors**—◆Jie Peng, University of California, Davis; Pei Wang, Fred Hutchinson Cancer Research Center; Ji Zhu, University of Michigan; Jonathan Pollack, Stanford University

9:00 a.m. **Prediction of Patient Outcomes Based on High-Throughput Genetic Data Using Supervised Principal Components**—◆Eric Bair, The University of North Carolina at Chapel Hill

9:25 a.m. **Estimation Methods for Multivariate Linear Time Series**—◆Prabir Burman, University of California, Davis; Metoyer N. Candace, Pacific Northwest National Laboratory

9:50 a.m. **Network-Based Prediction Model for Genomics Data Analysis**—◆Pei Wang, Fred Hutchinson Cancer Research Center; Ying Huang, Fred Hutchinson Cancer Research Center

10:15 a.m. **Floor Discussion**

251 CC-207A
IMS Medallion Lecture IV—Invited

IMS

Organizer(s): Xiaotong Shen, The University of Minnesota
Chair(s): Galin L. Jones, The University of Minnesota

8:35 a.m. **Markov Chain Monte Carlo in Theoretical Computer Science**—◆Alistair Sinclair, University of California, Berkeley

10:00 a.m. **Floor Discussion**

Invited Panels 8:30 a.m.–10:20 a.m.

252 CC-101
✪ Adaptive Design: Where Are We Now?—Invited

Biopharmaceutical Section, Biometrics Section

Organizer(s): Sue-Jane Wang, FDA
Chair(s): Sue-Jane Wang, FDA

Panelists:
◆Frank Bretz, Norvartis, Switzerland
◆Robert Hemmings, Medicines and Healthcare Products Regulatory Agency
◆H.M. James Hung, FDA
◆Armin Koch, Federal Institute for Drugs and Medical Devices
◆Chris Jennison, University of Bath
◆Robert O'Neill, FDA
◆Jerry Schindler, Merck Research Laboratories
◆Robert Temple, FDA

10:15 a.m. **Floor Discussion**

253 CC-157
Statistics and the Media: Getting the Questions and Answers Right—Invited

Scientific and Public Affairs Advisory Committee, Social Statistics Section, Social Statistics Section

Organizer(s): Rosanne Desmone, ASA
Chair(s): Rosanne Desmone, ASA

Panelists:
◆Sharon Begley, Newsweek
◆Carl Bialek, Wall Street Journal
◆Tom Siegfried, Science News
◆Keith Winstein, Wall Street Journal

10:15 a.m. **Floor Discussion**

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

254 CC-204C
Functional and Dynamic Data Analysis to Biomedical Research—Topic-Contributed

Biometrics Section

Organizer(s): Momiao Xiong, The University of Texas Health Science Center at Houston
Chair(s): Peihua Qiu, The University of Minnesota

8:35 a.m. **Functional Maps of Cortico-Cortical Beta-Frequency Coherence in a Macaque Monkey Performing a Visual Working Memory Task**—◆Mark C. Greenwood, Montana State University; Olga Vsevolozhskaya, Montana State University; Rodrigo F. Salazar, Montana State University; Charlie M. Gray, Montana State University

8:55 a.m. **Functional Structural Equation Models for Deciphering the Path from Genomic Information to Phenotypic Variation**—◆Li Luo, The University of Texas School of Public Health; Momiao Xiong, The University of Texas Health Science Center at Houston

9:15 a.m. **Functional Mixture Regression**—◆Fang Yao, University of Toronto; Yuejiao Fu, York University; Thomas C.M. Lee, Chinese University of Hong Kong/ Colorado State University

9:35 a.m. Disc: Sheng Luo, The University of Texas at Houston

9:55 a.m. Disc: Hao Xiong, University of California, San Francisco

10:15 a.m. **Floor Discussion**

255 CC-144B
■ Statistical Methods in Census Data Capture—Topic-Contributed

Section on Government Statistics

Organizer(s): Fred Highland, Lockheed Martin
Chair(s): Dick Taylor, Evolver, Inc.

8:35 a.m. **A Statistical Basis for Capacity Planning Risk Analysis**—◆Fred Highland, Lockheed Martin

8:55 a.m. **Truthing Production Data Capture**—◆Brad Paxton, ADI, LLC; Steven P. Spiwak, ADI, LLC; Douglass Huang, ADI, LLC

9:15 a.m. **Using Association Analysis to Enhance Control Chart Applications and Methods**—◆Thomas George, Evolver, Inc.; Cathe Reeser, Lockheed Martin

9:35 a.m. **Statistical Synthetic Data Generation for Census Applications**—◆John W. Dawson, ExactData, LLC

9:55 a.m. **Use of Record Linkage Techniques to Improve Data Capture Rates**—◆Mario Hendricks, Lockheed Martin; David Bonatz, Lockheed Martin; Andrew Graves, Lockheed Martin

10:15 a.m. **Floor Discussion**

256 CC-204A

■ Design and Analysis of Stratified Clinical Trials—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Byron Jones, Pfizer Inc.

Chair(s): Neal Thomas, Pfizer Inc.

8:35 a.m. **Stratification in Design vs. Stratification in Analysis**—◆Byron Jones, Pfizer Inc.; Neal Thomas, Pfizer Inc.

8:55 a.m. **Reporting the Proportion of Subjects with an Adverse Event from Multiple Studies**—◆Christy Chuang-Stein, Pfizer Inc.; Mohan Beltangady, Pfizer Inc.

9:15 a.m. **The Use of Regression Models in Adjustment of Treatment Assignment**—◆Valerii V. Fedorov, GlaxoSmithKline

9:35 a.m. **Stratification Usually Solves the Wrong Problem**—◆Thomas Permutt, FDA

9:55 a.m. Disc: William F. Rosenberger, George Mason University

10:15 a.m. **Floor Discussion**

257 CC-102A

■ Using SUDAAN for Analysis of Epidemiologic Data—Topic-Contributed

Section on Statistics in Epidemiology, Section on Survey Research Methods

Organizer(s): Angela Pitts, RTI International

Chair(s): Rick Williams, RTI International

8:35 a.m. **Using Survey Data to Investigate Changes Over Time in Health Indicators**—◆Donna J. Brogan, Emory University

8:55 a.m. **Weighting Methods for Population-Based Case-Control Study with Complex Sampling**—◆Yan Li, National Cancer Institute; Barry I. Graubard, National Cancer Institute; Ralph DiGaetano, Westat, Inc.

9:15 a.m. **Using Projection Splines to Explore Racial Differences in Gestational Age Distribution Among Very Low-Risk Women**—◆Nedra Whitehead, RTI International; Jun Liu, PPD, Inc.; Lei Li, RTI International; Jason Hsia, CDC

9:35 a.m. **Log-Linear Modeling of Health Services Use in a Sample Survey**—◆John S. Preisser, The University of North Carolina at Chapel Hill; Thomas A. Arcury, Wake Forest University

9:55 a.m. Disc: G. Gordon Brown, RTI International

10:15 a.m. **Floor Discussion**

258 CC-144C

■ ✪ Redesign of the National Survey on Drug Use and Health: Balancing Data Needs, Costs, and Methodological Considerations—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Jonaki Bose, Substance Abuse & Mental Health Services Administration

Chair(s): Joe Gfroerer, Substance Abuse & Mental Health Services Administration

8:35 a.m. **A Model-Based Method for Estimating Serious Mental Illness Using Household Interview Data Combined with Clinical Interviews**—Lisa Colpe, Substance Abuse & Mental Health Services Administration; ◆Jeremy Aldworth, RTI International

8:55 a.m. **What Is 'Misuse' of Prescription Drugs, and How Do We Measure It?**—◆James Colliver, Substance Abuse & Mental Health Services Administration

9:15 a.m. **Searching for a Gold Standard: Comparisons of NSDUH Data with External Sources to Assess Coverage and Validity**—◆Jonaki Bose, Substance Abuse & Mental Health Services Administration; Joe Gfroerer, Substance Abuse & Mental Health Services Administration; Deborah Trunzo, Substance Abuse & Mental Health Services Administration

9:35 a.m. **Evaluating the reliability of NSDUH data on drug use, mental health and demographics**—◆Joel Kennet, Substance Abuse & Mental Health Services Administration; Joe Gfroerer, Substance Abuse & Mental Health Services Administration

9:55 a.m. Disc: Art Hughes, Substance Abuse & Mental Health Services Administration

10:15 a.m. **Floor Discussion**

259 CC-209B

■ Student Paper Competition: Bayesian functional data analysis, model selection/ averaging, and prediction—Topic-Contributed

Section on Bayesian Statistical Science, International Indian Statistical Association

Organizer(s): Michael J. Daniels, University of Florida

Chair(s): Ming-Hui Chen, University of Connecticut

8:35 a.m. **Stochastic Functional Data Analysis: A Bayesian Perspective**—◆Bin Zhu, University of Michigan; Peter X.K. Song, University of Michigan; Jeremy Taylor, University of Michigan

9:15 a.m. **Bayesian Model Averaging for Clustered Data: Imputing Missing Daily Air Pollution Concentrations**—◆Howard Chang, Johns Hopkins University; Francesca Dominici, Johns Hopkins University; Roger D. Peng, Johns Hopkins Bloomberg School of Public Health

9:35 a.m. **The Role of Efron's Statistical Curvature in Bayesian Model Selection**—◆Cedric E. Ginestet, Imperial College London

9:55 a.m. **Bayesian Prediction for GLMM Using High-Order Laplace Approximation**—◆Evangelos Evangelou, The University of North Carolina at Chapel Hill; Zhengyuan Zhu, The University of North Carolina at Chapel Hill; Richard Smith, The University of North Carolina at Chapel Hill

10:15 a.m. **Floor Discussion**

260 CC-150B

New Developments in Causal Inference—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Dylan Small, University of Pennsylvania

Chair(s): Dylan Small, University of Pennsylvania

8:35 a.m. **Efficient Tests for Burden of Illness**—◆Jing Cheng, University of Florida; Dylan Small, University of Pennsylvania

8:55 a.m. **Nonparametric Estimation of the Disease Attributable Fraction**—◆Wei Wang, University of Pennsylvania

9:15 a.m. **Sufficient Cause Interactions for Categorical and Ordinal Exposures**—◆Tyler VanderWeele, The University of Chicago

9:35 a.m. **Tests of Covariate Balance in Experiments and Observational Studies**—◆Ben B. Hansen, University of Michigan; Jake Bowers, University of Illinois at Urbana-Champaign; Jake Bowers, University of Illinois at Urbana-Champaign

9:55 a.m. **Post-Randomization Interaction Analyses in Clinical Trials with Standard Regression**—◆Rongmei Zhang, University of Pennsylvania; Jennifer Faerber, University of Pennsylvania; Thomas Ten Have, University of Pennsylvania

10:15 a.m. **Floor Discussion**

261 CC-143C

Benchmarking and Reconciliation—Topic-Contributed

Business and Economic Statistics Section, Social Statistics Section

Organizer(s): Tucker S. McElroy, U.S. Census Bureau

Chair(s): Dominique Ladiray, Insee

8:35 a.m. **Illustration and Convergence Property of the Nonparametric Iterative Smoothing Method for Benchmarking and Temporal Distribution**—◆Benoit Quenneville, Statistics Canada; Susie Fortier, Statistics Canada; Christian Gagné, Statistics Canada

8:55 a.m. **Testing Time Series Data Compatibility for Benchmarking**—◆Christian Gagné, Statistics Canada

9:15 a.m. **Simultaneous and Two-Step Reconciliation of Systems of Time Series**—◆Marco Marini, ISTAT; Tommaso Di Fonzo, University of Padua

9:35 a.m. **Direct vs. Indirect Seasonal Adjustment for CPS National Labor Force Series**—◆Thomas Evans, Bureau of Labor Statistics

9:55 a.m. **Temporal Aggregation and Seasonal Adjustment**—◆Nicholas von Sanden, Australian Bureau of Statistics

10:15 a.m. **Floor Discussion**

262 CC-209C

✪ New Developments in Bayesian Nonparametric Methodology—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Abel Rodriguez, University of California, Santa Cruz

Chair(s): Lianming Wang, University of South Carolina

8:35 a.m. **Distance-Based Probability Distribution on Set Partitions with Applications to Bayesian Nonparametrics**—◆David B. Dahl, Texas A&M University; Ryan Day, University of the Pacific; Jerry Tsai, University of the Pacific

8:55 a.m. **Dynamic Point Process Modeling with a DDP**—◆Matt Taddy, The University of Chicago

9:15 a.m. **Semiparametric Bayesian Approach to Prediction of Cancer Mortality Counts in the Presence of Spatial Information**—◆Kaushik Ghosh, University of Nevada Las Vegas; Pulak Ghosh, Novartis Pharmaceuticals; Ram C. Tiwari, FDA

9:35 a.m. **NP Bayes Functional Regression for a PK/PD Semi-Mechanistic Model**—◆Michele Guindani, University of New Mexico; Peter Müller, The University of Texas M.D. Anderson Cancer Center; Gary L. Rosner, The University of Texas M.D. Anderson Cancer Center; Lena Friberg, Uppsala University

9:55 a.m. **On the Support of Levy Random Field Priors and Applications to Posterior Consistency Problems**—◆Natesh S. Pillai, Warwick University

10:15 a.m. **Floor Discussion**

263 CC-144A

Assessing Effects of Interventions in Longitudinal Naturalistic Data—Topic-Contributed

Section on Health Policy Statistics

Organizer(s): Douglas Faries, Eli Lilly and Company

Chair(s): Robert Obenchain, Risk Benefit Statistics LLC

8:35 a.m. **Assessing Causal Treatment Effects in Longitudinal Naturalistic Data: Challenges and Methods**—◆Douglas Faries, Eli Lilly and Company; Alan Brnabic, Eli Lilly and Company

8:55 a.m. **Considerations in Applying Marginal Structural Models to Analyze Longitudinal Naturalistic Data**—◆Ouhong Wang, Amgen, Inc.

9:15 a.m. **Maximum Likelihood Estimation of the Structural Nested Mean Model Using SAS PROC NLP**—◆Daniel Almirall, Duke University; Cynthia Coffman, Duke University Medical Center; William S. Yancy, Jr., Duke University; Susan Murphy, University of Michigan

9:35 a.m. **Estimating Volume-Outcome Associations from Longitudinal Naturalistic Data**—◆Benjamin French, University of Pennsylvania; Farhood Farjah, University of Washington; David R. Flum, University of Washington; Patrick Heagerty, University of Washington

9:55 a.m. **Data-Mining Techniques for Longitudinal Naturalistic Data**—◆Anthony Zagar, Eli Lilly and Company; Robert Obenchain, Risk Benefit Statistics LLC

10:15 a.m. **Floor Discussion**

264 CC-158A

■ Monitoring for Informed Natural Resource Management Decisions—Topic-Contributed

Section on Statistics and the Environment

Organizer(s): Joel H. Reynolds, U.S. Fish and Wildlife Service

Chair(s): Gretchen Moisen, U.S. Forest Service

8:35 a.m. **The Design of a Large-Scale Aerial Survey to Monitor Wintering Sea Duck Populations**—◆Emily Silverman, U.S. Fish and Wildlife Service; Mark Koneff, U.S. Fish and Wildlife Service; Kathy Fleming, U.S. Fish and Wildlife Service; James Wortham, U.S. Fish and Wildlife Service

8:55 a.m. **Spatial Design for the North American Breeding Bird Survey (BBS): An Integrated Approach**—◆Emily H. Griffith, U.S. Geological Survey; J. Andrew Royle, U.S. Geological Survey

9:15 a.m. **The Structure of Human Development Across Landscapes and Its Implications for Aquatic Monitoring Programs**—◆E. Ashley Steel, NOAA Fisheries

9:35 a.m. **Effective and Efficient Monitoring of Steller's Eiders at Izembek Lagoon, Alaska: Barriers and Pitfalls**—◆Joel H. Reynolds, U.S. Fish and Wildlife Service

9:55 a.m. **Floor Discussion**

265 CC-149A

Some Recent Developments in Transportation Statistics—Topic-Contributed

Social Statistics Section, Transportation Statistics Interest Group

Organizer(s): Promod Chandhok, U.S. Department of Transportation

Chair(s): Karl Sieber, National Institute for Occupational Safety and Health

8:35 a.m. **Nonresponse Bias Estimation in the Omnibus Household Survey**—◆Promod Chandhok, U.S. Department of Transportation

8:55 a.m. **A Case-Crossover Design Study for Evaluating the Safety Impact of Driver Behavior**—◆Feng Guo, Virginia Polytechnic Institute and State University

9:15 a.m. **Enhancing the National Household Travel Survey Data Series**—Bennett K. Pierce, Battelle; ◆Robert Santos, The Urban Institute

9:35 a.m. **Transportation Finance Options: Who Is Affected?**—◆Heather Contrino, Federal Highway Administration; Robert Santos, The Urban Institute

9:55 a.m. Disc: Michael P. Cohen, NORC at the University of Chicago

10:15 a.m. **Floor Discussion**

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

266 CC-155

■ Experiences Involving Undergraduates in Statistical Consulting—Topic-Contributed

Section on Statistical Education

Organizer(s): Neal Rogness, Grand Valley State University

Chair(s): Phyllis J. Curtiss, Grand Valley State University

Panelists: ◆Neal Rogness, Grand Valley State University
◆Nicholas Horton, Smith College
◆John Walker, Cal Poly
◆Brian Jersky, St. Mary's College of California

10:15 a.m. Floor Discussion

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

267 CC-142

Statistical Data Analysis in Macroeconomics and Forecasting—Contributed

Business and Economic Statistics Section

Chair(s): Nikolay Gospodinov, Concordia University

8:35 a.m. **Modeling Monetary Policy in Real Time: Does Discreteness Matter?**—◆Andrey Sirchenko, European University Institute

8:50 a.m. **On the Estimation of Forecasters' Loss Function Using Density Forecasts**—◆Kajal Lahiri, State University of New York at Albany; Fushang Liu, SUNY at Albany

9:05 a.m. **Forecasting and Estimation Models of GDP**—◆Les Yen, University of Phoenix

9:20 a.m. **Common Factors in Commodity Price Movements**—Joseph Gruber, Federal Reserve Board; ◆Robert Vigfusson, Federal Reserve Board

9:35 a.m. **Constructive Data Mining: Modeling Argentine Broad Money Demand**—◆Neil R. Ericsson, Federal Reserve Board; Steven B. Kamin, Federal Reserve Board

9:50 a.m. **The Ability of the Comunicational Bias to Predict the Direction of Monetary Policy Rates in an Emerging Economy**—◆Pablo M. Pincheira, Central Bank of Chile

10:05 a.m. Floor Discussion

268 CC-203B

Inferential Methods in Biostatistics—Contributed

ENAR

Chair(s): Jeffrey H. Stratton, University of Connecticut

8:35 a.m. **A Bootstrap Testing Procedure for Building Piecewise Linear Logistic Regression Models with Free-Knot Splines**—◆Scott W. Keith, Thomas Jefferson University; David B. Allison, The University of Alabama at Birmingham

8:50 a.m. **Hypothesis Testing of Correlation Parameters for Several Familial Dependence Structures**—◆Roy T. Sabo, Virginia Commonwealth University

9:05 a.m. **Testing Variance Components in Multilevel Linear Models Using Approximate Bayes Factors**—◆Benjamin Saville, Vanderbilt University; Amy Herring, The University of North Carolina at Chapel Hill

9:20 a.m. **Test of Trend for Clustered Data with the Use of Stochastic Ordering**—◆Kyeongmi Cheon, The University of Memphis; Aniko Szabo, Medical College of Wisconsin; E. Olusegun George, The University of Memphis

9:35 a.m. **Statistical Inferences from Formaldehyde DNA-Protein Cross-Link Data**—◆Martin Klein, University of Maryland, Baltimore County

9:50 a.m. **Extracting Within-Experiment Precision of Horticultural Experiments Useful for Meta-Analysis**—◆Dihua Xu, University of Maryland, Baltimore County

10:05 a.m. **Robust Tests of Independent Censoring for Recurrent Event Data**—◆Jimin Lee, The University of North Carolina at Asheville; Yanqing Sun, The University of North Carolina at Charlotte

269 CC-148

■ ✪ Transportation Risk—Contributed

Section on Risk Analysis

Chair(s): TBD

8:35 a.m. **A Critical Statistical Review of Some Transportation Safety Studies**—◆Norma F. Hubele, Arizona State University

8:50 a.m. **Risk Assessment in Traffic Safety**—◆Elke A. Moons, Hasselt University; Christel Faes, Hasselt University; Tom Brijs, Hasselt University

9:05 a.m. **Hierarchical Models in the Insurance Industry**—◆Bill Stergiou, Deloitte Consulting LLP

9:20 a.m. **The Serious Accidents in Car Insurance: A New Appoach by Extreme Value Theory**—◆Michel Grun-Rehomme, University of Paris 2

9:35 a.m. **Interpreting Differential Effects in Light of Fundamental Statistical Tendencies**—◆James P. Scanlan, James P. Scanlan, Attorney at Law

9:50 a.m. **Regression Analysis of the Relationship Between Network Properties and Network Reliability**—◆Seth D. Guikema, Johns Hopkins University; Jacob Torres, Johns Hopkins University

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

270 CC-141

Discrete Data and Mixtures Computational and Graphical Methods—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Andrew C. Thomas, Harvard University

8:35 a.m. **Two Graphical Methods for Outlier Detection in Discrete Distributions**—◆Fiona McElduff, University College London

8:50 a.m. **Estimating Mixture Proportions When Categorized Data Are Available**—◆Shiju Zhang, St. Cloud State University

9:05 a.m. **Multiple Structural Breaks in Time Series of Count Data: Forecasting the Number of Atlantic Hurricanes**—◆Beom Lee, University of South Florida; James E. Gentle, George Mason University

9:20 a.m. **The Model Selection of Zero-Inflated Mixtured Poisson Regression**—◆Huaiye Zhang, Virginia Polytechnic Institute and State University; Inyoung Kim, Virginia Polytechnic Institute and State University

9:35 a.m. **Choosing a Dissimilarity Representation for Pattern Classification (and How to Use This Choice to Improve Your Results)**—◆Adam Cardinal-Stakenas, Johns Hopkins University; Carey E. Priebe, Johns Hopkins University; Zhiliang Ma, Johns Hopkins University; Youngser Park, Johns Hopkins University; Jeffrey L. Solka, Naval Surface Warfare Center

9:50 a.m. **A Robust Estimation Method for Finite Mixture of Poisson Mixed-Effects Models**—◆Liming Xiang, Nanyang Technological University

10:05 a.m. **P2P Networks**—◆Adil Rajput, B. Point; Abdullah A. Alnoshan, The George Washington University

271 CC-143B

■ ✪ Graphical Methods for Massive or High-Dimensional Data Sets—Contributed

Section on Statistical Graphics, Interface Foundation of North America

Chair(s): Subhabrata Chakraborti, The University of Alabama

8:35 a.m. **Interactive System for the Analysis of Network Flows**—◆Lorraine Denby, Avaya Labs Research; Wen-Hua Ju, Avaya Labs Research; Fei Chen, Avaya Labs Research; James Landwehr, Avaya Labs Research; Pat Tendick, Avaya Labs Research

8:50 a.m. **Voronoi Tessellation for Contour Plots**—◆Hyunsook Lee, Harvard-Smithsonian Center for Astrophysics

9:05 a.m. **Sampling and Scripting for Exploration of Large Databases**—◆Danielle M. Wrolstad, Iowa State University

9:20 a.m. **Graph Theoretic Methods for Cluster Verification**—◆Bernard Harris, University of Wisconsin

9:50 a.m. **The View Locked Color Image Grand Tour**—◆Bradley C. Wallet, University of Oklahoma

9:50 a.m. **Visual Monitoring of Data Streams**—◆Adam Loy, Iowa State University; Heike Hofmann, Iowa State University

10:05 a.m. **Tools for Identifying Homogenous Subgroups in Large Data**—◆Yuanyuan Huang, Iowa State University; Heike Hofmann, Iowa State University; Dianne Cook, Iowa State University

272 CC-159A

■ Statistics in Sports—Contributed

Section on Statistics in Sports, Section on Bayesian Statistical Science

Chair(s): Matthew S. Johnson, Teachers College

8:35 a.m. **Odds Ratio Models in Sports**—◆Carl N. Morris, Harvard University

8:50 a.m. **Home Advantage in Professional Tennis**—◆Ruud Koning, University of Groningen

9:05 a.m. **Paired Comparison Models for Ranking National Soccer Teams**—◆Andrew W. Swift, University of Nebraska at Omaha; Shawn Hallinan, IMS Health

9:20 a.m. **An Equitable Scoring System for March Madness Pools**—◆Ted A. Gooley, Fred Hutchinson Cancer Research Center; Barry E. Storer, Fred Hutchinson Cancer Research Center

9:35 a.m. **Models for Motorcycle Grand Prix Racing Times**—◆Leanne Streja, University of California, Los Angeles; Robert E. Weiss, University of California, Los Angeles; Catherine A. Sugar, University of California, Los Angeles

9:50 a.m. **Estimating the Effect of Synergy in Partnerships: Evidence from Coaches and Football Teams from the German Premier League**—◆Padma Rao Sahib, University of Groningen

10:05 a.m. **Accounting for Home Ice Advantage in Women's College Hockey Rankings: A Bayesian Approach**—◆Michael A. Rutter, Penn State University Erie

273 CC-149B

■ Estimating and Adjusting for Nonresponse Bias—Contributed

Section on Survey Research Methods

Chair(s): James R. Chromy, RTI International

8:35 a.m. **Assessing Nonresponse Bias in the International Price Program's Import and Export Price Index Surveys**—◆Jenny L. FitzGerald, Bureau of Labor Statistics

8:50 a.m. **March CPS Income Time Series Analysis 1976–2007: Does Imputation Affect Poverty Estimates?**—◆Joan L. Turek, U.S. Department of Health and Human Services; Sameer Desale, Synectics for Management Decisions, inc.; Charles T. Nelson, U.S. Census Bureau; Fritz Scheuren, NORC at the University of Chicago

9:05 a.m. **Modeling Nonresponse and Under-Reporting in Response in Surveys of the Arrestee Population**—◆Zhiwei Zhang, NORC at the University of Chicago

9:20 a.m. **Analysis of Nonresponse Bias in the Early Head Start Research and Evaluation Project**—◆Barbara L. Carlson, Mathematica Policy Research, Inc.

9:35 a.m. **Effect on Oral Health Estimates of Response Disparities: Results from the Survey of Oral Health Status, Maryland School Children 2005--2006**—◆Haiyan Chen, University of Maryland Dental School; Richard Manski, University of Maryland Dental School; Ronald Chenette, University of Maryland Dental School

9:50 a.m. **Effect of Survey Modes on Sampling Design, Coverage, and Nonresponse in Surveys of Veteran and Military Populations**—◆Boris Rachev, ICF International

10:05 a.m. **Computing Response Rates for Probability-Based Web Panels**—Charles DiSogra, Knowledge Networks; ◆Mario Callegaro, Knowledge Networks

274 CC-158B

Sampling and Multiscaling Issues for Environmental Studies—Contributed

Section on Statistics and the Environment

Chair(s): William F. Christensen, Brigham Young University

8:35 a.m. **Development of a Soil Moisture Sampling Scheme Based on Scale and Validation Problems**—◆Lisa Bramer, Iowa State University; Petrutza Caragea, Iowa State University

8:50 a.m. **USEPA's Targeted National Sewage Sludge Survey**—◆Marla D. Smith, U.S. Environmental Protection Agency; Rick Stevens, U.S. Environmental Protection Agency

9:05 a.m. **Multivariate Downscaling of Outputs from Numerical Models**—◆Veronica J. Berrocal, Duke University; Alan E. Gelfand, Duke University

9:20 a.m. **Bayesian Spatio-Temporal Downscaling Models for Local Climate Prediction**—◆Paul D. Baines, Harvard University; Xiao-Li Meng, Harvard University

9:35 a.m. **An Integrated Approach to Land Use Policy**—◆Chandra Aleong, Delaware State University; John Aleong, University of Vermont

9:50 a.m. **Sequential Sampling with Spatial Generalized Linear Mixed Model with Application to Pest Density Assessment**—◆Judy X. Li, University of California, Riverside; Daniel Jeske, University of California, Riverside

10:05 a.m. **An Approach to Enhance Performance of Spatial Smoothing Methods with Aggregated Data**—◆Nong Shang, CDC

275 CC-208A

Nonparametrics Testing—Contributed

Section on Nonparametric Statistics

Chair(s): Marc Genton, Texas A&M University

8:35 a.m. **The Split Sample Permutation t-Tests**—◆Shunpu Zhang, University of Nebraska-Lincoln

8:50 a.m. **Detection of Treatment Effects by Covariate-Adjusted Expected Shortfall**—◆Ya-Hui Hsu, University of Illinois at Urbana-Champaign; Xuming He, University of Illinois at Urbana-Champaign; Mingxiu Hu, Millennium Pharmaceuticals/The Takeda Oncology Company

9:05 a.m. **How to Dig for DEGs**—◆Lena Granovsky, Technion; Paul D. Feigin, Technion–Israel Institute of Technology

9:20 a.m. **Combination of Levene-Type and Finite-Intersection Tests for Homogeneity of Variances Against Ordered Alternatives**—◆Kimihiro Noguchi, University of Waterloo; Yulia R. Gel, University of Waterloo

9:35 a.m. **Estimating Equations in Biased Sampling Problems**—◆Bin Zhang, University of Missouri; Jianguo Sun, University of Missouri; Jing Qin, National Institute of Allergy and Infectious Diseases

9:50 a.m. **Hippocampus Shape Analysis of Clinically Depressed Twin Populations Using a Modified Mann-Whitney-Wilcoxon Statistic**—◆Nikhil Ram Mohan, Johns Hopkins University; Carey E. Priebe, Johns Hopkins University; Youngser Park, Johns Hopkins University; Majnu John, Weill Medical College of Cornell University

10:05 a.m. **A Program for Computing Probability Values for Significance Tests Using Pearson Distributions**—◆Wei Pan, University of Cincinnati; Haiyan Bai, University of Central Florida

276 CC-204B
Semiparametric Models for Analyzing Longitudinal Outcomes—Contributed

Biometrics Section

Chair(s): Joel A. Dubin, University of Waterloo

8:35 a.m. **Robust Small Sample Inference for Fixed Effects from Restricted Maximum Likelihood**—◆Chunpeng Fan, sanofi-aventis; Donghui Zhang, sanofi-aventis; Cun-Hui Zhang, Rutgers University

8:50 a.m. **Semiparametric Analysis of Panel Count Data with Correlated Observation and Follow-Up Times**—◆Xin He, The Ohio State University; Xingwei Tong, Beijing Normal University; Jianguo Sun, University of Missouri

9:05 a.m. **Covariate-Adjusted Linear Mixed Effects Model for Longitudinal Data**—◆Danh Nguyen, University of California, Davis

9:20 a.m. **Quantile Regression for Longitudinal Biomarker Data Subject to Detection Limits**—Lan Kong, University of Pittsburgh; ◆Minjae Lee, University of Pittsburgh

9:35 a.m. **Robust Estimation in Multivariate Linear Mixed Effects Models**—◆Inna Chervoneva, Thomas Jefferson University

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

277 CC-203A
Nonparametric Models II—Contributed

Biometrics Section

Chair(s): Angelo Elmi, University of Pennsylvania

8:35 a.m. **Wavelet-Based Functional Mixed Models for Transcriptome Analysis**—◆Lieven Clement, Ghent University; Ciprian M. Crainiceanu, Johns Hopkins University; Kristof De Beuf, Ghent University; Olivier Thas, Ghent University; Rafael Irizarry, Johns Hopkins University

8:50 a.m. **Modeling Animal Mother-Infant Distance Proximity Over Time to Determine a Change Point in Behavior: When Does Animal Weaning Occur?**—◆Lorrie L. Hoffman, Armstrong Atlantic State University; Steve Clark, SeaWorld; Greg Knofczynski, Armstrong Atlantic State University; Jaree Hudson, Armstrong Atlantic State University; Heather King, Armstrong Atlantic State University; Alfreda Rogers, Armstrong Atlantic State University

9:05 a.m. **Weighted Likelihood Estimators for Finite Normal Mixture Models**—◆Tingting Zhan, Temple University; Inna Chervoneva, Thomas Jefferson University; Boris Iglewicz, Temple University

9:20 a.m. **Semiparametric Cure Rate Models for Current Status Data**—◆Guoqing Diao, George Mason University

9:35 a.m. **Covariate-Adjusted Correlation Analysis with Application to FMR1 Premutation Female Carrier Data**—◆Damla Senturk, Penn State University; Danh Nguyen, University of California, Davis

9:50 a.m. **Analysis of Longitudinal Data Using Partial Linear Models with Quadratic Inference Functions**—◆Wing K. Fung, The University of Hong Kong

10:05 a.m. **A Parametric Permutation Test for Regression Coefficients in LASSO Regularized Regression**—◆Michael Wu, Harvard University; Tianxi Cai, Harvard University; Xihong Lin, Harvard School of Public Health

278 CC-207B
■ Bayesian Semiparametric and Nonparametrics—Contributed

Section on Bayesian Statistical Science

Chair(s): Qingzhao Yu, Louisiana State University Health Sciences Center

8:35 a.m. **A Note on the Bayes Factor in a Semiparametric Regression Model**—◆Taeryon Choi, Inha University; Jaeyong Lee, Seoul National University; Anindya Roy, University of Maryland, Baltimore County

8:50 a.m. **Bayesian Semiparametric Infinite Latent Variable Models**—◆Ju Hyun Park, National Cancer Institute; David Dunson, Duke University

9:05 a.m. **Bayesian Inference for Semiparametric Quantal Response Equilibrium Models**—◆Anton Westveld, University of Nevada Las Vegas; Kevin Quinn, Harvard University

9:20 a.m. **Hierachical Bayesian Nonparametric Approaches for Detecting Difference Boundaries in Disease Maps**—◆Pei Li, The University of Minnesota; Sudipto Banerjee, The University of Minnesota; Tim Hanson, The University of Minnesota; Marshall A. McBean, The University of Minnesota

9:35 a.m. **Robust Nonparametric Bayesian Methods**—◆Juhee Lee, The Ohio State University; Steven N. MacEachern, The Ohio State University

9:50 a.m. **Bayesian Estimation for Generalized Nonparametric Single-Index Mixed Model**—◆Jinsong Chen, Virginia Polytechnic Institute and State University; Inyoung Kim, Virginia Polytechnic Institute and State University; George R. Terrell, Virginia Polytechnic Institute and State University

10:05 a.m. **Semiparametric Measurement Error Modeling in Logistic Regression, with Application to Survey Data**—◆Jianjun Gan, University of South Carolina; Hongmei Zhang, University of South Carolina

279 CC-208B

Miscellaneous Methodology II—Contributed

IMS

Chair(s): Carrie Hosman, University of Michigan

8:35 a.m. **Quadratic Covariation Estimation with Noisy and Asynchronous Data**—◆Dacheng Xiu, Princeton University

8:50 a.m. **Density Estimators for Invertible Linear Processes**—◆Wolfgang Wefelmeyer, University of Cologne

9:05 a.m. **Semi-Logarithmic Loss-Based Estimation and Its Related Distributions**—◆Masato Kagihara, Fukuoka University

9:20 a.m. **On Variance Estimation for Tree Order Restricted Models**—◆Sanjay Chaudhuri, National University of Singapore; Antar Bandyopadhyay, Indian Statistical Institute

9:35 a.m. **One Step Toward a Less Sensitive Statistic**—◆Anurag N. Banerjee, Durham University

9:50 a.m. **Estimation of the Parameters of Two-Parameter Exponential Distribution Using Top K-lists**—◆Mohamed Habibullah, Northeastern University

10:05 a.m. **Orthogonal Series Density Estimation Methodology**—◆Serge B. Provost, The University of Western Ontario; Min Jiang, The University of Western Ontario

280 CC-201

Statistical Issues Related to Safety Data—Contributed

Biopharmaceutical Section, Section on Bayesian Statistical Science

Chair(s): Chul H. Ahn, FDA

8:35 a.m. **Marking the Ends of T-Waves: Algorithms and Experts**—◆Yingchun Zhou, National Institute of Statistical Sciences; Nell Sedransk, National Institute of Statistical Sciences

8:50 a.m. **Diagnostics for Logistic Regression on AE Data**—◆Bo Jin, Merck Research Laboratories

9:05 a.m. **Handling Missing Data in the Analysis of Exposure-Adjusted Incidence Rates with Applications to Safety Endpoints in Clinical Trials**—◆Adeniyi J. Adewale, Merck & Co., Inc.; Adam B. Polis, Merck & Co., Inc.

9:20 a.m. **Validity and Utility of a Novel Method for Assessing Benefit-Risk Tradeoff in Clinical Trials**—◆Maksim Pashkevich, Eli Lilly and Company; Nathan Enas, Eli Lilly and Company

9:35 a.m. **A Bayesian Approach for Safety Monitoring in Clincal Trials**—◆Gang Jia, Merck & Co., Inc.; Xiaoming Li, Merck Research Laboratories; Xin Zhao, Merck & Co., Inc.

9:50 a.m. **Methods for Interval-Censored Safety Events Based on Laboratory Data**—◆Yan Zheng, sanofi-aventis; Meehyung Cho, sanofi-aventis; William Stager, sanofi-aventis; Gerard Derzko, sanofi-aventis; Kaihong Jiang, sanofi-aventis

10:05 a.m. **Single-Group Prospective Post-Marketing Safety Studies: A Bayesian Approach**—◆Yu-te Wu, FDA; George Rochester, FDA; Yi Tsong, FDA

Poster Presentations 8:30 a.m.–10:20 a.m.

281 CC-Hall D

Topic-Contributed Oral Poster Presentations: History of Statistics—Topic-Contributed

Section on Statistical Education

Chair(s): Lara Schmidt, RAND Corporation

History of Statistics

01 **Statisticians Speak Out**—◆Frederick O. Lorenz, Iowa State University; David Rockoff, Iowa State University

02 **The Impact of Henry Wallace on Statistics at Iowa State University**—◆Laura A. Hildreth, Iowa State University

03 **George Waddell Snedecor**—◆Dai-Trang Le, Iowa State University

04 **H. O. Hartley: His Views on Statistics and a Glimpse Into the Future**—◆Kristian Schmidt, Iowa State University

05 **The Life and Achievements of Oscar Kempthorne**—◆Karl T.L. Pazdernik, Iowa State University

06 **Women Do Much More Than 'Cooke'**—◆Luvenia Hellams, Iowa State University

282 CC-Hall D

■ Topic-Contributed Oral Poster Presentations: Technology Tools for Education—Topic-Contributed

Section on Statistical Education

Organizer(s): Lara Schmidt, RAND Corporation

Chair(s): Lara Schmidt, RAND Corporation

Statistical education, teaching, and training

07 **Using a Script Language to Develop Interactive Demonstrations**—◆Mark Bailey, SAS Institute Inc.

08 **Using the JMP Scripting Language to Teach Sampling and Inference for the Mean**—◆William Duckworth, Creighton University

09 **Livening Up the Introductory Statistics Course with Nontraditional Media Resources**—◆Page C. Moore, University of Arkansas for Medical Sciences

10 **Using the JMP Scripting Language to Teach Sampling and Inference for the Proportion**—◆Amy G. Froelich, Iowa State University

283 CC-Hall D

Contributed Oral Poster Presentations—Contributed

Section on Statistical Education

Chair(s): William Duckworth, Creighton University

Statistical education, teaching, and training

11 **Determining the Sample Size for Estimating the Standard Deviation**—◆Kevin S. Robinson, Millersville University of Pennsylvania

12 **Student Self-Assessment of Competence: Accurate or Important?**—◆Joe H. Sullivan, Mississippi State University

13 **R in the Classroom: Exploring the Sequential Probability Ratio Test for Normal Data**—◆Philip Wong, AAA NCNU; Roanna Gee, California State University, East Bay; Bruce E. Trumbo, California State University, East Bay

14 **Simplify Your Analyses of the Survey of Attitudes Toward Statistics**—◆Marjorie E. Bond, Monmouth College

15 **Informal Inference: Scaling Student Sophistication**—◆S. David Kriska, The Ohio State University; Mark C. Fulcomer, University of Medicine and Dentistry of New Jersey; Marcia M. Sass, University of Medicine and Dentistry of New Jersey

16 **A Visual Model for Analysis of Variance**—◆J. Burdeane Orris, Butler University

17 **Hands-On Learning Aid for Statistical Process Control and Capability Measures**—◆James A. Alloway, EMSQ Associates

18 **T-Test for Proportions? Making Do When Your Software Can't Do Confidence Intervals for Proportions**—◆Gerald Shoultz, Grand Valley State University

19 **Strat-O-Matic Baseball: An Introduction to Probability Concepts**—◆John Gabrosek, Grand Valley State University

20 **Comparison of the Power of the Paired Samples Using Permutation Tests**—◆Ferry Butar Butar, Sam Houston State University; Ananda Manage, Sam Houston State University

21 **Teaching Statistical Thinking as a Liberal Art with an Eye Toward History: A Writing- and Discussion-Intensive New Course**—◆Kevin Henning, Texas Tech University

Computational statistics, numerical methods, simulation

22 **Preliminary Variance Tests for Deciding to Use Pooled vs. Nonpooled t-Tests**—◆Jared L. Martin, Millersville University of Pennsylvania; Lewis H. Shoemaker, Millersville University of Pennsylvania

Longitudinal data, repeated measurements, and meta-analysis

23 **Postdoctoral Plans vs. Outcomes of PhD Graduates in the Labor Market**—◆Eric J. Solis, The George Washington University

Linear models, GLMs, parametric methods

24 Fitting and Interpreting GLMs (the Saturated Model Isn't Perfect and Other Cautionary Tales)—◆Robert Kushler, Oakland University

Statistical education, teaching, and training

25 Analogical Encoding of Statistics Problems: Role of Self-Explanation and Feedback—◆Simin Hall, Virginia Polytechnic Institute and State University; Eric Vance, Virginia Polytechnic Institute and State University

26 Relating Two Conceptualizations of the Arithmetic Mean—◆Mark Marnich, Point Park University

Engineering and physical sciences, chemometrics

27 Statistical Modeling: A More Acceptable Approach—◆Reza D. Noubary, Bloomsburg University

Statistical education, teaching, and training

28 Classroom Simulation: Investigation of the Asymptotic Distribution of the Sample Median—◆Vadim Y. Bichutskiy, California State University, East Bay; Joshua Kerr, California State University, East Bay; Bruce E. Trumbo, California State University, East Bay

29 Students' Perceptions of Variability Across Different Types of Graphs—◆Felice S. Shore, Towson University; Linda L. Cooper, Towson University

Categorical, multivariate analysis

30 Using Assessment Data in Multivariate Statistics Courses—◆Julia A. Norton, California State University, East Bay; Lynn Eudey, California State University, East Bay; Monica Anand, California State University, East Bay

Statistical education, teaching, and training

31 Exploration of Dimensionality of the CAOS Test—◆Ji Hoon Ryoo, The University of Minnesota

284 CC-Hall D

Contributed Oral Poster Presentations—Contributed

Section on Survey Research Methods

Chair(s): Lara Schmidt, RAND Corporation

Sampling and survey methodology

32 Why Is Survey Research 20 Years Behind?—◆Robert E. Fay, Westat, Inc.

33 Optimizing Call Time of Day in an RDD Survey—◆S. Sean Hu, CDC; Lina Balluz, CDC; Willaim Garvin, CDC; Mohamed Qayad, CDC

Social and behavioral science

34 Using Sample Statistics to Quantify Community Building—◆Bart Phillips, Community Building Tutors, NFP

35 Network Sampling for Assessing Excess Alcoholism and Drug Abuse Among Students in Nigerian Tertiary Institutions—Rotimi Ogundeji, University of Lagos; ◆Ismaila Adeleke, University of Lagos; Ray Okafor, University of Lagos; Edesiri Ahani, University of Lagos; Ugochukwu Mbata, University of Lagos; Adegbenga Olalude, University of Lagos

Incomplete data analysis, imputation methods

36 Imputation Methods for Adaptive Matrix Sampling—◆Jeffrey Gonzalez, Bureau of Labor Statistics; John L. Eltinge, Bureau of Labor Statistics

Applications and case studies

37 Testing Hardy-Weinberg Equilibrium Using Family Data from Complex Surveys—◆Dewei She, The George Washington University; Hong Zhang, University of Science and Technology of China; Zhaohai Li, The George Washington University

Government statistics

38 Pretesting with Populations Experiencing Transience: Testing to Ensure Questionnaires Are Broadly Accessible—◆Jennifer H. Childs, U.S. Census Bureau; Nathan Jurgenson, U.S. Census Bureau; Dawn R. Norris, U.S. Census Bureau

39 One-Time Contact for a Census Internet Survey: Is It Sufficient? Washington State Professional Health Worker Census Internet Mode Effect and Response Rate Study—◆Danna L. Moore, Washington State University; Bruce Austin, Washington State University; Kent Miller, Washington State University

Sampling and survey methodology

40 Are 'Do Not Include' Statements Helpful?—◆Monica Dashen, Bureau of Labor Statistics

Graphics, visualization

41 Visualization of Complex Survey Data—◆Edward Mulrow, NORC at the University of Chicago; Susan Hinkins, NORC at the University of Chicago; Fritz Scheuren, NORC at the University of Chicago

Health policy, epidemiology, public health

42 Assessing Variability in Life-Table Estimates Based on Longitudinal Data Involving a Complex Survey—◆Van L. Parsons, National Center for Health Statistics; Nathaniel Schenker, National Center for Health Statistics; Kimberly Lochner, National Center for Health Statistics; Gloria Wheatcroft, National Center for Health Statistics; Elsie R. Pamuk, National Center for Health Statistics

Sampling and survey methodology

43 Model-Based Methods in Analyzing Complex Survey Data: A Case Study with National Health Interview Survey Data—◆Rong Wei, National Center for Health Statistics; Van L. Parsons, National Center for Health Statistics

44 **Estimating the Variance of Between-Year Change in Domain-Level Totals**—◆Kimberly Henry, IRS; Valerie Testa, IRS; Richard Valliant, University of Michigan

Mathematical statistics, distribution theory, robust statistics

45 **Characteristic Function for and Moments of the Truncated Triangular Distribution**—◆Jay J. Kim, National Center for Health Statistics; Myron J. Katzoff, National Center for Health Statistics; Rahul A. Parsa, Drake University

Sampling and survey methodology

46 **Developing models of respondent fatigue to guide the order in which to ask survey questions**—◆Brian L. Egleston, Fox Chase Cancer Center

47 **Nonresponse Bias: Telephone Point-of-Purchase Survey**—◆Madeleine Saxton, Bureau of Labor Statistics; Patrick Falwell, Bureau of Labor Statistics

48 **Alphabetical Placement in Surveys of Persons at Institutions: A Simulation Study**—Pedro J. Saavedra, ICF Macro; ◆Francine Barrington, ICF Macro

49 **A Weighting Methodology for Complex Surveys**—◆Vicki J. Pineau, TNS-Global; Margaret E. Strickland, TNS Global; N. D. Prabhakar, TNS Global; Carl T. Finkbeiner, TNS Global

Incomplete data analysis, imputation methods

50 **Reproducing Nonresponse Adjustments in Replicate Weights**—Pedro J. Saavedra, ICF Macro; ◆R. Lee Harding, Macro International, Inc.

Sampling and survey methodology

51 **On the Construction of Bootstrap Confidence Intervals Under Purposive Sampling**—Ray Okafor, University of Lagos; Ismaila Adeleke, University of Lagos; Dallah Hamadu, University of Lagos; ◆Rotimi Ogundeji, University of Lagos

52 **Bayes Model for Inference on Vehicular Traffic Density at the Main Campus of University of Lagos**—◆Ray Okafor, University of Lagos; A. I. Opara, University of Lagos; Rotimi Ogundeji, University of Lagos; Ugochukwu Mbata, University of Lagos

53 **A Survey of Retail Outlets: Sample Design Issues**—◆Karol Krotki, RTI International

Longitudinal data, repeated measurements, and meta-analysis

54 **A Longitudinal Establishment Survey: Design and Estimation Issues**—Karol Krotki, RTI International; ◆Chris Cummiskey, RTI International

Sampling and survey methodology

55 **Sequential Modeling for Contact and Cooperation Propensity for the United States Military Health Survey**—◆Darryl V. Creel, RTI International; Vincent G. Iannacchione, RTI International

56 **A Noninformative Bayesian Approach to Small-Area Estimation**—Glen Meeden, The University of Minnesota; ◆Yanping Qu, The University of Minnesota; Bo Zhang, The University of Minnesota

Social and behavioral science

57 **Latent Structure Models for Social Networks Using Aggregated Relational Data**—◆Tian Zheng, Columbia University; Tyler H. McCormick, Columbia University

Sampling and survey methodology

58 **Developing the Dual Frame Design for the 2010 National Survey of College Graduates**—◆John M. Finamore, U.S. Census Bureau; David W. Hall, U.S. Census Bureau; Stephen Cohen, National Science Foundation; Fan Zhang, National Science Foundation; Flora Lan, National Science Foundation; Donsig Jang, Mathematica Policy Research, Inc.

59 **Missing Data and Complex Samples: The Impact of Listwise Deletion vs. Subpopulation Analysis on Statistical Bias and Hypothesis Test Results When Data Are MCAR and MAR**—◆Bethany A. Bell, University of South Carolina; Jeffrey D. Kromrey, University of South Florida; John M. Ferron, University of South Florida

Applications and case studies

60 **A Comparison of Address-Based Sampling and Random Digit Dialing Sampling**—◆Daniel E. Williams, Western Wats; Edward P. Johnson, Opinion Outpost

Sampling and survey methodology

61 **Assessing Survey Estimates of Intent to Leave with Personnel Data**—◆Taylor Lewis, Office of Personnel Management; Mary Clair Turner, Office of Personnel Management; Eulus Moore, Office of Personnel Management; Bob Heim, Office of Personnel Management

Longitudinal data, repeated measurements, and meta-analysis

62 **Model Selection in Linear Mixed Effects Models**—◆Ying Lu, University of Colorado at Boulder; Heng Peng, The Hong Kong Baptist University

Sampling and survey methodology

63 **Translation of Agreement Answer Scales: Effects on Category Response Curves**—◆Ana Villar, University of Nebraska Lincoln; Mario Callegaro, Knowledge Networks

Incomplete data analysis, imputation methods

64 **Assessing the Convergence of Multiple Imputation Algorithms Using a Sequence of Regression Models**—◆Jian Zhu, University of Michigan; Trivellore E. Raghunathan, University of Michigan

Sampling and survey methodology

65 Combining Nonoverlapping Confidential Data Through Multiple Imputation—◆Christine Kohnen, Macalester College; Jerry Reiter, Duke University

Longitudinal data, repeated measurements, and meta-analysis

66 Optimal Probability Weighting Methods in Longitudinal Models for Data with Nonignorable Unequal Selection and Nonignorable Wave Nonresponse—◆Sharon L. Christ, The University of North Carolina at Chapel Hill

Sampling and survey methodology

67 Sampling Weights for Analysis of Couple Data in Demographic and Health Surveys—◆Bryan Sayer, Social & Scientific Systems, Inc.; Stan Becker, Johns Hopkins University

68 Issues Associated with Measuring Activities Associated with Seeing and Hearing Across National Surveys—◆Frances M. Chevarley, Agency for Healthcare Research and Quality; David W. Keer, U.S. Department of Education; Barbara M. Altman, Consultant

69 Effectiveness of Nesting Age, Race, and Gender for Weighting Estimates of Radio Listening—◆Kelly Dixon, Arbitron, Inc.

70 Analysis of Data from Complex Survey Samples: Propensity Scores and Survey Weights—◆Weiwei Cui, National Institute of Statistical Sciences; Nan Liu, Child Trends, Inc.

Incomplete data analysis, imputation methods

71 Hot-Deck Imputation Using Imputation Models—◆Minhui Paik, Iowa State University

Sampling and survey methodology

72 Confidence Intervals for Radio Ratings Estimators—◆Richard Griffiths, Arbitron, Inc.

285 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

Section on Health Policy Statistics

Chair(s): Lara Schmidt, RAND Corporation

Health policy, epidemiology, public health

73 Peer Group Assignment for New Hospitals on Performance Comparison Report by Traditional and Modern Classification Methods—◆Jacob Jen-Hao Cheng, Maryland Hospital Association; Samuel Ogunbo, Maryland Hospital Association

74 Diabetes as a Potentially Disabling Condition: Studying Supports to Prevent Unemployment, Health Decline, and Reliance on Government Assistance—◆Tammy Tom, University of Hawaii

Categorical, multivariate analysis

75 Testing the Equality of Conditional Correlations Across Numeric Variable(s) with Heteroscedastic Data—◆Xueya Cai, Indiana University Purdue University Indianapolis; Gregory E. Wilding, SUNY at Buffalo; Alan Hutson, SUNY at Buffalo; Yue Li, University of California, Irvine

Health policy, epidemiology, public health

76 Reliability of the Orientation of Social Support Instrument in Substance Abuse Treatment—◆Michael Wolf-Branigin, George Mason University; Mark Taylor,

Incomplete data analysis, imputation methods

77 A Comparison of Imputation Methods for Missing Data in Self-Report Likert Ratings—◆Lingqi Tang, University of California, Los Angeles; Thomas R. Belin, University of California, Los Angeles; Judy Ho, University of California, Los Angeles; Bonnie Zima, University of California, Los Angeles

Health policy, epidemiology, public health

78 A Stochastic and State Space Model for Human Eye Cancer Involving Both Hereditary and Non-Hereditary Cancer Genes—◆Hong Zhou, Arkansas State University; Wai-Yuan Tan, University of Memphis

79 Hospital Mortality Rates analyzed through Empirical Mode Decomposition Method.—◆Boguslaw Skierczynski, Ascension Health; David Pryor, Ascension Health; Ann Hendrich, Ascension Health

Linear models, GLMs, parametric methods

80 Clustering to Achieve Normality in Generalized Linear Mixed Models—◆Kenneth Pietz, Michael E. DeBakey VA Medical Center; LeChauncy D. Woodard, Michael E. DeBakey VA Medical Center; Tracy Urech, Michael E. DeBakey VA Medical Center; Cassie Robinson, Michael E. DeBakey VA Medical Center; Laura A. Petersen, Baylor College of Medicine

Health policy, epidemiology, public health

81 Examination of Risk Factor and Health Condition Data in National Consumer Surveys for Use in Public Health Communication Planning—◆William E. Pollard, CDC; DeAndrea Martinez, CDC

82 Who Donates Blood?—◆Richard A. Forshee, FDA; Mark O. Walderhaug, FDA

Longitudinal data, repeated measurements, and meta-analysis

83 Meta-Analytic Inference with Few Studies—◆Todd Bodner, Portland State University

Health policy, epidemiology, public health

84 Union Effects on Health Insurance Coverage—◆Jongmook Choe, The University of Texas at Austin

85 Estimating Household Income Percentiles from a Public Health Survey Using Log-Linear Bootstrap Interpolation—◆Robert Feyerharm, Oklahoma State Department of Health

Spatial statistics, spatio-temporal modeling, GIS

86 Sample Size Requirement and Power Assessment in a Spatial Analysis—◆Qilong Yi, University of Ottawa; Yue Chen, University of Ottawa

Health policy, epidemiology, public health

87 Clustering Performance Data Across Measure Sets: An Analysis of National Hospital Quality Measures Designated for the CMS Value-Based Purchasing Program—◆Samuel Ogunbo, Maryland Hospital Association; Nikolas Matthes, Quality Indicator Project; Jacob Jen-Hao Cheng, Maryland Hospital Association; Carlos Alzola, Data Insights

Sampling and survey methodology

88 Development of a Quantitative Attitudes Instrument—◆Heibatollah Baghi, George Mason University

Health policy, epidemiology, public health

89 Predicting Wound Deterioration in Home Health Care Patients—◆Iordan Slavov, Visiting Nurse Service of New York; Carlin Brickner, Visiting Nurse Service of New York

90 Association Between Health Insurance and Generalized Periodontal Disease in a Study Population of Gullah African Americans with Diabetes—◆Nicole M. Marlow, Medical University of South Carolina; Elizabeth Slate, Medical University of South Carolina; Jyotika Fernandes, Medical University of South Carolina; Carlos Salinas, Medical University of South Carolina

91 Physician-Level Quality Measurement: Using Control Charts with National Benchmarks to Identify Common and Special Cause Variation in Patients' Systolic Blood Pressures—◆Gerald K. Arnold, American Board of Internal Medicine; Rebecca S. Lipner, American Board of Internal Medicine; Lorna A. Lynn, American Board of Internal Medicine; Weifeng Weng, American Board of Internal Medicine; Eric S. Holmboe, American Board of Internal Medicine

92 CMS Medicare Reimbursement for Quality Care: Will There Be an Unintended Downward Spiral for Safety Net Hospitals?—◆Ronald Low, New York City Health and Hospitals Corporation; Shunsuke Ito, New York City Health and Hospitals Corporation; Jiaying Wu, New York City Health and Hospitals Corporation; Caroline Jacobs, New York City Health and Hospitals Corporation; Raymond Gregory, New York City Health and Hospitals Corporation; Van Dunn, New York City Health and Hospitals Corporation; Ramanathan Raju, New York City Health and Hospitals Corporation

286 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

Section on Nonparametric Statistics

Chair(s): Lara Schmidt, RAND Corporation

Semiparametric and nonparametric methods

93 Multivariate Information and Interaction—◆Nan L. Kong, Educational Testing Service

94 Confidence Bands for the CDF When Sampling from a Finite Population—◆Jesse Frey, Villanova University

95 A Modified Mantel Test for the Compound Symmetry Covariance Structure—◆Megan Duke, University of Central Oklahoma; Tracy Morris, University of Central Oklahoma; Mark E. Payton, Oklahoma State University

96 Smoothing Spline with Incomplete Covariate Data—◆Xiwen Ma, University of Wisconsin-Madison

97 Simultaneous Confidence Bands for the Trend in a Functional Data Set—◆David Degras, The University of Chicago

Bayesian statistics, hierarchical models

98 Hyper Dirichlet Processes for Graphical Models—◆Daniel Heinz, Carnegie Mellon University

Applications and case studies

99 Applications of Spectral Kernel Methods—◆James Sharpnack, Carnegie Mellon University

Clinical Trial Designs

100 Rank Transforms and Tests of Interaction for Repeated Measures Experiments with Various Covariance Structures—◆Jennifer Bryan, Oklahoma Christian University; Mark E. Payton, Oklahoma State University

Bayesian statistics, hierarchical models

101 A Classification Algorithm for Finite Mixture Model—◆Erum Marfani, University of Maryland, Baltimore County

Linear models, GLMs, parametric methods

102 Detection of Interactions in Model Building: A Graphical Approach—◆William C. Bridges, Clemson University

287 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

Section on Teaching of Statistics in the Health Sciences

Chair(s): Lara Schmidt, RAND Corporation

Computational statistics, numerical methods, simulation

103 **Bias-Corrected Estimation for Intraclass Correlation Coefficient**—◆Eshetu G. Atenafu, Hospital for Sick Children; Joseph Beyene, University of Toronto; Jemila S. Hamid, Hospital for Sick Children

Statistical education, teaching, and training

104 **Sequencing and Mastering Preliminary Topics in Teaching Sampling Distributions**—◆Mark C. Fulcomer, University of Medicine and Dentistry of New Jersey; S. David Kriska, The Ohio State University; Marcia M. Sass, University of Medicine and Dentistry of New Jersey; Maritza Jauregui, The Richard Stockton College of New Jersey

Special Presentation 10:30 a.m.–12:20 p.m.

288 CC-102B

ASA College Stat Bowl II—Other

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

Organizer(s): Stephanie Cano, The University of Texas at San Antonio

Chair(s): Stephanie Cano, The University of Texas at San Antonio

Invited Sessions 10:30 a.m.–12:20 p.m.

289 CC-201

■ Nonparametric Approaches for High-Dimensional Data—Invited

Biometrics Section, International Chinese Statistical Association, Biopharmaceutical Section

Organizer(s): Annie Qu, University of Illinois at Urbana Champaign

Chair(s): Annie Qu, University of Illinois at Urbana Champaign

10:35 a.m. **Smoothing Spline Semiparametric Nonlinear Regression Models**—◆Yuedong Wang, University of California, Santa Barbara; Chunlei Ke, Amgen, Inc.

11:05 a.m. **Modeling the Dynamics of Gene Regulatory Network**—◆Ping Ma, University of Illinois at Urbana-Champaign

11:35 a.m. **Asymptotic Normality of Plug-In Level Set Estimates with Applications to Binary Classification**—◆Wolfgang Polonik, University of California, Davis

12:05 p.m. **Floor Discussion**

290 CC-150B

■ Stirring the Pot: Radical Ideas in Statistics Education—Invited

Section on Statistical Education

Organizer(s): Peter Westfall, Texas Tech University

Chair(s): Lorrie L. Hoffman, Armstrong Atlantic State University

10:35 a.m. **Losing the Distinction: From Traditional to Online to Hybrid Instruction**—◆David Zeitler, Grand Valley State University

11:00 a.m. **Change Agents for Teaching and Learning Statistics: The CATALST Project**—◆Andrew Zieffler, The University of Minnesota

11:25 a.m. **All Models are Right … Most Are Useless**—◆Thaddeus Tarpey, Wright State University

11:50 a.m. **Fostering Statistics TA Development as Writing Instructors**—◆Erin Blankenship, University of Nebraska-Lincoln; Walter Stroup, University of Nebraska-Lincoln; Jennifer Green, University of Nebraska-Lincoln; Alison Friedow, University of Nebraska-Lincoln; Shari Stenberg, University of Nebraska-Lincoln

12:15 p.m. **Floor Discussion**

291 CC-150A

✪ Emerging Trends and Evidence in High-Dimensional 'Omics' Investigations—Invited

Council of Chapters

Organizer(s): Gary L. Gadbury, Kansas State University
Chair(s): Gary L. Gadbury, Kansas State University

10:35 a.m. **Biostatistics' Rise as an Empirical Science: Genomic Research as the Leavening Agent**—◆David B. Allison, The University of Alabama at Birmingham

11:00 a.m. **The Role of Permutation and Randomization Tests in High-Dimensional Studies**—◆Dan Nettleton, Iowa State University

11:25 a.m. **Inferring Causal Effects in High-Dimensional Studies**—◆Mark J. van der Laan, University of California, Berkeley

11:50 a.m. Disc: Heping Zhang, Yale University

12:10 p.m. **Floor Discussion**

292 CC-209C

■ Random Effect Specification/Misspecification in Spatial/Spatio-Temporal Health Modeling—Invited

Section on Statistics and the Environment, Section on Bayesian Statistical Science, SSC

Organizer(s): Andrew B. Lawson, Medical University of South Carolina
Chair(s): Brian J. Reich, North Carolina State University

10:35 a.m. **Adding Spatially Correlated Errors Can Mess Up the Fixed Effect You Love**—◆James Hodges, The University of Minnesota; Brian J. Reich, North Carolina State University

11:00 a.m. **Random Effect Seepage and Identification Problems in Bayesian Spatial Health Data Modeling**—◆Andrew B. Lawson, Medical University of South Carolina; Sumirathan Rasathurai, University of South Carolina

11:25 a.m. **Random Effect Specification/Misspecification in Spatial Modeling of Univariate and Multivariate Health Data**—◆Ying MacNab, The University of British Columbia

11:50 a.m. **Spatial Random Effects to Assess Geographic Influences on Genetic Population Structure**—◆Lance A. Waller, Emory University; David C. Wheeler, National Cancer Institute/Harvard School of Public Health; Roman Biek, University of Glasgow; Leslie A. Real, Emory University

12:15 p.m. **Floor Discussion**

293 CC-144B

■ ✪ Social Network Analysis: Bridging Evidence and Policy in Complex Environments—Invited

Social Statistics Section, Section on Statistical Graphics, Section on Government Statistics, Interface Foundation of North America

Organizer(s): Jeffrey L. Herman, George Mason University
Chair(s): Jeffrey L. Herman, George Mason University

10:35 a.m. **Utilizing External Information in Social Networks**—◆David Marchette, Naval Surface Warfare Center

11:00 a.m. **The Use of Social Network Analysis in Support of Federal Agencies**—◆Elizabeth A. Conjar, George Mason University; Dan Horn, Booz Allen Hamilton

11:25 a.m. **Influence and Implications of Leadership Style on Social Networks**—◆Juliet Aiken, University of Maryland; Beng-Chong Lim, Nanyang Technological University; Paul Hanges, University of Maryland

11:50 a.m. Disc: Stanley Wasserman, Indiana University

12:10 p.m. **Floor Discussion**

294 CC-202A

■ ✪ Communicating Statistical Concepts to a Lay Audience—Invited

Committee on Excellence in Statistical Reporting, Social Statistics Section, Section on Government Statistics

Organizer(s): Telba Irony, FDA
Chair(s): Telba Irony, FDA

10:35 a.m. **Presentation and Interpretation of Statistical Results to Track Economic Developments**—◆John Berry, Bloomberg News

11:05 a.m. **Statistical Issues in 'The New York Times'**—◆Donald A. Berry, The University of Texas M.D. Anderson Cancer Center; Gina Kolata, The New York Times

11:35 a.m. **The Prosecutor's Fallacy**—◆Mark Buchanan, Independent Science Writer

12:05 p.m. **Floor Discussion**

295 CC-202B

✪ Causal Inference for Longitudinal Data—Invited

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

Organizer(s): Tyler VanderWeele, The University of Chicago
Chair(s): Tyler VanderWeele, The University of Chicago

10:35 a.m. **Causal Inference for Continuous Time Longitudinal Data When Covariates Are Observed Only at Discrete Times**—◆Dylan Small, University of Pennsylvania; Mingyuan Zhang, University of Pennsylvania; Marshall Joffe, University of Pennsylvania

11:00 a.m. **Estimation of Marginal Structural Models When Parametric Rates Cannot Be Obtained**—◆James Robins, Harvard School of Public Health

11:25 a.m. **Bayesian Inference About Mediation in Longitudinal Intervention Trials**—◆Joseph W. Hogan, Brown University; Shira Dunsiger, Brown University; Bess Marcus, Brown University

11:50 a.m. Disc: Constantine Frangakis, Johns Hopkins University

12:10 p.m. **Floor Discussion**

296 CC-207A

✪ New Applications of Statistics in Genetics/Genomics—Invited

IMS, Section on Bayesian Statistical Science, Biopharmaceutical Section

Organizer(s): Wei Pan, The University of Minnesota
Chair(s): Wei Pan, The University of Minnesota

10:35 a.m. **Spectral Graph Theory and Ancestry in Genome-Wide Association Studies**—◆Kathryn Roeder, Carnegie Mellon University; Ann Lee, Carnegie Mellon University; Diana Luca, Carnegie Mellon University

11:05 a.m. **Modeling Dependent Gene Expression**—◆Peter Müller, The University of Texas M.D. Anderson Cancer Center; Donatello Telesca, The University of Texas M.D. Anderson Cancer Center; Giovanni Parmigiani, Johns Hopkins University

11:35 a.m. **Methods for Identifying the Genetic Variants Associated with High-Order Expression Modules**—◆Hongzhe Li, University of Pennsylvania

12:05 p.m. **Floor Discussion**

297 CC-143A

✪ Composite Likelihood Methodology and Applications—Invited

SSC, International Indian Statistical Association

Organizer(s): Peter X.K. Song, University of Michigan
Chair(s): Xin Gao, York University

10:35 a.m. **Composite Likelihood Theory**—◆Nancy Reid, University of Toronto

11:00 a.m. **Composite Likelihood EM Algorithm in High-Dimensional Data Analysis**—◆Peter X.K. Song, University of Michigan

11:25 a.m. **Pairwise Likelihood Method for Clustered Longitudinal Binary Data**—Grace Yi, University of Waterloo; ◆Leilei Zeng, Simon Fraser University; Richard Cook, University of Waterloo

11:50 a.m. Disc: Grace Yi, University of Waterloo

12:10 p.m. **Floor Discussion**

298 CC-207B

Topics in Financial Statistics—Invited

IMS

Organizer(s): Rong Chen, Rutgers University
Chair(s): Rong Chen, Rutgers University

10:35 a.m. **Risk Assessment and Asset Allocation with Gross Exposure Constraints for Vast Portfolios**—◆Jianqing Fan, Princeton University; Jingjin Zhang, Princeton University; Ke Yu, Princeton University

11:05 a.m. **Topics in Financial Statistics**—◆Ruey S. Tsay, The University of Chicago; Jianqing Fan, Princeton University; Yingying Fan, University of Southern California

ASA Presidential Address & Awards Session

Sally Morton
ASA President

Tuesday, August 4, 8:00 p.m. – 9:30 p.m.
Walter E. Washington Convention Center,
Ballrooms A and B

Is your associate, professor, student, colleague, friend, or organization being recognized at the Joint Statistical Meetings in Washington, DC?

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
- ★ Waller Education Award
- ★ W. J. Dixon Award for Excellence in Statistical Consulting

Plan to attend the ASA Presidential Address and Awards Session for the recognition of the ASA's most distinguished members.

11:35 a.m. **Testing and Detecting Jumps Based on a Discretely Observed Process**—◆Yingying Fan, University of Southern California; Jianqing Fan, Princeton University

12:05 p.m. **Floor Discussion**

299 CC-158A
Making Research Data Public: Intelligible or Just Available?—Invited

Section on Statistical Consulting, National Institute of Statistical Sciences, Social Statistics Section, Section on Government Statistics

Organizer(s): Linda J. Young, University of Florida

Chair(s): Alan F. Karr, National Institute of Statistical Sciences

10:35 a.m. **Data-Sharing in the Field of Economics and the Role of Academic Journals**—◆P.J. Glandon, Vanderbilt University; John Siegfried, Vanderbilt University

10:55 a.m. **Data Management and Availability in the Earth Sciences**—◆Richard W. Carlson, Carnegie Institution of Washington

11:15 a.m. **Implicit Challenges to Statistics in Making Research Data Public**—◆Nell Sedransk, National Institute of Statistical Sciences

11:35 a.m. **Data Sharing from the Viewpoint of a Scholarly Journal**—◆Katrina Kelner, AAAS

11:55 a.m. **Data Sharing in Forensic Science and the Impact on the Legal System**—◆Edward Ungvarsky, The Public Defender Service for the District of Columbia

12:15 p.m. **Floor Discussion**

Invited Panels 10:30 a.m.–12:20 p.m.

300 CC-101
■ ✪ The Role of Statisticians in Decisionmaking—Invited

The American Statistician, Social Statistics Section

Organizer(s): John Stufken, The University of Georgia

Chair(s): John Stufken, The University of Georgia

Panelists: ◆Stephen Pierson, ASA

◆Simon Sheather, Texas A&M University

◆Frank Rockhold, GlaxoSmithKline

◆Guy F. Caruso, Center for Strategic and International Studies

12:15 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

301 CC-142
Survey Frame Quality and Coverage—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Xijian Liu Liu, U.S. Census Bureau

Chair(s): James Farber, U.S. Census Bureau

10:35 a.m. **A National Evaluation of Coverage for a Sampling Frame Based on the Master Address File**—◆Clifford Loudermilk, U.S. Census Bureau

10:55 a.m. **Content and Coverage Quality of a Commercial Address List as a National Sampling Frame for Household Surveys**—◆Timothy Kennel, U.S. Census Bureau; Mei Li, U.S. Census Bureau

11:15 a.m. **Examining Blocks with Lister Error in Area Listing**—◆Aliza Kwiat, U.S. Census Bureau

11:35 a.m. **Impact of Master Address File Coverage on Survey Estimates**—◆Xijian Liu Liu, U.S. Census Bureau

11:55 a.m. Disc: Vincent G. Iannacchione, RTI International

12:15 p.m. **Floor Discussion**

302 CC-149A
■ ✪ Frontiers in Statistical Applications to Marketing Problems—Topic-Contributed

Section on Statistics and Marketing

Organizer(s): Bani K. Mallick, Texas A&M University

Chair(s): Bani K. Mallick, Texas A&M University

10:35 a.m. **Attitudes Toward Firm and Competition: How Do They Matter for Customer Relationship Marketing Activities?**—◆Rajkumar Venkatesan, University of Virginia; Reinartz Werner, University of Cologne; Nalini Ravishanker, University of Connecticut

10:55 a.m. **Model-Based Graph Partitioning with Applications to Marketing**—◆Eric T. Bradlow, The Wharton School; Sam K. Hui, Leonard N. Stern School of Business

11:15 a.m. **Investigating Cross-Country Interaction in New Product Diffusion**—◆Debabrata (Debu) Talukdar, State University of New York at Buffalo; Brian Hartman, Texas A&M University; Bani K. Mallick, Texas A&M University

11:35 a.m. **Cross-Channel and Advertising Effects in the Hierarchy of Consumer Decisionmaking**—Venkatesh Shankar, Texas A&M University; ◆Tarun Kushwaha, The University of North Carolina at Chapel Hill

11:55 a.m. **Beating the Average with Conditional Averages: Target Selection Using Geo-Demographic Joint Distributions**—◆K. Sudhir, Yale School of Management; Jason Duan, The University of Texas at Austin; Sachin Sancheti, Yale School of Management

12:15 p.m. **Floor Discussion**

303 CC-158B

Forecasting and Real-Time Data—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Tatevik Sekhposyan, The University of North Carolina at Chapel Hill

Chair(s): Silvia Goncalves, University of Montreal

10:35 a.m. **Revisions to PCE Inflation Measures: Implications for Monetary Policy**—◆Dean Croushore, University of Richmond

10:55 a.m. **Has Models' Forecasting Performance for US Output Growth and Inflation Changed Over Time, and When?**—◆Tatevik Sekhposyan, The University of North Carolina at Chapel Hill; Barbara Rossi, Duke University

11:15 a.m. **Calibration and Resolution Diagnostics for Bank of England Density Forecasts**—◆Simon van Norden, HEC Montréal; John W. Galbraith, McGill University

11:35 a.m. **Nested Forecast Model Comparisons: A New Approach to Testing Equal Accuracy**—◆Michael McCracken, Federal Reserve Bank of Saint Louis

11:55 a.m. **Why Do So Few Macroeconomic News Announcements Have a Significant Price Impact on Asset Prices?**—◆Chiara Scotti, Federal Reserve Board; Thomas Gilbert, University of Washington; Georg Strasser, Boston College; Clara Vega, Federal Reserve Board

12:15 p.m. **Floor Discussion**

304 CC-208B

■ Sparsity and Structure in Multivariate Modeling—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Mike West, Duke University

Chair(s): Adrian Dobra, University of Washington

10:35 a.m. **Identifying Repeated Observations in the Presence of Sparsity and Distortion: A Case Study in Proteomics**—◆Joseph E. Lucas, Duke Institute for Genome Science and Policy

10:55 a.m. **Nonparametric Mixtures of Nonparametric Mixtures for Sparse Non-Gaussian Density Estimation with Application to Flow Cytometry**—◆Daniel Merl, Duke University

11:15 a.m. **Sparse Bayes Learning by Annealing Entropy**—◆Ryo Yoshida, Institute of Statistical Mathematics; Mike West, Duke University

11:35 a.m. **On the Primal and Dual Sparsity of Structured Input/Output Models**—◆Eric Xing, Carnegie Mellon University

11:55 a.m. **Bayes and Empirical-Bayes Multiplicity Adjustment in the Variable-Selection Problem**—◆James Scott, Duke University

12:15 p.m. **Floor Discussion**

305 CC-148

■ Predictive and Prequential Statistics—Topic-Contributed

Section on Risk Analysis

Organizer(s): Bertrand Clarke, The University of British Columbia/University of Miami

Chair(s): Bertrand Clarke, The University of British Columbia/University of Miami

10:35 a.m. **Prequential Probability: An Overview**—◆Vladimir Vovk, Royal Holloway, University of London

10:55 a.m. **Catching Up Faster by Switching Sooner: A Prequential Solution to the AIC-BIC Dilemma**—◆Tim van Erven, Centrum Wiskunde & Informatica

11:15 a.m. **Sequential Prediction Using Median Stacking**—◆Chi Wai Yu, The University of British Columbia

11:35 a.m. **Statistical Expression Deconvolution from Mixed Tissue Samples and Relevance to Biomarker Discovery**—◆Jennifer L. Clarke, University of Miami; Marc E. Lippman, University of Miami; J. Seo, University of Miami

11:55 a.m. **Selection of Copy Number Variation Drives Tumor-Specific Networks**—◆Eric Schadt, Rosetta Inpharmatics

12:15 p.m. **Floor Discussion**

306 CC-159B

■ Experimental Design for Generalized Linear Models—Topic-Contributed

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

Organizer(s): Anthony Atkinson, London School of Economics

Chair(s): Anthony Atkinson, London School of Economics

10:35 a.m. **Blocked Experimental Designs for a Non-Normal Response**—◆Dave Woods, University of Southampton; Peter van de Ven, TNO Quality of Life

10:55 a.m. **Sequential Design of Experiments for GLMs**—◆David M. Steinberg, Tel Aviv University; Hovav Dror, Tel Aviv University

11:15 a.m. **Adaptive Experimental Designs for Determining the Optimum Factor Level with Trinomial Responses**—◆Barbara Bogacka, Queen Mary University of London

11:35 a.m. **On Locally Optimal Designs for Generalized Linear Models with Group Effects**—◆Min Yang, University of Missouri-Columbia

11:55 a.m. Disc: Randall Tobias, SAS Institute Inc.

12:15 p.m. **Floor Discussion**

307 CC-204C

■ Missing Data Handling in Medical Device Clinical Trials—Topic-Contributed

Biopharmaceutical Section, Biometrics Section

Organizer(s): Ning Li, FDA

Chair(s): Terri K. Johnson, FDA

10:35 a.m. **Missing Data Handling in Medical Device Clinical Trials**—◆Xu Yan, FDA; Shiowjen Lee, FDA; Heng Li, FDA; Ning Li, FDA

10:55 a.m. **Sensitivity Analysis in Missing Value Imputation to Assess Quantitative Coronary Angiograph Data in Stent Trials**—◆Hong Wang, Boston Scientific Corporation; Heather Bai, Boston Scientific Corporation; Joseph Bero, Boston Scientific Corporation

11:15 a.m. **Sensitivity Analysis for Continuous Endpoints in Two-Arm Medical Device Trials**—◆Maria C. Alfaro, Boston Scientific Corporation; Joseph Bero, Boston Scientific Corporation; Gina Garding, Boston Scientific Corporation

11:35 a.m. **Reverse Regression in Randomized Clinical Trials with Nonignorable Nonresponse**—◆Zhiwei Zhang, FDA

11:55 a.m. Disc: Gang Chen, Johnson & Johnson

12:15 p.m. **Floor Discussion**

308 CC-206

■ ✪ Bayesian Tracking Problems—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Simon Godsill, University of Cambridge

Chair(s): Julien Cornebise, Statistical and Applied Mathematical Sciences Institute

10:35 a.m. **Dynamic Spatial Mixture Modeling and Its Application in Bayesian Tracking for Cell Fluorescent Microscopic Imaging**—◆Chunlin Ji, Duke University; Mike West, Duke University

10:55 a.m. **Variational Mean Field Approach to Efficient Multitarget Tracking**—◆Ernest Fokoue, Kettering University

11:15 a.m. **Source Term Estimation with Expensive Likelihoods**—◆Nathan Green, Defense Science and Technology Laboratory

11:35 a.m. **Bayes Filtering for Spatio-Temporal Poisson Cluster Point Processes**—◆Daniel E. Clark, Heriot-Wat University; Ba Tuong Vo, University of Western Australia; Mark Briers, QinetiQ; Ba-Ngu Vo, The University of Melbourne

11:55 a.m. Disc: Francois Septier, University of Cambridge

12:15 p.m. **Floor Discussion**

309 CC-141

■ ✪ Improving Census Data for Demographic Analysis—Topic-Contributed

Section on Government Statistics, Social Statistics Section

Organizer(s): Katie Genadek, The University of Minnesota

Chair(s): Michael Davern, University of Minnesota

10:35 a.m. **Decennial Census Data at the Census Bureau's Research Data Centers**—◆Todd Gardner, U.S. Census Bureau

10:55 a.m. **Errors in Age and Sex Data in the Census Bureau's Public Use Microdata Samples**—◆Betsey Stevenson, University of Pennsylvania; Trent Alexander, Minnesota Population Center; Michael Davern, University of Minnesota

11:15 a.m. **Constructing Synthetic Samples Using Simulated Annealing**—Glen Meeden, The University of Minnesota; ◆Hua Dong, Amgen, Inc.

11:35 a.m. **Weighting the Matched Current Population Survey Respondents**—◆Katie Genadek, The University of Minnesota

11:55 a.m. Disc: Jacob A. Klerman, Abt Associates Inc.

12:15 p.m. **Floor Discussion**

310 CC-144C

■ Reliability Issues in the DoD: A Session in Honor of Paul Ellner—Topic-Contributed

Section on Statistics in Defense and National Security

Organizer(s): Aparna Huzurbazar, Los Alamos National Laboratory

Chair(s): Aparna Huzurbazar, Los Alamos National Laboratory

10:35 a.m. **Redefining the Role of Statistical Science in Defense and National Security**—◆Duane Steffey, Exponent, Inc.

10:55 a.m. **Ballistic Imaging**—◆John E. Rolph, University of Southern California

11:15 a.m. **Reliability Growth Planning and Implementation of the ASA(ALT) Reliability Test Threshold**—◆J. Brian Hall, U.S. Army Test and Evaluation Command

11:35 a.m. **Adventures in Reliability Growth Modeling**—◆Arthur Fries, Institute for Defense Analyses

11:55 a.m. **An Unsung Hero in Reliability Growth**—◆James Streilein, U.S. Army Test and Evaluation Command; J. Brian Hall, U.S. Army Test and Evaluation Command

12:15 p.m. **Floor Discussion**

311 CC-209A

Statistical Methods in Molecular Evolution—Topic-Contributed

WNAR, Section on Bayesian Statistical Science

Organizer(s): Erik W. Bloomquist, University of California, Los Angeles

Chair(s): Jennifer Tom, University of California, Los Angeles

10:35 a.m. **Many-Core Algorithms for Statistical Phylogenetics**—◆Marc A. Suchard, University of California, Los Angeles; Andrew Rambaut, University of Edinburgh

10:55 a.m. **Joint Bayesian Estimation of Phylogeny and Sequence Alignment**—◆Heejung Shim, University of Wisconsin-Madison; Bret Larget, University of Wisconsin-Madison

11:15 a.m. **Unifying Vertical and Nonvertical Evolution**—◆Erik W. Bloomquist, University of California, Los Angeles

11:35 a.m. **Statistical Properties of Site-to-Site Rate Heterogeneity Estimators**—◆Spencer V. Muse, North Carolina State University; Frank Mannino, GlaxoSmithKline

11:55 a.m. **The Lineage Model for Metagenomic Clonal Population Structure**—◆John D. O'Brien, University of Bristol

12:15 p.m. **Floor Discussion**

312 CC-209B

■ Statistical Methods in Reproductive Epidemiology—Topic-Contributed

Section on Statistics in Epidemiology, Social Statistics Section, Biometrics Section, Section on Bayesian Statistical Science

Organizer(s): Rajeshwari Sundaram, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH

Chair(s): Rajeshwari Sundaram, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH

10:35 a.m. **Enriched Stick-Breaking Processes for Functional Data**—◆Bruno Scarpa, Università di Padova; David Dunson, Duke University

10:55 a.m. **Flexible Bayesian Human Fecundability Models with Generalized t-Link**—◆Sungduk Kim, National Institute of Child Health and Human Development; Rajeshwari Sundaram, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH; Germaine M. Louis, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH

11:15 a.m. **An Association Model for Longitudinal Intercourse Data with Informative Censoring via Time-to-Conception**—◆Kirsten J. Lum, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH; Rajeshwari Sundaram, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH; Germaine M. Louis, Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH

11:35 a.m. **Estimating Diagnostic Accuracy of Linear Combination of Multiple Biomarkers While Accounting for Limits of Detection**—◆Neil J. Perkins, National Institute of Child Health and Human Development; Enrique Schisterman, National Institutes of Health

11:55 a.m. Disc: Zhen Chen, The Eunice Kennedy Shriver National Institute of Child Health and Human Development

12:15 p.m. **Floor Discussion**

Contributed Sessions 10:30 a.m.–12:20 p.m.

313 CC-159A

■ Applied Regression Techniques—Contributed

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

Chair(s): Joe H. Sullivan, Mississippi State University

10:35 a.m. **Interior Analysis in Multiple Linear Regression**—◆John F. Wellington, Indiana University Purdue University Fort Wayne; Stephen A. Lewis, Mongrel Works, Inc.

10:50 a.m. **Comparison of Methods to Understand the Link Between Climate Variability and Hurricane Counts**—◆Roshanak Nateghi, Johns Hopkins University; Seth D. Guikema, Johns Hopkins University; Steven Quiring, Texas A&M University

11:05 a.m. **Comparison of Risks of Generalized Ridge Regression Estimators and Least Square Estimators Averaged Over the Linex Loss Function**—◆Marvin H.J. Gruber, Rochester Institute of Technology

11:20 a.m. **Modeling Approaches Applied to Pulse Jet Mixing Data - Part 1**—◆Greg Piepel, Pacific Northwest National Laboratory; Brett Amidan, Pacific Northwest National Laboratory; Alejandro Heredia Langner, Pacific Northwest National Laboratory; Perry Meyer, Pacific Northwest National Laboratory; Beric Wells, Pacific Northwest National Laboratory; James Fort, Pacific Northwest National Laboratory; Judith Bamberger, Pacific Northwest National Laboratory; William Kuhn, Pacific Northwest National Laboratory

11:35 a.m. **Modeling Approaches Applied to Pulse Jet Mixing Data - Part 2**—◆Brett Amidan, Pacific Northwest National Laboratory; Greg Piepel, Pacific Northwest National Laboratory; Alejandro Heredia-Langner, Pacific Northwest National Laboratory; Perry Meyer, Pacific Northwest National Laboratory; Beric Wells, Pacific Northwest National Laboratory; James Fort, Pacific Northwest National Laboratory; Judith Bamberger, Pacific Northwest National Laboratory; William Kuhn, Pacific Northwest National Laboratory

11:50 a.m. **Prediction-Based Model Selection**—◆Adam L. Pintar, Iowa State University; Christine Anderson-Cook, Los Alamos National Laboratory; Huaiqing Wu, Iowa State University

12:05 p.m. **Simple Linear Regression When Both Variables Are Random**—◆Christopher Tong, Merck & Co., Inc.; Shubing Wang, Merck & Co., Inc.

314 CC-153

Educational Accreditation, Guidelines, and Certification—Contributed

Section on Statistical Education

Chair(s): Jennifer J. Kaplan, Michigan State University

10:35 a.m. **Teaching Business Statistics: An Accreditation Standards Perspective**—◆Bodapati V.R. Gandhi, University of Puerto Rico

10:50 a.m. **Putting BIO2010 Into Practice: Collaborations for Statistics and Biology**—◆Debra Hydorn, University of Mary Washington

11:05 a.m. **Fostering Change in College Students' Mathematical and Statistical Dispositions Through GAISE**—◆Caroline Ramirez, University of California, Davis/California State University

11:20 a.m. **Statistical Literacy and Attitudes Over Two Semesters of Required Business Statistics**—◆Amy L. Phelps, Duquesne University

11:35 a.m. **GAISE Between the Lines: Criteria and a Rubric for Assessing Introductory Statistics Textbooks**—Deborah Rumsey, The Ohio State University; ◆W. Robert Stephenson, Iowa State University; Amy G. Froelich, Iowa State University; Jared Schuetter, The Ohio State University

11:50 a.m. **The Integration of the SAS Certificate Program Into the Classroom Teaching Environment**—◆Jun Lu, American University; Monica Jackson, American University; Mary Gray, American University; Helena Solana, American University

12:05 p.m. **On the Topic of Assessment Cheating Detection**—◆Weimin Zhang, American Institutes for Research; Jiang Tao, American Institutes for Research

315 CC-102A

■ Analysis of Prevalence and Risk in Epidemiologic Studies—Contributed

Section on Statistics in Epidemiology

Chair(s): Sowmya Rao, MGH Biostatistics Center

10:35 a.m. **Variance Estimation of Partial Population Attributable Fraction and Its Applications**—◆Jungwha Lee, University of Illinois at Chicago; Sally Freels, University of Illinois at Chicago; Dulal K. Bhaumik, University of Illinois at Chicago

10:50 a.m. **A Simulation Study of Health Disparity Indexes: How Do They Depend on Prevalence?**—◆Stuart Gansky, University of California, San Francisco; Nancy F. Cheng, University of California, San Francisco; Gloria Mejia, University of California, San Francisco

11:05 a.m. **A Fresh Look at the Discriminant Function Approach for Estimating Crude or Adjusted Odds Ratios**—◆Robert H. Lyles, Emory University; Ying Guo, Emory University; Andrew N. Hill, CDC

11:20 a.m. **Bias-Corrected Inference for the Conditional Logistic Regression**—◆Jenny Sun, Texas A&M University

11:35 a.m. **Interval Estimation of Risk Difference for Clustered Data**—◆Tasneem Zaihra, University of Windsor; Sudhir R. Paul, University of Windsor

11:50 a.m. **On the Confidence Intervals of Attributable Risk Using Delta and Bootstrap Methods for a Cross-Sectional Sampling Design with Confounders**—◆Tanweer J. Shapla, Eastern Michigan University; Khairul Islam, Wayne State University

12:05 p.m. **Some Errors Frequently Occurring in Estimating the Required Sample Size in Cohort and Case-Control Studies**—◆Peng T. Liu, FDA

316 CC-155

Teaching Tools for Basic Statistical Literacy in the Health Sciences—Contributed

Section on Teaching of Statistics in the Health Sciences

Chair(s): Penelope S. Pekow, University of Massachusetts Amherst

10:35 a.m. **Seeing Is Believing**—◆Paul L. Stephenson, Grand Valley State University; Mary Richardson, Grand Valley State University

10:50 a.m. **Use of Interesting Examples in Teaching an Introductory Biostatistics Course: 3 Controversies and 2 Parodoxes**—◆Harry J. Norton, Carolinas Medical Center; George Divine, Henry Ford Hospital

11:05 a.m. **Designing Curricula Supporting the Development of Statistical Literacy**—◆Rochelle E. Tractenberg, Georgetown University Medical Center

11:20 a.m. **Teaching Statistics to DNP and PhD Nursing Students: The Opportunities and Challenges of a Distance-Learning Format**—◆Mary Kay Rayens, University of Kentucky

11:35 a.m. **On Developing a Master's-Level Course in Biostatistical Consulting**—◆Stephen W. Looney, Medical College of Georgia; Jennifer L. Waller, Medical College of Georgia

11:50 a.m. **Adding a Small Unit on QIS to a Lower-Division Undergraduate Concept–Oriented Statistical Literacy Class for Nursing Majors**—◆Robert D. Curley, University of Central Oklahoma

12:05 p.m. **Floor Discussion**

317 CC-143C

■ Methods for Ignorable and Nonignorable Nonresponse—Contributed

Section on Survey Research Methods

Chair(s): Jana Asher, Carnegie Mellon University

10:35 a.m. **Analysis of Nonresponse in a Social Survey with the Sharp Bounds Method**—◆Yury Gubman, Israeli Central Bureau of Statistics; Charles F. Manski, Northwestern University; John V. Pepper, University of Virginia; Dmitri Romanov, Israeli Central Bureau of Statistics

10:50 a.m. **Propensity Score Methodology for Nonignorable Nonresponse**—◆Leigh Ann H. Starcevich, Oregon State University; Virginia Lesser, Oregon State University

11:05 a.m. **Responsive Design for Random Digit Dial Surveys Using Auxiliary Survey Process Data and Contextual Data**—◆Sunghee Lee, University of California, Los Angeles

11:20 a.m. **The Rao, Hartley, and Cochran Scheme with Dubious Random Nonresponse in Survey Sampling**—◆Sarjinder Singh, Texas A&M University-Kingsville; Maria del Mar Rueda Garcia, Universidad de Granada; Antonio Arcos, Universidad de Granada; Raghunath Arnab, University of Botswana

11:35 a.m. **Propensity Score Matching to Correct Telephone Surveys for Cell Phone Nonresponse**—◆John Bremer, Harris Interactive

11:50 a.m. **Simulation Studies of a Latent-Class Selection Model for Nonignorable Missing Data**—◆Hyekyung Jung, Texas Tech University; Joseph L. Schafer, Penn State University; Byungtae Seo, Texas Tech University

12:05 p.m. **Are We Adjusting Response Rates or Survey Variables? The Effects of Multiple Auxiliary Variables on Nonresponse Adjustment**—◆Frauke Kreuter, University of Maryland; Kristen Olson, University of Nebraska-Lincoln

318 CC-208A

Dimension Reduction Using PCA and PLS—Contributed

Section on Statistical Learning and Data Mining, Interface Foundation of North America

Chair(s): Prasenjit Kapat, The Ohio State University

10:35 a.m. **Statistical Inference for High-Dimensional Data**—◆Yingli Qin, Iowa State University

10:50 a.m. **Data Fusion and Inference with Disparate Feature Spaces Using Iterative Denoising Trees**—◆Bennett A. Landman, Johns Hopkins University; Youngser Park, Johns Hopkins University; Zhiliang Ma, Johns Hopkins University; Carey E. Priebe, Johns Hopkins University

11:05 a.m. **Penalized Rotation of a Subset of Principal Components**—◆Trevor Park, University of Florida

11:20 a.m. **An Iterative Thresholding Approach for Sparse PCA**—◆Zongming Ma, Stanford University

11:35 a.m. **On Clustering fMRI Time Series Using Potts and Mixture Regression Models**—◆Jing Xia, University of Illinois at Urbana-Champaign; Feng Liang, University of Illinois at Urbana-Champaign; Yongmei (Michelle) Wang, University of Illinois at Urbana-Champaign

11:50 a.m. **Robust Dimension Reduction PLS Method for Classification**—Nedret Billor, Auburn University; ◆Asuman Turkman, The Ohio State University

12:05 p.m. **Floor Discussion**

319 CC-149B

Advances in Robust Methods and Anomaly Detection—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): James A. Shine, U.S. Army Topographic Engineering Center

10:35 a.m. **Robust Inference in Conditionally Linear Nonlinear Regression Models**—◆Harshini Fernando, Purdue University North Central

10:50 a.m. **Functional Linear Model**—◆Robertas Gabrys, Utah State University; Piotr Kokoszka, Utah State University; Lajos Horvath, The University of Utah

11:05 a.m. **Anomaly Detection Using Scan Statistics on Time Series Hypergraphs**—◆Youngser Park, Johns Hopkins University; Carey E. Priebe, Johns Hopkins University; David Marchette, Naval Surface Warfare Center; Abdou Youssef, The George Washington University

11:20 a.m. **A High Breakdown Approach for Fitting Nonlinear Regression**—◆Dost M. Khan, University of Peshawar; Douglas M. Hawkins, The University of Minnesota

11:35 a.m. **Detecting Anomalous Documents in a Corpus-Driven Language Model**—◆Kristin Yancey, Naval Surface Warfare Center; Elizabeth L. Hohman, Naval Surface Warfare Center

11:50 a.m. **Developing Median Regression for SURE Models**—Ghazi Shukur, Vaxjo University; ◆Zangin A.A. Zeebari, Vaxjo University

12:05 p.m. **Efficient Uk's Redescending M-estimator for Robust Regression**—◆Umair Khalil, University of Peshawar; Fazli Qadir, University of Peshawar; Amjad Ali, University of Peshawar

320 CC-157
Nonparametric Testing—Contributed

Section on Nonparametric Statistics

Chair(s): Jeffrey Hart, Texas A&M University

10:35 a.m. **A Note on Analysis of Means-Type Nonparametric Tests for Homogeniety of Variances**—◆Saad T. Bakir, Alabama State University

10:50 a.m. **Comparing Two Groups Based on Partial Orderings: Three Matched Pair Designs**—◆Jun Cao, Temple University; Woollcott Smith, Temple University

11:05 a.m. **Robust Heteroscedastic MANOVA: Asymptotics and Small Sample Approximations**—◆Solomon W. Harrar, The University of Montana; Arne C. Bathke, University of Kentucky

11:20 a.m. **A Wilcoxon Rank-Sum Test for Clustered Data**—◆Sundar Natarajan, VA New York Harbor Healthcare System; Stuart Lipsitz, Brigham and Women's Hospital

11:35 a.m. **Heterogeneous Compound Symmetry in a Nonparametric Analysis of Block Designs**—◆Angela Schörgendorfer, University of Kentucky; Laurence V. Madden, The Ohio State University; Arne C. Bathke, University of Kentucky

11:50 a.m. **A Nonparametric Version of Wilks' Lambda: Asymptotics, Approximations, and Permutations**—◆Chunxu Liu, University of Kentucky; Arne C. Bathke, University of Kentucky; Solomon W. Harrar, The University of Montana

12:05 p.m. **Greenhouse-Geisser Adjustment and the ANOVA-Type Statistic: Distant Cousins or Twins?**—◆Arne C. Bathke, University of Kentucky; Oliver Schabenberger, SAS Institute Inc.; Randall Tobias, SAS Institute Inc.; Laurence V. Madden, The Ohio State University

321 CC-144A
■ ✪ Advances in Government Statistical Agencies Around the World—Contributed

Section on Government Statistics

Chair(s): Robert Lussier, Statistics Canada

10:35 a.m. **The Current State of the Microdata Analysis System at the Census Bureau**—◆Jason Lucero, U.S. Census Bureau; Laura Zayatz, U.S. Census Bureau

10:50 a.m. **The Impact of Cleansing Procedures for Overlaps on Estimation Results: Evidence for German Administrative Data**—◆Patrycja Scioch, Institute for Employment Research

11:05 a.m. **Comparisons of Methodological Approaches to the Follow-Up Operation for Business Surveys**—◆Hansheng Xie, Statistics Canada; Serge Godbout, Statistics Canada; Sungjin Youn, Statistics Canada

11:20 a.m. **Benefits and challenges of supporting in-house analysis of data in a statistical agency**—◆Jane F. Gentleman, National Center for Health Statistics

11:35 a.m. **Puerto Rico Institute of Statistics: Starting from Scratch**—◆Mario Marazzi, Puerto Rico Institute of Statistics; Carlos Toro-Vizcarrondo, University of Puerto Rico

11:50 a.m. **Evaluating the Likely Efficacy of Paid Tax Preparer Regulation**—◆Anna Maria Ortiz, U.S. Government Accountability Office

12:05 p.m. **Floor Discussion**

322 CC-203A
Oncology Trials—Contributed

Biometrics Section

Chair(s): Leslie McClure, University of Alabama at Birmingham

10:35 a.m. **'Dose-Establishment' Designs for Phase I/II Cancer Immunotherapy Trials**—◆Karen Messer, University of California, San Diego

10:50 a.m. **Proportional Odds Model for Dose-Finding Clinical Trial Designs with Ordinal Toxicity Grading**—◆Emily M. Van Meter, Medical University of South Carolina; Elizabeth Garrett-Mayer, Medical University of South Carolina; Dipankar Bandyopadhyay, Medical University of South Carolina

11:05 a.m. **Simon's Two-Stage Design for Phase II Cancer Clinical Trials with Two Distributions as Hypotheses**—◆Junfeng Liu, University of Medicine and Dentistry of New Jersey; Yong Lin, University of Medicine and Dentistry of New Jersey; Weichung J. Shih, University of Medicine and Dentistry of New Jersey

11:20 a.m. **Reinforcement Learning Treatment Strategies Based on Support Vector Regressions in a Non-Small Cell Lung Cancer Trial**—◆Yufan Zhao, Amgen, Inc.; Michael Kosorok, The University of North Carolina at Chapel Hill

11:35 a.m. **The Calibration of the TITE-CRM Design for Phase I Cancer Trials with Fast Patient Accrual**—◆Mei-Yin Polley, University of California, San Francisco

11:50 a.m. **Estimation of Safe and Effective Dose in Phase I Clinical Trials in Oncology**—◆Motomi Mori, Oregon Health & Science University; Yiyi Chen, Oregon Health & Science University; Joshi Alumkal, Oregon Health & Science University

12:05 p.m. **Comparing CRM with Frequentist t-Statistic Method for Phase I Clinical Trials in Oncology**—◆Amit Phansalkar, Cytel, Inc.

323 CC-203B

Alternatives to Proportional Hazards Survival Methods—Contributed

Biometrics Section, Section on Bayesian Statistical Science

Chair(s): Daohai Yu, H. Lee Moffitt Cancer Center & Research Institute

10:35 a.m. **Hazard Change-Point Models with Left-Truncated and Right-Censored Data**—◆Deniz C. Yenigun, Bilkent University; Ulku Gurler, Bilkent University

10:50 a.m. **Proportional Hazards and Threshold Regression: Their Theoretical and Practical Connections**—◆Mei-Ling Ting Lee, University of Maryland; George A. Whitmore, McGill University

11:05 a.m. **Survival Analysis Under Nonproportional Hazards: A Unified Approach**—◆Jianghua He, The University of Kansas Medical Center; Matthew S. Mayo, The University of Kansas Medical Center

11:20 a.m. **Estimating Differences in Restricted Mean Lifetime Using Observational Data in the Presence of Dependent Censoring**—◆Min Zhang, University of Michigan; Douglas E. Schaubel, University of Michigan

11:35 a.m. **Ecological Momentary Assessment: Opportunities for Statistical Research**—◆Stephen L. Rathbun, The University of Georgia

11:50 a.m. **Estimation of Median Household and Family Incomes for Small Areas: A Bayesian Semiparametric Approach**—◆Dhiman Bhadra, University of Florida; Malay Ghosh, University of Florida

12:05 p.m. **Exact and Asymptotic Weighted Logrank Tests for Interval-Censored Data: A Review and New R Package**—◆Michael P. Fay, National Institute of Allergy and Infectious Diseases; Pamela A. Shaw, National Institute of Allergy and Infectious Diseases

324 CC-204B

■ Vaccine Trials and HIV Trials—Contributed

Biopharmaceutical Section

Chair(s): John Zhong, Human Genome Sciences

10:35 a.m. **Test of Acceptable Vaccine Immunogenicity: t-Test vs. Longitudinal Data Analysis Model**—◆Xiaoming Li, Merck Research Laboratories; Frank Liu, Merck Research Laboratories; Devan V. Mehrotra, Merck Research Laboratories

10:50 a.m. **Polishing a Diamond in the Rough: Deconstructing and Reconstructing the Estimate of Population Benefit of Vaccination**—◆Oliver M. Bautista, Merck & Co., Inc.

11:05 a.m. **Application of Subsampling Methods for the Correlation of Immunogenicity and Efficacy in Vaccine Trials**—◆Yanli Zhao, Merck & Co., Inc.; William Wang, Merck & Co., Inc.; Ivan S.F. Chan, Merck & Co., Inc.

11:20 a.m. **Control Chart Performance When Monitoring Long-Term Vaccine Efficacy**—◆J. Brooke Marshall, Merck Research Laboratories; David Radley, Merck Research Laboratories; Lisa Lupinacci, Merck Research Laboratories

11:35 a.m. **A Meta-Analysis to Assess the FDA Division of Antiviral Product's Time to Loss of Virologic Response (TLOVR) Algorithm in HIV Submissions**—◆Fraser Smith, FDA; Thomas Hammerstrom, FDA; Guoxing (Greg) Soon, FDA; Susan Zhou, FDA; Baibai Chen, FDA; Yabing Mai, FDA; Kimberly Struble, FDA; Mohammad F. Huque, FDA

11:50 a.m. **Handling Missing Outcome Data When Estimating and Testing the Average Causal Effect of Treatment for a Subset Selected by a Post-Randomization Event**—◆Robin Mogg, Merck Research Laboratories; Devan V. Mehrotra, Merck Research Laboratories; Peter Gilbert, University of Washington/Fred Hutchinson Cancer Research Center; Thomas Ten Have, University of Pennsylvania; Marshall Joffe, University of Pennsylvania

12:05 p.m. **Floor Discussion**

325 CC-204A

■ Issues in Subgrouping Analysis and Preclinical and Phase I Trials—Contributed

Biopharmaceutical Section

Chair(s): Jonathan Norton, FDA

10:35 a.m. **Dose-Response Assay Equivalence with Replicate Data**—◆Steven Novick, GlaxoSmithKline

10:50 a.m. **Subgroup Heterogeneity in Drug Efficacy**—◆Qiang (Casey) Xu, FDA; Rajeshwari Sridhara, FDA; Shenghui Tang, FDA; Yu-Ling Chang, FDA

11:05 a.m. **Fit Five-Parameter Logistic Function for Assay Data Using SAS**—◆Rong Liu, Merck & Co., Inc.; Shuping Zhang, Merck & Co., Inc.; Jason Liao, Merck Research Laboratories; Shuping Zhang, Merck & Co., Inc.

11:20 a.m. **A Clinically More Meaningful Interaction Test of Treatment Effects Within Subgroups**—◆Weihua Tang, Bristol-Myers Squibb Company; David H. Henry, Bristol-Myers Squibb Company; Lisa Ying, Bristol-Myers Squibb Company

11:35 a.m. **Rationale for Sponsor-Unblinded Phase I Trials: Challenging the Double-Blind Paradigm**—◆Jitendra Ganju, Amgen, Inc.; Clapton Dias, Amgen, Inc.

11:50 a.m. **Dose-Time-Effect Modeling for Cancer Cell Growth in In-Vitro Experiments**—◆Maiying Kong, University of Louisville

12:05 p.m. **Understanding the Key Factors in the Design of a Randomized Thorough QT Study**—◆Jessie Qing Xia, National Institute of Statistical Sciences; Alexei A. Dmitrienko, Eli Lilly and Company; Beasley Charles, Eli Lilly and Company; S. Stanley Young, National Institute of Statistical Sciences

326 CC-159B

Education—Contributed

Business and Economic Statistics Section

Chair(s): Bill Parr, China Europe International Business School

10:35 a.m. **Performance of MBA Students on Assessment Test**—◆Mammo Woldie, Texas Southern University

10:50 a.m. **Analysis of Italian Survey Data on PhD Graduates: Is Job Consistent with Education?**—◆Matilde Bini, University of Florence; Leonardo Grilli, University of Florence

11:05 a.m. **Does Major Affect Employment Outcomes and Job Satisfaction Among Business Graduates?**—◆Margaretha Hsu, Shippensburg University

11:20 a.m. **Math and Science Partnerships to Enhance Student Outcomes: Evidence of Policy Implications from the ATOMS2XP Project**—◆Mack Shelley, Iowa State University; Betty Latimer, Mississippi State University; Mari Kemis, Iowa State University; Elena Polush, Iowa State University

11:35 a.m. **A Test of Two Similar Particle System Models of Wage Income Distribution Conditioned on Education**—◆John Angle, Inequality Process Institute

11:50 a.m. **Constructing University Performance Indicators in Italy: A Comparative Approach**—◆Tiziana Laureti, University of Naples; Margherita Velucchi, Università di Firenze

12:05 p.m. **Floor Discussion**

327 CC-143B

Small-Area Estimation and Coverage Issues—Contributed

Section on Survey Research Methods

Chair(s): Tapabrata Maiti, Michigan State University

10:35 a.m. **A Simulation Study of the Distribution of Fay's Successive Difference Replication Variance Estimator**—◆Elizabeth T. Huang, U.S. Census Bureau; William R. Bell, U.S. Census Bureau

10:50 a.m. **Coverage Bias and Sampling Error in a Study Using 1000-Series RDD Sampling**—◆John Hall, Mathematica Policy Research, Inc.; Karen Cybulski, Mathematica Policy Research, Inc.; Nancy Duda, Mathematica Policy Research, Inc.

11:05 a.m. **Modeling County-Level Vaccination Coverage Rates**—◆Nadarajasundaram Ganesh, NORC at the University of Chicago; Philip J. Smith, CDC; Kennon R. Copeland, NORC at the University of Chicago; Kirk Wolter, NORC at the University of Chicago

11:20 a.m. **Small-Area Variance Modeling with Application to County Poverty Estimates from the American Community Survey**—◆Jerry J. Maples, U.S. Census Bureau; William R. Bell, U.S. Census Bureau; Elizabeth T. Huang, U.S. Census Bureau

11:35 a.m. **A SPREE Small-Area Procedure for Estimating Population Counts**—◆Emily Berg, Iowa State University; Wayne Fuller, Iowa State University

11:50 a.m. **Using Predictive Marginals to Produce Standardized Estimates**—◆Kathryn Spagnola, RTI International; Michael B. Witt, RTI International

12:05 p.m. **Floor Discussion**

Speaker with Lunch 12:30 p.m.–1:50 p.m.

328 CC-301

Business and Economic Statistics Section Speaker with Lunch (fee event)—Speaker with Lunch

Business and Economic Statistics Section

Organizer(s): Stuart Scott, Bureau of Labor Statistics

TL09 **Rebalancing the American Economy: Challenges to Recovery**—◆Barry Bosworth, The Brookings Institution

Roundtables with Lunch 12:30 p.m.–1:50 p.m.

329 CC-Ballroom South Prefunction
Biopharmaceutical Section Roundtables with Lunch (fee event)
Biopharmaceutical Section

Organizer(s): Dionne Price, FDA

TL10 Statistical Issues on Design and Analysis of Thorough QT Clinical Trials—◆Yi Tsong, FDA

TL11 Building a Professional Mentoring Network—◆Christy Chuang-Stein, Pfizer Inc.

TL12 Best Practices for Specifications of Tables, Listings, and Figures—◆Charles Kincaid, COMSYS

TL13 Subgroup Analysis: Cost and Ethical Considerations—◆Terri K. Johnson, FDA

TL14 Establishing Biomarkers That Are Predictive of Efficacy in Retrospective Analyses—◆Terry Katz, ImClone Systems; Michael Szarek, ImClone Systems

TL15 Statistical Issues in Bioassay Analytical Software: The Present and Future—◆Lev Sirota, FDA

330 CC-Ballroom South Prefunction
International Chinese Statistical Association Roundtable with Lunch (fee event)
International Chinese Statistical Association

Organizer(s): Xuming He, University of Illinois at Urbana-Champaign

TL16 Global Clinical Trials—◆Dianne M. Finkelstein, Harvard/Massachusetts General Hospital

331 CC-Ballroom South Prefunction
Section on Bayesian Statistical Science Roundtable with Lunch (fee event)
Section on Bayesian Statistical Science

Organizer(s): Alyson Wilson, Iowa State University

TL17 Why Bayesian Statistics and Machine Learning Need Each Other—◆Sayan Mukerjee, Duke University

332 CC-Ballroom South Prefunction
Section on Government Statistics Roundtable with Lunch (fee event)
Section on Government Statistics

Organizer(s): Lisa Blumerman, U.S. Census Bureau

TL18 The Unique Method for Obtaining Data: Entering Agreements to Share Administrative Records—◆Stephen Q. Cornman, National Center for Education Statistics; Shelly W. Martinez, Office of Management and Budget

333 CC-Ballroom South Prefunction
Section on Health Policy Statistics Roundtable with Lunch (fee event)
Section on Health Policy Statistics

Organizer(s): Susan Paddock, RAND Corporation

TL19 Drawing Evidence Using Multiple Studies for Public Health Questions—◆Chia-Wen Ko, National Institutes of Health

334 CC-Ballroom South Prefunction
Section on Physical and Engineering Sciences Roundtables with Lunch (fee event)
Section on Physical and Engineering Sciences

Organizer(s): George Ostrouchov, Oak Ridge National Laboratory

TL20 Using the New Technologies in Teaching Introductory Statistics—◆Ramon V. Leon, The University of Tennessee

TL21 Climate Past, Present, and Future—◆Douglas Nychka, National Center for Atmospheric Research

335 CC-Ballroom South Prefunction
Section on Statistical Consulting Roundtables with Lunch (fee event)
Section on Statistical Consulting

Organizer(s): Walter Ambrosius, Wake Forest University School of Medicine

TL22 The Current State and Future Role of Pro Bono Statistical Consulting—◆Christopher Holloman, The Ohio State University

TL23 Setting Consulting Rates—◆Walter Ambrosius, Wake Forest University School of Medicine

336 CC-Ballroom South Prefunction

Section on Statistical Education Roundtables with Lunch (fee event)

Section on Statistical Education

Organizer(s): Tisha L. Hooks, Winona State University

TL24 The Best of Both Worlds: Merging Ground and Online Pedagogy Into the Hybrid Course—◆David Zeitler, Grand Valley State University

TL25 Using Model-Eliciting Activities (MEAs) in the Introductory Statistics Class—◆Joan B. Garfield, The University of Minnesota

TL26 Resequencing Topics in an Introductory Statistics Course—◆Christopher J. Malone, Winona State University

337 CC-Ballroom South Prefunction

Section on Statistical Graphics Roundtable with Lunch (fee event)

Section on Statistical Graphics

Organizer(s): Heike Hofmann, Iowa State University

TL27 Challenges for Statisticians Working on Large Data Sets in R—◆Michael Kane, Yale University

338 CC-Ballroom South Prefunction

Section on Survey Research Methods Roundtable with Lunch (fee event)

Section on Survey Research Methods

Organizer(s): Michael Elliott, University of Michigan

TL28 Models for the Characterization and Management of Costs and Risks During Changes in Survey Design—◆John L. Eltinge, Bureau of Labor Statistics

339 CC-Ballroom South Prefunction

Social Statistics Section Roundtables with Lunch (fee event)

Social Statistics Section

Organizer(s): Joseph J. Salvo, NYC Department of City Planning

TL29 What Every Statistician Should Know About the ACS: ACS for Newbies—◆Susan Schechter, U.S. Census Bureau

TL30 Using Data from the American Community Survey: What Federal Agencies Need to Know—◆Frederick Eggers, Independent Consultant

Invited Sessions 2:00 p.m.–3:50 p.m.

340 CC-202A

■ Impact of High-Dimensional Data on Molecular Epidemiology and Statistical Genomics—Invited

Section on Statistics in Epidemiology

Organizer(s): Jaya Satagopan, Memorial Sloan-Kettering Cancer Center

Chair(s): Jaya Satagopan, Memorial Sloan-Kettering Cancer Center

2:05 p.m. Gene Set Analysis as a Tool for Cross-Platform Integration in Genomics—◆Giovanni Parmigiani, Johns Hopkins University; Simina Boca, Johns Hopkins University; Luigi Marchionni, Johns Hopkins University

2:35 p.m. Statistical Issues and Challenges of Epigenomics—◆Rebecca W. Doerge, Purdue University

3:05 p.m. Statistical Methods for Differential Diagnosis of Second Primary Cancers from Metastases—◆Colin B. Begg, Memorial Sloan-Kettering Cancer Center

3:35 p.m. Floor Discussion

341 CC-209C

Analysis of Complex and High-Dimensional Data—Invited

International Chinese Statistical Association

Organizer(s): Peter G. Hall, The University of Melbourne

Chair(s): Peter G. Hall, The University of Melbourne

2:05 p.m. Building Nonparametric Sparse Models from Natural Images to V1 fMRI—◆Bin Yu, University of California, Berkeley; Pradeep K. Ravikumar, University of California, Berkeley; Vincent Vu, University of California, Berkeley; Thomas Naselaris, University of California, Berkeley; Kendrick Kay, University of California, Berkeley; Jack Gallant, University of California, Berkeley

2:30 p.m. Unsupervised Cross-Validation—◆Art B. Owen, Stanford University

2:55 p.m. Liquid Association for Complex Data Analysis—◆Ker-Chau Li, Institute of Statistical Science, Academia Sinica

3:20 p.m. Analysis of Complex and High-Dimensional Data—◆DuBois Bowman, Emory University

3:45 p.m. Floor Discussion

342 CC-207A

■ ✪ Bayesian Approaches to Safety, Efficacy, and Health Surveillance—Invited

Section on Bayesian Statistical Science, Section on Survey Research Methods, Section on Statistics and the Environment, Biopharmaceutical Section, Section on Government Statistics

Organizer(s): Sharon-Lise T. Normand, Harvard Medical School
Chair(s): Sharon-Lise T. Normand, Harvard Medical School

2:05 p.m. **Small Area Estimation of the Prevalence of Cancer Risk Factors and Screening via Bayesian Methods Using Combined Information from Two Surveys**—William Davis, National Cancer Institute; Eric Feuer, National Cancer Institute; Van L. Parsons, National Center for Health Statistics; Trivellore E. Raghunathan, University of Michigan; ◆Nathaniel Schenker, National Center for Health Statistics; Dawei Xie, University of Pennsylvania

2:30 p.m. **The Role of Meta-Analysis in Assessing Adverse Drug Effects**—◆Joel B. Greenhouse, Carnegie Mellon University

2:55 p.m. **Bayesian Shrinkage Models for Associations Involving Sparse Data**—◆William DuMouchel, Phase Forward Lincoln Safety Group

3:20 p.m. Disc: Danica Marinac-Dabic, FDA

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

343 CC-143C

■ ✪ Profiling Health Care Providers: Emerging Issues, Statistical Methods, and Policy Implications—Invited

Section on Health Policy Statistics, Section on Government Statistics

Organizer(s): Yulei He, Harvard Medical School
Chair(s): Christopher H. Schmid, Tufts Medical Center

2:05 p.m. **Hospital Report Cards: Toward Optimal Statistical Decisions**—◆Peter Austin, Institute for Clinical Evaluative Sciences

2:30 p.m. **Evaluating Composite Quality Measures**—◆Mary Beth Landrum, Harvard Medical School

2:55 p.m. **Performance of Confidence Intervals for the Ratio of Observed to Expected Numbers of an Event**—◆Sean M. O'Brien, Duke University Medical Center

3:20 p.m. Disc: Shaheen Halim, Centers for Medicare and Medicaid Services

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

344 CC-149A

■ ✪ Statistical Methods for Forecasting—Invited

Business and Economic Statistics Section

Organizer(s): Tae-Hwy Lee, University of California, Riverside
Chair(s): Graham Elliott, University of California, San Diego

2:05 p.m. **Let's Do It Again: Bagging Equity Premium Predictors**—Eric Hillebrand, Louisiana State University; ◆Tae-Hwy Lee, University of California, Riverside; Marcelo C. Medeiros, Pontifical Catholic University Rio

2:30 p.m. **MIDAS Instruments**—◆Jonathan H. Wright, Johns Hopkins University; Eric Ghysels, The University of North Carolina at Chapel Hill

2:55 p.m. **Factor Model Forecasts of Exchange Rates**—◆Kenneth West, University of Wisconsin-Madison

3:20 p.m. **Forecasting Inflation with Gradual Regime Shifts and Exogenous Information**—◆Kistin Hubrich, European Central Bank; Timo Teraesvirta, Aarhus University; Andrés González, Central Bank of Colombia

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

345 CC-150A

■ ✪ The Agony and Ecstasy of Innovation in Federal Surveys—Invited

Section on Government Statistics, SSC

Organizer(s): Lynda T. Carlson, National Science Foundation
Chair(s): Lawrence D. Brown, The Wharton School

2:05 p.m. **The Importance of Goal-Oriented Leadership for Innovation**—◆Constance F. Citro, The National Academies

2:30 p.m. **Partnership for Innovation**—◆Jeri M. Mulrow, National Science Foundation; Lynda T. Carlson, National Science Foundation; Thomas L. Mesenbourg, U.S. Census Bureau; Thomas E. Zabelsky, U.S. Census Bureau

2:55 p.m. **Overcoming Extremeness: The Survey Innovator's Essential Task**—◆Don A. Dillman, Washington State University

3:20 p.m. Disc: Norman M. Bradburn, NORC at the University of Chicago

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

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

346 CC-207B

■ ✪ Geosciences and SAMSI—Invited

IMS, Section on Bayesian Statistical Science

Organizer(s): James Berger, Statistical and Applied Mathematical Sciences Institute

Chair(s): Nell Sedransk, National Institute of Statistical Sciences

2:05 p.m. **Functional ANOVA Models for Comparing Sources of Variability in Climate Model Output**—◆Cari Kaufman, University of California, Berkeley; Stephan R. Sain, National Center for Atmospheric Research

2:30 p.m. **Data Assimilation: What Is the Point?**—◆Leonard A. Smith, University of Oxford

2:55 p.m. **Uncertain Tempering and Extreme Events in Volcanic Risk Assessment**—◆Robert L. Wolpert, Duke University

3:20 p.m. Disc: James Berger, Statistical and Applied Mathematical Sciences Institute

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

347 CC-204C

✪ Memorial for Daniel G. Horvitz: Pioneering Researcher and Visionary Leader—Invited

Memorial, Section on Survey Research Methods

Organizer(s): Ralph E. Folsom, RTI International

Chair(s): Ralph E. Folsom, RTI International

2:05 p.m. **Dan Horvitz: His Life and Work as a Statistician**—◆Judith Lessler, Harland's Creek Farm

2:30 p.m. **Some Generalizations of the Horvitz-Thompson Estimator**—◆James R. Chromy, RTI International

2:55 p.m. **Horvitz-Thompson Estimation and Unit Nonresponse**—◆William Kalsbeek, The University of North Carolina at Chapel Hill; Robert Agans, The University of North Carolina at Chapel Hill; Abigail Panter, The University of North Carolina at Chapel Hill

3:20 p.m. **Imputation and Estimation Under NMAR Nonresponse with Limited Covariate Information**—◆Danny Pfeffermann, Hebrew University/University of Southampton; Anna Sikov, Hebrew University

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

348 CC-204B

Computer Experiments: Modeling Data and Making Decisions—Invited

Technometrics, Section on Bayesian Statistical Science, Interface Foundation of North America

Organizer(s): David M. Steinberg, Tel Aviv University

Chair(s): David M. Steinberg, Tel Aviv University

2:05 p.m. **Decision-Theoretic Sensitivity Analysis for Complex Computer Models**—◆Jeremy Oakley, The University of Sheffield

2:30 p.m. **Variable Selection in Bayesian Smoothing Spline ANOVA Models: Application to Deterministic Computer Codes**—◆Brian J. Reich, North Carolina State University; Curtis Storlie, University of New Mexico; Howard D. Bondell, North Carolina State University

2:55 p.m. Disc: Derek Bingham, Simon Fraser University

3:15 p.m. Disc: Hugh Chipman, Acadia University

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

349 CC-209B

■ ✪ Use of Administrative Data in Policymaking—Invited

International Association of Survey Statisticians, Section on Survey Research Methods, Social Statistics Section, Section on Government Statistics

Organizer(s): Louise Bourque, Institut de la statistique du Québec

Chair(s): Marie-éve Tremblay, Institut de la statistique du Québec

2:05 p.m. **Use of Income Tax Data of Individuals for Demographic Purposes**—◆Sonia Demers, Statistics Canada

2:30 p.m. **Register Data Are a Good Backbone but Sometimes Restricted for Policymakers: Experiences from Finland Over Decades**—◆Seppo Laaksonen, Statistics Finland/University of Helsinki; Pekka Myrskyla, Statistics Finland

2:55 p.m. **Mixing Administrative and Survey Data in a Longitudinal Setting: Construction and Uses of the French Permanent Demographic Sample**—◆Stéphane Jugnot, National Institute for Statistics and Economic Studies

3:20 p.m. Disc: John L. Eltinge, Bureau of Labor Statistics

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

350 CC-202B

■ New Statistical Methods for Array CGH Data—Invited

ENAR, Section on Bayesian Statistical Science

Organizer(s): Jeffrey S. Morris, The University of Texas M.D. Anderson Cancer Center

Chair(s): Jeffrey S. Morris, The University of Texas M.D. Anderson Cancer Center

2:05 p.m. **Bayesian Random Segmentation Models for Array-CGH Data**—◆Veera Baladandayuthapani, The University of Texas M.D. Anderson Cancer Center; Jeffrey S. Morris, The University of Texas M.D. Anderson Cancer Center; Yuan Ji, The University of Texas M.D. Anderson Cancer Center

2:55 p.m. **Model-Based Clustering of Array CGH Profiles: A Recursive-Partitioning Algorithm for Wavelet Decompositions**—◆David Engler, Brigham Young University; Brent Coull, Harvard University; Rebecca Betensky, Harvard School of Public Health; E. Andres Houseman, University of Massachusetts Lowell

3:05 p.m. **Segregated Analysis of Array CGH Data**—◆Daniel P. Gaile, State University of New York at Buffalo; Jeffrey C. Miecznikowski, State University of New York at Buffalo; David Gold, Roswell Park Cancer Institute; Lara Sucheston, State University of New York at Buffalo; Song Liu, State University of New York at Buffalo; Carl Morrison, Roswell Park Cancer Institute

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

351 CC-206

Bayes-Frequentist Reconciliation in Large Parameter Spaces—Invited

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

Organizer(s): Subhashis Ghoshal, North Carolina State University

Chair(s): Subhashis Ghoshal, North Carolina State University

2:05 p.m. **Posterior Normality and Prior Selection in High Dimensions**—◆Bertrand Clarke, The University of British Columbia/University of Miami; Subhashis Ghoshal, North Carolina State University

2:35 p.m. **A Semiparametric Bernstein-von Mises Theorem**—◆Ismael Castillo, Vrije Universiteit Amsterdam

3:05 p.m. **Large Sample Properties of Bayesian Survival Analysis**—◆Yongdai Kim, Seoul National University

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

Invited Panels 2:00 p.m.–3:50 p.m.

352 CC-102B

■ ✪ Mediating Statistics in the Media: Getting Your Numbers Rightly Reported!—Invited

Committee on Meetings

Organizer(s): Xiao-Li Meng, Harvard University ; David Leonhardt, The New York Times

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

Panelists: ◆David Leonhardt, The New York Times

◆Shankar Vedantam, The Washington Post

◆William Alpert, Barron's

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

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

353 CC-158A

Recent Advances in Methodology for Functional Data—Topic-Contributed

Section on Nonparametric Statistics

Organizer(s): R. Todd Ogden, Columbia University

Chair(s): Philip T. Reiss, New York University

2:05 p.m. **Multilevel Functional Principal Component Analysis**—◆Chongzhi Di, Johns Hopkins University; Ciprian M. Crainiceanu, Johns Hopkins University

2:25 p.m. **Wavelet-Based Functional Linear Regression**—◆Yihong Zhao, Columbia University; Todd Ogden, Columbia University

2:45 p.m. **Hierarchical Bayesian Models for Predicting Spatially Correlated Curves**—◆Joon Jin Song, University of Arkansas; Bani K. Mallick, Texas A&M University

3:05 p.m. **New Data Analysis Methods for Actigraphy in Sleep Medicine**—◆William Shannon, Washington University School of Medicine; Jaime Boero, Marshfield Clinic; Duntley Stephen, Washington University School of Medicine; David Clifford, Washington University School of Medicine; Jimin Ding, Washington University in St. Louis

3:25 p.m. **Wavelet-Based Functional Mixed Models via DPM**—◆Alejandro Villagran, Rice University; Sang-Han Lee, Nathan S. Kline Institute for Psychiatric Research; Marina Vannucci, Rice University

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

354 CC-150B

✪ Student Paper Competition - Markov Chains, Mixture Models, MLEs, and More—Topic-Contributed

Section on Statistical Computing, Interface Foundation of North America

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

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

2:05 p.m. **Twisted Sisters: Disentangling Selection in Overlapping Reading Frames**—◆Wei-Chen Chen, Iowa State University; Karin S. Dorman, Iowa State University

2:25 p.m. **A Steplength Algorithm for Fitting ERGMs**—◆Ruth M. Hummel, Penn State University; Mark S. Handcock, University of Washington; David R. Hunter, Penn State University

2:45 p.m. **MCPMod: An R Package for the Design and Analysis of Dose-Finding Studies**—◆Bjoern Bornkamp, Dortmund University of Technology; Jose C. Pinheiro, Novartis Pharmaceuticals; Frank Bretz, Norvartis, Switzerland

3:05 p.m. **Penalized Sieve Deconvolution Estimation of Mixture Distributions with Boundary Effects**—◆Mihee Lee, The University of North Carolina at Chapel Hill; Haipeng Shen, The University of North Carolina at Chapel Hill; J. Steve Marron, The University of North Carolina at Chapel Hill

3:25 p.m. **Pairwise Variable Selection for High-Dimensional Model-Based Clustering**—◆Frank Jian Guo, University of Michigan; Elizaveta Levina, University of Michigan; George Michailidis, University of Michigan; Ji Zhu, University of Michigan

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

355 CC-144A

■ ✪ Efforts to Minimize the Use of Social Security Numbers in Federal Data Collections—Topic-Contributed

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

Organizer(s): Marilyn Seastrom, National Center for Education Statistics

Chair(s): Katherine Wallman, Office of Management and Budget

2:05 p.m. **Federal Policy on Collecting and Using Social Security Numbers for Statistical Purposes**—◆Rochelle (Shelly) W. Martinez, Office of Management and Budget; John Barkhamer, Office of Management and Budget

2:25 p.m. **The Effect on Linkage Rates and Mortality Ascertainment of Partial SSN Matching to the National Death Index**—◆Christine S. Cox, National Center for Health Statistics; Kimberly Lochner, National Center for Health Statistics; Stephanie Bartee, National Center for Health Statistics; Donna Miller, National Center for Health Statistics; Gloria Wheatcroft, National Center for Health Statistics

2:45 p.m. **Tracing Survey Respondents Without SSNs**—◆Marilyn Seastrom, National Center for Education Statistics

3:05 p.m. Disc: Mary B. Frazier, U.S. Census Bureau

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

356 CC-141

■ Diffusion Tensor Imaging in the Brain: Overview and Recent Advances—Topic-Contributed

Biometrics Section

Organizer(s): Lynn E. Eberly, The University of Minnesota

Chair(s): Shuzhen Li, University of Minnesota

2:05 p.m. **Diffusion Tensor Imaging in the Brain: Overview**—◆Lynn E. Eberly, The University of Minnesota

2:25 p.m. **Statistical Curve and Tube Fitting for Diffusion Tensor Imaging Tractography**—◆Brian S. Caffo, Johns Hopkins Bloomberg School of Public Health; Ciprian M. Crainiceanu, Johns Hopkins University; Arthur J. Goldsmith, Johns Hopkins Bloomberg School of Public Health; Daniel Reich, Johns Hopkins University

2:45 p.m. **Voxel-Based Inference for Eigenvalues and Eigenvectors in Group Diffusion Tensor Imaging Studies**—◆Armin Schwartzman, Harvard School of Public Health; Robert F. Dougherty, Stanford University; Jonathan Taylor, Stanford University

3:05 p.m. **Nonparametric Smoothing and Classification of High Angular Resolution Diffusion Imaging Data**—◆John D. Carew, Emory University

3:25 p.m. **A Unified Parametric Model of White Matter Fiber Tract**—◆Moo K. Chung, University of Wisconsin

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

357 CC-144C

■ Analyzing Complex Survey Data Using Auxiliary Variables—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Daniell Toth, Bureau of Labor Statistics

Chair(s): Polly Phipps, Bureau of Labor Statistics

2:05 p.m. **Bayesian Inference of Finite Population Distribution Functions and Quantiles from Unequal Probability Samples**—◆Qixuan Chen, University of Michigan; Michael Elliott, University of Michigan; Roderick J.A. Little, University of Michigan

2:25 p.m. **Estimating Variance Components Using Random Forest**—◆Guillermo Mendez, American Express; Sharon Lohr, Arizona State University

2:45 p.m. **An Adaptive Method for Collapsing Strata Using Regression Trees on Data from a Complex Design**—◆Daniell Toth, Bureau of Labor Statistics; John L. Eltinge, Bureau of Labor Statistics

3:05 p.m. **Simultaneous Calibration and Nonresponse Adjustment**—◆Eric V. Slud, University of Maryland College park; Yves Thibaudeau, U.S. Census Bureau

3:25 p.m. **Collinearity Diagnostics for Complex Survey Data**—◆Dan Liao, University of Maryland

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

358 CC-102A

■ ✪ Innovative Methods for Conveying Statistical Ideas to Nonstatisticians—Topic-Contributed

Committee on Outreach Education, Social Statistics Section, Section on Government Statistics

Organizer(s): Owen J. Devine, CDC

Chair(s): Owen J. Devine, CDC

2:05 p.m. **Biopharmaceutical Interactive Outreach**—◆Jeremy D. Jokinen, Johnson & Johnson

2:25 p.m. **Automatic Analyses on the Web**—◆Dan Rope, SPSS

2:45 p.m. **First-Year Basics: Getting Started in College Counseling Statistics**—◆Fred Djang, Bristol-Myers Squibb Company

3:05 p.m. **Innovative Ways to Convey Statistical Concepts to Nonstatisticians**—◆Anna B. Nevius, FDA; Alexei A. Dmitrienko, Eli Lilly and Company; Venkat S. Sethuraman, Novartis; Mani Y. Lakshminarayanan, Merck & Co., Inc.

3:25 p.m. Disc: Stephen Gulyas, Lilly Corporate Center

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

359 CC-142

■ Genome-Wide Association Approaches and Their Roles to Identify Predictors for Drug Development—Topic-Contributed

Biopharmaceutical Section, International Indian Statistical Association, Biometrics Section

Organizer(s): Sue-Jane Wang, FDA

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

2:05 p.m. **Statistical Aspects of Using Shared Controls in Genome-Wide Association Studies**—◆Dmitri Zaykin, National Institute of Environmental Health Sciences

2:25 p.m. **Pathway Analysis by Adaptive Combination of P-Values**—◆Kai Yu, National Cancer Institute

2:45 p.m. **Identifying Predictors of Drug Efficacy in Clinical Development Using Genome-Wide Association Approach**—◆Gbenga R. Kazeem, GlaxoSmithKline; Silviu Bacanu, GlaxoSmithKline; Nelson R. Matthew, GlaxoSmithKline; Magaret Ehm, GlaxoSmithKline; Wang Sue-Jane, FDA

3:05 p.m. **Two-Stage Procedures for Selecting the Best Diagnostic Biomarkers**—◆Aiyi Liu, National Institute of Child Health and Human Development

3:25 p.m. **Genetic Association Analysis of Longitudinal and Multivariate Phenotypes in Families**—◆Qiong Yang, Boston University; Hongsheng Wu, Boston University; Chao-Yu Guo, Children's Hospital

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

360 CC-209A

■ ✪ Savage Award Finalists—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Marina Vannucci, Rice University

Chair(s): Joseph G. Ibrahim, The University of North Carolina at Chapel Hill

2:05 p.m. **Adaptive Bayesian P-Splines to Estimate Varying Regression Coefficients: Application to Receptor Occupancy Estimation**—◆Astrid Jullion, UCB Pharma; Philippe Lambert, University of Liège; François Vandenhende, ClinBAY

2:25 p.m. **On the Analysis of Bayesian Semiparametric IRT-Type Models**—◆Alejandro Jara, Universidad de Concepción; Ernesto San Martin, Department of Statistics and Measurement Center MIDE UC Pontificia Universidad Católica de Chile

2:45 p.m. **Functional Mixed Registration Models**—◆Donatello Telesca, The University of Texas M.D. Anderson Cancer Center; Lurdes Inoue, University of Washington

3:05 p.m. **Some Extensions of the Polya Urn Scheme with Bayesian Applications**—◆Lorenzo Trippa, The University of Texas M.D. Anderson Cancer Center

3:25 p.m. Disc: David Dunson, Duke University

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

361 CC-101

■ Statistical Analysis Issues for Diagnostic Devices—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Arkendra De, FDA; Vicki Petrides, Abbott Diagnostics

Chair(s): Vicki Petrides, Abbott Diagnostics

2:05 p.m. **How Much Information Can a Genomic Classifier Based on Gene Expression Add to Models Based on Clinical Covariates Alone?**—◆Samir Lababidi, FDA

2:25 p.m. **When is a Diagnostic Test Informative?**—◆Lakshmi Vishnuvajjala, FDA

2:45 p.m. **Methods for Handling Missing Data from Diagnostic Tests**—◆Gene Pennello, FDA

3:05 p.m. **Biomarker Evaluation Using Percentile Value Standardization Approach with Event Time Outcomes**—◆Yuying Jin, University of Washington; Margaret Pepe, University of Washington; Yingye Zheng, Fred Hutchinson Cancer Research Center

3:25 p.m. **Estimating Cross-Validation Variability**—◆Waleed A. Yousef, Helwan University; Weijie Chen, FDA

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

362 CC-204A

■ Machine Learning and Computational Inference for Diagnostic Devices—Topic-Contributed

Section on Statistics in Epidemiology, Interface Foundation of North America

Organizer(s): Shanti Gomatam, FDA

Chair(s): Timothy S. Davison, Almac Diagnostics Ltd.

2:05 p.m. **Classifier Variability: Accounting for Training and Testing**—◆Weijie Chen, FDA; Brandon D. Gallas, FDA

2:25 p.m. **Supplementing a Validation Test Sample**—◆Frank W. Samuelson, FDA

2:45 p.m. **Computational Intelligence-Based Data Mining for the Minimal Clinically Relevant Difference in the Unified Parkinson's Disease Rating Scale**—◆Nitzan Mekel-Bobrov, Boston Scientific Corporation

3:05 p.m. **MDLR/MSV: An Algorithm for Mutation Detection Microarray and Software for Mutation Signal Visualization**—◆Wei-min Liu, Roche Molecular Systems, Inc.; Aki Nakao, Roche Molecular Systems, Inc.; Li Qiu, Roche Molecular Systems, Inc.; Nancy Patten, Roche Molecular Systems, Inc.; Sim Truong, Roche Molecular Systems, Inc.; Lin Wu, Roche Molecular Systems, Inc.

3:25 p.m. Disc: Andrew Hill, Wyeth Research

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

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

363 CC-155

■ ASA and NCTM Collaborations on a Shared Vision for the Role of Statistics in Schools—Topic-Contributed

ASA NCTM Joint Committee on Curriculum in Statistics and Probability, Social Statistics Section

Organizer(s): Jerry Moreno, John Carroll University

Chair(s): Jerry Moreno, John Carroll University

Panelists: ◆Gary Kader, Appalachian State University

◆Pat Hopfensperger, Mequon School District

◆Roxy Peck, Cal Poly

◆Christine S. Franklin, The University of Georgia

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

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

364 CC-143A

Modeling Customer Lifetime Value and Social Media Data—Contributed

Section on Statistics and Marketing

Chair(s): David Schweidel, University of Wisconsiin

2:05 p.m. **Scalable Analysis of Dyadic Data Using Dirichlet Processes**—◆Michael Braun, Massachusetts Institute of Technology; Andre Bonfrer, Singapore Management University

2:20 p.m. **Customer Engagement and Sales Conversion in a Social Media Context**—◆Lynd D. Bacon, Loma Buena Associates; Danielle Murray, Shutterfly Inc.; Peter Lenk, University of Michigan

2:35 p.m. **A Multistage Approach to Estimating Customer Lifetime Value**—◆Heather M. Johnston, IBM; A. M. Santos, IBM

2:50 p.m. **A Bias-Correction Procedure for Using Aggregate Data to Proxy Individual Characteristics**—◆Jason Duan, The University of Texas at Austin

3:05 p.m. **A Geometric Brownian Motion Model of Purchase History Dynamics**—Kalyan Raman, Northwestern University; ◆Edward C. Malthouse, Northwestern University

3:20 p.m. **Quantile Regression as a Tool for Identifying Drivers of Satisfaction and Dissatisfaction**—◆Jorge A. Alejandro, Market Probe; Kurt A. Pflughoeft, Market Probe

3:35 p.m. **Optimization of Marketing Amount Allocation and Marketing Personalization for a Set of Products in the Presence of Word of Mouth**—◆Dmitri V. Kuznetsov, Intellidyn Corp.

365 CC-144B

■ Measurement Errors, Outliers, and Influential Observations in Surveys—Contributed

Section on Survey Research Methods

Chair(s): Clyde Tucker, Bureau of Labor Statistics

2:05 p.m. **Measurement Error Models for Physical Activity Measures**—◆Nicholas K. Beyler, Iowa State University; Sarah Nusser, Iowa State University; Alicia L. Carriquiry, Iowa State University; Gregory Welk, Iowa State University; Wayne Fuller, Iowa State University

2:20 p.m. **How Misclassification of Race/Ethnicity Categories in Sampling Stratification Affects Survey Estimates**—◆Donsig Jang, Mathematica Policy Research, Inc.; Amang Sukasih, Mathematica Policy Research, Inc.; Kelly H. Kang, National Science Foundation; Stephen Cohen, National Science Foundation

2:35 p.m. **Estimating Response Bias and Response Variance (Simple and Correlated) from Reinterviews**—◆Dhiren Ghosh, Synectics for Management Decisions Inc.

2:50 p.m. **Effects from Respondent Location on Telephone Survey Estimates**—◆Courtney Kennedy, University of Michigan; Stephen E. Everett, The Everett Group; Michael W. Traugott, University of Michigan

3:05 p.m. **Using Statistical Models in the Sample Design for the Quality Control Reinterview Program**—◆Jianzhu Li, Westat, Inc.; Michael J. Brick, Westat, Inc.; Phyllis Singer, U.S. Census Bureau; Bac Tran, U.S. Census Bureau

3:20 p.m. **Identifying Outliers When Creating an Imputation Base for the Quarterly Financial Report**—◆Melvin J. McCullough, U.S. Census Bureau; Terry L. Pennington, U.S. Census Bureau

3:35 p.m. **Identifying Sources of Survey Errors: The 2007 Classification Error Survey for the U.S. Census of Agriculture**—◆Denise A. Abreu, National Agricultural Statistics Service; Jaki McCarthy, National Agricultural Statistics Service

366 CC-159B

Methodological Advances for Spatial and Temporal Studies—Contributed

Section on Statistics and the Environment, Section on Bayesian Statistical Science

Chair(s): Dan Nordman, Iowa State University

2:05 p.m. **On Shortest Prediction Intervals in Log-Gaussian Random Fields**—◆Victor De Oliveira, The University of Texas at San Antonio; Changxiang Rui, University of Arkansas

2:20 p.m. **Maximum Likelihood Estimation of Variance Parameters in the Spatial Random Effects Model**—◆Matthias Katzfuss, The Ohio State University; Noel A. Cressie, The Ohio State University

2:35 p.m. **Clipped Latent Variable Spatial Models for Ordered Categorical Data**—◆Megan D. Higgs, Montana State University; Jennifer Hoeting, Colorado State University

2:50 p.m. **Correcting for Signal Attenuation from Noise: Sharpening the Focus on Past Climate**—◆Marc Genton, Texas A&M University; Caspar Ammann, National Center for Atmospheric Research; Bo Li, Purdue University

3:05 p.m. **Cross-Covariance Functions for Multivariate Random Fields Based on Latent Dimensions**—◆Tatiyana V. Apanasovich, Thomas Jefferson University; Marc Genton, Texas A&M University

3:20 p.m. **Reversible Jump MCMC for Inference in a Deterministic Individual-Tree-Based Growth Model for Studying Forest Dynamics**—◆Jarrett Barber, University of Wyoming; Darren E. Gemoets, University of Wyoming; Kiona Ogle, University of Wyoming

3:35 p.m. **A Model-Based Analysis of Semicontinuous Spatial Data**—◆Virginia Recta, Penn State University; Murali Haran, Penn State University; James L. Rosenberger, Penn State University

367 CC-153

Teaching the Fundamentals—Contributed

Section on Statistical Education

Chair(s): Kevin Henning, Texas Tech University

2:05 p.m. **What Do Students Hear When We Say 'Random'?: Emipirical Results from a Study of Lexical Ambiguity**—◆Jennifer J. Kaplan, Michigan State University; Diane Fisher, University of Louisiana-Lafayette; Neal Rogness, Grand Valley State University

2:20 p.m. **Statistics-Based Calculus?**—◆Patti F. Lock, St. Lawrence University

2:35 p.m. **Teaching Probability and Combinatorics Using Lotteries**—◆Patricia B. Humphrey, Georgia Southern University

2:50 p.m. **Two Language-Based Examples for Use in the Statistics Classroom**—◆Roger Bilisoly, Central Connecticut State University

3:05 p.m. **Why We Should Teach Introductory Applied Statistics Courses Backwards**—◆Bill Rybolt, Babson College

3:20 p.m. **Moment-Generating Functions for Tenable Two-Label Polya Urns**—◆Kyle Whittaker, The George Washington University; Katharine Gurski, Howard University

3:35 p.m. **Understanding the Central Limit Theorem Through Visualizations**—◆Tower Chen, University of Guam

368 CC-148

■ Modeling and Process Control—Contributed

Section on Quality and Productivity

Chair(s): Chengxing Lu, CDC

2:05 p.m. **Bayes-Type Test for Constancy of Parameters in Logistic Model**—◆Yukan Wu, University of Maryland, Baltimore County; Nagaraj K. Neerchal, University of Maryland, Baltimore County

2:20 p.m. **Additive Models in Regression Problems**—◆Mehdi Kiani, Athens University of Economics and Business

2:35 p.m. **Supersaturated Designs: Are Our Results Significant?**—◆David Edwards, Virginia Commonwealth University; Robert W. Mee, The University of Tennessee

2:50 p.m. **Design and Analysis of Mixture-of-Mixture Experiments**—◆Lulu Kang, Georgia Institute of Technology; Roshan V. Joseph, Georgia Institute of Technology; William A. Brenneman, Procter & Gamble

3:05 p.m. **Profile-Monitoring Analysis with Fixed and Random Effects Using Nonparametric and Semiparametric Methods**—◆Abdel-Salam G. Abdel-Salam, Virginia Polytechnic Institute and State University; Jeffrey B. Birch, Virginia Polytechnic Institute and State University

3:20 p.m. **A Readjustment and Rectifying Action in the Integrated Process Control**—◆Changsoon Park, Chung-Ang University; Jaeheon Lee, Chung-Ang University

3:35 p.m. **CUSUM Charts for Monitoring Lifetime Data**—◆Denisa A. Olteanu, Virginia Polytechnic Institute and State University; Geoff G. Vining, Virginia Polytechnic Institute and State University

369 CC-158B

Nonparametric Methods for Department Data—Contributed

Section on Nonparametric Statistics

Chair(s): Mohsen Pourahmadi, Northern Illinois University

2:05 p.m. **Resampling-Based Bias-Corrected Time Series Prediction**—◆Soutir Bandyopadhyay, Texas A&M University

2:20 p.m. **On Confidence Intervals for the Mean of a Long-Range Dependent Process**—◆Zhewen Fan, University of Illinois at Urbana-Champaign; Xiaofeng Shao, University of Illinois at Urbana-Champaign

2:35 p.m. **Nonparametric Estimation for Multivariate Lèvy Processes**—◆Roger Laeven, Tilburg University

2:50 p.m. **Dependence Calibration in Conditional Copulas: A Nonparametric Approach**—◆Elif F. Acar, University of Toronto; Radu Craiu, University of Toronto; Fang Yao, University of Toronto

3:05 p.m. **Cox-McFadden Marginal Likelihood for Clustered Proportional Hazards**—◆Jan Ondrich, Syracuse University

3:20 p.m. **Time Series Factorial Models with Uncertainty Measures: Applications to ARMA Processes and Financial Data**—◆Carole Toque, University of Luxembourg; Virginie Terraza, University of Luxembourg

3:35 p.m. **Bayesian Wavelet-Based Transformation for Inducing Normality from Non-Gaussian Long Memory Time Series**—◆Kyungduk Ko, Boise State University

370 CC-159A

Nonparametric Estimation and Testing—Contributed

Section on Nonparametric Statistics

Chair(s): Ursula U. Müller-Harknett, Texas A&M University

2:05 p.m. **Generalized Wilcoxon Test for Interval-Censored Failure Time Data**—◆Chinsan Lee, Shu-Te University of Technology

2:20 p.m. **Nonparametric Assessment of Effectiveness in the Presence of Interactions Between Treatment Options and Cost Using Censored Data**—◆Mohammad H. Rahbar, The University of Texas Health Science Center at Houston; Joseph C. Gardiner, Michigan State University; Md Monir Hossain, The University of Texas Health Science Center at Houston; Hooshang Talebi, University of Isfahan

2:35 p.m. **Multiple Imputation Based on Restricted Mean Models for Censored Survival Data**—◆Lyrica Xiaohong Liu, University of Michigan; Susan Murray, University of Michigan; Alexander Tsodikov, University of Michigan

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2:50 p.m. **Self-Consistent Estimators Based on Doubly Censored Data**—◆Meng Zhao, Mississippi State University; Karunarathna Kulasekera, Clemson University

3:05 p.m. **Testing for Shape-Restricted Hazard Function Using Resampling Techniques**—◆Desale Habtzghi, University of Akron; Somnath Datta, University of Louisville; Mary C. Meyer, Colorado State University

3:20 p.m. **Nonparametric Calibration of Two Common Antimicrobial Susceptibility Tests Based on Interval-Censored Data with Measurement Error**—◆Bruce A. Craig, Purdue University; Xiaoli Qi, Oracle Corporation

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

371 CC-203A

Nonparametric Models I—Contributed

Biometrics Section

Chair(s): Sarah Ratcliffe, University of Pennsylvania

2:05 p.m. **Generalized Functional Latent Feature Models in Colon Carcinogenesis Data**—◆Yehua Li, The University of Georgia; Naisyin Wang, Texas A&M University; Raymond J. Carroll, Texas A&M University

2:20 p.m. **Estimation in Covariate-Adjusted Nonlinear Regression Models**—◆Esra Kurum, Penn State University; Damla Senturk, Penn State University

2:35 p.m. **A B-Spline–Based Semiparametric Nonlinear Mixed Effects Model**—◆Angelo Elmi, University of Pennsylvania; Sarah Ratcliffe, University of Pennsylvania; Wensheng Guo, University of Pennsylvania; Samuel Parry, University of Pennsylvania

2:50 p.m. **Maximum Likelihood Estimation Using Spline Smoothing for the Accelerated Failure Time Model**—◆Ying Ding, University of Michigan; Bin Nan, University of Michigan

3:05 p.m. **Choosing a Variance Function in Semiparametric Analysis of Overdispersed Count Data**—◆Sudhir R. Paul, University of Windsor

3:20 p.m. **Nonparametric Methodology for the Time-Dependent Partial Area Under the ROC Curve**—◆Chin-Tsang Chiang, National Taiwan University

3:35 p.m. **Lack of Fit in Self-Modeling Regression**—◆Lyndia C. Brumback, University of Washington

372 CC-208A

■ Bayesian Methods for Gene Expression and Microarrays—Contributed

Section on Bayesian Statistical Science

Chair(s): Niko Kaciroti, University of Michigan

2:05 p.m. **Modeling the Spatial Structure in Microarray Data**—◆Vinicius D. Mayrink, Duke University; Joseph E. Lucas, Duke Institute for Genome Science and Policy

2:20 p.m. **Bayesian Analysis of iTRAQ Data with Nonrandom Missing: Identification of Differentially Expressed Proteins**—◆Ruiyan Luo, Yale University; Hongyu Zhao, Yale University

2:35 p.m. **A Bayesian Approach to the Quantification of Protein Lysate Arrays**—◆E. Shannon Neeley, Brigham Young University; C. Shane Reese, Brigham Young University

2:50 p.m. **Bayesian Modeling of ChIP-Chip Data via a Modified Ising Model**—◆Qianxing Mo, Memorial Sloan-Kettering Cancer Center; Faming Liang, Texas A&M University

3:05 p.m. **Testing Multiple Hypotheses on a Gene Ontology Graph**—◆Kun Liang, Iowa State University; Dan Nettleton, Iowa State University

3:20 p.m. **Bayesian Hierarchical Model of Gene Expression and Methylation Data Through EM Algorithm**—◆Jaesik Jeong, Indiana University Purdue University Indianapolis

3:35 p.m. **A Modified Statistical Method for Identifying Differentially Expressed Genes**—◆Zhao Chen, Florida Gulf Coast University

373 CC-203B

Genome-Wide Association Studies—Contributed

Biometrics Section

Chair(s): Jichun Xie, University of Pennsylvania

2:05 p.m. **A New Population Size Model for Two-Dimensional Gel Electrophoresis in Proteomics**—◆Changxuan Mao, AT&T Labs - Research

2:20 p.m. **Distributions of Within-Family Genetic Variances**—◆Anne M. Millar, Mount Saint Vincent University

2:35 p.m. **Using Cases from Genome-Wide Association Studies to Strengthen Inference on the Association Between Single Nucleotide Polymorphisms and a Secondary Phenotype**—◆Huilin Li, National Cancer Institute; Mitchell H. Gail, National Cancer Institute

2:50 p.m. **Improving Differential Expression Analysis with the Consideration of Genome-Wide Co-Expression Information**—◆Yinglei Lai, The George Washington University

3:05 p.m. **Gene-Gene Interaction Analysis for the Association Studies via Multifactor Dimensionality Reduction Method**—Taesung Park, Seoul National University; ◆Jaehoon Lee, Seoul National University; Sohee Oh, Seoul National University; Kyunga Kim, Seoul National University; Kwon Min-Seok, Seoul National University

3:20 p.m. **Nonmetric Multidimensional Scaling to Correct for Population Stratification in Association Studies**—◆Kelci J. Miclaus, SAS Institute Inc./North Carolina State University

3:35 p.m. **Determining Chromatin Features from Genome-Wide Tiling Arrays Using Continuous Time Hidden Markov Models**—◆Ritendranath Mitra, The University of North Carolina at Chapel Hill

374 CC-208B

■ Bayesian Learning, Smoothing, and Dimension Reduction—Contributed

Section on Bayesian Statistical Science

Chair(s): Robert B. Gramacy, University of Cambridge

2:05 p.m. **A Bayesian Multiscale Model for Smoothing Images Using the Chinese Restaurant Process**—◆John T. White, North Carolina State University

2:20 p.m. **Bayesian Hazard Rate Estimation and Sufficient Dimension Reduction**—◆Shraddha S. Mehta, Purdue University; Surya T. Tokdar, Carnegie Mellon University; Jayanta K. Ghosh, Purdue University; Bruce A. Craig, Purdue University

2:35 p.m. **Bayesian Principal Component Regression with Data-Driven Components Selection**—◆Liuxia Wang, Sentrana Inc.

2:50 p.m. **Bayesian Adaptive Ensemble Learning**—◆Sounak Chakraborty, University of Missouri-Columbia

3:05 p.m. **Bayesian Flexible Joint Modeling of Survival and Curve Predictors**—◆Xiaohui Wang, The University of Texas Pan American; Veera Baladandayuthapani, The University of Texas M.D. Anderson Cancer Center; Bani K. Mallick, Texas A&M University; Kim-Anh Do, The University of Texas M.D. Anderson Cancer Center

3:20 p.m. **Semiparametric Bayes Local Additive Models for Longitudinal Data**—◆Zhaowei Hua, The University of North Carolina at Chapel Hill; David Dunson, Duke University

3:35 p.m. **Bayesian Adaptive Nearest Neighbor Classification**—◆Ruixin Guo, University of Missouri; Sounak Chakraborty, University of Missouri-Columbia

375 CC-157

Variable Selection and Model Selection—Contributed

IMS

Chair(s): Sijian Wang, University of Wisconsin-Madison

2:05 p.m. **Variable Selection in Multivariate Linear Regression Models with Fewer Observations Than the Dimension**—◆Mariko Yamamura, Kitasato University; Hirokazu Yanagihara, Hiroshima University; Muni S. Srivastava, University of Toronto

2:20 p.m. **Variable Selection for High-Dimensional Data: Sparse MAVE**—◆Qin Wang, The University of Georgia; Xiangrong Yin, The University of Georgia

2:35 p.m. **Distinguishing Between Parametric and Nonparametric Regression Scenarios with a Consistent Model Selection Procedure**—◆Wei Liu, The University of Minnesota-Twin Cities; Yuhong Yang, The University of Minnesota-Twin Cities

2:50 p.m. **Optimal Combining of Regression Procedures**—◆Chihche Lin, Astellas Pharma Global Development, Inc.

3:05 p.m. **A Simple Selection of Smoothing Parameter in Penalized Spline Regression**—◆Hironori Fujisawa, The Institute of Statistical Mathematics

3:20 p.m. **Two-Stage Sensitivity-Based Group Screening in Computer Experiments**—◆Hyejung Moon, The Ohio State University; Thomas Santner, The Ohio State University; Angela Dean, The Ohio State University

3:35 p.m. **Statistical Models for Mechanical Malfunction Detection Based on Vibration Data**—◆Lei Jin, McNeese State University

376 CC-149B

Diffusion Processes Estimation and Financial Markets—Contributed

Business and Economic Statistics Section

Chair(s): Jimmy Efird, UNCG

2:05 p.m. **Parameter Estimation for Multivariate Stochastic Differential Equations**—◆Shan Yang, Iowa State University; Song Xi Chen, Iowa State University

2:20 p.m. **Automatic Time Series Model Selection**—◆Dongik Jang, Seoul National University; Hee-Seok Oh, Seoul National University

2:35 p.m. **Multifrequency Forecasting with SAS High-Performance Forecasting Software**—◆Michele A. Trovero, SAS Institute Inc.; Ed Blair, SAS Institute Inc.; Micheal J. Leonard, SAS Institute Inc.

2:50 p.m. **The Return and Volatility Distribution for the DAX Index**—◆Yasemin Ulu, Temple University

3:05 p.m. **Econometric Analysis via Filtering for Financial Ultra-High Frequency Data**—◆Yong Zeng, University of Missouri-Kansas City

3:20 p.m. **The Stationary, Continuous Time, Discrete Space (SCD) Model with Polya Tree for Micro Data Analysis in Finance**—◆Masaru Hashimoto, Mitsubishi UFJ Securities; Peter Lenk, University of Michigan

3:35 p.m. **Predicting the Present (with Google Trends)**—◆Hyunyoung Choi, Google, Inc.; Hal Varian, Google, Inc.

377 CC-201

■ Application of Innovative Design and Analysis in Clinical Trials—Contributed

Biopharmaceutical Section

Chair(s): Dionne Price, FDA

2:05 p.m. **Primary Efficacy Endpoint in Clinical Trials of Antiepileptic Drugs: Change or Percent Change**—◆Ohidul Siddiqui, FDA

2:20 p.m. **A Methodological Perspective of Predicting Circadian Fluctuations of 24-Hour Ambulatory Blood Pressure: A New Look to ABPM Analyses in Cardiovascular Clinical Trials**—◆D. Das Purkayastha, Novartis Pharmaceuticals

2:35 p.m. **Flexibility and Integrity Planning in Phase IIb, 2-Stage Adaptive Dose-Ranging Acute Migraine Trials**—◆Christopher Assaid, Merck & Co., Inc.; Frank (Xiaoyin) Fan, Merck & Co., Inc.; Joy (Yang) Ge, Merck Research Laboratories

2:50 p.m. **Effects of Sources of Variability on Sample Sizes Required for RCTs, Applied to Trials of Lipid-Altering Therapies on Carotid Artery Intima-Media Thickness (cIMT)**—◆A. Lawrence Gould, Merck Research Laboratories; Joerg Koglin, Merck Research Laboratories; Ray Bain, Merck Research Laboratories; Cathy-Anne Pinto, Merck Research Laboratories; Yale B. Mitchel, Merck Research Laboratories; Richard C. Pasternak, Merck Research Laboratories

3:05 p.m. **Design of Early Treatment Trials in Alzheimer's Disease Through Cohort Enrichment and Surrogate Endpoints**—◆Eric A. Macklin, Massachusetts General Hospital/Harvard Medical School; Deborah L. Blacker, Massachusetts General Hospita/Harvard Medical School; Bradley T. Hyman, Massachusetts General Hospital/Harvard Medical School; Rebecca Betensky, Harvard School of Public Health

3:20 p.m. **The Use of the Third Quartile of Placebo Responses in Assessment of Drug Abuse Potential**—◆Ling Chen, FDA

3:35 p.m. **Modeling Smoking Cessation Data with Alternating States and a Cure Fraction Using Frailty Models**—◆Yimei Li, University of Pennsylvania; Paul E. Wileyto, University of Pennsylvania; Daniel F. Heitjan, University of Pennsylvania

Poster Presentations 2:00 p.m.–3:50 p.m.

378 CC-Hall D

■ Topic-Contributed Oral Poster Presentations: Gene Expression and Analysis—Topic-Contributed

Biometrics Section

Organizer(s): Ji Zhu, University of Michigan

Chair(s): Lara Schmidt, RAND Corporation

Biometrics, bioinformatics, computational biology

01 **Dimension Reduction in the Study of Genetics of Gene Expression**—◆Qiang Guo, Oklahoma State University; Stephanie A. Santorico, University of Colorado

02 **Bayesian Detection of SNP Interactions Associated with Type-1 Diabetes**—◆Jing Zhang, Harvard University; Yu Zhang, Penn State University; Jun S. Liu, Harvard University

03 **Unifying Gene Expression Measures Using Factor Analysis**—◆Xin V. Wang, University of California, Berkeley; Terence P. Speed, University of California, Berkeley

04 **Parameter Selection and Assessment in Prediction**—◆Ian A. Wood, University of Queensland

05 **Methods for Genomic Data Integration**—◆Joseph Beyene, University of Toronto; Elena Parkhomenko, Hospital for Sick Children; Jemila S. Hamid, Hospital for Sick Children; David Tritchler, University of Toronto

06 **Modeling Three-Dimensional Chromosome Structures Using Gene Expression Data**—◆Guanghua Xiao, The University of Texas Southwestern Medical Center at Dallas; Xinlei Wang, Southern Methodist University; Arkady Khodursky, The University of Minnesota

07 **A New Test for Significant Quantitative Trait Loci Effect**—◆Pradeep Singh, Southeast Missouri State University; Dayana Dominic, Southeast Missouri State University; Kuldeep K. Saxena, CCS Haryana Agricultural University

379 CC-Hall D

■ Topic-Contributed Oral Poster Presentations: Microarray Data—Topic-Contributed

Biometrics Section, ENAR, WNAR

Organizer(s): Ji Zhu, University of Michigan

Chair(s): Lara Schmidt, RAND Corporation

Biometrics, bioinformatics, computational biology

08 **Cost-Efficient Designs Based on Linearly Associated Biomarkers**—◆Changxing Ma, State University of New York at Buffalo; Albert Vexler, New York State University at Buffalo; Lili Tian, State University of New York at Buffalo; Enrique Schisterman, National Institutes of Health

09 **Randomized P-Values with Applications in Multiple Testing**—◆Josh Habiger, University of South Carolina; Edsel A. Pena, University of South Carolina

10 **Identifying Important Predictors Using L1 Penalized Models and Random Forests**—◆Kellie J. Archer, Virginia Commonwealth University

11 **Supervised Classification of Microarray Data Using Enriched Ensemble Classifiers**—◆Yung-Seop Lee, Dongguk University; Dhammika Amaratunga, Johnson & Johnson Pharma; Javier Cabrera, Rutgers University

12 **Analysis of MicroRNA Data**—◆Andre A.A. Williams, Virginia Commonwealth University; Kellie J. Archer, Virginia Commonwealth University

13 **Statistical Modeling for Oligonucleotide Arrays Using PCA with Likelihood Approach**—◆Mehdi Maadooliat, Texas A&M University; Jianhua Hu, The University of Texas M.D. Anderson Cancer Center; Jianhua Huang, Texas A&M University

14 **Normalization of Microarray Data Using Multivariate Methods**—◆Mark Reimers, Virginia Commonwealth University

15 **Biomarker Detection Methods When Combining Multiple Multi-Class Microarray Studies**—◆Shu-Ya Lu, University of Pittsburgh

16 **Multivariate Analysis of Variance Test for Gene Set Analysis**—◆Chen-An Tsai, China Medical University; James Chen, National Center for Toxicological Research

17 **Using Exon Microarrays to Predict Breast Cancer Occurrence**—◆William E. Johnson, Brigham Young University; Ying Sun, The University of Utah; Andrea Bild, The University of Utah

18 **A Detection Method for Identifying the Shared Targets of Multiple DNA-Binding Proteins from ChIP-chip Tiling Array Data**—◆Nancy N. Wang, University of California, Berkeley

19 **Support Vector Machines with Disease-Gene-Centric Network Penalty for High-Dimensional Microarray Data**—◆Yanni Zhu, The University of Minnesota; Wei Pan, The University of Minnesota; Xiaotong Shen, The University of Minnesota

20 **A Distribution for p-Values**—◆Daniel Zelterman, Yale University; Chang Yu, Vanderbilt University School of Medicine

21 **Composite Likelihood Modeling of Neighboring Site Correlations of DNA Sequence Substitution Rates**—◆Dirk F. Moore, University of Medicine and Dentistry of New Jersey; Ling Deng, Johnson & Johnson

22 **Using Distributions for p-Values in the Two-Component Mixture Models to Estimate the Proportion from Null**—◆Chang Yu, Vanderbilt University School of Medicine; Daniel Zelterman, Yale University

23 **Bayesian Analysis of Microarray Experiments with Multiple Sources of Variation: A Mixed Model Approach**—◆Cumhur Y. Demirkale, Iowa State University; Dan Nettleton, Iowa State University; Tapabrata Maiti, Michigan State University

380 CC-Hall D

Contributed Oral Poster Presentations—Contributed

Biometrics Section

Chair(s): Lara Schmidt, RAND Corporation

Biometrics, bioinformatics, computational biology

24 **Statistical and Numerical Dependence in Gene Expression Summaries**—◆John R. Stevens, Utah State University; Gabriel Nicholas, University of Wisconsin-Madison

Reliability and survival modeling, risk analysis

25 **Real-Time Evaluation of Incubation Period Distributions in an Epidemic**—◆Nicholas G. Reich, Johns Hopkins Bloomberg School of Public Health; Ron Brookmeyer, Princeton University

Clinical Trial Designs

26 **Correction for Two-Group Sample Size Calculation with Uncertain Group Membership**—◆Hung-Mo Lin, Mt. Sinai School of Medicine; Shannon K. McClintock, CDC; John M. Williamson, CDC

Biometrics, bioinformatics, computational biology

27 **Sample Size Calculation for a Mixture of Discrete and Continuous Endpoints**—◆Yolanda Munoz Maldonado, Michigan Technological University; Sarah M. Baraniuk, The University of Texas Health Science Center at Houston; Lemuel A. Moye, The University of Texas Health Science Center at Houston

Clinical Trial Designs

28 **Sample Size Re-Estimation for Poisson Distributed Variables with Partial Follow-Up**—◆Jeannette Y. Lee, University of Arkansas for Medical Sciences; Page C. Moore, University of Arkansas for Medical Sciences; Shelly Lensing, University of Arkansas for Medical Sciences

Health policy, epidemiology, public health

29 **Item Development from the Promis Physical Functioning Scale**—◆Man Hung, The University of Utah; Charles Saltzman, The University of Utah; Daniel Clegg, The University of Utah; Tom Greene, The University of Utah

Biometrics, bioinformatics, computational biology

30 **Evidence That Oligonucleotide Expression Values Are Not Normally Distributed**—◆Jason Wilson, Biola University

31 **From Constructing the Age-Specific Reference Range to the Disease Outcome Study**—◆Chong Y. Fu, National Yang Ming University; Ya-Wen Yang, National Yang Ming University; Hsin-Yi Huang, National Yang Ming University; Shih-Hua Liu, National Yunlin University of Science & Technology

Mathematical statistics, distribution theory, robust statistics

32 An Inequality About Principal Component and Regression—◆Andreas A. Artemiou, Penn State University; Bing Li, Penn State University

Health policy, epidemiology, public health

33 Efficient Sampling in Case-Control Studies—◆Ashlyn H. Munson, Colorado School of Mines; William Navidi, Colorado School of Mines

Biometrics, bioinformatics, computational biology

34 Age Estimation Techniques in Facial Recognition—◆Fernando Schiefelbein, The University of North Carolina at Wilmington

Health policy, epidemiology, public health

35 Estimating Transmission Parameters for Infectious Diseases Using Social Contact Data—◆Niel Hens, Hasselt University; Nele Goeyvaerts, Hasselt University; Benson Ogunjimi, University of Antwerp; Olivier Lejeune, University of Antwerp; Marc Aerts, Hasselt University; Philippe Beutels, University of Antwerp

Biometrics, bioinformatics, computational biology

36 Multivariate Analysis of EEG Sleep Patterns of Neonates—◆Alexandra Piryatinska, San Francisco State University

Health policy, epidemiology, public health

37 Frequency Matching and Balance in Case-Control Studies: Quantifying the Efficiency Loss of Robust but Suboptimal Design Strategies—◆Jennifer L. Wilcock, University of Auckland; Alan J. Lee, University of Auckland

Mathematical statistics, distribution theory, robust statistics

38 Two-Sided Hypothesis Testing Based on Pool Screening with Unequal Pool Sizes—◆Hongjiang Gao, The University of Alabama at Birmingham; Inmaculada Aban, The University of Alabama at Birmingham; Charles R. Katholi, The University of Alabama at Birmingham

Computational statistics, numerical methods, simulation

39 Three Algorithms and SAS Macros for Estimating Power and Sample Size for Logistic Models with One or More Independent Variables of Interest in the Presence of Covariates—◆D. Keith Williams, University of Arkansas for Medical Sciences; Zoran Bursac, University of Arkansas for Medical Sciences; Terri Wooten, University of Arkansas for Medical Sciences

Clinical trials, drug discovery

40 Causal Inference in a Randomized Trial with Noncompliance and Administrative Censoring—◆Hui Nie, University of Pennsylvania

Incomplete data analysis, imputation methods

41 Statistical Methods to Account for Data Errors Discovered from an Audit—◆Bryan E. Shepherd, Vanderbilt University; Chang Yu, Vanderbilt University School of Medicine

Biometrics, bioinformatics, computational biology

42 Logit-Based Confidence Intervals for Single Capture-Recapture Estimation—◆Mauricio Sadinle, Universidad Nacional de Colombia

43 Peptide/Protein Identification Based on Clustered Tandem Mass Spectrometry Data and Bayesian Model Selection—◆Soyoung Ryu, University of Washington; Vladimir Minin, University of Washington; Dave Goodlett, University of Washington

Longitudinal data, repeated measurements, and meta-analysis

44 A Hot-Deck Multiple Imputation Procedure for Gaps in Longitudinal Event Histories Based on Multivariate Predictive Mean Matching—◆Chia-Ning Wang, University of Michigan; Roderick J.A. Little, University of Michigan; Bin Nan, University of Michigan; Sioban Harlow, University of Michigan

45 Two-Sample Test of Longitudinal Data with Unequal Observation and Termination Times Based on a Marked Point Process—◆Jinheum Kim, University of Suwon; Chung Mo Nam, Yonsei University; Yang-Jin Kim, Ewha Woman's University

Health policy, epidemiology, public health

46 Unconditional Exact Test for Comparison of Two Poisson Means—◆Huey-Miin Hsueh, National Chengchi University; MingTe Liu, Tatung Institute of Commerce and Technology

Incomplete data analysis, imputation methods

47 The Effect of Imputation Misspecification for Incomplete Predictor Time-to-Event Regression Models—James Henle, Smith College; ◆Portia Parker, Smith College; Nicholas Horton, Smith College; Shannon McDonough, Smith College

Clinical trials, drug discovery

48 The Use and Abuse of Multiple Outcomes in Randomized Controlled Trials of Depression—◆Kristin M. Tyler, Smith College; Nicholas Horton, Smith College

Longitudinal data, repeated measurements, and meta-analysis

49 Latent Class-Profile Analysis for Modeling Stage-Sequential Processes of Drug-Taking Behaviors—◆Hwan Chung, Michigan State University

50 A Markov Transition Model to Dementia with Death as a Competing Event—◆Liou Xu, University of Kentucky; David Snowdon, University of Kentucky; Richard J. Kryscio, University of Kentucky

Linear models, GLMs, parametric methods

51 Sample Size for Testing Interaction Hypothesis in the Cox Regression Model—◆Abu Minhajuddin, The University of Texas Southwestern Medical Center at Dallas; Xian-Jin Xie, The University of Texas Southwestern Medical Center at Dallas

Biometrics, bioinformatics, computational biology

52 An Exact Test to Detect Geographic Aggregations of Events—◆Rhonda J. Rosychuk, University of Alberta; Jason L. Stuber, Mathematical Sciences Inc.

Longitudinal data, repeated measurements, and meta-analysis

53 Three-Level Mixed Model with Heterogeneous Within-Subject Variances—◆Sharada Modur, The Ohio State University; Elizabeth Stasny, The Ohio State University; Christopher Hans, The Ohio State University

Clinical trials, drug discovery

54 Achieving the Benefits of an Internal Pilot with Interim Analysis While Controlling Type I Errors for Gaussian Linear Models—◆John A. Kairalla, University of Florida; Keith E. Muller, University of Florida; Christopher S. Coffey, The University of Alabama at Birmingham

55 Adaptive Prediction in Genomic Signatures--Based Clinical Trials—◆Yang Xie, The University of Texas Southwestern Medical Center at Dallas; Guanghua Xiao, The University of Texas Southwestern Medical Center at Dallas; Chul W. Ahn, The University of Texas Southwestern Medical Center at Dallas; Luc Girard, The University of Texas Southwestern Medical Center at Dallas; John Minna, The University of Texas Southwestern Medical Center at Dallas

Biometrics, bioinformatics, computational biology

56 Informative Retesting—◆Christopher R. Bilder, University of Nebraska-Lincoln; Joshua M. Tebbs, University of South Carolina; Peng Chen, Takeda Pharmaceuticals

Longitudinal data, repeated measurements, and meta-analysis

57 Multiple Comparisons of Mean Response Profiles in Longitudinal Studies—◆Ramu Sudhagoni, South Dakota State University; Gemechis Djira, South Dakota State University

Spatial statistics, spatio-temporal modeling, GIS

58 Hierarchical Dynamic Modeling of Spatial-Temporal Binary Data—◆Yanbing Zheng, University of Kentucky; Jun Zhu, University of Wisconsin-Madison; Brian Aukema, Canadian Forest Service/University of Northern British Columbia

381 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

Section on Quality and Productivity

Chair(s): Lara Schmidt, RAND Corporation

QC, operation research, risk assessment

59 Decomposition of a Test Statistic Used in Monitoring Process Variability—◆John C. Young, Retired; Robert L. Mason, Southwest Research Institute; Youn-Min Chou, The University of Texas at San Antonio

60 Repeated Classification Subject to Errors in Process Control—◆Michelle L. Smith, Eastern Kentucky University; William S. Griffith, University of Kentucky

Bootstrap, resampling methods

61 Using the Bootstrap for Analysis Unreplicated Two-Level Designs—◆Maher B. Qumsiyeh, University of Dayton; Gerald J. Shaughnessy, University of Dayton

QC, operation research, risk assessment

62 A Double Multivariate Exponentially Weighted Moving Average Control Chart—Jay Schaffer, University of Northern Colorado; ◆Saad Alkahtani, University of Northern Colorado

63 Determining the Factors That Affect the Fuel Consumption in F-4 Aircrafts by 2 ^ k Experiments and Taguchi Method—◆Berna Yazici, Anadolu University; Senol Kasap, Air Force Command

Bootstrap, resampling methods

64 Heteroscedasticity and Non-Normality in Regression: A Parametric Approach—◆Fassil Nebebe, Concordia University

Sampling and survey methodology

65 Data Security for a CAPI Survey—◆Martin Wulfe, Macro International, Inc.

382 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

Section on Risk Analysis

Chair(s): Lara Schmidt, RAND Corporation

Health policy, epidemiology, public health

66 Large-Scale Covariates Increase Prediction Accuracy of Health-Related Risk Models—◆Demosthenes Panagiotakos, Harokopio University; Vasileios Maroulas, The University of Minnesota; Anthony P. Fitzgerald, University College Cork

Reliability and survival modeling, risk analysis

67 Shelf Life Assessment Based on Threshold Parameter Estimation—◆Michael E. Tarter, University of California, Berkeley; Guangwei Huang, Technical and Scientific Affairs Almond Board of California

Business, financial, and marketing statistics

68 Comparing the Upperbounds for the Tail of the Compound Negative Binomial Distribution—◆Kumer P. Das, Lamar University

Health policy, epidemiology, public health

69 Bayesian Model-Averaging Approach in Health Effects Studies: Sensitivity Analyses Using PM10 and Cardiopulmonary Hospital Admissions in Allegheny County, PA, and Simulated Data—◆Ya-Hsiu Chuang, University of Pittsburgh; Sati Mazumdar, University of Pittsburgh

Reliability and survival modeling, risk analysis

70 Cox Proportional Hazards Model with Brownian-Like Predictor—◆Yulei Zhang, Columbia University; Ian McKeague, Columbia University

Applications and case studies

71 Multivariate Modeling of Wind Speed Maxima—◆Pál Rakonczai, Lund Institute of Technology; Nader Tajvidi, Lund Institute of Technology; András Zempléni, Eötvös Loránd University

Semiparametric and nonparametric methods

72 The Use of Semiparametric Regression in Automobile Insurance Pricing—◆Wehrli E. Perez Caicer, Ecuadorean Statistical Society

Biometrics, bioinformatics, computational biology

73 Variable Selection in Competing Risks Using the L1 Penalized Cox Model—◆Xiangrong Kong, Johns Hopkins University; Kellie J. Archer, Virginia Commonwealth University

383 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

Section on Physical and Engineering Sciences

Chair(s): Lara Schmidt, RAND Corporation

Linear models, GLMs, parametric methods

74 On the Bivariate Negative Binomial Regression Model—◆K. Felix Famoye, Central Michigan University

Reliability and survival modeling, risk analysis

75 Multiple Comparisons for Weibull Shape Parameters and Percentiles—◆John McCool, Penn State University-Great Valley

Time series, wavelet analysis, signal processing

76 A Multivariate Time Series Analysis for the Climate Modeling: The Solar-Terrestrial Relation—◆Elizabeth Martínez-Gómez, National Autonomous University of Mexico; Victor M. Guerrero, Instituto Tecnológico Autónomo de México; Francisco Estrada, Centro de Ciencias de la Atmósfera

QC, operation research, risk assessment

77 The Use of T-Squared Control Charts for Process-Driven Studies—◆Maria Weese, The University of Tennessee

Engineering and physical sciences, chemometrics

78 Inference with Censored Degradation Data—◆Yang Yang, University of Michigan; Vijay Nair, University of Michigan

79 Statistical Analysis of Microbial Diversity of Anaerobic Granules in Starch Wastewater Treatment Plant—◆Wei Wei, University of Puerto Rico-Mayaguez; Bo Hu, University of Puerto Rico-Mayaguez

Probability, stochastic processes

80 Explicit and Efficient Estimation for a Flexible Class of Stochastic Differential Equation Models—◆Julie L. Forman, University of Copenhagen; Michael Sørensen, University of Copenhagen

Time series, wavelet analysis, signal processing

81 Prediction Algorithm Using a Widely Lineal Processing—◆Rosa M. Fernandez-Alcala, University of Jaen; Javier Moreno-Kayser, University of Jaen; Jesus Navarro-Moreno, University of Jaen; Juan C. Ruiz-Molina, University of Jaen

Engineering and physical sciences, chemometrics

82 Statistical Behavior of Pedestrians Under Panic—◆Guillermo Frank, University of Buenos Aires; Claudio Dorso, University of Buenos Aires

Spatial statistics, spatio-temporal modeling, GIS

83 Evaluation of Procedures to Estimate Unconventional Natural Gas Resources When Spatial Trends Are Present—◆Emil D. Attanasi, U.S. Geological Survey; Timothy C. Coburn, Abilene Christian University

Computational statistics, numerical methods, simulation

84 Non-Negative Matrix Factorization: Estimation of the Number of Components and the Effect of Normalization—◆Jose Maisog, Georgetown University; Karthik Devarajan, Fox Chase Cancer Center; S. Stanley Young, National Institute of Statistical Sciences; Paul Fogel, Independent Consultant; George Luta, Georgetown University

Experimental design

85 Sequential Latin Hypercube Designs for Computer Experiments—◆Jun Li, University of Wisconsin-Madison; Zhiguang Qian, University of Wisconsin-Madison

Time series, wavelet analysis, signal processing

86 Statistical Analysis of Eye Movement Data—◆Ritaja Sur, University of Maryland; Benjamin Kedem, University of Maryland

Engineering and physical sciences, chemometrics

87 Bayesian Estimation of Vortex Merger Parameters—◆Neil Martinsen-Burrell, Wartburg College

88 A Discussion and Application of Discriminant Analysis Theory—◆Takisha R. Harrison, Alabama A&M University; Enoch C. Temple, Alabama A&M University

Invited Sessions 4:00 p.m.–5:50 p.m.

384 CC-Ballroom A-B

Deming Lecture—Invited

ASA, ENAR, IMS, SSC, WNAR, International Chinese Statistical Association, International Indian Statistical Association, Deming Lectureship Committee

Organizer(s): Nicholas I. Fisher, University of Sydney

Chair(s): John M. Bushery, U.S. Census Bureau

4:05 p.m. Deming Today—◆J. Stuart Hunter, Princeton University

5:30 p.m. Floor Discussion

385 CC-202A

Wald Lecture I—Invited

IMS

Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill

Chair(s): J. Steve Marron, The University of North Carolina at Chapel Hill

4:05 p.m. Fast Sparse Regression and Classification—◆Jerome H. Friedman, Stanford University

5:30 p.m. Floor Discussion

Invited Sessions 8:00 p.m.–9:30 p.m.

386 CC-Ballroom A-B

✪ ASA Presidential Address and Awards—Invited

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

Organizer(s): Sally C. Morton, RTI International

Chair(s): Peter A. Lachenbruch, Oregon State University

8:00 p.m. Presentation of Awards—◆Peter A. Lachenbruch, Oregon State University

8:30 p.m. Remarks from the 104th President of the Royal Statistical Society—◆David J. Hand, Imperial College

8:40 p.m. Statistics: From Evidence to Policy—◆Sally C. Morton, RTI International

9:10 p.m. Presentation of Founders Awards and New ASA Fellows—◆Peter A. Lachenbruch, Oregon State University

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

WEDNESDAY, AUGUST 5

Tours

TR12 - Welcome to Washington Tour
9:00 a.m.–1:00 p.m.

TR13 - The Neighborhoods of Washington, DC: Not Just the Nation's Capital City
2:00 p.m.–6:00 p.m.

TR14 - Monuments by Moonlight
8:00 p.m.–11:00 p.m.

Committee/Business Meetings & Other Activities

7:00 a.m.–8:00 a.m. RH-Meeting Room 6
Conference on Applied Statistics Planning Committee
Chair(s): Nathaniel Schenker, National Center for Health Statistics

7:00 a.m.–8:30 a.m. CC-302
Committee of Representatives to AAAS Business Meeting
Chair(s): Michael P. Cohen, NORC at the University of Chicago

7:00 a.m.–8:30 a.m. CC-303
Committee on International Relations in Statistics Meeting (closed)
Chair(s): Demissie Alemayehu, Pfizer Inc.

7:00 a.m.–8:30 a.m. RH-Meeting Room 4
Committee on Privacy and Confidentiality Annual Meeting
Chair(s): Jerome Reiter, Duke University; Jerry Reiter, Duke University

7:00 a.m.–8:30 a.m. RH-Meeting Room 7
Scientific and Public Affairs Advisory Committee Meeting
Chair(s): David Marker, Westat

7:00 a.m.–8:30 a.m. RH-Meeting Room 8
Committee on Outreach Education Business Meeting (closed)
Chair(s): Wendy Martinez, U.S. Department of Defense

7:00 a.m.–6:00 p.m. CC-154A
Speaker Management Room

7:00 a.m.–8:00 p.m. CC-East Registration
Cyber Center

7:30 a.m.–4:30 p.m. CC-East Registration
JSM Main Registration

7:30 a.m.–4:30 p.m. CC-East Registration
ASA Membership/Special Assistance/Press Desk

8:00 a.m.–2:00 p.m. CC-Hall D
Exhibitor Lounge

8:00 a.m.–2:30 p.m. CC-Hall D
Career Placement Service

8:30 a.m.–9:30 a.m. RH-Meeting Room 2
Mu Sigma Rho Business Meeting
Organizer(s): Christine S. Franklin, The University of Georgia

9:00 a.m.–11:00 a.m. RH-Meeting Room 5
COS Publications, Editors and Webmasters
Chair(s): Karen Copeland, Boulder Statitstics

9:00 a.m.–2:30 p.m. CC-Hall D
American Statistical Association Booth #101

9:00 a.m.–2:30 p.m. CC-Hall D
EXPO 2009

9:00 a.m.–5:30 p.m. CC-East Registration
ASA Marketplace

10:30 a.m.–11:30 a.m. RH-Meeting Room 4
Advisory Committee on Continuing Education CE Course Evaluation (closed)
Chair(s): Xiaoming Sheng, University of Utah

11:00 a.m.–12:00 p.m. RH-Meeting Room 2
STATCOM Open Introductory Meeting
Organizer(s): Allison Cummins,

11:30 a.m.–2:00 p.m. CC-302
Committee on Meetings (closed)
Chair(s): Xiao-Li Meng, Harvard University

12:00 p.m.–2:30 p.m. RH-Meeting Room 7
ENAR 2010 Spring Meeting Planning Committee Lunch (by invitation only)
Organizer(s): Kathy Hoskins, ENAR

12:30 p.m.–2:00 p.m. CC-303
Noether Luncheon
Chair(s): Carlos J. Morales, Wellington Management Company, LLP

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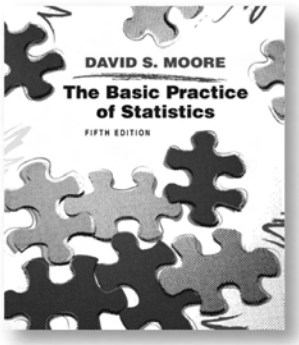
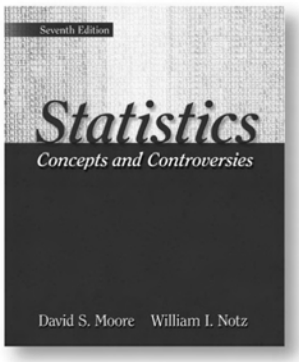
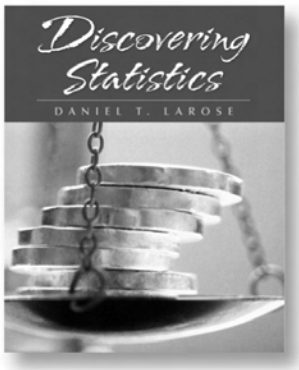


New!
THE BASIC PRACTICE OF STATISTICS, FIFTH EDITION
David S. Moore

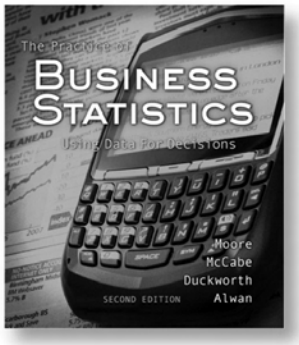


New!
STATISTICS: CONCEPTS AND CONTROVERSIES, SEVENTH EDITION
David S. Moore
William Notz



New!
DISCOVERING STATISTICS
Daniel Larose

Preliminary Edition!
INTRODUCTORY STATISTICS: A PROBLEM-SOLVING APPROACH
Stephen Kokoska



THE PRACTICE OF BUSINESS STATISTICS, SECOND EDITION
David S. Moore
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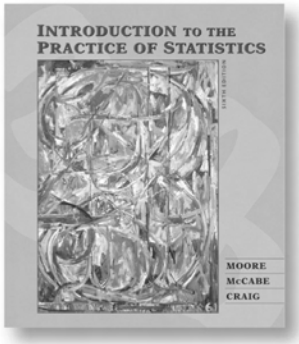
William M. Duckworth III
Layth Alwan



INTRODUCTION TO THE PRACTICE OF STATISTICS, SIXTH EDITION
David S. Moore
George P. McCabe
Bruce A. Craig

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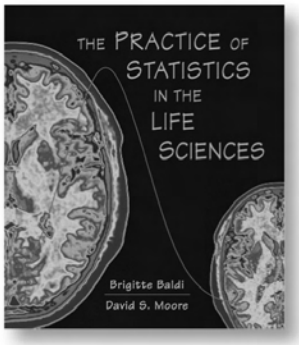

THE PRACTICE OF STATISTICS IN THE LIFE SCIENCES
Brigitte Baldi
David S. Moore

Stop by the W. H. Freeman exhibit at booth #401 for more about these titles and a demo of StatsPortal

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✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

12:30 p.m.–2:00 p.m. RH-Meeting Room 8
NISS/ASA Writing Workshop Lunch
Chair(s): Keith Crank, ASA

12:30 p.m.–2:30 p.m. CC-157
Section for Statistical Programmers and Analysts Mixer and Business Meeting
Chair(s): Steve Yao, Amgen, Inc.

1:00 p.m.–6:30 p.m. CC-East Registration
JSM Luggage Storage

2:30 p.m.–9:00 p.m. CC-Hall D
Exhibitor Move-Out

4:00 p.m.–5:30 p.m. RH-Meeting Room 2
STATCOM Annual Business Meeting (closed)
Organizer(s): Meghan Honerlaw, Network Outreach Coordinator

6:00 p.m.–7:00 p.m. CC-143A
International Chinese Statistical Association (ICSA) Annual Members Meeting
Organizer(s): Ming-Hui Chen, University of Connecticut

6:00 p.m.–7:30 p.m. RH-Meeting Room 2
Section on Statistical Education Business Meeting
Chair(s): Robert delMas, The University of Minnesota

6:00 p.m.–7:30 p.m.
2009 JSM Program Committee/ACCE/Local Area Committee Appreciation Reception (by invitation only)

6:00 p.m.–7:30 p.m. RH-Meeting Room 4
Section on Survey Research Methods Business Meeting
Chair(s): Roderick J.A. Little, University of Michigan

6:30 p.m.–8:00 p.m. RH-Meeting Room 5
University of Maryland College Park Statistical Alumni Reception
Organizer(s): Eric V. Slud, University of Maryland College park

Continuing Education (Fee Events)

CE_30T
Methods for Multiple Imputation with SOLAS for Missing Data Analysis 3.2
8:00 a.m.–9:45 a.m. RH-Meeting Room 16
ASA
Instructor(s): Brian Sullivan, Statistical Solutions

CE_31T
Survey Data Analysis with Stata
8:00 a.m.–9:45 a.m. RH-Meeting Room 15
ASA
Instructor(s): Jeffrey Pitblado, StataCorp LP

CE_32T
Introduction to Bayesian Analysis Using SAS Software
8:00 a.m.–9:45 a.m. RH-Meeting Rooms 12, 13, 14
ASA
Instructor(s): Fang Chen, SAS Institute Inc.

CE_33T
Meta-Analysis: Concepts and Applications
10:00 a.m.–11:45 a.m. RH-Meeting Room 16
ASA
Instructor(s): Michael Borenstein, Biostat, Inc.; Hannah R. Rothstein, Biostat, Inc.

CE_34T
Multilevel and Mixed Models in Stata
10:00 a.m.–11:45 a.m. RH-Meeting Room 15
ASA
Instructor(s): Roberto G. Gutierrez, StataCorp LP

CE_35T
Introduction to the MCMC Procedure in SAS/STAT Software
10:00 a.m.–11:45 a.m. RH-Meeting Rooms 12, 13, 14
ASA
Instructor(s): Fang Chen, SAS Institute Inc.

CE_36T
Determining Sample Size and Power in Study Planning: nQuery Advisor 7.0

1:00 p.m.–2:45 p.m. RH-Meeting Room 16
ASA
Instructor(s): Janet D. Elashoff, Statistical Solutions; Brian Sullivan, Statistical Solutions

CE_37T
Introduction to CART: Data Mining with Decision Trees
1:00 p.m.–2:45 p.m. RH-Meeting Room 15
ASA
Instructor(s): Mikhail Golovnya, Salford Systems

CE_38T
Group Sequential Analysis Using SAS Software
1:00 p.m.–2:45 p.m. RH-Meeting Rooms 12, 13, 14
ASA
Instructor(s): Yang Yuan, SAS Institute Inc.

CE_39T
Advances in Data Mining: Jerome Friedman's TreeNet/ MART and Leo Breiman's Random Forests
3:00 p.m.–4:45 p.m. RH-Meeting Room 15
ASA
Instructor(s): Mikhail Golovnya, Salford Systems

CE_40T
Using Replication Methods to Analyze Survey Data in SAS Software
3:00 p.m.–4:45 p.m. RH-Meeting Rooms 12, 13, 14
ASA
Instructor(s): Anthony An, SAS Institute Inc.

CE_41T
Introduction to SizÆ: Cytel's New Software Package for Clinical Trial Design and Analysis
3:00 p.m.–4:45 p.m. RH-Meeting Room 16
ASA
Instructor(s): Yannis Jemiai, Cytel, Inc.

Roundtables with Coffee 7:00 a.m.–8:15 a.m.

387 CC-Ballroom South Prefunction
Section for Statistical Programmers and Analysts Roundtables with Coffee (fee event)
Section for Statistical Programmers and Analysts
Organizer(s): Chengying Wu, sanofi-aventis

WL01 Patterns of Data Manipulation—◆Hadley Wickham, Rice University
WL02 Data Management and Analytical Issues for Health Service Research Using Health Insurance Claim Data—◆Yong-Fang Kuo, The University of Texas Medical Branch
WL03 A Nonrandom Walk Through Mentoring Programs—◆Monica Johnston, Mostly Math
WL04 Publication of Statistical Software as Open Source—◆Werner Wothke, American Institutes for Research

388 CC-Ballroom South Prefunction
Section on Government Statistics Roundtable with Coffee (fee event)
Section on Government Statistics
Organizer(s): Lisa Blumerman, U.S. Census Bureau

WL05 The 2010 Census Communications Campaign: Research That Feeds the Campaign—◆Nancy Bates, U.S. Census Bureau

389 CC-Ballroom South Prefunction
Section on Statistical Education Roundtables with Coffee (fee event)
Section on Statistical Education
Organizer(s): Tisha L. Hooks, Winona State University

WL06 Challenges in Teaching Statistics to Future Mathematics Teachers—◆John R. Stevens, Utah State University

390 CC-Ballroom South Prefunction
Section on Teaching Statistics in the Health Sciences Roundtable with Coffee (fee event)
Section on Teaching of Statistics in the Health Sciences
Organizer(s): Carol Bigelow, University of Massachusetts Amherst

WL07 When Less Is More: What Are the Fundamental Statistical Concepts Health Science Students Need?—◆Ralph M. Turner, University of the Sciences

391 CC-Ballroom South Prefunction
Section on Statistics and the Environment Roundtable with Coffee (fee event)
Section on Statistics and the Environment
Organizer(s): Petrutza Caragea, Iowa State University

WL08 Geography, Space, and Time in Ecology and Health—◆Lance A. Waller, Emory University

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

392 CC-202A
Late-Breaking Session II: The Role of Statistics in the Nation's Financial Recovery and Stability—Other
ASA, ENAR, IMS, WNAR, SSC, International Chinese Statistical Association, International Indian Statistical Association
Organizer(s): Katherine Ensor, ASA
Chair(s): Alan F. Karr, National Institute of Statistical Sciences

8:35 a.m. The Financial Crisis: Our Share of the Blame—◆Don McLeish, Center for Advanced Studies
9:00 a.m. Practical Challenges in Operational Risk Modeling: A Regulator's Point of View—◆Emre Balta, Office of the Comptroller of the Currency (OCC)
9:25 a.m. Constant Proportion, Zeno's Paradox, and the Spectacular Financial Crisis of 2008—◆Donald Richards, Penn State University

9:50 a.m. **Panel Discussion: The Role of Statistics in the Nation's Financial Health**—◆Nicholas Kiefer, Cornell University

10:15 a.m. **Floor Discussion**

Invited Sessions 8:30 a.m.–10:20 a.m.

393 CC-206

Statistical Challenges in Personalized Medicine and Genotype-Guided Clinical Trials—Invited

Biometrics Section, International Chinese Statistical Association, Biopharmaceutical Section

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

8:35 a.m. **Design Issues in the NHLBI Randomized Trial of Genotype-Guided Dosing of Warfarin Therapy (COAG)**—◆Jonas H. Ellenberg, University of Pennsylvania; Jungnam Joo, National Heart, Lung, and Blood Institute; Nancy Geller, National Heart, Lung, and Blood Institute; Yves Rosenberg, National Heart, Lung, and Blood Institute; Stephen Kimmel, University of Pennsylvania; Benjamin French, University of Pennsylvania

9:05 a.m. **Genotype-Stratified Clinical Trials in the Asthma Clinical Research Network**—◆Vernon M. Chinchilli, Penn State University

9:35 a.m. **Rationale, Study Design, and Longitudinal Analysis of the NHLBI Cardiogene Study: Genomics of In-Stent Restenosis**—◆Jungnam Joo, National Heart, Lung, and Blood Institute; Santhi K. Ganesh, National Heart, Lung, and Blood Institute; Gang Zheng, National Heart, Lung, and Blood Institute; Elizabeth G. Nabel, National Heart, Lung, and Blood Institute; Nancy Geller, National Heart, Lung, and Blood Institute

9:50 a.m. Disc: Sue-Jane Wang, FDA

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

394 CC-204C

The 2010 Census: Status of the Program, Integrated Communications, Evaluations, and Coverage Measurement—Invited

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

Organizer(s): Daniel H. Weinberg, U.S. Census Bureau
Chair(s): Daniel H. Weinberg, U.S. Census Bureau

8:35 a.m. **Evaluating the 2010 Census**—◆Jennifer W. Reichert, U.S. Census Bureau

9:00 a.m. **Measuring Coverage in the 2010 Census**—◆Patrick J. Cantwell, U.S. Census Bureau; Donna Kostanich, U.S. Census Bureau; Magdalena Ramos, U.S. Census Bureau

9:25 a.m. **An Integrated Approach to Communications**—Kendall Johnson, U.S. Census Bureau; ◆Tasha Boone, U.S. Census Bureau

9:50 a.m. **An Overview of Progress on the 2010 Census**—◆Arnold A. Jackson, U.S. Census Bureau

10:15 a.m. **Floor Discussion**

395 CC-155

Computational Aspects of Bayesian Shrinkage—Invited

Section on Statistical Computing, Section on Bayesian Statistical Science, Interface Foundation of North America

Organizer(s): Christopher Hans, The Ohio State University
Chair(s): Christopher Hans, The Ohio State University

8:35 a.m. **Shrinkage in the Evaluation of Fielding in Major League Baseball**—◆Shane Jensen, The Wharton School; Kenneth Shirley, Columbia University; Abraham Wyner, The Wharton School

9:05 a.m. **Shrinkage Regression for Multivariate Inference with Missing Data with an Application to Portfolio Balancing**—◆Robert B. Gramacy, University of Cambridge

9:35 a.m. **The Horseshoe Approach to Shrinkage**—◆Carlos M. Carvalho, The University of Chicago; Nicholas Polson, The University of Chicago; James Scott, Duke University

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

396 CC-150A

■ Internet Applications of Bayesian Statistics—Invited

Section on Statistics and Marketing, Section on Bayesian Statistical Science, Interface Foundation of North America

Organizer(s): Paul Dagum, MarkMonitor
Chair(s): Rene Schaub, Business.com

8:35 a.m. **Modeling Competition Amongst Web Sites Using Clickstream Data**—◆Alan Montgomery, Carnegie Mellon University

9:00 a.m. **Learning and Harnessing Graphical Models in Online Applications**—◆Eric Horvitz, Microsoft Research

9:25 a.m. **Bayesian Statistics in Internet Advertising**—◆Paul Dagum, MarkMonitor

9:50 a.m. Disc: Tim Gilbride, Mendoza College of Business

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

397 CC-101

■ ✪ Quantitative Methods for Combating Bioterrorism—Invited

Section on Statistics in Defense and National Security, Section on Government Statistics, Interface Foundation of North America

Organizer(s): Alyson Wilson, Iowa State University

Chair(s): Alyson Wilson, Iowa State University

8:35 a.m. **What's Wrong with Hazard-Ranking Systems?**—◆Louis A. Cox, Cox Associates

9:05 a.m. **Computer Model Validation: Issues with BTRA**—◆David Banks, Duke University

9:35 a.m. **Trilevel Optimization of Terrorism Risk Management**—◆Gerald G. Brown, Naval Postgraduate School; Matthew Carlyle, Naval Postgraduate School; Kevin Wood, Naval Postgraduate School

Disc: Neal Glassman, National Research Council

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

398 CC-159B

■ ✪ Digital Governance, Hotspot Geoinformatics, Knowledge Discovery, and Public Policy—Invited

Environmental and Ecological Statistics, Section on Government Statistics, Interface Foundation of North America

Organizer(s): Ganapati P. Patil, Penn State University

Chair(s): Ganapati P. Patil, Penn State University

8:35 a.m. **Finding Spatial Clusters in Maps Equipped with Environmentally Defined Structures with Disease Policy Case Studies**—◆Luiz H. Duczmal, Federal University of Minas Gerais; Ricardo Tavares, Federal University of Ouro Preto; Ganapati P. Patil, Penn State University; Andre L.F. Cançado, Federal University of Minas Gerais

8:55 a.m. **Hiroshima-Nagasaki Atomic Bombing Radiation Effects Hotspot Biogeoinformatics and Public Health Policy**—◆Harry Cullings, Radiation Effects Research Foundation; Geoffrey Jacquez, BioMedware; Andrew B. Lawson, Medical University of South Carolina; Ganapati P. Patil, Penn State University

9:15 a.m. **Digital Governance and Hotspot Geoinformatics of Detection and Prioritization with Environmental Policy Case Studies**—◆Sharad Joshi, Slippery Rock University; Ganapati P. Patil, Penn State University; Rainer Bruggemann, Leibniz Institute of Freshwater Ecology and Inland Fisheries; Rajesh E. Koli, Moolji Jaitha College; Sanjay P. Pawde, Moolji Jaitha College

9:35 a.m. Disc: N. Phillip Ross, Radiation Effects Research Foundation

9:45 a.m. Disc: Christopher Portier, National Institute of Environmental Health Sciences

9:55 a.m. Disc: Lan Huang, National Cancer Institute

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

399 CC-150B

■ New Statistical Strategies for Exploring Massive Complex Data Sets in Science and Technology—Invited

General Methodology, Section on Bayesian Statistical Science, Interface Foundation of North America

Organizer(s): Mayetri Gupta, Boston University

Chair(s): Mayetri Gupta, Boston University

8:35 a.m. **Genome-Wide Association Studies in a Founder Population**—◆Chiara Sabatti, University of California, Los Angeles

9:00 a.m. **Dimension Augmenting Vector Machine: A New General Classifier with Flexible Feature Selection in High Dimension**—◆Samiran Ghosh, Indiana University Purdue University Indianapolis

9:25 a.m. **Bayesian Structural Learning and Estimation in Gaussian Graphical Models and Hierarchical Log-Linear Models**—◆Adrian Dobra, University of Washington

9:50 a.m. **Bayesian Models for Complex Genetic Traits**—◆Paola Sebastiani, Boston University

10:15 a.m. **Floor Discussion**

400 CC-208A

■ ✪ Statistical Challenges in Mechanistic Modeling of Complex Biological Processes Using Differential Equations—Invited

ENAR, International Indian Statistical Association

Organizer(s): Hulin Wu, University of Rochester

Chair(s): Hua Liang, University of Rochester

8:35 a.m. **Statistical Challenges in Modeling Immune Response to Infectious Disease Agents Using Differential Equation Models**—◆Hulin Wu, University of Rochester

9:00 a.m. **Parameters Estimation and Model Selection of Long-Term Dynamic Models of HIV**—◆Marc Lavielle, INRIA Saclay; Adeline Samson, Université Paris-Descartes; Ana Karina Fermin, Université Nanterre; France Mentré, INERM-Université Paris-Diderot

9:25 a.m. **Optimal Therapeutic Strategy for HIV-Infected Subjects Based on Mechanistic Models**—◆Daniel Commenges, ISPED; Rodolphe Thiebaut, ISPED

9:50 a.m. **Quantile Functions Distributed Over Space and Time**—James O. Ramsay, McGill University; ◆Jason D. Nielsen, Carleton University

10:15 a.m. **Floor Discussion**

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

401 CC-102B

■ Flexible Statistical Machine Learning for Complex Data—Invited

IMS, Interface Foundation of North America

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

Chair(s): Shuangge Ma, Yale University

8:35 a.m. **A Prediction Interval for the Misclassification Rate**—◆Susan Murphy, University of Michigan; Eric Laber, University of Michigan

9:00 a.m. **Robust Model-Free Probability Estimation**—◆Yichao Wu, North Carolina State University; Hao (Helen) Zhang, North Carolina State University; Yufeng Liu, The University of North Carolina at Chapel Hill

9:25 a.m. **On Large Margin Hierarchical Classification**—◆Junhui Wang, University of Illinois at Chicago; Xiaotong Shen, The University of Minnesota; Wei Pan, The University of Minnesota

9:50 a.m. **Statistically Based Mining of Copy Number and Correlation Matrices**—◆Andrew Nobel, The University of North Carolina at Chapel Hill

10:15 a.m. **Floor Discussion**

402 CC-201

IMS Medallion Lecture V—Invited

IMS

Organizer(s): Xiaotong Shen, The University of Minnesota

Chair(s): Marten Wegkamp, Florida State University

8:35 a.m. **Combinatorial Problems in Randomized Sequential Prediction**—◆Gabor Lugosi, ICREA and Pompeu Fabra University, Barcelona

10:00 a.m. **Floor Discussion**

403 CC-159A

Memorial Session for David Freedman—Invited

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

Organizer(s): Terence P. Speed, University of California, Berkeley

Chair(s): Terence P. Speed, University of California, Berkeley

8:35 a.m. **Fat Chalk and Other Pillars of Wisdom**—◆Ani Adhikari, University of California, Berkeley

8:55 a.m. **A Survey of David Freedman's Work on Census Adjustment**—◆Lawrence D. Brown, The Wharton School

9:15 a.m. **David Freedman on Law and Public Policy**—◆Donald Ylvisaker, University of California, Los Angeles

9:35 a.m. **David Freedman's Work in Probability and Mathematical Statistics**—◆Persi Diaconis, Stanford University

9:55 a.m. **Freedman's Dialogue with the Social Sciences**—◆Philip B. Stark, University of California, Berkeley

10:15 a.m. **Floor Discussion**

Invited Panels 8:30 a.m.–10:20 a.m.

404 CC-158B

■ ✪ The Pros of Pro Bono Statistical Consulting—Invited

Committee on Student Pro Bono Statistics

Organizer(s): Andrea Rau, Purdue University

Chair(s): Justin Gross, Carnegie Mellon University

Panelists:
◆Meghan Honerlaw, Purdue University
◆Jana Asher, Carnegie Mellon University
◆Nilupa S. Gunaratna, International Nutrition Foundation
◆Maria Larkina, Michigan State University
◆Sarah Nusser, Iowa State University
◆Luke Fostvedt, Iowa State University
Disc: Sarah Nusser, Iowa State University

10:15 a.m. **Floor Discussion**

405 CC-143B

Statistics and Policy: Climate Change—Invited

Section on Statistics and the Environment, Section on Government Statistics

Organizer(s): Stephen Pierson, ASA

Chair(s): Francis Slakey, Georgetown University

Panelists:
◆Amy Braverman, Jet Propulsion Laboratory
◆Richard Smith, The University of North Carolina at Chapel Hill
◆Kevin Rennert, Senate Energy and Natural Resources Committee
◆Mark Berliner, The Ohio State University
◆Jana A. Leggett, Congressional Research Office

10:15 a.m. **Floor Discussion**

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

406 CC-207A

■ Analyzing Data on Copy Number Variation—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Glen A. Satten, CDC

Chair(s): Christophe Lange, Harvard University

8:35 a.m. **Analysis of Copy Number Variations in Genome-Wide Association Studies**—◆Mingyao Li, University of Pennsylvania

8:55 a.m. **Robust Regression for Detecting Copy Number Variants**—◆Glen A. Satten, CDC; Andrew Allen, Duke University; Jennifer Mulle, Emory University; Morna Ikeda, Emory University; Stephen Warren, Emory University

9:15 a.m. **Detecting Breakpoints Using Multiscale Wavelet Products**—◆Li Hsu, Fred Hutchinson Cancer Research Center

9:35 a.m. **Distinguishing Copy Number Variants from Cancer-Related Alterations**—◆Adam B. Olshen, Memorial Sloan-Kettering Cancer Center; Irina Ostrovnaya, Memorial Sloan-Kettering Cancer Center

9:55 a.m. **Overcoming Data Quality and Copy Number Detection Issues in Genome-Wide Copy Number Variation (CNV) Association Studies**—◆Christophe G. Lambert, Golden Helix Inc.; Greta M. Linse, Golden Helix Inc.; James E. Grover, Golden Helix Inc.; Gabriel F. Rudy, Golden Helix Inc.

10:15 a.m. **Floor Discussion**

407 CC-144C

■ Models and Methodologies for Truncated and Censored Data—Topic-Contributed

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

Organizer(s): Ananda Sen, University of Michigan

Chair(s): Ananda Sen, University of Michigan

8:35 a.m. **A Simple Step-Stress Model with an Immune Fraction**—◆Nandini Kannan, The University of Texas at San Antonio; Debasis Kundu, Indian Institute of Technology Kanpur

8:55 a.m. **State-Space Models for Recurrent Events and Longitudinal Markers**—◆Edsel A. Pena, University of South Carolina

9:15 a.m. **A Unified Competing Risks Cure Rate Model for Failure Data**—◆Sanjib Basu, Northern Illinois University

9:35 a.m. **Estimating the Effect of a Time-Dependent Therapy on Residual Restricted Mean Lifetime**—◆Douglas E. Schaubel, University of Michigan; John D. Kalbfleisch, University of Michigan

9:55 a.m. Disc: Luis A. Escobar, Louisiana State University

10:15 a.m. **Floor Discussion**

408 CC-158A

■ Partnership, Benefits, and Challenges—Topic-Contributed

SPAIG Committee

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

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

8:35 a.m. **Application of Medical Economic Research: A Case Study in Academic-Industry Partnerships**—◆Joseph Heyse, Merck Research Laboratories; Boris Iglewicz, Temple University

8:55 a.m. **Successful Examples of 'SPAIG' Relationships**—◆William B. Smith, Lecot Inc.

9:15 a.m. **Strengthening Academic Partnerships with Government and Private Sector Survey Organizations**—◆Alan R. Tupek, Arbitron, Inc.

9:35 a.m. **Creating the Win/Win Arrangement for Successful Collaborations Between Academia and Industry**—◆Alan Menius, GlaxoSmithKline; Pam Arroway, North Carolina State University; Jiajun Liu, Merck Research Laboratories

9:55 a.m. Disc: Robert Starbuck,

10:15 a.m. **Floor Discussion**

409 CC-202B

Estimation with Nonignorable Missing Data in Survey Sampling—Topic-Contributed

Section on Survey Research Methods, Section on Bayesian Statistical Science

Organizer(s): Jae-kwang Kim, Iowa State University

Chair(s): J. Michael Brick, Westat, Inc.

8:35 a.m. **Bayesian Sensitivity Analysis of Incomplete Data Using Pattern-Mixture and Selection Models Through Equivalent Parameterization**—◆Niko Kaciroti, University of Michigan; Trivellore E. Raghunathan, University of Michigan

8:55 a.m. **Semiparametric Estimation for Longitudinal Data with Nonignorable Nonmonotone Missing Responses**—◆Jun Shao, University of Wisconsin-Madison; Deyuan Jiang, University of Wisconsin-Madison

9:15 a.m. **Extensions of Proxy Pattern-Mixture Analysis for Survey Nonresponse**—◆Rebecca Andridge, University of Michigan; Roderick J.A. Little, University of Michigan

9:35 a.m. **Statistical Inference with Nonignorable Missing Data Using Fractional Imputation in Survey Sampling**—◆Jae-kwang Kim, Iowa State University; Cindy L. Yu, Iowa State University

10:15 a.m. **Floor Discussion**

410 CC-142

■ Bayesian Hierarchical Modeling in Biology and Environmental Studies—Topic-Contributed

Section on Bayesian Statistical Science, Section on Statistics and the Environment

Organizer(s): Yu Yue, Baruch College
Chair(s): Jun Lu, American University

8:35 a.m. **Bayesian Model for a Dual-Color Tag System for Investigating Virus-Virus Interactions**—◆Douglas A. Noe, Miami University; Jing Zhang, Miami University; Stephen E. Wright, Miami University; A. John Bailer, Miami University

8:55 a.m. **A Hierarchical Spatio-Temporal Zero-Inflated Model for Correlated Tornado Reports in the United States**—◆Ali Arab, Georgetown University; Christopher Wikle, University of Missouri-Columbia; Scott Holan, University of Missouri-Columbia; Christopher J. Anderson, Iowa State University

9:15 a.m. **Modeling Uncertainty for Storm Water Quantity and Quality Analysis Models in Urban DC**—◆Valbona Bejleri, University of the District of Columbia; Tolessa Deksissa, University of the District of Columbia

9:35 a.m. **Multivariate Zero-Inflated Bayesian Spatial Models with Repeated Measurements**—◆Jing Zhang, Miami University; Chong Z. He, University of Missouri

9:55 a.m. **Fully Bayesian Smoothing Splines for Varying-Coefficient Models**—◆Yu Yue, Baruch College

10:15 a.m. **Floor Discussion**

411 CC-209A

■ Current Issues in Statistical Genetics—Topic-Contributed

Biometrics Section

Organizer(s): Ching-Ti Liu, Boston University
Chair(s): Alisa Manning, Boston University School of Public Health-Biostatistics

8:35 a.m. **Variable Selection for Genome-Wide Multiple Loci Mapping**—◆Wei Sun, The University of North Carolina at Chapel Hill; Fei Zou, The University of North Carolina at Chapel Hill; Joseph G. Ibrahim, The University of North Carolina at Chapel Hill

8:55 a.m. **Allelic-Based Gene-Gene Interaction in Case-Control Study**—◆Jeesun Jung, Indiana University School of Medicine

9:15 a.m. **Detection of Disease-Associated Deletions in Case-Control Studies Using SNP Genotypes**—◆Chih-Chieh Wu, The University of Texas M.D. Anderson Cancer Center

9:35 a.m. **A Multilevel Hidden Markov Model of DNA Copy Number Variation**—◆Stephen W. Erickson, University of Arkansas for Medical Sciences

9:55 a.m. **Case-Control Studies of Genetic and Environmental Factors with Error in Measurement of Environmental Factors**—◆Iryna Lobach, New York University School of Medicine; Raymond J. Carroll, Texas A&M University; Christine Spinka, University of Missouri; Mitchell H. Gail, National Cancer Institute; Nilanjan Chatterjee, National Cancer Institute

10:15 a.m. **Floor Discussion**

412 CC-209B

■ Outcome Clinical Trials: Long and Wavy Roads?—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Vipin Arora, Takeda Pharmaceuticals
Chair(s): Barry Davis, The University of Texas School of Public Health

8:35 a.m. **Outcome Trials in Type 1 Diabetes: The Diabetes Control and Complications Trial Experience**—◆John M. Lachin, The George Washington University

8:55 a.m. **Outcome Clinical Trials: Long and Wavy Roads?**—◆Lawrence Friedman, Independent Consultant

9:15 a.m. **Bumps in the Road for an Academic Data Coordinating Center**—◆William R. Clarke, The University of Iowa; Dixie Ecklund, The University of Iowa; Ying Zhang, The University of Iowa

9:35 a.m. **Subtopic: Long-Term Follow-Up in the Lung Health Study**—◆John Connett, University of Minnesota

9:55 a.m. Disc: Marian R. Fisher, University of Wisconsin-Madison

10:15 a.m. **Floor Discussion**

413 CC-149A

Topics in Seasonal Time Series—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Tucker S. McElroy, U.S. Census Bureau
Chair(s): Scott Holan, University of Missouri-Columbia

8:35 a.m. **Cost-of-Living Index Based on an Estimated Generalized Constant-Elasticity-of-Substitution Utility Function**—◆Peter Zadrozny, Bureau of Labor Statistics

8:55 a.m. **Seasonality and Trends in the Temperature Anomaly Data from Goddard Institute for Space Studies**—◆Peter B. Kenny, PBK Research; Tucker S. McElroy, U.S. Census Bureau

9:15 a.m. **Analyzing Seasonal Time Series with Periodic Low Volumes**—◆Tammy Jackson, SAS Institute Inc.

9:35 a.m. **The Rewards and Challenges of Seasonally Adjusting a Short Series: Seasonal Adjustment Research for the US Census Bureau's Quarterly Services Survey**—◆Rebecca J. Hutchinson, U.S. Census Bureau; Erica Wong, U.S. Census Bureau

9:55 a.m. **Detecting Seasonal Volatility: A Banking Application**—◆Irma Hernandez-Magallanes, University of California, Berkeley

10:15 a.m. **Floor Discussion**

414 CC-143A

■ ✪ Particle Learning—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Hedibert F. Lopes, The University of Chicago
Chair(s): Hedibert F. Lopes, The University of Chicago

8:35 a.m. **Parameter Estimation for General State-Space Models: A Review**—◆Jonathan R. Stroud, The George Washington University

8:55 a.m. **Particle Learning in Autoregressive Models with Structured Priors**—◆Raquel Prado, University of California, Santa Cruz; Hedibert F. Lopes, The University of Chicago

9:15 a.m. **Sequential Monte Carlo in Model Comparison: Example in Cellular Dynamics in Systems Biology**—◆Chiranjit Mukherjee, Duke University; Y. Tanouchi, Duke University; L. You, Duke University; Mike West, Duke University

9:35 a.m. **Sequential Monte Carlo Methods for Long Memory Stochastic Volatility Models**—◆Christian Macaro, Duke University; Hedibert F. Lopes, The University of Chicago

9:55 a.m. **The Role of Options, Stochastic Volatility, and Jumps in the Interest Rate Risk Premia Dynamics**—◆Bruno P. Lund, Chicago Booth School of Business; Hedibert F. Lopes, The University of Chicago

10:15 a.m. **Floor Discussion**

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

415 CC-149B

Analysis of Financial Time Series—Contributed

Business and Economic Statistics Section

Chair(s): Viktor Todorov, Northwestern University

8:35 a.m. **Testing for Jumps in Financial Time Series**—◆Werner Ploberger, Washington University in St. Louis; Taesuk Lee, University of Rochester/ Washington University in St. Louis

8:50 a.m. **Independent Component Analysis for Multivariate Financial Time Series**—◆David S. Matteson, Cornell University; Ruey S. Tsay, The University of Chicago

9:05 a.m. **Statistical Inference for Volatility Component Models**—◆Fangfang Wang, The University of North Carolina at Chapel Hill; Eric Ghysels, The University of North Carolina at Chapel Hill

9:20 a.m. **Option Pricing under Random Field Interest Rate Model with Stochastic Volatility**—◆Baowei Xu, The University of North Carolina at Chapel Hill; Chuanshu Ji, The University of North Carolina at Chapel Hill

9:35 a.m. **Long-Run Risks in the Term Structure of Interest Rates: Estimation**—◆Taeyoung Doh, Federal Reserve Bank of Kansas City

9:50 a.m. **Spectral Analysis of the Term Structure of US Interest Rates**—◆Kalidas Jana, The University of Texas at Brownsville

10:05 a.m. **Determining the Future Rate of Poisson Random Variables After Removing Variables with Too Few or Too Many Occurrences**—Matthew Lindsey, The University of Texas at Tyler; Kellie Keeling, University of Denver; ◆Robert Pavur, University of North Texas

416 CC-153

Computational Advances in Clustering and Mixtures—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Jean-Michel Marin, University Montpellier II

8:35 a.m. **A k-Mean-Directions Algorithm for Clustering Data on the Sphere**—◆Ivan Ramler, St. Lawrence University; Ranjan Maitra, Iowa State University

8:50 a.m. **Geographically Enhanced Clustering**—◆James A. Shine, U.S. Army Topographic Engineering Center; James E. Gentle, George Mason University

9:05 a.m. **A Separability Index for Clustering Problems and Its Applications**—Arka Ghosh, Iowa State University; Ranjan Maitra, Iowa State University; ◆Anna D. Peterson, Iowa State University

9:20 a.m. **Cluster-Based Modeling: Exploring the Linear Regression Model Space**—◆Rebecca Nugent, Carnegie Mellon University; Xia-Yi Shen, Carnegie Mellon University; Russell Steele, McGill University

9:35 a.m. **Statistical Cluster Detection and Pervasive Surveillance of Nuclear Materials Using Mobile Sensors**—◆Jerry Cheng, Rutgers University; Minge Xie, Rutgers University; Fred Roberts, Rutgers University

9:50 a.m. **Bootstrapping for Significance in Multidimensional Compact Clustering Models**—◆Ranjan Maitra, Iowa State University; Soumendra N. Lahiri, Texas A&M University; Volodymyr Melnykov, Iowa State University

10:05 a.m. **Variable Selection in Finite Mixture Models**—◆Volodymyr Melnykov, Iowa State University; Ranjan Maitra, Iowa State University

417 CC-148

Applications in Statistical Consulting—Contributed

Section on Statistical Consulting

Chair(s): Stephan Ogenstad, Statogen Consulting

8:35 a.m. **Monte Carlo Evidence of an Evaluation Strategy of Diverse Programs with Small Group Sizes**—Zhehui Luo, RTI International; ◆Jeremy W. Bray, RTI International; John Shadle, RTI International

8:50 a.m. **A University Statistical Consulting Center: A Learning Experience for Undergraduate and Graduate students**—◆Phyllis J. Curtiss, Grand Valley State University

9:05 a.m. **Application of Factor Analysis in Medical Education**—◆Jayawant Mandrekar, Mayo Clinic

9:20 a.m. **An Outpatient Clinic Queueing Model**—◆Anna Valeva, Western Illinois University; Farideh Dehkordi-Vakil, Western Illinois University; Feridun Tasdan, Western Illinois University

9:35 a.m. **Overcoming Adverse Effects of Correlations in Microarray Data Analysis**—◆Linlin Chen, University of Rochester; Alexander Y. Gordon, The University of North Carolina at Charlotte; Galina Glazko, University of Rochester; Andrei Yakovlev, University of Rochester

9:50 a.m. **Floor Discussion**

418 CC-160

Active Learning in Statistics Education—Contributed

Section on Statistical Education

Chair(s): Jamis Perrett, Texas A&M University

8:35 a.m. **An A-maze-ing Comparison**—◆Mary Richardson, Grand Valley State University; Diann Reischman, Grand Valley State University

8:50 a.m. **The Magical Number 7**—◆Diann Reischman, Grand Valley State University; Mary Richardson, Grand Valley State University

9:05 a.m. **Playing Games with a Purpose**—◆Shonda Kuiper, Grinnell College

9:20 a.m. **Adapting a Carnival Guessing Game to Teach Experimental Design**—◆Nicholas Burn, Abbott Point of Care

9:35 a.m. **Planning and Implementing a Hands-On Epidemiology Investigation Unit for Advanced Placement Statistics and Biology High-School Students**—◆Ellen K. Endriss, Career Center High School; Sean Bennett, Career Center High School

9:50 a.m. **TigerSTAT: A First Person Shooter Game for Statistics Education**—Frank Wattenberg, U.S. Military Academy; ◆Adam Wright, U.S. Military Academy at West Point; Rodney Sturdivant, U.S. Military Academy; Nick Davis, Tietronix

10:05 a.m. **Supporting Math Undergraduates: Self-Learning Materials for Introductory Statistics Course**—◆Juhyun Park, Lancaster University; Matthew Sperrin, Lancaster University

419 CC-207B

■ Missing Data Methods in Epidemiologic Studies—Contributed

Section on Statistics in Epidemiology

Chair(s): Sherri Rose, University of California, Berkeley

8:35 a.m. **Robustness of Efficiency in Semiparametric Models for Incomplete Data**—◆Thomas Lumley, University of Washington

8:50 a.m. **Marginal Structural Models and Missing Data in the Exposure of Interest: A Simulation Study Based on the Framingham Heart Study Data**—◆Susan Shortreed, McGill University; Andrew Forbes, Monash University

9:05 a.m. **Accounting for two types of missing data to estimate the accuracy of a binary diagnostic-test**—◆Jeffrey H. Stratton, University of Connecticut; Ofer Harel, University of Connecticut

9:20 a.m. **Multiple Imputation of Missing Categorical Data: A Latent Class Analysis Approach**—◆Mulugeta Gebregziabher, Medical University of South Carolina; Stacia M. DeSantis, Medical University of South Carolina

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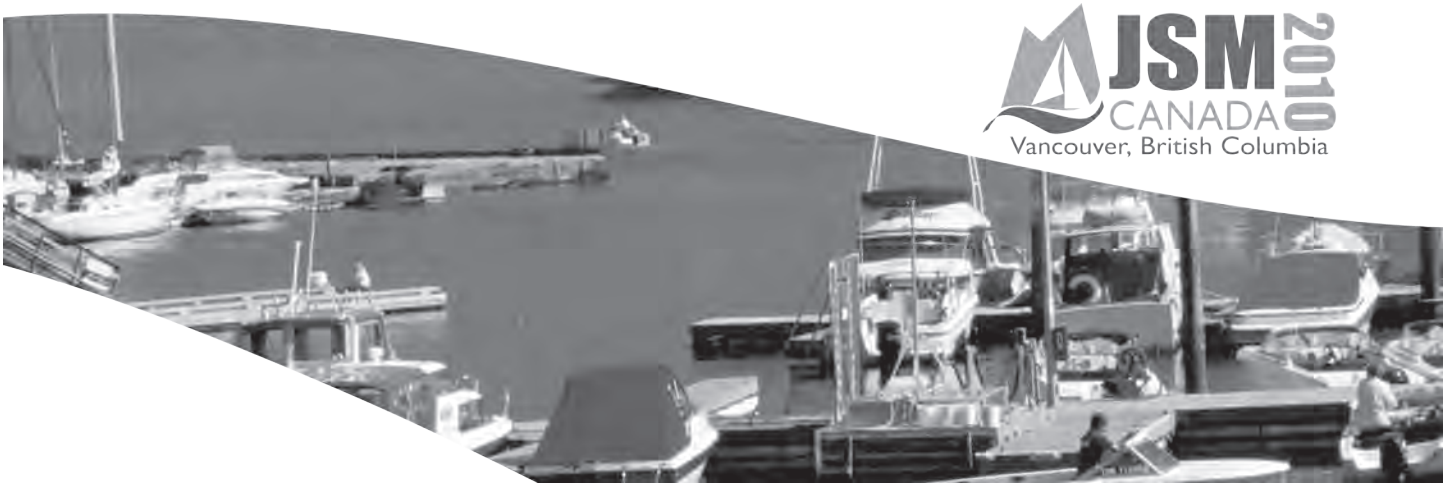

9:35 a.m. **The Generalized ANOVA: A Classic Song Sung with Modern Lyrics**—◆Hui Zhang, University of Rochester; Hua He, University of Rochester; Qin Yu, University of Rochester; Rui Chen, University of Rochester Medical Center; Naiji Lu, University of Rochester; Xin M. Tu, University of Rochester

9:50 a.m. **Joint Modeling of Missing Data Due to Nonresponse and Death in Longitudinal Epidemiological Studies**—◆Kumar B. Rajan, Rush University and Medical Center; Sue Leurgans, Rush University and Medical Center

10:05 a.m. **Missing Data Analysis in the BE-DRI Trial (UITN)**—◆Aarthi Balasubramanyam, Roche Molecular Systems, Inc.; Heather Litman, New England Research Institutes; Yan Xu, New England Research Institutes; Anne Stoddard, New England Research Institutes

420 CC-203A

■ Survey Mode Effects and Methods for Asking Sensitive Questions—Contributed

Section on Survey Research Methods

Chair(s): Jeffrey Gonzalez, Bureau of Labor Statistics

8:35 a.m. **Mean and Sensitivity Estimation in Optional Randomized Response Models**—◆Sat N. Gupta, The University of North Carolina at Greensboro; Javid Shabbir, Quai-I-Azam University; Supriti Sehra, The University of North Carolina at Greensboro

8:50 a.m. **Evaluating Mode Effects in Military Surveys**—◆Michael Yonghe Yang, ICF International; Amy Falcone, ICF International; Lynn Milan, U.S. Army Research Institute; Brad Booth, ICF International

9:05 a.m. **Data Collection Mode Effects: Empirical Comparisons Between CATI-Only vs. Mixed Mode in the 2003 National Survey of Recent College Graduates**—◆Zhanyun Zhao, Mathematica Policy Research, Inc.; Donsig Jang, Mathematica Policy Research, Inc.; Kelly H. Kang, National Science Foundation

9:20 a.m. **The Franklin's Randomized Response Model for Two Sensitive Attributes**—◆Cheng C. Chen, Texas A&M University-Kingsville; Sarjinder Singh, Texas A&M University-Kingsville

9:35 a.m. **Sample Surveys with Sensitive Questions: A Nonrandomized Response Approach**—◆Guo-Liang Tian, The University of Hong Kong; Ming T. Tan, University of Maryland Greenebaum Cancer Center; Man-Lai Tang, Hong Kong Baptist University

9:50 a.m. **Looking for a Needle in a Haystack: A Multi-Mode Approach to a Survey of Rare Subpopulations**—◆Mansour Fahimi, Marketing Systems Group; Barbara L. Kroner, RTI International; Anne E. Kenyon, RTI International; David J. Thurman, CDC

10:05 a.m. **Response Mode and Bias Analysis in the IRS' Individual Taxpayer Burden Survey**—◆George Contos, IRS; Michael J. Brick, Westat, Inc.; Karen C. Masken, IRS; Roy Nord, IRS

421 CC-203B

Developments in Address-Based Sampling and Other Frame and Coverage Issues—Contributed

Section on Survey Research Methods, Section on Government Statistics

Chair(s): Eric Grau, Mathematica Policy Research, Inc.

8:35 a.m. **Using Addresses as Sampling Units in the 2007 Health Information National Trends Survey**—◆Greg Norman, Westat, Inc.; Richard Sigman, Westat, Inc.

8:50 a.m. **Indirect Sampling in Context of Multiple Bases**—◆Manuela Maia, Universidade Católica Portuguesa; Pierre Lavallée, Statistics Canada

9:05 a.m. **A Comparative Evaluation of Traditional Listing vs. Address-Based Sampling Frames: Matching with Field Investigation of Discrepancies**—◆Jill Montaquila, Westat, Inc.; Michael J. Brick, Westat, Inc.; Valerie Hsu, Westat, Inc.; Stephanie Eckman, NORC at the University of Chicago; Ned English, NORC at the University of Chicago

9:20 a.m. **Multi-Frame Estimation for the 2008 NSSRN: Theory, Implementation, and Assessment**—◆Ralph DiGaetano, Westat, Inc.; Lou Rizzo, Westat, Inc.; Jim Green, Westat, Inc.

9:35 a.m. **Operational Results from an Address-Based Sampling Pilot for the National Immunization Survey**—◆Benjamin Skalland, NORC at the University of Chicago; Martin Barron, NORC at the University of Chicago; Karen Wooten, CDC

9:50 a.m. **Cross-Community Comparison and Multi-Frame Weighting in REACH US**—◆Peter K. Kwok, NORC at the University of Chicago; Hee-Choon Shin, NORC at the University of Chicago; Whitney Murphy, NORC at the University of Chicago; Colm O'Muircheartaigh, The University of Chicago; Angela Debello, NORC at the University of Chicago; Kari Carris, NORC at the University of Chicago; Youlian Liao, CDC

10:05 a.m. **The Use of Address-Based Sampling (ABS) with Multi-Mode Data Collection: The Case of REACH (Racial and Ethnic Approaches to Community Health) US Risk Factor Survey**—◆Kanru Xia, NORC at the University of Chicago; Katie Dekker, NORC at the University of Chicago; Colm O'Muircheartaigh, The University of Chicago; Youlian Liao, CDC

422 CC-144B

Monitoring and Improving Air Quality—Contributed

Section on Statistics and the Environment, Section on Bayesian Statistical Science

Chair(s): Joel H. Reynolds, U.S. Fish and Wildlife Service

8:35 a.m. **Spatio-Temporal Modeling of Air Pollutants Using a Process Convolution Approach**—◆Jenise Swall, U.S. Environmental Protection Agency

8:50 a.m. **Hierarchical Spatial Modeling of Air Pollution Exposure and Measurement Error**—◆Simone Gray, Duke University; Alan E. Gelfand, Duke University; Marie Lynn Miranda, Duke University; Sharon Edwards, Duke University

9:05 a.m. **Statistical Modeling of Carbon Dioxide in the Atmosphere: Continental United States**—◆Yong Xu, University of South Florida; Chris P. Tsokos, University of South Florida

9:20 a.m. **Estimating NO2 Level from Traffic Exposure Using GIS and GLM**—◆Keita Ebisu, Yale University; Michelle L. Bell, Yale University; Lisa McKay, Yale University; Janneane F. Gent, Yale University; Kathleen Belanger, Yale University; Michael B. Bracken, Yale University; Brian P. Leaderer, Yale University; Theodore R. Holford, Yale University

9:35 a.m. **Comparison of Deterministic and Stochastic Spatiotemporal Interpolation Methods for Ozone in the Conterminous US**—◆Lixin Li, Georgia Southern University; Xingyou Zhang, CDC; Reinhard Piltner, Georgia Southern University

9:50 a.m. **Hierarchical 2-Level Cluster Model to Estimate Regional and National Adverse Effects of NO2 on Public Health**—◆Hwashin H. Shin, Health Canada and Institute of Population Health, University of Ottawa; Richard T. Burnett, Health Canada; Dave Stieb, Health Canada; Barry Jessiman, Air Health Science Division, Health Canada

10:05 a.m. **Improving Air Quality Management Strategies for Ozone Using an Ensemble of Air Quality Model Simulations**—◆Kristen M. Foley, U.S. Environmental Protection Agency; Robert W. Pinder, U.S. Environmental Protection Agency; Sergey L. Napelenok, U.S. Environmental Protection Agency

423 CC-143C

Classification and Discriminant Analysis—Contributed

Section on Statistical Learning and Data Mining, Interface Foundation of North America

Chair(s): Tyler H. McCormick, Columbia University

8:35 a.m. **An Empirical Application of Credit Card Customers' Classification and Recognition in a Chinese Bank**—◆Li Xia, IBM China Research Laboratory; Bin Zhang, IBM China Research Laboratory; Ming Xie, IBM China Research Laboratory; Minglu Li, IBM China Research Lab; Jinyan Shao, IBM China Research Lab; Lili Zhao, IBM China Research Lab

8:50 a.m. **The Effect of Model Misspecification on Semi-Supervised Classification**—◆Ting Yang, Johns Hopkins University; Carey E. Priebe, Johns Hopkins University

9:05 a.m. **Discriminant Analysis with Interval Constraints**—Xiaoming Huo, Georgia Tech; ◆Heeyoung Kim, Georgia Tech; Jianjun Shi, Georgia Tech

9:20 a.m. **Multicategory Composite Least Squares Classifier**—◆Seo Young Park, The University of North Carolina at Chapel Hill; Yufeng Liu, The University of North Carolina at Chapel Hill

9:35 a.m. **Semi-Supervised Learning via Regularized Logistic Discrimination**—◆Shuichi Kawano, Kyushu University; Sadanori Konishi, Kyushu University

9:50 a.m. **Properties of the Quadratic Subspace in Discriminant Analysis**—◆Santiago Velilla, Universidad Carlos III de Madrid

10:05 a.m. **Subclassifying Type 2 Diabetes by Combining Nonlinear Dynamic Modeling and Multivariate Classification Methods**—◆Lucas Beverlin, Iowa State University; Derrick Rollins, Iowa State University; Nisarg Vyas, BodyMedia, Inc.; Gregory Welk, Iowa State University; Warren Franke, Iowa State University

424 CC-144A

Nonparametric and Semiparametric Methods—Contributed

Section on Nonparametric Statistics

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

8:35 a.m. **Model Selection and Estimation in Additive Regression Models**—◆Huiping Miao, North Carolina State University; Daowen Zhang, North Carolina State University

8:50 a.m. **Testing for Linearity of a Semiparametric Generalized Linear Model via Splines**—◆Chin-Shang Li, University of California, Davis

9:05 a.m. **On the Behavior of Marginal and Conditional Akaike Information Criteria in Linear Mixed Models**—◆Sonja Greven, Johns Hopkins University; Thomas Kneib, Ludwig-Maximilains-Universitaet Muenchen

9:20 a.m. **Efficient and Effective Smoothing with Binned Data**—◆Michael C. Minnotte, University of North Dakota

9:35 a.m. **Semiparametric Sequential Optimal Designs for Binary Response Models**—◆Joseph Warfield, Johns Hopkins University Applied Physics Laboratory; Anindya Roy, University of Maryland, Baltimore County

9:50 a.m. **Analysis of Meteorological Data Using Nonparametric Multiple Regression**—◆Ozlem Alpu, Eskisehir Osmangazi University; Berna Yazici, Anadolu University; Betul Kan, Anadolu University

10:05 a.m. **Determining the Coordinates of an Experimental Data Set Based on Multivariate Adaptive Regression Splines**—◆Betul Kan, Anadolu University; Berna Yazici, Anadolu University

425 CC-204B

Advances in Causal Inference and Health Economic Evaluations—Contributed

Section on Health Policy Statistics

Chair(s): Laura Lee Johnson, U.S. Department of Health and Human Services

8:35 a.m. **Teen Sex from Evidence to Policy: The Accuracy of the Media's Communication of Quantitative Methods**—◆Janet E. Rosenbaum, Johns Hopkins Bloomberg School of Public Health

8:50 a.m. **A New Method for Assigning Weights for Propensity Score Analysis**—◆Michael Posner, Villanova University

9:05 a.m. **Joint Modeling of Zero-Inflated Data Using Copulas**—◆Joanne K. Daggy, Purdue University; Bruce A. Craig, Purdue University; Joseph Thomas, III, Purdue University

9:20 a.m. **Sensitivity Analysis Using Probabilistic Simulation Methods: An Application to the Health Economics of Stable Coronary Disease**—◆Zugui Zhang, Christiana Care Health System; Paul Kolm, Christiana Care Health System; William S. Weintraub, Christiana Care Health System

9:35 a.m. **Appealing to Assumptions of Marginal Structural Models for Time-to-Event Outcomes by Using Electronic Health Records**—◆Kenneth J. Wilkins, Uniformed Services University of the Health Science

9:50 a.m. **Heterogeneous Treatment Effects and Individual Inefficiency**—◆Zhehui Luo, RTI International; Jeremy W. Bray, RTI International; Joseph C. Gardiner, Michigan State University

10:05 a.m. **A Nonparametric Matching Method, Genetic Matching, with Applications to Health Policy Evaluations: Revisiting the Case of Pulmonary Artery Catheterization**—◆Jasjeet S. Sekhon, University of California, Berkeley; Richard Grieve, London School of Hygiene and Tropical Medicine

426 CC-204A

New Methods for Multivariate Survival Data—Contributed

Biometrics Section

Chair(s): Wei-Ting Hwang, University of Pennsylvania

8:35 a.m. **Marginalized Frailty Models for Multivariate Data**—◆Megan Othus, Harvard University/Dana Farber Cancer Institute; Yi Li, Harvard University/Dana Farber Cancer Institute

8:50 a.m. **Recurrent Event Data Analysis Using Within-Cluster Resampling**—◆Xianghua Luo, The University of Minnesota; Chiung-Yu Huang, National Institute of Allergy and Infectious Diseases

9:05 a.m. **Goodness-of-Fit Tests for Archimedean Copula Models**—◆Antai Wang, Georgetown University

9:20 a.m. **Accelerated Failure Time Marginal Means Models for Recurrent Events with a Terminal Event**—◆Xiaoyan Wang, The University of North Carolina at Chapel Hill; Jianwen Cai, The University of North Carolina at Chapel Hill

9:35 a.m. **Competing Risks Regression for Clustered Data**—◆Bingqing Zhou, The University of North Carolina at Chapel Hill

9:50 a.m. **A Positive Stable Frailty Model for Clustered Failure Time Data with Covariate Dependent Frailty**—Dandan Liu, University of Michigan; ◆John D. Kalbfleisch, University of Michigan; Douglas E. Schaubel, University of Michigan

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

427 CC-141

■ Bayesian Applications—Contributed

Section on Bayesian Statistical Science

Chair(s): Rebecca Hubbard, Group Health Center for Health Studies

8:35 a.m. **Optimal Conversion of Regression Models to Point-Based Scoring Systems for Clinical Use**—◆John Boscardin, University of California, San Francisco

8:50 a.m. **Signal Detection in Noisy Images: A Bayesian Approach**—Khalil Shafie, University of Northern Colorado; ◆Mohammad R. Rouhani, Shahid Beheshti University; Siamak Noorbaloochi, The University of Minnesota

9:05 a.m. **Bayesian Combination of State Polls and Election Forecasts**—◆Kari Lock, Harvard University; Andrew Gelman, Columbia University

9:20 a.m. **BugsXLA: Making Bayesian Methods More Accessible**—◆Phil Woodward, Pfizer Inc.

9:35 a.m. **Evaluating Multiple Imputation Procedures Using Simulations in a Bayesian Prospective**—◆Fabrizia Mealli, University of Florence; Michela Baccini, University of Florence; Constantine Frangakis, Johns Hopkins University; Fan Li, Duke University; Donald B. Rubin, Harvard University; Elizabeth R. Zell, CDC

9:50 a.m. **Bayesian Regression Inference in Knot Theory**—◆John Kern, Duquesne University; Eric Rawdon, St. Thomas University

10:05 a.m. **A Latent Class Mixture Model to Impute Missing Covariates in Observational Studies**—◆Robin Mitra, Southampton Statistical Sciences Research Institute; Jerome Reiter, Duke University

428 CC-208B

Methods for Genetic Data—Contributed

Biometrics Section

Chair(s): Caiyan Li, University of Pennsylvania

8:35 a.m. **Multiple Comparison and Regularization for Analysis of eQTL Data**—◆Jichun Xie, University of Pennsylvania; Hongzhe Li, University of Pennsylvania

8:50 a.m. **Distributional Properties of Digital Gene Expression Data**—◆Lisa M. Chung, University of Wisconsin-Madison; Michael A. Newton, University of Wisconsin-Madison

9:05 a.m. **Tumor Subtype Discovery Using Integrated Genomic Data**—◆Ronglai Shen, Memorial Sloan-Kettering Cancer Center

9:20 a.m. **Inference for a Difference in Correlated Counts on an Interval**—◆Justin W. Davis, University of Missouri; David H. Annis, SportsQuant

9:35 a.m. **Uncovering Shared Genetic Risk Factors for Various Aspects of Complex Disorders Captured in Multiple Traits: A Power Calculation and Its Application to Reading Disability Data**—◆Summer S. Han, Yale University; Elena L. Grigorenko, Yale University; Joseph T. Chang, Yale University

9:50 a.m. **Floor Discussion**

429 CC-209C

■ Active Control Trials and Multiple Testing in Clinical Trials—Contributed

Biopharmaceutical Section

Chair(s): Jingyu (Julia) Luan, FDA

8:35 a.m. **Use and Abuse of Statistics in Design and Analysis of Active Control Trials**—◆Kallappa M. Koti, FDA

8:50 a.m. **An Application of GEE Models in Assessing Noninferiority to an Aggregate Response**—G. Frank Liu, Merck Research Laboratories; ◆Michael J. Dallas, Merck Research Laboratories

9:05 a.m. **New Step-Down Procedures for Control of the Generalized Family-Wise Error Rate**—◆Zijiang Yang, Temple University; Sanat Sarkar, Temple University

9:20 a.m. **Decision Analysis Using Confidence Intervals for a Binomial Parameter with Stratification**—◆Kenneth Liu, Merck & Co., Inc.

9:35 a.m. **Multiple Testing Procedures for Multi-Dose Clinical Trials**—◆Gang Li, Johnson & Johnson PRD; Peter Ouyang, Johnson & Johnson; Yining Wang, Johnson & Johnson

9:50 a.m. **Sample Size Re-Estimation for Noninferiority Trials**—◆Xiaohui Luo, Merck & Co., Inc.; Bret Musser, Merck Research Laboratories

10:05 a.m. **A 'MiniPool' Approach for Combined Phase IIB/III Trial in Patients with Life-Threatening Disease**—◆Y.H. Joshua Chen, Merck Research Laboratories; Keaven Anderson, Merck & Co., Inc.

430 CC-102A

■ Clinical Trial Simulation Sample Size and Decision Analysis—Contributed

Biopharmaceutical Section

Chair(s): Brian L. Wiens, Gilead Sciences, Inc.

8:35 a.m. **Sample Size and Power Analysis for PG and PGB Trials Using Parametric Tests**—◆Mallikarjuna Rettiganti, The Ohio State University

8:50 a.m. **Simulation Modeling Approaches: Applications for Analysis and Design of Islet Cell Transplant Clinical Trials**—◆Maithili Daphtary, FDA; Hong Yang, FDA; Bruce S. Schneider, FDA; Jawahar Tiwari, FDA; Steven A. Anderson, FDA

9:05 a.m. **Evaluating Optimal Drug Supply Strategies in Adaptive Design Trials Through Simulation and Nonparametric Bootstrap Method**—◆Suvajit Samanta, Merck & Co., Inc.; Weili He, Merck & Co., Inc.

9:20 a.m. **Sample Size Estimation for Trials with Recurrent Events as the Primary Endpoint**—◆Kuolung Hu, Amgen, Inc.; Robert A. Parker, Amgen, Inc.

9:35 a.m. **Improving Monte Carlo Analysis in Nonlinear Least Squares Regression**—◆Leonid A. Khinkis, Canisius College; Milburn E. Crotzer, Canisius College

9:50 a.m. **Estimation vs. Hypothesis Testing in a Decision Analytic Framework**—◆Duane Snavely, Merck & Co., Inc.; Kenneth Liu, Merck & Co., Inc.; Richard Entsuah, Merck & Co., Inc.

10:05 a.m. **Testing for Efficacy in Primary and Secondary Endpoints by Partitioning Decision Paths**—◆Yi Liu, The Ohio State University; Jason Hsu, The Ohio State University

Poster Presentations 8:30 a.m.–10:20 a.m.

431 CC-L Street Bridge

Topic-Contributed Oral Poster Presentations—Topic-Contributed

IMS

Organizer(s): Lara Schmidt, RAND Corporation
Chair(s): Lara Schmidt, RAND Corporation

Incomplete data analysis, imputation methods

01 **A New Notion of Data Depth Based on Goodness-of-Fit Tests**—◆Ye Dong, The University of Hong Kong; Stephen M.S. Lee, The University of Hong Kong

Computational statistics, numerical methods, simulation

02 **Selecting the Number of Factors in Exploratory Factor Analysis via Locally Conic Parameterization**—◆Yoshiyuki Ninomiya, Kyushu University; Hirokazu Yanagihara, Hiroshima University; Ke-Hai Yuan, University of Notre Dame

Probability, stochastic processes

03 **Parameter Estimation for First-Order Bifurcating Autoregressive Processes with Point Process Technique**—◆Chenhua Zhang, University of Southern Mississippi

04 **Hierarchical Clustering Algorithms with Unimodal Test**—◆Bumsu Kim, Seoul National University; Yongdai Kim, Seoul National University; Sangmi Han

Bayesian statistics, hierarchical models

05 **Testing the Regression Coefficient for High-Dimensional Data**—◆Pingshou Zhong, Iowa State University; Song Xi Chen, Iowa State University

Graphics, visualization

06 **Simple Bias-Corrected Cross-Validation Criterion**—◆Hirokazu Yanagihara, Hiroshima University

Semiparametric and nonparametric methods

07 **Asymptotics for Time-Dependent Autoregressive Processes**—◆Sreenivas Konda, Temple University

Probability, stochastic processes

08 **Dimension Folding for Array-Valued Predictors with Application to EEG Data**—◆Min Kyung Kim, Penn State University; Bing Li, Penn State University; Naomi S. Altman, Penn State University

09 **A Study of Methods for Computing Empirical Likelihood**—◆Dan Yang, University of Pennsylvania; Dylan Small, University of Pennsylvania

10 **CitySense: Multiscale Space Time Clustering of GPS Points and Trajectories**—◆Markus Loecher, Sense Networks; Tony Jebara, Columbia University; David Rosenberg, Sense Networks

Experimental design

11 **Robust Covariance Structure Estimation in Linear Mixed Models**—◆Xueliang Pan, The Ohio State University; David Jarjoura, The Ohio State University

432 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

IMS

Chair(s): Lara Schmidt, RAND Corporation

Bayesian statistics, hierarchical models

12 **A Hierarchical Bayesian Model to Merge Prior Opinions**—◆Maria J. Rufo Bazaga, University of Extremadura; Jacinto Martin Jimenez, University of Extremadura; Carlos J. Perez Sanchez, University of Extremadura

Mathematical statistics, distribution theory, robust statistics

13 **A Positive False Discovery Rate Convergence Result**—◆Igor Melnykov, Colorado State University; John Chen, Bowling Green State University

Data mining and knowledge discovery, machine learning

14 **Robust Inference for Sparse Graphical Models Using a Multivariate t Distribution and Penalized Likelihoods**—◆Michael A. Finegold, The University of Chicago; Mathias Drton, The University of Chicago

Applications and case studies

15 **Workload Forecasting for a Call Center: Methodology and a Case Study**—◆Sivan Aldor-Noiman, The Wharton School; Paul D. Feigin, Technion--Israel Institute of Technology; Avishai Mandelbaum, Technion--Israel Institute of Technology

Biometrics, bioinformatics, computational biology

16 Calculation of Likelihood Ratios from Categorical Data with Applications to Forensic Handwriting Analysis—◆Christopher P. Saunders, George Mason University; Amanda B. Hepler, George Mason University; Mark J. Lancaster, George Mason University; Linda J. Davis, George Mason University; Donald T. Gantz, George Mason University

Experimental design

17 Optimal Design of the Sensor Network Under Communication and Energy Budget Constraints—◆Zhengyuan Zhu, The University of North Carolina at Chapel Hill; Jun Yang, Duke University; Yi Zhang, Duke University; Xuanlong Nguyen, Duke University

Mathematical statistics, distribution theory, robust statistics

18 Context Tree Estimation for Ergodic Processes—◆Zsolt Talata, University of Kansas; Tyrone Duncan, University of Kansas

433 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

ENAR

Chair(s): Lara Schmidt, RAND Corporation

Applications and case studies

19 Evaluating the Association Between Red Blood Cell Storage Duration and Prostate Cancer Recurrence—◆Jarrod E. Dalton, Cleveland Clinic Foundation; Edward J. Mascha, Cleveland Clinic Foundation; Daniel I. Sessler, Cleveland Clinic Foundation; Shamgar Ben-Eliyahu, Tel Aviv University; Juan Cata, Cleveland Clinic Foundation

Longitudinal data, repeated measurements, and meta-analysis

20 A Meta-Analytic Framework for Combining Incomparable Cox Proportional Hazard Models Caused by Omitting Important Covariates—◆Xing Yuan, University of Pittsburgh; Stewart Anderson, University of Pittsburgh

Biometrics, bioinformatics, computational biology

21 Monoisotopic Peak Detection for Mass Spectrometry Data—◆Mourad Atlas, University of Louisville; Susmita Datta, University of Louisville

Spatial statistics, spatio-temporal modeling, GIS

22 Kronecker Product Linear Exponent AR(1) Correlation Structures for Multivariate Repeated Measures—◆Sean L. Simpson, Wake Forest University; Lloyd J. Edwards, The University of North Carolina at Chapel Hill; Keith E. Muller, University of Florida

Health policy, epidemiology, public health

23 Instrumental Variables with Binary Data—◆Michael Baiocchi, University of Pennsylvania; Paul R. Rosenbaum, University of Pennsylvania; Dylan Small, University of Pennsylvania

Biometrics, bioinformatics, computational biology

24 Identification of Disease Biomarkers Using Logic Forest—◆Bethany Wolf, Medical University of South Carolina; Elizabeth Slate, Medical University of South Carolina; Elizabeth Hill, Medical University of South Carolina

25 Development of Statistical Model for Quality Control of Reverse Phase Protein Array (RPPA) Slide and Study of Tissue Heterogeneity Effects on Protein Expression—◆Zhenlin Ju, The University of Texas M.D. Anderson Cancer Center

Applications and case studies

26 Variance Component Analysis of a Reverse Phase Protein Array's Data—◆Wenbin Liu, The University of Texas M.D. Anderson Cancer Center; Kevin R. Coombes, The University of Texas M.D. Anderson Cancer Center; Yiling Lu, The University of Texas M.D. Anderson Cancer Center; Zhenlin Ju, The University of Texas M.D. Anderson Cancer Center; Gordon B. Mills, The University of Texas M.D. Anderson Cancer Center

Biometrics, bioinformatics, computational biology

27 Power and Sample Size Estimation for the Clustered Wilcoxon Test—◆Bernard Rosner, Channing Laboratory; Robert J. Glynn, Brigham and Women's Hospital

Incomplete data analysis, imputation methods

28 A General Framework for Estimating Genetic Effects and Gene-Environment Interactions with Missing Data—◆Yijuan Hu, 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

Biometrics, bioinformatics, computational biology

29 Random Effects Semiparametric Regression Model for Clustered Interval-censored Data—K. F. Lam, The University of Hong Kong; ◆Yongxian Long, The University of Hong Kong

30 Penalized Model-Based Clustering with General Covariance Matrices—◆Hui Zhou, The University of Minnesota; Wei Pan, The University of Minnesota; Xiaotong Shen, The University of Minnesota

Applications and case studies

31 Statistical Model and Sample Size Determination for the QuitNexus Study: Accounting for Within-Cluster Variability in the Denominator of the Counseling Rate—◆Tina D. Cunningham, Virginia Commonwealth University; Robert E. Johnson, Virginia Commonwealth University

434 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

International Indian Statistical Assoc., Reps. for Young Statisticians

Linear models, GLMs, parametric methods

32 **Linex Regression**—◆Aman Sahni, University of Northern Colorado; Khalil Shafie, University of Northern Colorado; Saad Alkahtani, University of Northern Colorado

435 CC-Hall D

■ Topic-Contributed Oral Poster Presentations: Applications and Case Studies—Topic-Contributed

Section on Statistical Learning and Data Mining

Organizer(s): Chamont Wei Hong Wang, College of New Jersey

Chair(s): Lara Schmidt, RAND Corporation

Applications and case studies

33 **Profit Analysis and Customer Satisfaction in Consumer Finance**—◆Mikhail Zhuravlev, The College of New Jersey

34 **Profit Analysis in Binary Prediction**—◆Michele Meisner, The College of New Jersey

35 **Detecting Unsatisfied Customers: A Case Study**—◆Kristen Schuck, The College of New Jersey

36 **Profit Analysis and Bootstrapping of Mass Spectrometry Data**—Brian Daniels, The College of New Jersey; ◆Katie Lentz, The College of New Jersey

436 CC-Hall D

Contributed Oral Poster Presentations—Contributed

Section on Statistical Learning and Data Mining

Chair(s): Lara Schmidt, RAND Corporation

Statistical Analysis of Text

37 **Statistical Learning of Word Acquisition with Application to Readability Prediction**—◆Paul B. Kidwell, Purdue University; Guy Lebanon, Georgia Institute of Technology; Kevyn Collins-Thompson, Microsoft Research

Data mining and knowledge discovery, machine learning

38 **Performance of Algorithms for Chemometric Calibration**—◆Stanislav Zakharkin, Solae; David Ryan, Solae; Nicole Mueth, Solae; Kyoungmi Kim, University of California, Davis

39 **Spatial Voxel Co-Occurrence Matrices and Correction Functions for Multiple Magnetic Resonance Imaging Scanners**—◆Arpad G. Kelemen, University of Maryland, Baltimore; Yulan Liang, University of Maryland, Baltimore

Bootstrap, resampling methods

40 **AdaBoost from the Perspective of Importance Sampling**—◆Qingzhao Yu, Louisiana State University Health Sciences Center

Pattern recognition, computer vision, shape analysis

41 **Adaptive Bayesian Pattern Recognition**—◆Thomas C. Minter, Adaptive Recognition Systems

Time series, wavelet analysis, signal processing

42 **Testing Equality of Latent Variables Across Groups**—◆Hui Huang, University of Maryland, Baltimore County

Data mining and knowledge discovery, machine learning

43 **Clustering via Data Spectroscopy**—◆Jared Schuetter, The Ohio State University; Tao Shi, The Ohio State University

Business, financial, and marketing statistics

44 **Session-Centric Page Sequence Clustering for Improving Web Experience**—◆Lakshminarayan K. Choudur, Hewlett-Packard Laboratories

Computational statistics, numerical methods, simulation

45 **Variable Selection for Clustering**—◆Hyang Min Lee, Penn State University; Jia Li, Penn State University

Mathematical statistics, distribution theory, robust statistics

46 **Weighted Distance-Weighted Discrimination and Its Asymptotic Properties**—◆Xingye Qiao, The University of North Carolina at Chapel Hill; Hao (Helen) Zhang, North Carolina State University; Yufeng Liu, The University of North Carolina at Chapel Hill; Michael Jeremy Todd, Cornell University; J. Steve Marron, The University of North Carolina at Chapel Hill

Applications and case studies

47 **Application of Periodic Autoregressive Moving Average (PARMA) Models in Water-Quality Trend Analysis of Minnesota River**—◆Deepak Sanjel, Minnesota State University; Mohammad L. Rahman, Minnesota State University

Biometrics, bioinformatics, computational biology

48 **Methods for the Processing of Large-Scale High-Resolution LC/MS Data**—◆Tianwei Yu, Emory University

Social and behavioral science

49 **Regression Trees for Group-Randomized Trials**—◆Anne-Michelle Noone, Georgetown University; Rebecca Andridge, University of Michigan

Mathematical statistics, distribution theory, robust statistics

50 **Outlier Detection in Functional Data Analysis**—◆Pallavi Sawant, Auburn University; Nedret Billor, Auburn University

Computational statistics, numerical methods, simulation

51 Supervised Dimensionality Reduction on the Fusion of Dissimilarity Matrices—◆Zhiliang Ma, Johns Hopkins University; Carey E. Priebe, Johns Hopkins University

Categorical, multivariate analysis

52 A Nonparametric Model for Multiclass Multidimensional Classification—Hua Fang, University of Nebraska-Lincoln; ◆Honggang Wang, University of Nebraska-Lincoln

Bayesian statistics, hierarchical models

53 Application of Transportation Problem to Improve 'Naïve' Bayes Classifier—◆Michael Zakharevich, Align Technology, Inc.; Olena Tsvirkunova, Align Technology, Inc.; Vadim Matov, Align Technology, Inc.

Categorical, multivariate analysis

54 Clustering Relationships in High-Dimensional Data—◆Timothy Au, Cornell University; Wei Jiang, Hong Kong University of Science and Technology

Applications and case studies

55 Power Simulation Using Nonlinear Bayesian Prediction Model on Alcohol Dependence Literature Database—◆Yun-Fei Chen, Eli Lilly and Company; Haoda Fu, Eli Lilly and Company

Experimental design

56 Planning the Optimal Get-Out-the-Vote Campaign Using Randomized Field Experiments—◆Aaron Strauss, Princeton University; Kosuke Imai, Princeton University

Data mining and knowledge discovery, machine learning

57 A Comparison of Logic Regression and CART for Identifying Important SNP Interactions—◆Wonsuk Yoo, Wayne State School of Medicine; Michele Cote, Karmanos Cancer Institute/Wayne State University; Ann Schwartz, Karmanos Cancer Institute

437 CC-Hall D

Topic-Contributed Oral Poster Presentations: Measurement Error and Misclassification in Epidemiology—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Lara Schmidt, RAND Corporation

Chair(s): Lara Schmidt, RAND Corporation

Health policy, epidemiology, public health

58 Sensitivity Analysis for Covariate Misclassification in Logistic Regression via Predictive Value Weights—Robert H. Lyles, Emory University; ◆Ji Lin, Emory University

59 Accounting for Exposure Measurement Error in Environmental Epidemiology—◆Adam Szpiro, University of Washington; Lianne Sheppard, University of Washington; Thomas Lumley, University of Washington

60 Regression Analysis on a Covariate with Heteroscedastic Measurement Error—◆Ying Guo, University of Michigan; Roderick J.A. Little, University of Michigan

61 An Ordinal Logistic Regression Model with Misclassification of the Outcome Variable and a Covariate—◆Beverly A. Shirkey, The University of Texas Health Science Center at Houston; Stephen C. Waring, The University of Texas Health Science Center at Houston; Jay H. Glasser, The University of Texas Health Science Center at Houston; Wenyaw Chan, The University of Texas Health Science Center at Houston

62 Generalized Multiple Indicators Multiple Causes Measurement Error Models—◆Carmen D. Tekwe, State University of New York at Buffalo; Randy L. Carter, State University of New York at Buffalo; Harry Cullings, Radiation Effects Research Foundation

63 Confidence Interval for the Odds Ratio Using Double Sampling—◆Denka Markova, Baylor University; Dean Young, Baylor University

438 CC-Hall D

■ Topic-Contributed Oral Poster Presentations: Case Studies in Epidemiology—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Natalie C. Hall, Eli Lilly and Company

Chair(s): Lara Schmidt, RAND Corporation

Health policy, epidemiology, public health

64 The Obesity Epidemic in Maryland: An Analysis and Proposal for Change—◆Simone A. Robers, Education Statistics Services Institute

65 Discussion on Bivariate Reference Ranges of QT Interval and Heart Rate—◆Tianhe Xu, Binzhou Medical College; Zengli Shi, Binzhou Medical College; Hongwei Sun, Binzhou Medical College; Jiu Wang, Binzhou Medical College; Yong Gao, Binzhou Medical College

66 Identifying Early Determinants of Overweight/Obesity Among Preschoolers: A Comparison of Classification Trees, Multivariate Adaptive Regression Splines, and Logistic Regression—◆Panagiota Kitsantas, George Mason University

67 An Empirical Identification of Subgroups of Patients with Knee Replacements—◆Charles Saltzman, The University of Utah; Man Hung, The University of Utah; Tom Greene, The University of Utah; Richard Johnston, The University of Iowa; Daniel Clegg, The University of Utah; John Callaghan, University of Iowa

68 Prediction of Functional Status for the Elderly Based on Double Indexed TORQUE—◆Hyokyoung (Grace) Hong, Baruch College; Jianhui Zhou, University of Virginia; Xuming He, University of Illinois at Urbana-Champaign

69 The Social and Geographic Context of Obesity and Diabetes Epidemics—◆Xingyou Zhang, CDC; James Holt, CDC

439 CC-Hall D

■ Topic-Contributed Oral Poster Presentations: Statistical Methods for Mental Health Studies—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Ralph M. Turner, University of the Sciences

Chair(s): Lara Schmidt, RAND Corporation

Health policy, epidemiology, public health

70 Assessing the Effect of Treatment Strategies for Longitudinally Observed Outcome Data—◆Sachiko Miyahara, University of Pittsburgh; Abdus S. Wahed, University of Pittsburgh

71 Variance Estimates for Synthetic Estimation of Need for Mental Health Services—◆Hoang Nguyen, LifeStat LLC; Charles E. Holzer, III, The University of Texas Medical Branch at Galveston

72 Detecting Schizophrenia Liability in Healthy First-Degree Relatives of Schizophrenics: A Finite Mixture Model Approach—◆Charity J. Morgan, The University of Alabama at Birmingham; Deborah L. Levy, McLean Hospital; Mark F. Lenzenweger, State University of New York at Binghamton; Donald B. Rubin, Harvard University

73 Bayesian Analysis of Doubly Censored Data with Covariates with Application to AIDS and Dementia—◆Binbing Yu, National Institute on Aging

74 Comparing Diagnostic Tools: Different Methods, Same Story?—◆Novie Younger, Tropical Medicine Research Institute, Jamaica; Audrey Pottinger, University of the West Indies

75 SF-36 Among Older Americans with Traumatic Brain Injury: Reliability, Factor Structure, and Impact of Injury Severity and Race—◆Chengwu Yang, Medical University of South Carolina; Anbesaw W. Selassie, Medical University of South Carolina; Rickey E. Carter, Medical University of South Carolina; Barbara C. Tilley, Medical University of South Carolina

76 A Sequential Approach of an Age-Period-Cohort Analysis—◆Kit Ling Yang, The University of Hong Kong

440 CC-Hall D

Contributed Oral Poster Presentations: Statistical Methods in Epidemiology—Contributed

Section on Statistics in Epidemiology

Chair(s): Lara Schmidt, RAND Corporation

Health policy, epidemiology, public health

77 Identifying Clusters of Mortality from Selected Causes of Death by Health Service Area: USA 2003–2005—◆Jay H. Kim, CDC/NCHS; Rong Wei, National Center for Health Statistics

Applications and case studies

78 Children's Health: The Effect of Air Pollution—◆Elizabeth A. Stanwyck, University of Maryland, Baltimore County; Bimal Sinha, University of Maryland, Baltimore County

79 Application of an Extended Poisson Process to Model Cardiovascular Events—◆Paul Kolm, Christiana Care Health System; Zugui Zhang, Christiana Care Health System; Edward Ewen, Christiana Care Health System; James Bowen, Christiana Care Health System

Health policy, epidemiology, public health

80 A Comparison of Methods for Analysis of Multidimensional Profiles—◆Margo A. Sidell, Tulane University

Linear models, GLMs, parametric methods

81 Test Coefficients Regression When the Variables Are Not Independent from Each Other—Leann Myers, Tulane University; ◆Adriana C. Dornelles, Tulane University

Health policy, epidemiology, public health

82 Confidence Interval for the Product of a Relative Risk and a Probability—◆William M. Reichmann, Brigham and Women's Hospital; Charles R. Horsburgh, Jr., Boston University School of Public Health; David Gagnon, Boston University School of Public Health; Elena Losina, Boston University

83 Distributions of Pediatric Blood Pressure Index and Percentiles: Implications as Diagnostic Tools—◆Cynthia Bell, The University of Texas Health Science Center at Houston; Alisa Acosta, The University of Texas Health Science Center at Houston; Karen McNiece, University of Arkansas Medical School/Arkansas Children's Hospital; Ronald Portman, The University of Texas Health Science Center at Houston; Joshua Samuels, The University of Texas Health Science Center at Houston

Linear models, GLMs, parametric methods

84 A Linear Regression Framework for Receiver Operating Characteristic Curve Analysis—◆Zheng Zhang, Brown University

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

Health policy, epidemiology, public health

85 Analyses of the Accuracy of Cancer Mortality as Measured by Death Certificates Data—Ronaldo Iachan, Macro International, Inc.; ◆Aliza Fink, Macro International, Inc.

Graphics, visualization

86 Using L'Abbe Plots, Event Rate Migration Analysis/Event Rate Curves to Report BMI Results from the Medical College of Georgia FitKid Project—◆John Hanes, Regent University

Longitudinal data, repeated measurements, and meta-analysis

87 Quantitative Synthesis of Dichotomous Data: Avoiding Dominance of a Single Study—◆Kepher H. Makambi, Georgetown University Medical Center

88 Application of Joint Modeling for Growth Model and Time-to-Event Analysis—◆Wan-Ling Hsu, Radiation Effects Research Foundation; Kazuo Neriishi, Radiation Effects Research Foundation; Tatsuyuki Kakuma, Kurume University; Yuko Araki, Kurume University

Health policy, epidemiology, public health

89 A Two-Component Mixture Model for Characterizing the Age Distribution of Pertussis Infant Mortality in the United States—◆Andrew L. Baughman, CDC; Tracy Pondo, CDC; Barry Sirotkin, CDC; Tejpratap Tiwari, CDC; Charles E. Rose, CDC; Margaret M. Cortese, CDC

Longitudinal data, repeated measurements, and meta-analysis

90 Bayesian Longitudinal Plateau Model of Adult Grip Strength with Multiple Imputation for Missing Response and Covariates—◆Ramzi W. Nahhas, Lifespan Health Research Center; Stefan A. Czerwinski, Lifespan Health Research Center

Bayesian statistics, hierarchical models

91 Interval Estimators for Directly Standardized Rates—◆Tracy Pondo, CDC; Charles E. Rose, CDC; Amanda C. Cohn, CDC; Elizabeth R. Zell, CDC

Longitudinal data, repeated measurements, and meta-analysis

92 How to Improve a Biomarker's Efficacy Using Longitudinal Data: Application to Prostate Cancer—◆Anna E. Kettermann, Johns Hopkins University; Luigi Ferrucci, National Institute on Aging; E. Jeffrey Metter, National Institute on Aging; H. Ballentine Carter, Johns Hopkins University

Health policy, epidemiology, public health

93 A Mean Test for Relative-Pairs in Genetic Linkage Analysis—◆Qimei He, Pacific Health Research Institute

94 Prevalence of Diabetes in Low-Income and First Nations People in Alberta, Canada—◆Greg M. Hugel, University of Alberta; Jeffrey A. Johnson, University of Alberta; Stephanie U. Balko,

Linear models, GLMs, parametric methods

95 Association Study with Multiple Markers on a Candidate Region and Disease via Generalized Partial Least Squares Approach—◆Hyonho Chun, Yale University

Health policy, epidemiology, public health

96 Cancer Genetics Network: A Research Resource—◆Nora Horick, Massachusetts General Hospital; Dianne M. Finkelstein, Harvard/Massachusetts General Hospital

Biometrics, bioinformatics, computational biology

97 Detecting Association with Rare Genetic Variants in Common Diseases—◆Yali Li, Case Western Reserve University; Tao Feng, Case Western Reserve University; Xiaofeng Zhu, Case Western Reserve University

Health policy, epidemiology, public health

98 Stomach Cancer Risk in Hodgkin Lymphoma and Testicular Cancer Survivors—◆Julia T. Molony, The University of Minnesota; Ethel Gilbert, National Cancer Institute, Division of Cancer Epidemiology and Genetics

Reliability and survival modeling, risk analysis

99 Penalized Splines in the Time-Varying Coefficient Rates Model—◆Leila D. Amorim, Universidade Federal da Bahia; Jianwen Cai, The University of North Carolina at Chapel Hill; Donglin Zeng, The University of North Carolina at Chapel Hill; Mauricio L. Barreto, Universidade Federal da Bahia

Health policy, epidemiology, public health

100 Identification of the Most Appropriate ICD Version for Epidemiologic Studies: Description of a Statistical Method—◆Ja K. Gu, National Institute for Occupational Safety and Health; Luenda E. Charles, National Institute for Occupational Safety and Health; Cecil M. Curchfiel, National Institute for Occupational Safety and Health; Michael E. Andrew, National Institute for Occupational Safety and Health; John M. Violanti, State University of New York at Buffalo

Biometrics, bioinformatics, computational biology

101 A Score-Based Combinatorial Approach to Detecting Gene-Gene Interactions in Nuclear Families—◆Xiaoqi Cui, Michigan Technological University; Huann-Sheng Chen, Michigan Technological University

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

Special Presentation 10:30 a.m.–12:20 p.m.

441 CC-207A
Late-Breaking Session III: Statistics in the New Administration

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

Organizer(s): Wendy Martinez, U.S. Department of Defense

Invited Sessions 10:30 a.m.–12:20 p.m.

442 CC-204C
✪ Statistical Analysis in the Presence of Measurement Error—Invited

Section on Statistics in Epidemiology, Section on Bayesian Statistical Science

Organizer(s): Huixia (Judy) Wang, North Carolina State University

Chair(s): Huixia (Judy) Wang, North Carolina State University

10:35 a.m. **Cox Models with Smooth Functional Effect of Covariates Measured with Error**—◆Ciprian M. Crainiceanu, Johns Hopkins University

11:00 a.m. **Quantile Regression with Measurement Error**—◆Ying Wei, Columbia University; Raymond J. Carroll, Texas A&M University

11:25 a.m. **Identification and Estimation of Nonparametric Measurement Error Models**—◆Susan Schennach, The University of Chicago

11:50 a.m. **Measurement Error Models for Variance Predictors**—◆Leonard A. Stefanski, North Carolina State University

12:15 p.m. **Floor Discussion**

443 CC-206
■ Evaluating and Predicting Player Performance—Invited

Section on Statistics in Sports

Organizer(s): Matthew S. Johnson, Teachers College

Chair(s): Ronald Neath, Baruch College

10:35 a.m. **Beyond +/-: A Rating System to Compare NHL Players**—◆Dennis F. Lock, St. Lawrence University

11:05 a.m. **A Survey of Methods for the Statistical Evaluation of Defensive Ability in Major League Baseball**—◆Benjamin S. Baumer, CUNY Graduate Center

11:35 a.m. **Evaluating Player Performance in Basketball**—◆Matthew S. Johnson, Teachers College

12:05 p.m. **Floor Discussion**

444 CC-209A
■ Recent Developments in Seasonal Adjustment Methodology—Invited

Business and Economic Statistics Section, Section on Government Statistics

Organizer(s): Brian C. Monsell, U.S. Census Bureau

Chair(s): Tucker S. McElroy, U.S. Census Bureau

10:35 a.m. **Recent Developments in Trend-Cycle Prediction for Real Time Analysis**—◆Estela Bee Dagum, University of Bologna; Silvia Bianconcini, University of Bologna

11:00 a.m. **Identification of Problematic Series in Model-Based Seasonal Adjustment of Large Sets**—◆Agustin Maravall, Bank of Spain

11:25 a.m. **Periodic Unobserved Components in Seasonal Time Series**—◆Siem Jan Koopman, Vrije Universiteit Amsterdam

11:50 a.m. **Stock Series Holiday Regressors Generated by Flow Series Regressors**—◆David Findley, U.S. Census Bureau

12:15 p.m. **Floor Discussion**

445 CC-150A
■ ✪ Emerging Statistical Challenges in Cancer Research—Invited

International Indian Statistical Association, Biopharmaceutical Section

Organizer(s): Bhramar Mukherjee, University of Michigan

Chair(s): Bhramar Mukherjee, University of Michigan

10:35 a.m. **Predictive Models of Complex Traits: Inference of Statistical Dependencies and Predictive Geometry**—◆Sayan Mukherjee, Duke University

11:00 a.m. **On Analyzing Routes of Exposures Obtained from Questionnaires**—◆Jaya Satagopan, Memorial Sloan-Kettering Cancer Center

11:25 a.m. **Multiple Testing Procedures for Integrative Genomics Problems in Cancer Studies**—◆Debashis Ghosh, Penn State University; Laila M. Poisson, University of Michigan

11:50 a.m. **Survival Trees and Forest for Breast Cancer Prognostication**—◆Mousumi Banerjee, University of Michigan; David Miller, University of Michigan

12:15 p.m. **Floor Discussion**

446 CC-202B

■ ✪ Statistics in Biopharmaceutical Research: Novel Approaches to Designing Adaptive Clinical Trials—Invited

Statistics in Biopharmaceutical Research Journal, Biopharmaceutical Section

Organizer(s): Joseph Heyse, Merck Research Laboratories

Chair(s): Joseph Heyse, Merck Research Laboratories

10:35 a.m. **Flexible Phase I Clinical Trials: Allowing for Nonbinary Toxicity Response and Removal of Other Common Limitations**—◆Richard F. Potthoff, Duke University Medical Center; Stephen L. George, Duke University Medical Center

11:00 a.m. **T-Statistic-Based Up and Down Design for Dose-Finding Competes Favorably with Bayesian 4-Parameter Logistic Design**—◆James A. Bolognese, Cytel, Inc.; Nitin R. Patel, Cytel, Inc.; Yevgen Tymofyeyef, Merck & Co., Inc.; Inna Perevozskaya, Merck & Co., Inc.; Jeffrey Palmer, Cytel, Inc.

11:25 a.m. **Adaptive Dose-Finding in Non-Life-Threatening Diseases: Review and Case Studies**—◆Anastasia Ivanova, The University of North Carolina at Chapel Hill

11:50 a.m. **Variance-Based Sample Size Reassessments Increase Relative Efficiency of Studies**—◆Deepak B. Khatry, MedImmune, LLC

12:15 p.m. **Floor Discussion**

447 CC-209C

■ Career Advice for Female Industrial Statisticians—Invited

Section on Quality and Productivity

Organizer(s): Diane K. Michelson, International SEMATECH Manufacturing Initiative

Chair(s): Diane K. Michelson, International SEMATECH Manufacturing Initiative

10:35 a.m. **Building a Career in Industry**—◆Martha Gardner, General Electric Global Research

11:05 a.m. **Making the Move from Statistician to Management**—◆Leslie Fowler, Freescale Semiconductor

11:35 a.m. **Thriving, Not Just Surviving, as a Statistician**—◆Joanne R. Wendelberger, Los Alamos National Laboratory

12:05 p.m. **Floor Discussion**

448 CC-158B

Health Impact of Climate Change—Invited

Section on Bayesian Statistical Science, Section on Risk Analysis, Section on Statistics and the Environment, Section on Government Statistics

Organizer(s): Francesca Dominici, Johns Hopkins University

Chair(s): Francesca Dominici, Johns Hopkins University

10:35 a.m. **The Health Effects of Heat Waves**—◆Roger D. Peng, Johns Hopkins Bloomberg School of Public Health

11:05 a.m. **Regional Climate, NARCCAP, and Health Impacts**—◆Stephan R. Sain, National Center for Atmospheric Research; Claudia Tebaldi, Climate Central

11:35 a.m. **The Potential Impact of Climate Change on Health Through Tropospheric Ozone**—◆Michelle L. Bell, Yale University

12:05 p.m. **Floor Discussion**

449 CC-201

Bayesian Methods in Medicine and Biology—Invited

WNAR, Section on Bayesian Statistical Science, Biometrics Section, Biopharmaceutical Section

Organizer(s): Wesley O. Johnson, University of California, Irvine

Chair(s): Wesley O. Johnson, University of California, Irvine

10:35 a.m. **A Bayesian Theory of Surprise for Modeling Attention Mechanisms in Natural and Artificial Perceptual Systems: Application to Eye Movements**—◆Pierre Baldi, University of California, Irvine

11:05 a.m. **Automated Methods for Complex Image Data: Adaptive Bayesian Image Mixed Models**—◆Jeffrey S. Morris, The University of Texas M.D. Anderson Cancer Center

11:35 a.m. **Bayesian Nonparametric Techniques in Genome-Wide Association Studies**—◆Purushottam W. Laud, Medical College of Wisconsin; Nicholas M. Pajewski, The University of Alabama at Birmingham

12:05 p.m. **Floor Discussion**

450 CC-144B

■ Distance Teaching in Practice: Bring Your Laptop and Experience for Yourself—Invited

Section on Teaching of Statistics in the Health Sciences, Interface Foundation of North America

Organizer(s): Carol Bigelow, University of Massachusetts Amherst

Chair(s): Cynthia Coffman, Duke University Medical Center

10:35 a.m. **Teaching Health Professionals Online: Keeping It Real**—◆Penelope S. Pekow, University of Massachusetts Amherst

11:00 a.m. **An Interactive Web-Based Introduction to Biostatistics for Health Practitioners**—◆Jacob J. Oleson, The University of Iowa

11:25 a.m. **Duke Medicine Teaching: Multiple Simultaneous Sites and Technical Presentations with SAS**—◆Lawrence H. Muhlbaier, Duke University; Cynthia Coffman, Duke University Medical Center; Steven C. Grambow, Duke University; Linda S. Lee, Duke University; William E. Wilkinson, Duke University

11:50 a.m. **The Virtual Data Analysis Classroom: A Live Demonstration**—◆Guillaume Weisang, Bentley University; Olumayokun Soremekun, Bentley University

12:15 p.m. **Floor Discussion**

451 CC-144C

Noether Awards Invited Session—Invited

Noether Award Committee

Organizer(s): Carlos J. Morales, Wellington Management Company, LLP

Chair(s): Carlos J. Morales, Wellington Management Company, LLP

10:35 a.m. **Extending SS-ANOVA Models with Pedigree Data**—◆Grace Wahba, University of Wisconsin-Madison

11:20 a.m. **Semiparametric Efficient Estimation in the Case-Cohort Study**—◆Donglin Zeng, The University of North Carolina at Chapel Hill

12:05 p.m. **Floor Discussion**

452 CC-159B

Cautionary Tales of Modern Statistical Methods—Invited

IMS, Section on Bayesian Statistical Science

Organizer(s): Peter Hoff, University of Washington

Chair(s): Aleksandra B. Slavkovic, Penn State University

10:35 a.m. **Inference Post-Model Selection: The Good, The Bad, and The Ugly**—◆Hannes Leeb, Yale University

11:05 a.m. **MCMC: Does It Work? How Can We Tell?**—◆Charles J. Geyer, The University of Minnesota

11:35 a.m. **Problems Resulting from the Avalanche of Genetic Information**—◆Robert C. Elston, Case Western Reserve University

12:05 p.m. **Floor Discussion**

453 CC-207B

Wald Lecture II—Invited

IMS

Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill

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

10:35 a.m. **Decision Trees and Gradient Boosting**—◆Jerome H. Friedman, Stanford University

12:00 p.m. **Floor Discussion**

Invited Panels 10:30 a.m.–12:20 p.m.

454 CC-143B

■ ✪ Future of Random-Digit-Dial Telephone Surveys—Invited

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

Organizer(s): Meena Khare, CDC

Chair(s): Sunghee Lee, University of California, Los Angeles

Panelists:
- ◆Linda B. Piekarski, Survey Sampling International, LLC
- ◆Meena Khare, CDC
- ◆James A. Singleton, CDC
- ◆Michael P. Battaglia, Abt Associates Inc.
- ◆Michael J. Brick, Westat, Inc.
- ◆David Grant, University of California, Los Angeles

12:15 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

455 CC-159A

✪ Population Monte Carlo, SMC Sampler—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Julien Cornebise, Statistical and Applied Mathematical Sciences Institute

Chair(s): Christian P. Robert, Université Paris Dauphine

10:35 a.m. **Adaptive Design of Transition Kernels in Sequential Monte Carlo Methods**—◆Julien Cornebise, Statistical and Applied Mathematical Sciences Institute; Eric Moulines, Telecom ParisTech; Jimmy Olsson, Lund University

10:55 a.m. **Some Conditional Binary Sequences**—◆Ian H. Dinwoodie, Duke University

11:15 a.m. **Adaptive Multiple Importance Sampling**—◆Jean-Michel Marin, University Montpellier II; Jean-Marie Cornuet, Imperial College, London; Antonietta Mira, University of Insubria; Christian P. Robert, Université Paris Dauphine

11:35 a.m. **An Improved Analysis of the Product Estimator**—◆Mark Huber, Duke University; Sarah Schott, Duke University

11:55 a.m. **Population Monte Carlo and Cosmology**—◆Darren Wraith, Université de Paris Dauphine

12:15 p.m. **Floor Discussion**

456 CC-209B

■ ✪ The Development of Advanced Lifetime Data Analysis in Industrial Settings—Topic-Contributed

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

Organizer(s): I-Li Lu, The Boeing Company

Chair(s): I-Li Lu, The Boeing Company

10:35 a.m. **Statistical Aspects of Monitoring Time-Managed Lifetime Data**—◆Emmanuel Yashchin, IBM Research

10:55 a.m. **Exceedence Monitoring and Alerting Mechanism for the Boeing In-Service Reliability Program**—◆Shuying Zhu, The Boeing Company

11:15 a.m. **Data-Driven Reliability Estimation for Prognostics and Health Management**—◆Aparna Huzurbazar, Los Alamos National Laboratory

11:35 a.m. **Estimating Lifetimes When Several Unidentified Components Are Reported**—◆Julio L. Peixoto, The Boeing Company

11:55 a.m. Disc: Anbessie Yitbarec, The Boeing Company

12:15 p.m. **Floor Discussion**

457 CC-158A

■ Bayesian Nonparametric Methods for Time Series and Functional Data—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Sam Behseta, California State University, Fullerton

Chair(s): Herbert Lee, University of California, Santa Cruz

10:35 a.m. **Bayesian Nonparametric Mixture Modeling for Poisson Processes with an Application to Comparison of Single-Neuron Firing Intensities**—◆Athanasios Kottas, University of California, Santa Cruz

10:55 a.m. **Markov Models for Neuronal Spike Trains**—◆Jeffrey Liebner, Lafayette College; Athanasios Kottas, University of California, Santa Cruz; Abel Rodriguez, University of California, Santa Cruz; Kert Viele, University of Kentucky; Sam Behseta, California State University, Fullerton

11:15 a.m. **Multilevel Functional Clustering**—◆Abel Rodriguez, University of California, Santa Cruz

11:35 a.m. **Integrating Bayesian Time Series Methods Into Self-Modeling Regressions**—◆Kert Viele, University of Kentucky; Rhonda VanDyke, Cincinnati Children's Hospital Medical Center

11:55 a.m. **Multiple Curve-Fitting with BARS**—◆Sam Behseta, California State University, Fullerton; Robert E. Kass, Carnegie Mellon University

12:15 p.m. **Floor Discussion**

458 CC-143C

■ ✪ Innovative Methods and Findings from Health Care Assessment Surveys—Topic-Contributed

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

Organizer(s): Alan M. Zaslavsky, Harvard Medical School

Chair(s): Steven Cohen, Agency for Healthcare Research and Quality

10:35 a.m. **Using the Census Bureau's Surname List to Improve Estimates of Race/Ethnicity and Associated Disparities**—◆Marc N. Elliott, RAND Corporation; Peter A. Morrison, RAND Corporation; Allen Fremont, RAND Corporation; Daniel F. McCaffrey, RAND Corporation; Philip Pantoja, RAND Corporation; Nicole Lurie, RAND Corporation

10:55 a.m. **Methodological Issues in the Analysis of Responses to CAHPS Questions in the Medical Expenditure Panel Survey (MEPS)**—◆Paul Gorrell, Social & Scientific Systems, Inc.

11:15 a.m. **Optimal Survey Design When Nonrespondents Are Subsampled for Follow-Up in a Comparative Study**—◆A. James O'Malley, Harvard Medical School; Alan M. Zaslavsky, Harvard Medical School

11:35 a.m. **A Simulation Study of Design Effect Approximations for Propensity-Score Weighted Data with Application to the MCAHPS Survey**—◆Amelia M. Haviland, RAND Corporation; Marc N. Elliott, RAND Corporation; Mary Slaughter, RAND Corporation

11:55 a.m. **Random Coefficients Models for Subgroup Differences in Surveys of Health Care Quality**—◆Alan M. Zaslavsky, Harvard Medical School; A. James O'Malley, Harvard Medical School

12:15 p.m. **Floor Discussion**

459 CC-150B

■ ✪ The Statistics of Election Auditing—Topic-Contributed

Scientific and Public Affairs Advisory Committee, Social Statistics Section

Organizer(s): Mary Foulkes, George Washington University

Chair(s): Mary Foulkes, George Washington University

10:35 a.m. **Election Auditing: A Report from Florida**—◆Linda J. Young, University of Florida

10:55 a.m. **Post-Election Audit Efforts in Iowa: Successes and Challenges**—◆Jonathan M. Hobbs, Iowa State University; David Rockoff, Iowa State University; Russell V. Lenth, The University of Iowa; Rahul A. Parsa, Drake University; Alicia L. Carriquiry, Iowa State University

11:15 a.m. **Oregon 2008 'Hand Recounts'**—◆Albyn C. Jones, Reed College

11:35 a.m. **Statistical Auditing Techniques and Small Errors in Four Races in California**—◆Luke W. Miratrix, University of California, Berkeley; Philip B. Stark, University of California, Berkeley

11:55 a.m. Disc: Mary Batcher, Ernst and Young LLP

12:15 p.m. **Floor Discussion**

460 CC-101

■ Characteristics of Biomarker in the Clinical Development and Adoption—Topic-Contributed

Biometrics Section

Organizer(s): Grace Kim, Radiological Science, UCLA

Chair(s): Constantine Gatsonis, Brown University

10:35 a.m. **Biomarker and Clinical Endpoint in Asthma**—◆Yun Chon, Amgen, Inc.

10:55 a.m. **Identification of Patient Stratification Biomarkers for ABT-263**—◆Viswanath Devanarayan, Abbott Laboratories; Mark Anderson, Abbott Laboratories; Peter Ansell, Abbott Laboratories; Chris Tse, Abbott Laboratories; Stephen Tahir, Abbott Laboratories

11:15 a.m. **Can Apparent Diffusion Coefficient Be a Predictive Biomarker in Glioblastoma Multiforme Patients?**—◆Hyun (Grace) J. Kim, University of California, Los Angeles

11:35 a.m. **Percentage of Survival Variation Explained by a Continuous Marker**—◆Caixia Li, University of California, San Francisco; Ying Lu, University of California, San Francisco

11:55 a.m. Disc: Sue-Jane Wang, FDA

12:15 p.m. **Floor Discussion**

461 CC-155

Undergraduate Statisticians: Developing Evidence to Improve Environmental Policy—Topic-Contributed

Section on Statistics and the Environment

Organizer(s): William F. Hunt, Jr., North Carolina State University

Chair(s): William F. Hunt, Jr., North Carolina State University

10:35 a.m. **Crustal Matter: Exploring the Differences Between Ambient Air Samples and Emissions Inventory**—◆Jennifer M. James, North Carolina State University; Camille Clark, North Carolina State University; Jeff Rice, North Carolina State University

10:55 a.m. **Forecasting Wildfires and Examining the Impact of Global Climate Change**—Jamie Pearce, North Carolina State University; ◆Jason Leone, North Carolina State University; Kristen L. Gore, North Carolina State University

11:15 a.m. **Meteorologically Adjusted Particulate Matter Trend Analysis**—◆Kristen L. Gore, North Carolina State University; Marshall Gaddis, North Carolina State University; Nicole Bader, North Carolina State University

11:35 a.m. **Can Blood Lead Levels in Children Be Reduced?**—◆Steve Somers, North Carolina State University; Ashley Myers, North Carolina State University; Erika Burger, North Carolina State University

11:55 a.m. Disc: Roger Woodward, North Carolina State University

12:15 p.m. **Floor Discussion**

462 CC-208A

Bayesian Estimation of Diffusion Models—Topic-Contributed

Business and Economic Statistics Section, Section on Bayesian Statistical Science

Organizer(s): Osnat Stramer, The University of Iowa

Chair(s): Osnat Stramer, The University of Iowa

10:35 a.m. **Bayesian Filtering for Jump-Diffusions**—◆Andrew Golightly, Newcastle University

10:55 a.m. **Estimation of Continuous-Time Stochastic Volatility Models with Jumps Using High-Frequency Data**—◆Viktor Todorov, Northwestern University

11:15 a.m. **Bayesian Inference for Discretely Sampled Diffusion Processes**—◆Matthew Bognar, The University of Iowa

11:35 a.m. **Particle Filter for Partially Observed Stochastic Partial Differential Equation with Fractional Levy Ornstein-Uhlenbeck Stochastic Volatility**—◆Jaya Bishwal, The University of North Carolina at Charlotte

11:55 a.m. **EMM MCMC and Bayesian Parameter Estimation for a Partially Observed Nonlinear Diffusion Process**—◆Paul Schneider, University of Warwick; Osnat Stramer, The University of Iowa

12:15 p.m. **Floor Discussion**

463 CC-102B

■ Statistical Issues in Thorough QT Studies—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Yi Tsong, FDA

Chair(s): Lihan Yan, FDA

10:35 a.m. **Error in Variable Modeling for QT Correction**—◆Bin Cheng, Columbia University; Yi Tsong, FDA

10:55 a.m. **Multiple Testing Issues of Prolongation Thorough QTc Clinical Trials**—Yi Tsong, FDA; ◆Jinglin Zhong, FDA; Joanne Zhang, FDA

11:15 a.m. **Adaptive type I error rate spending approach for validation and non-inferiority tests of thorough QT studies**—◆Yi Tsong, FDA; Joanne Zhang, FDA

11:35 a.m. **Sample Size in Oncology QT Studies**—◆Joanne Zhang, FDA

11:55 a.m. Disc: Jie Chen, Merck & Co., Inc.

12:15 p.m. **Floor Discussion**

Topic-Contributed Panels 10:30 a.m.–12:20 p.m.

464 CC-202A

■ Industry-Sponsored Science: Are Consultants Really Biased?—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Michael E. Ginevan, M.E. Ginevan & Associates

Chair(s): Russell W. Helms, UNC Department of Biostatistics and Chief Technical Officer at Rho

Panelists: ◆Michael E. Ginevan, M.E. Ginevan & Associates

◆S. Stanley Young, National Institute of Statistical Sciences

◆Allen Heller, Bayer HealthCare Pharmaceuticals

◆Peter A. Lachenbruch, Oregon State University

◆Robert Obenchain, Risk Benefit Statistics LLC

12:10 p.m. **Floor Discussion**

465 CC-149B

■ Words from the Wise: Mu Sigma Rho Education Award Winners Tell All!—Topic-Contributed

Section on Statistical Education

Organizer(s): Roxy Peck, Cal Poly

Chair(s): Roxy Peck, Cal Poly

Panelists: ◆Robin H. Lock, St. Lawrence University

◆Thomas H. Short, John Carroll University

◆Michael Kutner, Emory University

12:05 p.m. **Floor Discussion**

466 CC-143A

✪ National Health Care Surveys Design Changes 2004–2010: New Evidence for Policymakers—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Esther Hing, National Center for Health Statistics

Chair(s): Esther Hing, National Center for Health Statistics

Panelists: ◆Linda McCaig, National Center for Health Statistics

◆Alan Simon, National Center for Health Statistics

◆Sandra L. Decker, National Center for Health Statistics

◆Lauren Harris-Kojetin, National Center for Health Statistics

12:15 p.m. **Floor Discussion**

Contributed Sessions 10:30 a.m.–12:20 p.m.

467 CC-204A

Analysis of High-Dimensional Data—Contributed

ENAR, Interface Foundation of North America

Chair(s): Mary Mays, Arizona State University

10:35 a.m. **Lower Confidence Bounds for Prediction Accuracy in High Dimensions with Feature Selection**—◆Kevin K. Dobbin, The University of Georgia

10:50 a.m. **Application of Randomized Singular Value Decomposition for Partial Least Squares Analysis: Multimodality Neuroimaging Data**—◆Bedda L. Rosario, University of Pittsburgh; Lisa A. Weissfeld, University of Pittsburgh; William E. Klunk, University of Pittsburgh; Chester A. Mathis, University of Pittsburgh; Julie C. Price, University of Pittsburgh

11:05 a.m. **The Effects of Dimension of Wavelet Resampling on Tests for Functional Connectivity**—◆Ohn Jo Koh, Southern Methodist University; William Schucany, Southern Methodist University; Richard F. Gunst, Southern Methodist University; Wayne A. Woodward, Southern Methodist University

11:20 a.m. **Testing for Gene Effect in Presence of Gene-Gene Interactions**—◆Arnab Maity, Harvard School of Public Health; Xihong Lin, Harvard School of Public Health

11:35 a.m. **Clinical versus Statistical Significance in Medical Imaging**—◆Thomas F. Heston, Johns Hopkins University; Richard L. Wahl, Johns Hopkins University

11:50 a.m. **Blind Source Detection in Images: A Multiple Testing Strategy**—◆David A. Friedenberg, Carnegie Mellon University

12:05 p.m. **The Orthogonal Interactions Model for Unreplicated Factorial Experiments**—◆Clayton A. Barker, SAS Institute Inc.; Leonard A. Stefanski, North Carolina State University; Jason Osborne, North Carolina State University

468 CC-148

Survival Analysis and Semiparametric Models—Contributed

SSC

Chair(s): Paramjit S. Gill, The University of British Columbia

10:35 a.m. **Accelerated Hazards Mixture Cure Model**—◆Yingwei Peng, Queen's University; Jiajia Zhang, University of South Carolina

10:50 a.m. **Weighted Composite Endpoints in the Analysis of Cardiovascular Clinical Trial Data: Addressing an Unmet Need**—◆Jeffrey A. Bakal, University of Alberta; Cynthia M. Westerhout, University of Alberta; Robert C. Welsh, University of Alberta; Paul W. Armstrong, University of Alberta

11:05 a.m. **Semiparametric Inference for a Time-Dependent Extended Hazard Model**—◆Yi-Kuan Tseng, National Central University; Ken-Ning Hsu, National Central University

11:20 a.m. **M-Estimation in Censored Linear Models Under a Convex Discrepancy Function**—◆Weihua Zhou, University of North Carolina

11:35 a.m. **Assessing Mediation Effects for Survival Types of Outcomes**—Bin Huang, Cincinnati Children's Hospital Medical Center; ◆Chen Chen, Cincinnati Children's Hospital Medical Center

12:05 p.m. **Floor Discussion**

469 CC-144A

Methods to Look at Individual or Small-Group Behavior and the Impact on Data—Contributed

Social Statistics Section

Chair(s): Walter Hill, Saint Mary's College of Maryland

10:35 a.m. **Multivariate, Multilevel Modeling of Behavioral Interaction Data**—◆Getachew A. Dagne, University of South Florida

10:50 a.m. **Plaid Clustering of Urban Juvenile Delinquency and Recidivism Data**—◆Alan J. Izenman, Temple University; Joseph Jupin, Temple University

11:05 a.m. **A New Heuristic Search Model for the Identification of Collusion Sets in Agent-Based Models**—◆Gregory Michaelson, University of Alabama; Marcus Perry, University of Alabama

11:20 a.m. **Nonparametric Estimation of Individual Activity Spaces**—◆William F. Darnieder, The Ohio State University; Catherine Calder, The Ohio State University; Mei-Po Kwan, The Ohio State University; Timothy L. Hawthorne, The Ohio State University; Aubrey Jackson, The Ohio State University

11:35 a.m. **POINT: A Method for Evaluating the Quality of Interviewing**—◆Michael Egan, Social Surveys Division

11:50 a.m. **Leadership Behavior: A Comparative Study of Multiple Regression and the Multilevel Regression**—◆Shahid Kamal, University of the Punjab; Rehan Ahmad, University of the Punjab; Muhammad A. Raza, University of the Punjab

12:05 p.m. **Floor Discussion**

470 CC-204B

Methods for Genetic Association Studies—Contributed

Section on Statistics in Epidemiology, Section on Bayesian Statistical Science

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

10:35 a.m. **On Quality Control Measures in Genome-Wide Association Studies: A Test to Assess the Genotyping Quality of Individual Probands in Family-Based Association Studies**—◆David Fardo, University of Kentucky; Iuliana Ionita-Laza, Harvard School of Public Health; Christophe Lange, Harvard University

10:50 a.m. **On Combining Data from Genome-Wide Association Studies to Discover Disease-Associated SNPs**—◆Ruth Pfeiffer, National Cancer Institute; Mitchell H. Gail, National Cancer Institute

11:05 a.m. **A Generalized Sequential Bonferroni Procedure for Genome-Wide Association Studies Incorporating Information of Hardy-Weinberg Disequilibrium**—◆Guolian Kang, The University of Alabama at Birmingham; Guimin Gao, The University of Alabama at Birmingham

11:20 a.m. **Score Statistics for Family-Based Genetic Association Studies of Quantitative Traits**—◆Samsiddhi Bhattacharjee, National Cancer Institute; Eleanor Feingold, University of Pittsburgh

11:35 a.m. **A Powerful Two-Stage Association Test Using Genotype Data from Family Triads, Unrelated Cases, and/or Controls**—◆Jin-Hua Chen, China Medical University; Kuang-Fu Cheng, China Medical University; Wei-Jiun Lin, National Central University

11:50 a.m. **Confidence Set Inference (CSI): A Family-Based Association Method for Obtaining Confidence Sets of SNPs Regulating Quantitative Phenotypes**—◆Charalampos Papachristou, University of the Sciences in Philadelphia; Shili Lin, The Ohio State University

12:05 p.m. **Asymptotic Bayes Factor for Genetic Association When the Underlying Genetic Model Is Unknown**—◆Mark J. Meyer, National Heart, Lung, and Blood Institute; Gang Zheng, National Heart, Lung, and Blood Institute

471 CC-153

■ ✪ Applications of Graphical Methods—Contributed

Section on Statistical Graphics

Chair(s): Bradley C. Wallet, University of Oklahoma

10:35 a.m. **How Good is Your Eyeballing?**—◆David Rockoff, Iowa State University; Heike Hofmann, Iowa State University

10:50 a.m. **Multivariate Quantiles and High-Dimensional Credible Set Construction**—◆Nitai D. Mukhopadhyay, Virginia Commonwealth University; Snigdhansu Chatterjee, The University of Minnesota

11:05 a.m. **Multivariate Disease Mapping (MVDM)**—Caroline Jeffery, Harvard School of Public Health; ◆Al Ozonoff, Boston University School of Public Health; Marcello Pagano, Harvard School of Public Health

11:20 a.m. **Graphically Analyzing Multivariate Mental Health Data: Results from a Cohort of Older Patients Recently Discharged from a Medical Intensive Care Unit**—◆Peter H. Van Ness, Yale University

11:35 a.m. **On Some Properties of a Simple and More General Boxplot Method for Identifying Outliers**—◆Yinaze H. Dovoedo, The University of Alabama; Subhabrata Chakraborti, The University of Alabama

11:50 a.m. **A Graphical Test to Distinguish Between the Pareto and Tapered Pareto Distributions**—◆Rakhee D. Patel, University of California, Los Angeles

12:05 p.m. **Reigniting Classroom Research as a Tool for Accountability**—◆Ronald L. White, Norfolk State University

472 CC-149A

Applied Programming Session—Contributed

Section for Statistical Programmers and Analysts, Interface Foundation of North America

Chair(s): Yong-Fang Kuo, The University of Texas Medical Branch

10:35 a.m. **Interactive Computer Program for Optimal Designs of Longitudinal Cohort Studies**—◆Fetene B. Tekle, Tilburg University; Frans E.S. Tan, Maastricht University; Martijn Berger, Maastricht University

10:50 a.m. **It All Starts with Statistical Programming**—◆Nancy Wang, MDS Pharma Services

11:05 a.m. **Comparing Statistical Software Packages for Multilevel Modeling**—◆Marie Gantz, RTI International; G. Gordon Brown, RTI International; Randall Bender, RTI International; Jill Fromewick, Summit Research Associates; Scott Novak, RTI International; Dhuly Chowdhury, RTI International; Malavika Subramanyam, Harvard School of Public Health; Theresa L. Osypuk, Northeastern University

11:20 a.m. **Open Source Estimation Toolkit for Item Response Theory Modeling**—◆Werner Wothke, American Institutes for Research

11:35 a.m. **Categorical Data Analysis System**—◆Yining Wang, Johnson & Johnson; C. J. Tian, Johnson & Johnson; Lisa Zhou, Johnson & Johnson PRD

11:50 a.m. **Efficacy Analysis System for Clinical Trials**—◆Lisa Zhou, Johnson & Johnson PRD; Yining Wang, Johnson & Johnson; C. J. Tian, Johnson & Johnson

12:05 p.m. **Arrow System: An Integrated Statistical Analysis and Reporting System for Clinical Data**—◆C. J. Tian, Johnson & Johnson; Denis Michel, Johnson & Johnson

473 CC-203A
Genome-Wide Analysis—Contributed

Biometrics Section, Section on Bayesian Statistical Science

Organizer(s): Li Luo, The University of Texas School of Public Health

Chair(s): Li Luo, The University of Texas School of Public Health

10:35 a.m. **Exploratory Analysis of Failure Times with Genomic Applications**—◆Cheng Cheng, St. Jude Children's Research Hospital

10:50 a.m. **A Novel Approach to Learning Gene Association Networks from High-Dimensional Data**—◆Jie Cheng, GlaxoSmithKline; Xiwu Lin, GlaxoSmithKline; Kwan R. Lee, GlaxoSmithKline

11:05 a.m. **A Unified Procedure for Evaluating HWE and Association in Genome-Wide Association Studies That Reduces False Positives**—◆Stefan Boehringer, Institut für Humangenetik; Hajo Holzmann, Universität Marburg; Johannes Hebebrand, University of Duisburg-Essen

11:20 a.m. **Power of Genetic Association Studies with Fixed and Random Genotype Frequencies**—◆Julia Kozlitina, The University of Texas Southwestern Medical Center at Dallas; William Schucany, Southern Methodist University

11:35 a.m. **Hierarchical Generalized Linear Models for Multiple QTL Mapping**—◆Nengjun Yi, The University of Alabama at Birmingham

11:50 a.m. **Floor Discussion**

474 CC-203B
Gene Expression and DNA Sequencing—Contributed

Biometrics Section

Chair(s): Jing He, University of Pennsylvania

10:35 a.m. **Estimation of Parameters Subject to Order Restrictions on a Circle with Application to Estimation of Phase Angles of Cell Cycle Genes**—Cristina Rueda, Universidad de Valladolid; Miguel A. Fernández, Universidad de Valladolid; ◆Shyamal D. Peddada, National Institute of Environmental Health Sciences

10:50 a.m. **A Statistical Test for Detecting Variability in the Gene Expression Data Using Pair-Wise Comparisons**—◆Sunil Mathur, The University of Mississippi

11:05 a.m. **Model-Based Classifications for Multiple Conditions on the Temporal Gene Expressions**—◆Dianliang Deng, University of Regina

11:20 a.m. **Using Ambiguous Tags in Digital Gene Expression Analysis**—◆Naomi S. Altman, Penn State University

11:35 a.m. **Dynamic Clustering of Temporal Gene Expression Across Conditions**—◆Lingling An, University of Arizona

11:50 a.m. **A Statistical Model for the Identification of Genes Governing the Incidence of Cancer with Age**—◆Kiranmoy Das, Penn State University

12:05 p.m. **An Integrated Approach to Identify Critical miRNAs and Their Regulatory Roles in Corresponding Genes in Cancer Development**—◆Yian A. Chen, Moffitt Cancer Center; Dung-Tsa Chen, Moffitt Cancer Center & Research Institute

475 CC-160
Test—Contributed

IMS

Chair(s): Min Qian, University of Michigan

10:35 a.m. **A Goodness-of-Fit Test for a Generalized Inverse Gaussian Based on the Matsumoto-Yor Property**—◆Severien Nkurunziza, University of Windsor; Angelo E. Koudou, Institut Elie Cartan

10:50 a.m. **Weighted Likelihood Ratio Tests for Exponential Distributions**—◆Jiqiang Guo, Iowa State University

11:05 a.m. **Asymptotically Efficient Tests for Goodness-of-Fit**—◆Yongzhao Shao, Iowa State University; Ming Zhou, Iowa State University; Jiqiang Guo, Iowa State University

11:20 a.m. **A New Test for Normality**—◆Ming Zhou, Iowa State University; Yongzhao Shao, Iowa State University

11:35 a.m. **Testing for Independence Between a Time Series and a Point Process**—◆Victor Solo, University of New South Wales

11:50 a.m. **A Powerful and Robust Test Statistic for Randomization Inference in Group Randomized Trials**—◆Kai Zhang, University of Pennsylvania; Dylan Small, University of Pennsylvania

12:05 p.m. **Optimal Configuration of a Square Array Group Testing Algorithm**—Michael Hudgens, The University of North Carolina at Chapel Hill; ◆Hae-Young Kim, New England Research Institutes

476 CC-102A

■ Interrater Agreement, Quality of Life, and Observational Studies—Contributed

Biopharmaceutical Section

Chair(s): Jennifer E. Hamer-Maansson, AstraZeneca Pharmaceuticals

10:35 a.m. **A General Class of Agreement Coefficients for Categorical and Continuous Responses**—◆Wei Zhang, Quintiles, Inc.; Vernon M. Chinchilli, Penn State University

10:50 a.m. **An Observational Error Model to Investigate Discordance in Oncology Studies with Progression-Free Survival**—◆Frank Mannino, GlaxoSmithKline; Ohad Amit, GlaxoSmithKline

11:05 a.m. **Predictive Accuracy in Time-to-Event Data: Application to Evaluation of Pneumonia Severity Indexes**—◆Guy N. Brock, University of Louisville; Forest W. Arnold, University of Louisville; Paula Peyrani, University of Louisville; Julio A. Ramirez, University of Louisville

11:20 a.m. **Identifiability of Causal Diagram and Its Application**—◆Kun Nie, Amgen, Inc.

11:35 a.m. **Multiple Imputation Compared with Single Imputation Methods in the Analysis of Observational Data with Incomplete Covariate Information**—◆Sunni A. Barnes, Baylor Health Care System; Dunlei Cheng, Baylor Health Care System; David Nicewander, Baylor Health Care System; Yahya Daoud, Baylor Health Care System

11:50 a.m. **Detecting Fraudulent Data in Clinical Trials**—◆Bret Musser, Merck Research Laboratories

12:05 p.m. **Analysis of Method Comparison Studies with Multiple Methods**—◆Pankaj K. Choudhary, The University of Texas at Dallas; Kunshan Yin, EQECAT

477 CC-208B

Statistical Methods for Analyzing Socioeconomic Data—Contributed

Business and Economic Statistics Section

Chair(s): John Bremer, Harris Interactive

10:35 a.m. **Application of Variable Selection Method via Spectral Analysis to Seasonal Linear Models in Some Call Volume Forecasting**—◆Myung Suk Kim, Sogang University; Taek Soo Shin, Citi Bank

10:50 a.m. **Nonresponse Bias Study for the Annual Capital Expenditures Survey**—◆Justin Z. Smith, U.S. Census Bureau; Katherine J. Thompson, U.S. Census Bureau

11:05 a.m. **Finding Unexpected Interactions in Discrete Choice Experiments: A Case Study**—◆John Lawson, Brigham Young University

11:20 a.m. **Regression for Recovery Rates with Both Continuous and Discrete Characteristic**—◆Raffaella Calabrese, University of Milan-Bicocca

11:35 a.m. **A Semiparametric Bayesian Approach to Account for Missing Covariates in Choice Models**—◆Yi Qian, Northwestern University; Hui Xie, University of Illinois

11:50 a.m. **Statistical Assessment of Patent Validity**—◆Alejandro Veen, IBM Research

12:05 p.m. **Using Backward Means to Eliminate Individual Effects from Dynamic Panels**—◆Gerdie Everaert, Ghent University

478 CC-141

■ Developments in Complex Sample Design—Contributed

Section on Survey Research Methods

Chair(s): John M. Finamore, U.S. Census Bureau

10:35 a.m. **Link-Tracing Sampling: Estimating the Size of a Hidden Population in Presence of Heterogeneous Nomination Probabilities**—◆Martin H. Felix-Medina, Universidad Autonoma de Sinaloa; Pedro E. Monjardin, Universidad Autonoma de Sinaloa; Aida Nohemi Aceves-Castro, Escuela de Ciencias Fisico-Matematicas, Universidad Autonoma de Sinaloa

10:50 a.m. **Adjusting Sampling and Weighting to Account for Births and Deaths**—◆Lawrence R. Ernst, Bureau of Labor Statistics; Randall K. Powers, Bureau of Labor Statistics; Andy Sandler, Bureau of Labor Statistics; Dave Slack, Bureau of Labor Statistics

11:05 a.m. **Sample Design and Estimation of Volumes and Trends in the Use of Paper Checks and Electronic Payment Methods in the United States**—◆May X. Liu, Federal Reserve Board; Geoffrey R. Gerdes, Federal Reserve Board; Darrel W. Parke, Federal Reserve Board

11:20 a.m. **An Application of Two-Way Stratification Procedure for Selection Under Three-Way Stratification**—◆Kadaba P. Srinath, Abt Associates Inc.

11:35 a.m. **Modified Network Sampling Without Replacement**—◆Monroe Sirken, National Center for Health Statistics

11:50 a.m. **Longitudinal Surveys versus Continuous Surveys and Surveys with Flexible Periodicity**—◆Andrew Vogt, Georgetown University; Dhiren Ghosh, Synectics for Management Decisions Inc.

12:05 p.m. **A Russian Invasion, Skeptical Villagers, and Controversial Elections: The 'Power' Plays Faced by Randomized Impact Evaluations in Developing Countries**—◆Celeste Tarricone, Millennium Challenge Corporation

479 CC-142

Analysis of Complex Survey Data—Contributed

Section on Survey Research Methods

Chair(s): Yves Thibaudeau, U.S. Census Bureau

10:35 a.m. **A Study of the Composite Estimator for Change Rate**—Dong-Yun Shin, Hankuk University of Foreign Studies; ◆Heungsun Park, Hankuk University of Foreign Studies

10:50 a.m. **A Simulation Study of Treatments of Influential Values in a Monthly Retail Trade Survey**—Mary H. Mulry, U.S. Census Bureau; ◆Broderick Oliver, U.S. Census Bureau

11:05 a.m. **Multiple Imputation for Missing Items in Multi-Section Questionnaires**—◆Rong Liu, Penn State University; Joseph L. Schafer, Penn State University

11:20 a.m. **A Bayesian Approach to Predicting the Electoral Vote Totals for the 2008 Presidential Election**—◆Steven E. Rigdon, Southern Illinois University Edwardsville; Sheldon H. Jacobson, University of Illinois; Edward C. Sewell, Southern Illinois University Edwardsville; Wendy K.T. Cho, University of Illinois; Christopher J. Rigdon, Arizona State University

11:35 a.m. **Estimation Procedure for New Public Employment Survey Design**—◆Yang Cheng, U.S. Census Bureau; Joseph Barth, U.S. Census Bureau; Casey Corcoran, U.S. Census Bureau; Carma Hogue, U.S. Census Bureau

11:50 a.m. **Election Day 2008 Voter Scorecard**—◆Kate Hobson, NORC at the University of Chicago; Edward Mulrow, NORC at the University of Chicago; Hee-Choon Shin, NORC at the University of Chicago; Fritz Scheuren, NORC at the University of Chicago

12:05 p.m. **Floor Discussion**

Speaker with Lunch 12:30 p.m.–1:50 p.m.

480 CC-301

Section on Health Policy Statistics Speaker with Lunch (fee event)—Speaker with Lunch

Section on Health Policy Statistics

Organizer(s): Susan Paddock, RAND Corporation

WL09 **Aligning Provider Incentives: Pay for Performance and Beyond**—◆Meredith B. Rosenthal, Harvard School of Public Health

Roundtables with Lunch 12:30 p.m.–1:50 p.m.

481 CC-Ballroom South Prefunction

Biopharmaceutical Section Roundtables with Lunch (fee event)

Biopharmaceutical Section

Organizer(s): Dionne Price, FDA

WL10 **Issues and Challenges in Modeling Bioassay Data**—◆Jason Liao, Merck Research Laboratories

WL11 **Advanced Oncology Trial Designs**—◆Mingxiu Hu, Millennium Pharmaceuticals/The Takeda Oncology Company

WL12 **Adaptive Clinical Trials: Interim Data Analysis Challenges**—◆Darcy Hille, Merck & Co., Inc.; Paulette Ceesay, Merck & Co., Inc.

WL13 **The Role of the Unblinded Statistician and Their Relationship with the DSMB**—◆Valerie Durkalski, Medical University of South Carolina

WL14 **Retrospective Studies of Biomarkers: How Can They Improve Our Understanding of Drug Use?**—◆Estelle Russek-Cohen, FDA

WL15 **Clinical Trials in Practice: Designs, Monitoring, and Data Analysis**—◆Daohai Yu, H. Lee Moffitt Cancer Center & Research Institute

482 CC-Ballroom South Prefunction

Section on Bayesian Statistical Science Roundtable with Lunch (fee event)

Section on Bayesian Statistical Science

Organizer(s): Alyson Wilson, Iowa State University

WL16 **Bayesian Adaptive Designs**—◆Keying Ye, The University of Texas at San Antonio

483 CC-Ballroom South Prefunction

Section on Government Statistics Roundtable with Lunch (fee event)

Section on Government Statistics

Organizer(s): Lisa Blumerman, U.S. Census Bureau

WL17 **Metadata: Making It Work for Federal Statistics**—◆Shawna Waugh, Energy Information Administration; Daniel W. Gillman, Bureau of Labor Statistics

484 CC-Ballroom South Prefunction
Section on Nonparametric Statistics Roundtable with Lunch (fee event)
Section on Nonparametric Statistics

Organizer(s): Edsel A. Pena, University of South Carolina

WL18 Nonparametric Test Procedures and High-Dimensional Multiple Testing: Are They Compatible?—◆Edsel A. Pena, University of South Carolina

485 CC-Ballroom South Prefunction
Section on Physical and Engineering Sciences Roundtables with Lunch (fee event)
Section on Physical and Engineering Sciences

Organizer(s): George Ostrouchov, Oak Ridge National Laboratory

WL19 Parallel Statistical Computing with R—◆Hao Yu, University of Western Ontario

WL20 Future of Nuclear Power—◆Bernard Harris, University of Wisconsin

486 CC-Ballroom South Prefunction
Section on Statistical Consulting Roundtables with Lunch (fee event)
Section on Statistical Consulting

Organizer(s): Walter Ambrosius, Wake Forest University School of Medicine

WL21 Academic Statistical Consulting Centers Serving Commercial Clients—◆Sam Woolford, Bentley University

WL22 Indemnification for Consultants and DSMB Members: Who Protects Whom?—◆Janet Wittes, Statistics Collaborative, Inc.

487 CC-Ballroom South Prefunction
Section on Statistical Education Roundtables with Lunch (fee event)
Section on Statistical Education

Organizer(s): Tisha L. Hooks, Winona State University

WL23 Statistics in K-12 Math Is Necessary for Career Success and Informed Citizenship—◆Arnold Goodman, Collaborative Data Solutions

WL24 Audience Response Systems (aka 'Clickers' and 'Remotes') and Active Learning: Pluses and Minuses—◆Megan E. Mocko, University of Florida

WL25 Incorporating Brain-Based Learning Principles in Statistics Education—◆Paul J. Fields, Brigham Young University

488 CC-Ballroom South Prefunction
Section on Statistics in Defense and National Security Roundtable with Lunch (fee event)
Section on Statistics in Defense and National Security

Organizer(s): Jeffrey L. Solka, Naval Surface Warfare Center

WL26 Statistics versus Operations Research in Defense Analysis—◆Ron Fricker, Naval Postgraduate School

489 CC-Ballroom South Prefunction
Section on Survey Research Methods Roundtables with Lunch (fee event)
Section on Survey Research Methods

Organizer(s): Michael Elliott, University of Michigan

WL27 Imputation Methods for Complex Survey Data: Best Practices and Next Steps—◆Michael D. Larsen, Iowa State University

WL28 ASA Advocacy—◆Lisa Lesterberg, Google, Inc. CANCELLED

490 CC-Ballroom South Prefunction
Social Statistics Section Roundtables with Lunch (fee event)
Social Statistics Section

Organizer(s): Joseph J. Salvo, NYC Department of City Planning

WL29 Leveraging Advances in Cyberinfrastructure to Provide Secure Access to Sensitive Data, Preserve Data, and Create Virtual Scientific Communities—◆Timothy M. Mulcahy, NORC at the University of Chicago

Special Presentation
2:00 p.m.–3:50 p.m.

491 CC-207A
Introductory Overview Lecture: Causal Inference in Statistics—Other
ASA, ENAR, IMS, SSC, WNAR, International Chinese Statistical Association, International Indian Statistical Association

Organizer(s): Wendy Martinez, U.S. Department of Defense

Chair(s): Wendy Martinez, U.S. Department of Defense

2:05 p.m. Causal Inference in Statistics: A Gentle Introduction—◆Judea Pearl, University of California, Los Angeles

3:30 p.m. Floor Discussion

Invited Sessions 2:00 p.m.–3:50 p.m.

492 CC-150A

Nonparametric Methods for Small-Area Estimation—Invited

Section on Survey Research Methods, Section on Statistics and the Environment

Organizer(s): Jean Opsomer, Colorado State University
Chair(s): Jean Opsomer, Colorado State University

2:05 p.m. **Fence Method for Prediction Problems and Its Application in Small Area Estimation**—◆Jiming Jiang, University of California, Davis; Thuan Nguyen, Oregon Health & Science University; J. Sunil Rao, Case Western Reserve University

2:30 p.m. **Borrowing Strength Over Space in Small Area Estimation: Comparing Local and Spline-Based M-Quantile Models with Spatial Autoregressive Random Effects Models**—◆Nikos Tzavidis, University of Manchester

2:55 p.m. **Robust Small Area Estimation Under Penalized Spline Mixed Models**—◆J.N.K. Rao, Carleton University; Sanjoy K. Sinha, Carleton University

3:20 p.m. **Design-Based Model Consistent Estimator for the Nested-Error Regression**—◆Tapabrata Maiti, Michigan State University; Lixia Diao, The University of Texas M.D. Anderson Cancer Center; Jean Opsomer, Colorado State University

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

493 CC-202B

■ ✪ Issues in Translating Innovative Phase I Designs Into Oncology Trials—Invited

Biopharmaceutical Section, International Chinese Statistical Association

Organizer(s): William L. Mietlowski, Novartis Oncology
Chair(s): William L. Mietlowski, Novartis Oncology

2:05 p.m. **Translation of Innovative Designs Into Cancer Phase I Trials**—◆Andre Rogatko, Cedars-Sinai Medical Center

2:30 p.m. **Challenges in the Implementation of Adaptive Phase I Clinical Trial Designs for Biologic Agents and Molecularly Targeted Therapies**—◆Daniel Sargent, Mayo Clinic; Sumithra Mandrekar, Mayo Clinic; Rui Qin, Mayo Clinic

2:55 p.m. **Ups and Downs of Implementing BLR-EWOC Guided Dose Escalation at Novartis Oncology**—◆Jyotirmoy Dey, Novartis Pharmaceuticals

3:20 p.m. Disc: Michael Brave, FDA

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

494 CC-206

■ Challenges in Statistical Learning and Variable Selection for High-Dimensional Data—Invited

IMS

Organizer(s): Yichao Wu, North Carolina State University
Chair(s): Yichao Wu, North Carolina State University

2:05 p.m. **Ultra High-Dimensional Variable Selection: Beyond the Linear Model**—◆Richard Samworth, University of Cambridge; Jianqing Fan, Princeton University; Yichao Wu, North Carolina State University

2:35 p.m. **The Large Margin Unified Machine: A Bridge Between Hard and Soft Classification**—◆Yufeng Liu, The University of North Carolina at Chapel Hill; Hao (Helen) Zhang, North Carolina State University

3:05 p.m. **Instability Measures and Model Averaging**—◆Dennis D. Boos, North Carolina State University; Leonard A. Stefanski, North Carolina State University

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

495 CC-143A

■ Advanced Monte Carlo Methods—Invited

Section on Statistical Computing, Section on Bayesian Statistical Science, Interface Foundation of North America

Organizer(s): Yuguo Chen, University of Illinois at Urbana-Champaign
Chair(s): Yuguo Chen, University of Illinois at Urbana-Champaign

2:05 p.m. **Computational Methods for Bayesian Model Choice**—◆Christian P. Robert, Université Paris Dauphine; Jean-Michel Marin, University Montpellier II

2:35 p.m. **Auxiliary Variable MCMC with Applications in Protein Structure Modeling**—◆Jun S. Liu, Harvard University; Kou X. Sam, Harvard University

3:05 p.m. **Approximate Bayesian Computation: What, Why, and When?**—◆Simon Tavare, University of Southern California

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

496 CC-204A

■ ✪ Quantifying Mortality from Genocide and Crimes Against Humanity: Issues and Methods—Invited

Committee on Scientific Freedom and Human Rights, Social Statistics Section, Section on Government Statistics

Organizer(s): William Seltzer, Fordham University
Chair(s): Mary Gray, American University

2:05 p.m. **Conceptual Issues in Quantifying Genocide, Crimes Against Humanity, and War Crimes**—◆William Seltzer, Fordham University

2:30 p.m. **Methodological Issues in Gathering and Analyzing Data on Genocide Mortality**—◆Safaa R. Amer, NORC at the University of Chicago

2:55 p.m. **Mortality from Genocide and Crimes Against Humanity: A Field-Based Perspective on Linking Data, Method, and Policy Objectives**—◆Romesh Silva, Benetech

3:20 p.m. Disc: Jana Asher, Carnegie Mellon University

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

497 CC-159A

■ New Developments for the Analysis of Spatial and Temporal Systems in Ecology—Invited

Section on Statistics and the Environment, Section on Government Statistics

Organizer(s): Mevin B. Hooten, Utah State University

Chair(s): Ali Arab, Georgetown University

2:05 p.m. **A Moving Average Approach for Spatial Statistical Models of Stream Networks**—◆Jay Ver Hoef, NOAA National Marine Mammal Lab

2:30 p.m. **Modeling Scales of Variability of Harmful Algae Blooms in the Indian River Lagoon, Florida**—◆Mary C. Christman, University of Florida

2:55 p.m. **Modeling Animal Movement in Response to Landscapes**—◆Jun Zhu, University of Wisconsin-Madison

3:20 p.m. **Simultaneous Cellular Movement Models for Resource Selection**—◆Devin Johnson, National Marine Mammal Laboratory; Mevin B. Hooten, Utah State University

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

498 CC-150B

■ ✪ Quantitative Security and Cybersystems—Invited

Section on Risk Analysis

Organizer(s): Mehmet Sahinoglu, Auburn University Montgomery

Chair(s): Bertrand Clarke, The University of British Columbia/ University of Miami

2:05 p.m. **Statistical Inference and Simulation on Security Metrics in Cloud Computing for Large Cyber Systems**—◆Luis A. Cueva-Parra, Auburn University Montgomery; Mehmet Sahinoglu, Auburn University Montgomery; David Tyson, Auburn University Montgomery; Sunil Das, Troy University Montgomery

2:35 p.m. **Some Stopping Rules in Security Testing**—◆Susan J. Simmons, The University of North Carolina at Wilmington; Mehmet Sahinoglu, Auburn University Montgomery; James Matis, Texas A&M University

3:05 p.m. **Statistical Inference on the Residual Risk Metric of the Quantitative Security-Meter Model Using Triple-Uniform Density**—◆Mehmet Sahinoglu, Auburn University Montgomery; Yanling Yuan, Troy University Montgomery; David Banks, Duke University

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

499 CC-143C

■ Extracting Information from Images—Invited

Section on Physical and Engineering Sciences, Section on Statistical Graphics, Section on Quality and Productivity, Interface Foundation of North America

Organizer(s): Joanne R. Wendelberger, Los Alamos National Laboratory

Chair(s): Joanne R. Wendelberger, Los Alamos National Laboratory

2:05 p.m. **FDA for Tree-Structured Data Objects**—◆J. Steve Marron, The University of North Carolina at Chapel Hill

2:30 p.m. **Feature Detection Techniques for Proteomic Data Analysis**—◆Kimberly F. Sellers, eorgetown University

2:55 p.m. **Same or Different? Identifying Similarities and Computing Distances Between Images**—◆Kary Myers, Los Alamos National Laboratory

3:20 p.m. **Image Measurements in a Statistical Study of Corrosion**—◆Leslie M. Moore, Los Alamos National Security, LLC; Joanne R. Wendelberger, Los Alamos National Laboratory; Roland K. Schulze, Los Alamos National Security, LLC; Mary A. Hill, Los Alamos National Security, LLC

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

500 CC-159B

JASA, Applications and Case Studies Invited Session—Invited

JASA, Applications and Case Studies, Section on Bayesian Statistical Science

Organizer(s): David Banks, Duke University

Chair(s): David Banks, Duke University

2:05 p.m. **A Spatio-Temporal Model for Mean, Anomaly, and Trend Fields of North Atlantic Sea Surface Temperature**—Ricardo T. Lemos, Universidade de Lisboa; ◆Bruno Sanso, University of California, Santa Cruz

2:55 p.m. Disc: Christopher Wikle, University of Missouri-Columbia

3:10 p.m. Disc: Dave Higdon, Los Alamos National Laboratory

3:25 p.m. Disc: Roy Mendelssohn, NOAA

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

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

501 CC-209A
Regression Models with Functional Predictors—Invited
IMS

Organizer(s): Todd Ogden, Columbia University
Chair(s): Todd Ogden, Columbia University

2:05 p.m. **Functional Generalized Linear Regression**—◆Harrison Zhou, Yale University

2:35 p.m. **Functional Linear Regression of Gradients from Sparse Observations**—◆Ian McKeague, Columbia University; Sara Lopez-Pintado, Universidad Pablo de Olavide

3:05 p.m. **Functional Additive Modeling and Gradient Estimation**—◆Hans-Georg M¸ller, University of California, Davis; Fang Yao, University of Toronto

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

502 CC-207B
IMS Medallion Lecture VI—Invited
IMS

Organizer(s): Xiaotong Shen, The University of Minnesota
Chair(s): Joseph S. Verducci, The Ohio State University

2:05 p.m. **Auxiliary Variables, Perfect Simulation, and Importance Sampling for the Statistical Analysis of Stochastic Processes**—◆Gareth Roberts, University of Warwick

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

Invited Panels 2:00 p.m.–3:50 p.m.

503 CC-202A
■ ✪ Boundaries for Harm in Clinical Trials Designed to Establish Safety—Invited
ENAR, Biopharmaceutical Section

Organizer(s): Robert A. Parker, Amgen, Inc.
Chair(s): Robert A. Parker, Amgen, Inc.

Panelists: ◆Alex Fleishman, Amgen, Inc.
◆Barry Davis, The University of Texas School of Public Health
◆Susan Ellenberg, University of Pennsylvania
◆Gordon Lan, Johnson & Johnson PRD
◆Michael Proschan, National Institute of Allergy and Infectious Diseases
◆Janet Wittes, Statistics Collaborative, Inc.

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

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

504 CC-102B
Advancements in Principal Stratification for Causal Inference—Topic-Contributed
Biometrics Section, International Indian Statistical Association, Section on Statistics in Epidemiology, Section on Health Policy Statistics

Organizer(s): Corwin M. Zigler, University of California, Los Angeles
Chair(s): Thomas R. Belin, University of California, Los Angeles

2:05 p.m. **Public Schools versus Private Schools: Causal Inference with Partial Compliance**—◆Hui Jin, Harvard University; Donald B. Rubin, Harvard University

2:25 p.m. **Causal Inference for Randomized Trials of Two Active Treatments Subject to Noncompliance**—◆Jason Roy, Geisinger Center for Health Research; Yan Ma, Weill Medical College of Cornell University

2:45 p.m. **Statistical Identifiability and the Surrogate Endpoint Problem**—◆Julian Wolfson, University of Washington

3:05 p.m. **Principal Stratification for Evaluation of Surrogate Endpoints with Variable Control-Group Response**—◆Corwin M. Zigler, University of California, Los Angeles; Thomas R. Belin, University of California, Los Angeles

3:25 p.m. **Exact Inference within Principal Strata**—◆Michael Hudgens, The University of North Carolina at Chapel Hill

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

505 CC-101
■ ✪ Statistical and Regulatory Challenges in Alzheimer's Disease Clinical Trials—Topic-Contributed
Biopharmaceutical Section

Organizer(s): Yonggang Zhao, Wyeth Research
Chair(s): Yonggang Zhao, Wyeth Research

2:05 p.m. **Some Statistical and Regulatory Considerations on Alzheimer Trials**—◆Kun Jin, FDA

2:25 p.m. **Statistical Inference and Sample Size Issues for Co-Primary Endpoints in Alzheimer's Disease Trials**—◆Mohammad F. Huque, FDA

2:45 p.m. **A Meta-Analytic Model for Alzheimer's Disease Incorporating Both Summary-Level and Patient-Level Data**—◆James A. Rogers, Metrum; Bill Gillespie, Metrum; Kaori Ito, Pfizer Inc.; Marc Gastonguay, Metrum

3:05 p.m. Providing Evidence of Disease Modification—◆Suzanne Hendrix, Pentara Corporation

3:25 p.m. Floor Discussion

506 CC-209C

■ ✪ Novel Bayesian Advances in Public Health and Epidemiology—Topic-Contributed

Section on Bayesian Statistical Science, Section on Statistics in Epidemiology

Organizer(s): Jun Lu, American University

Chair(s): Yu Yue, Baruch College

2:05 p.m. Bayesian Optimal Discovery Procedure for Simultaneous Significance Testing—◆Jing Cao, Southern Methodist University; Xian-Jin Xie, The University of Texas Southwestern Medical Center at Dallas; Song Zhang, The University of Texas Southwestern Medical Center

2:25 p.m. Change of Support in Inverse Implementations of Statistical Differential Equation Models—◆Mevin B. Hooten, Utah State University; Marti B. Garlick, Utah State University; James B. Powell, Utah State University

2:45 p.m. A Multiple Comparison Procedure Based on a Variant of the Schwarz Information Criterion in a Mixed Model—◆Junfeng Shang, Bowling Green State University

3:05 p.m. Semiparametric Bayes Proportional Odds Models for Current Status Data with Under-Reporting—◆Lianming Wang, University of South Carolina; David Dunson, Duke University

3:25 p.m. A Bayesian Hierarchical Model to Translate Microarray Findings into Biological Functional Profiles—◆Song Zhang, The University of Texas Southwestern Medical Center

3:45 p.m. Floor Discussion

507 CC-160

■ ✪ Customer Intelligence—Topic-Contributed

Section on Statistics and Marketing, Social Statistics Section

Organizer(s): Dirk Van den Poel, Ghent University

Chair(s): Dirk Van den Poel, Ghent University

2:05 p.m. Comparing Random Forests and Random Multinomial Logit to Rotation Forest and the New Rotation Multinomial Logit—◆Anita Prinzie, Manchester Business School/Gent University; Dirk Van den Poel, Ghent University

2:25 p.m. Incorporating Domain Knowledge in Customer Churn Prediction Using AntMiner+—◆Wouter Verbeke, Katholieke Universiteit Leuven; Bart Baesens, Katholieke Universiteit Leuven; David Martens, Hogeschool Gent; Manu De Backer, Hogeschool Gent; Raf Haesen, Katholieke Universiteit Leuven

2:45 p.m. Love at First Sight? Effects of Direct Mail Design on Consumer Response Behavior—◆Manfred Krafft, University of Münster; Sebastian Feld, University of Münster; Heiko Frenzen, University of Münster; Kay Peters, University of Münster

3:05 p.m. How Does a Customer Walk for Shopping in a Store?—◆Katsutoshi Yada, Kansai University

3:25 p.m. Demographic Classification of Anonymous Web Site Visitors Using Click Stream Information: A Practical Method for Supporting Online Advertising Targeting—◆Koen De Bock, Ghent University; Dirk Van den Poel, Ghent University

3:45 p.m. Floor Discussion

508 CC-144A

■ ✪ Safety and Health Issues in Transportation—Topic-Contributed

Social Statistics Section, Section on Government Statistics, Transportation Statistics Interest Group

Organizer(s): Karl Sieber, National Institute for Occupational Safety and Health

Chair(s): Promod Chandhok, U.S. Department of Transportation

2:05 p.m. Collecting Health and Safety Information in a Mobile and Hard-to-Reach Population: Surveying Long-Haul Truck Drivers—◆Karl Sieber, National Institute for Occupational Safety and Health

2:25 p.m. The Evolution of Crash Analysis Methodologies—◆Karin M. Bauer, Midwest Research Institute; Courtney Bokenkroger, Midwest Research Institute

2:45 p.m. Drowsy Driver Performance in a Simulated Environment: A Case-Crossover Analysis—◆Linda Ng Boyle, University of Iowa

3:05 p.m. Floor Discussion

509 CC-142

■ Numeracy 2009—Topic-Contributed

Section on Statistical Education

Chair(s): Paul J. Fields, Brigham Young University

2:05 p.m. Formal Debates to Clarify the Objectives of an Intro Stats Course—◆Dan Schafer, Oregon State University

2:25 p.m. How Prepared are Doctoral Dissertation Committee Members?—◆Rossi A. Hassad, Mercy College

2:45 p.m. **Statistical Literacy: Confound Those Speculative Statistics**—◆Milo Schield, W.M. Keck Statistical Literacy Project

3:05 p.m. **Distinguishing Association from Causation in Titles of News Stories**—◆Robert Raymond, University St. Thomas; Milo Schield, W.M. Keck Statistical Literacy Project

3:25 p.m. **Taking Confounding Seriously with Introductory Students**—◆Daniel Kaplan, Macalester College

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

510 CC-148

Seasonal Adjustment Methodology—Topic-Contributed

Business and Economic Statistics Section, Social Statistics Section

Organizer(s): Tucker S. McElroy, U.S. Census Bureau

Chair(s): Theodore Alexandrov, University of Bremen

2:05 p.m. **On the Impact of Sampling Error on Modeling Seasonal Time Series**—◆Stuart Scott, Bureau of Labor Statistics; Danny Pfeffermann, Hebrew University/University of Southampton

2:25 p.m. **On X11 Seasonal Adjustment and Estimation of Its MSE**—◆Michail Sverchkov, BAE Systems IT/Bureau of Labor Statistics; Stuart Scott, Bureau of Labor Statistics; Danny Pfeffermann, Hebrew University/University of Southampton

2:45 p.m. **A Bayesian Approach to Seasonal Long Memory**—◆Scott Holan, University of Missouri-Columbia; Tucker S. McElroy, U.S. Census Bureau

3:05 p.m. **An Empirical Evaluation of Signal Extraction Goodness-of-Fit Diagnostic Tests**—◆Christopher Blakely, U.S. Census Bureau; Tucker S. McElroy, U.S. Census Bureau

3:25 p.m. **The Detection of Cycles in Raw and Seasonally Adjusted Data**—◆Tucker S. McElroy, U.S. Census Bureau; Scott Holan, University of Missouri-Columbia

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

511 CC-209B

■ Applications of Bayesian Methods to Biomedical Data—Topic-Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section

Organizer(s): Dipankar Bandyopadhyay, Medical University of South Carolina

Chair(s): Abel Rodriguez, University of California, Santa Cruz

2:05 p.m. **Using a Dirichlet Process Mixture of Hidden Markov Models for Protein Conformation Angle Data**—◆Kristin P. Lennox, Texas A&M University; David B. Dahl, Texas A&M University; Marina Vannucci, Rice University; Ryan Day, University of the Pacific; Jerry Tsai, University of the Pacific

2:25 p.m. **Posterior Simulation in Mixture Models for Large Data Sets**—◆Subharup Guha, University of Missouri

2:45 p.m. **A Hidden Markov Model for Zero-Inflated Poisson Counts with an Application to Cocaine Use Data**—◆Stacia M. DeSantis, Medical University of South Carolina; Dipankar Bandyopadhyay, Medical University of South Carolina

3:05 p.m. **A Multivariate Spatial Factor Model for Clustered Data with Informatively Present Mixed Responses**—◆Dipankar Bandyopadhyay, Medical University of South Carolina; Brian J. Reich, North Carolina State University; Jyotika Fernandes, Medical University of South Carolina

3:25 p.m. **Semiparametric Bayesian Analysis of Nutritional Epidemiology Data in the Presence of Measurement Error**—◆Samiran Sinha, Texas A&M University; Bani K. Mallick, Texas A&M University; Victor Kipnis, National Cancer Institute; Raymond J. Carroll, Texas A&M University

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

512 CC-144C

■ Recent Developments in Address-Based Sampling Methodologies—Topic-Contributed

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

Organizer(s): Mansour Fahimi, Marketing Systems Group

Chair(s): Mansour Fahimi, Marketing Systems Group

2:05 p.m. **Methodological Issues in the Conversion from RDD to Address-Based Sampling**—◆Michael Link, The Nielsen Company; Gail Daily, The Nielsen Company; Charles Shuttles, The Nielsen Company

2:25 p.m. **Address-Based Sampling and the 2008 American National Election Survey: A New Paradigm for In-Person Household Surveys**—Vincent G. Iannacchione, RTI International; ◆Jamie L. Ridenhour, RTI International; Bonnie Shook-Sa, RTI International; Joseph P. McMichael, RTI International

2:45 p.m. **Recruiting Probability-Based Web Panel Members Using an Address-Based Sample Frame: Results from a Pilot Study Conducted by Knowledge Networks**—◆Charles DiSogra, Knowledge Networks; Mario Callegaro, Knowledge Networks; Erlina Hendarwan, Knowledge Networks

3:05 p.m. **Using Address Frames to Identify Cell-Phone-Only and Cell-Phone-Primary Households**—◆Anna Fleeman, Arbitron, Inc.

3:25 p.m. **Coverage Rates and Coverage Bias in Housing Unit Frames**—◆Ned English, NORC at the University of Chicago; Colm O'Muircheartaigh, The University of Chicago; Stephanie Eckman, NORC at the University of Chicago

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

513 CC-144B

■ ✪ Advances in the Arena of Confidentiality and Data Protection—Topic-Contributed

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

Organizer(s): Jonaki Bose, Substance Abuse & Mental Health Services Administration

Chair(s): Jonaki Bose, Substance Abuse & Mental Health Services Administration

2:05 p.m. **Informing Potential Respondents About Disclosure Risk and Survey Participation**—◆Eleanor Singer, University of Michigan; Mick P. Couper, University of Michigan; Frederick G. Conrad, University of Michigan; Robert Groves, University of Michigan

2:25 p.m. **Data Access for the National Children's Study: Preliminary Plans**—◆Jennifer Park, National Institute of Child Health and Human Development

2:45 p.m. **Disclosure Review Issues of Genetic Data**—◆Karen E. Davis, National Center for Health Statistics; Peter Meyer, National Center for Health Statistics

3:05 p.m. **Application of the Truncated Distributions and Copulas in Masking Data**—◆Rahul A. Parsa, Drake University; Jay J. Kim, National Center for Health Statistics; Myron J. Katzoff, National Center for Health Statistics

3:25 p.m. **An Overview of Uncertainty Creation to Protect Statistical Data**—◆Paul B. Massell, U.S. Census Bureau

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

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

514 CC-158B

✪ From Evidence to Policy: ASA Members in Public Office—Topic-Contributed

Scientific and Public Affairs Advisory Committee, Section on Government Statistics

Organizer(s): Stephen Pierson, ASA

Chair(s): Christine S. Franklin, The University of Georgia

Panelists: ◆Jeff Witmer, Oberlin College

◆James L. Rosenberger, Penn State University

◆Ivelisse Aviles, National Institute of Standards and Technology

◆James R. Murphy, National Jewish Health

◆Jerry Moreno, John Carroll University

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

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

515 CC-153

Statistical Methods in Finance—Contributed

Business and Economic Statistics Section

Chair(s): Timothy Bogong Li, SHCG - SunTrust Mortgage, Inc.

2:05 p.m. **Estimated Quasi-Likelihood Estimator on GARCH Models with Heavy-Tailed and Skewed Innovations and Its Applications**—◆Taewook Lee, Hankuk University of Foreign Studies

2:20 p.m. **Finite Sample Properties of Classcial Testings on Long Memory HYGARCH Models**—◆Muyi Li, The University of Hong Kong

2:35 p.m. **Backdating Stock Options: Governance and Executive Incentives**—◆Don R. Warren, The University of Texas at San Antonio; Mary Zey, The University of Texas at San Antonio; John Garza, The University of Texas at San Antonio

2:50 p.m. **Application of Robust Estimation in O-GARCH Model**—Lingyu Zheng, Temple University; ◆William Wei, Temple University

3:05 p.m. **Recursive Estimation Using Combined Optimal Estimating Functions**—◆Melody Ghahramani, University of Winnipeg; Aerambamoorthy Thavaneswaran, University of Manitoba

3:20 p.m. **Secondary Mortgage Market Repurchase Forecast Through Survival Analysis**—◆Bogong T. Li, Statistical Guidance Co.

3:35 p.m. **Estimation of Conditional Distribution of Market Returns**—◆Yuzhi Cai, University of Plymouth

516 CC-149B

■ Applications in Reliability—Contributed

Section on Physical and Engineering Sciences, Section on Quality and Productivity, Section on Bayesian Statistical Science

Chair(s): Lewis H. Shoemaker, Millersville University of Pennsylvania

2:05 p.m. **Prediction of Remaining Life of Power Transformers Based on Left-Truncated and Right-Censored Lifetime Data**—◆Yili Hong, Iowa State University; William Q. Meeker, Iowa State University; James D. McCalley, Iowa State University

2:20 p.m. **Modeling Leads to Cause-of-Field Failures**—◆David C. Trindade, Sun Microsystems, Inc.

2:35 p.m. **Monitoring Civil Structures Using Restricted Autoregressive Models and Wireless Sensor Networks**—◆Guilherme Rocha, Indiana University; Shamim Pakzad, Lehigh University; Bin Yu, University of California, Berkeley

2:50 p.m. **Bayesian Analysis of Step-Stress Accelerated Life Testing Using Weibull Proportional Hazard Model**—◆Naijun Sha, The University of Texas at El Paso; Rong Pan, Arizona State University

3:05 p.m. **Lower Tolerance Bounds in Accelerated Life Testing: Weibull Models with Inverse Power Relationship**—◆Ananda A. Jayawardhana, Pittsburg State University; V. A. Samaranayake, Missouri University of Science and Technology

3:20 p.m. **Enhanced Monte Carlo Estimation of Extremely Small Probabilities of Failure**—◆Peter W. Hovey, University of Dayton; Brian Krilov, University of Dayton

3:35 p.m. **Robust Test Plans for Accelerated Degradation Experiment**—◆Shuen-Lin Jeng, National Cheng Kung University

517 CC-143B

Applications of Statistics in Defense and Biosurveillance—Contributed

Section on Statistics in Defense and National Security, Interface Foundation of North America

Chair(s): Myron J. Katzoff, National Center for Health Statistics

2:05 p.m. **Ternary Pixel Transition Matrix--Based Feature Space Statistics for Image Retrieval from Databases**—◆Pranab K. Banerjee, Space Dynamics Laboratory

2:20 p.m. **Resource Allocation and Infrastructure Density Around Vulnerable Sites**—◆Jeffrey S. Simonoff, New York University; Carlos E. Restrepo, New York University; Rae Zimmerman, New York University; Zvia Naphtali, New York University; Henry H. Willis, RAND Corporation

2:35 p.m. **Modeling Site Selection Behavior: Applications to Crime and Terrorism**—◆Michael D. Porter, Spadac

2:50 p.m. **Biosurveillance with Multiple-Width-Window Scan Statistics**—◆Joseph I. Naus, Rutgers University

3:05 p.m. **Clustering Time Series Using Compression Dissimilarities and Wavelets**—◆Patricia H. Carter, Naval Surface Warfare Center

3:20 p.m. **Statistical Assessment of Simple Strategy with Gaming: On Modeling the Fundamentals of Irregular Warfare**—◆Scott Simpkins, Johns Hopkins University; Jonathan Smalletz, Johns Hopkins University; Robert Sagmiller, Clemson University

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

518 CC-102A

■ Epidemiologic Methods: Causal Inference—Contributed

Section on Statistics in Epidemiology

Chair(s): Jason Brinkley, East Carolina University

2:05 p.m. **Causal Inference in Cancer Clinical Trials**—◆Babette Brumback, University of Florida; Wendy London, University of Florida

2:20 p.m. **Causal Inference in Trials with Partial Compliance by Means of Continuous Principal Strata: A Likelihood Approach Based on Copulas**—Francesco Bartolucci, University of Perugia; ◆Leonardo Grilli, University of Florence

2:35 p.m. **Diagnostics for Propensity Score Matching: Creating a Balanced Control Group to Assess In Vitro Fertilization Guidelines**—◆Cassandra K. Wolos, Harvard University; Donald B. Rubin, Harvard University

2:50 p.m. **A Markov Compliance Class and Outcome Model for Causal Analysis in the Longitudinal Setting**—◆Xin Gao, University of Michigan; Michael Elliott, University of Michigan

3:05 p.m. **Causal Inference in Nested Case-Control Studies**—◆Sherri Rose, University of California, Berkeley; Mark J. van der Laan, University of California, Berkeley

3:20 p.m. **Treatment-Outcome Complex and Analysis of Observational Data**—◆Lev S. Sverdlov, Schering-Plough Research Institute

3:35 p.m. **Causal Estimation for the Proportional Hazard Model with Prevalent Sampling**—◆Yu-Jen Cheng, Johns Hopkins University; Mei-Cheng Wang, Johns Hopkins Bloomberg School of Public Health

519 CC-149A

Imputation Case Studies—Contributed

Section on Survey Research Methods

Chair(s): Mandi Yu, FDA

2:05 p.m. **Methods for Analysis of Recall of Fires in a Retrospective Survey**—◆Michael A. Greene, U.S. Consumer Product Safety Commission; Craig D. Andres, U.S. Army Aberdeen Test Center

2:20 p.m. **Developing Macro Edits for the Census and Annual Survey of Government Finance**—◆Loretta A. McKenzie, U.S. Census Bureau; Terri L. Craig, U.S. Census Bureau; Jennifer N. Whitaker, U.S. Census Bureau

2:35 p.m. **Empirical Evaluation of Imputation Methods on Quarterly Census of Employment and Wages Data**—◆Marek Kaminski, Bureau of Labor Statistics; Vinod Kapani, Bureau of Labor Statistics

2:50 p.m. **Imputation Variance Estimation by Multiple Imputation Method for the National Hospital Discharge Survey**—◆Qiyuan Pan, National Center for Health Statistics; Iris Shimizu, National Center for Health Statistics

3:05 p.m. **Evaluation of Alternative Imputation Methods for the Public Libraries Survey**—Irene Brown, U.S. Census Bureau; ◆Terri L. Craig, U.S. Census Bureau

3:20 p.m. **Impacts of Bridging Race/Ethnicity for the California Health Interview Survey**—◆Yifeng J. Chia, University of California, Los Angeles

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

520 CC-204C

Modern Statistical Methods for Genetic Studies—Contributed

Section on Statistics in Epidemiology

Chair(s): Wang Xiaofei, Duke University Medical Center

2:05 p.m. **Haplotype-Based Regression Analysis with Transmitted and Nontransmitted Haplotypes**—◆Yung-Hsiang Huang, National Taiwan University

2:20 p.m. **Accounting for Disease Model Uncertainty in Mapping Heterogeneous Traits: A Bayesian Model Averaging Approach**—◆Swati Biswas, University of North Texas Health Science Center

2:35 p.m. **Risk Effect Estimation for Secondary Phenotypes and Gene-Environment Interaction: A Conditional Likelihood Approach**—◆Arpita Ghosh, The University of North Carolina at Chapel Hill; Fred A. Wright, The University of North Carolina at Chapel Hill; Fei Zou, The University of North Carolina at Chapel Hill

2:50 p.m. **Estimation of Association in Case-Control Studies with Potential Population Structure**—◆Yong Chen, Johns Hopkins University; Kung-Yee Liang, Johns Hopkins University

3:05 p.m. **Using Allele Sharing Distance for Detecting Human Population Stratification**—◆Xiaoyi Gao, Washington University in St. Louis

3:20 p.m. **A Score Test Based on Modified Genotype Data**—◆Renfang Jiang, Michigan Technological University; Yilin Dai, Michigan Technological University; Jianping Dong, Michigan Technological University

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

521 CC-155

Boosting, Ensemble Learning, and Other Data-Mining Methods—Contributed

Section on Statistical Learning and Data Mining, Interface Foundation of North America

Chair(s): Brian Shea, The University of Minnesota

2:05 p.m. **Distinct Counting with a Self-Learning Bitmap**—◆Aiyou Chen, Bell Labs, Alcatel-lucent; Jin Cao, Bell Labs, Alcatel-lucent

2:20 p.m. **Using Data Mining to Explore Seasonal Differences Between the US Current Employment Statistics Survey and the Quarterly Census of Employment and Wages**—◆Gregory Erkens, Bureau of Labor Statistics

2:35 p.m. **Mining Financial Statements: Comparative Performance of Adaptive and Ensemble Models in Discovering Financial Statement Fraud**—◆David G. Whiting, Brigham Young University; James V. Hansen, Brigham Young University; James B. McDonald, Brigham Young University; Conan Albrecht, Brigham Young University; Steve Albrecht, Brigham Young University

2:50 p.m. **GA-Boost: A Genetic Algorithm for Robust Boosting**—Brian Gray, The University of Alabama; ◆Dong-Yop Oh, The University of Alabama

3:05 p.m. **Ensemble-Based Semi-Supervised Learning with Optimal Feature Weighting**—◆Joseph Retzer, Maritz Research

3:20 p.m. **Developing an Adaptive Individualized Therapy Trial for Life-Threatening Chronic Disease**—◆Yiyun Tang, The University of North Carolina at Chapel Hill; Michael Kosorok, The University of North Carolina at Chapel Hill

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

522 CC-141

Numerical Algorithm in Modern Estimation and Inference—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Brian J. Smith, The University of Iowa

2:05 p.m. **Efficient Exact Inference for the Common Odds Ratio**—◆Bruce Barrett, The University of Alabama; J. Brian Gray, The University of Alabama

2:20 p.m. **Computational Methods for Time-Dependent Relational Data**—◆Andrew C. Thomas, Harvard University

2:35 p.m. **Stochastic Root-Finding and Optimization via the Adaptive Simultaneous Perturbation Algorithm**—◆James C. Spall, Johns Hopkins University Applied Physics Laboratory

2:50 p.m. **Exact Algorithms for Decompressing the Log-Compressed Echo Envelope of Medical Ultrasound Images**—◆Kai-Sheng Song, University of North Texas

3:05 p.m. **Semiparametric Efficient Estimation and EM Algorithm for Partially Linear Model with Missing Data**—◆Mingyu Li, Rutgers University; Minge Xie, Rutgers University

3:20 p.m. **Robust Tail Sums for Differential Gene Expression Analysis**—◆June Luo, Clemson University

3:35 p.m. **Distribution of Statistics of Hidden State Sequences via the Sum-Product Algorithm Over Factor Graphs**—◆Donald E.K. Martin, North Carolina State University

523 CC-158A

Nonparametric Methods for Functional and Longitudinal Data—Contributed

Section on Nonparametric Statistics

Chair(s): Jing Zhou, BlackRock, Inc.

2:05 p.m. **Recent History Functional Linear Model for Sparse Longitudinal Data**—◆Kion Kim, Penn State University; Senturk Damla, Penn State University

2:20 p.m. **Assessment of Measurement Agreement for Functional/Longitudinal Data**—◆Mina Yoo, Penn State University; Runze Li, Penn State University

2:35 p.m. **Astronomical Transient Detection Through Functional Data Analysis**—◆Darren W. Homrighausen, Carnegie Mellon University

2:50 p.m. **Assessing Individual Observer Agreement in Studies Involving Replicated Ordinal Observations**—◆Jingjing Gao, Emory University

3:05 p.m. **A New Permutation-Based Method for the Evaluation of the Agreement Between Two Observers with Replicated Binary Observations**—◆Yi Pan, Emory University; Michael J. Haber, Emory University

3:20 p.m. **Functional Linear Model with Zero-Value Coefficient Function at Sub-Region**—◆Jianhui Zhou, University of Virginia; Naisyin Wang, Texas A&M University

3:35 p.m. **Functional Latent Feature Models for Data with Longitudinal Covariate Processes**—◆Erning Li, Texas A&M University; Yehua Li, The University of Georgia; Nae-Yuh Wang, Johns Hopkins University School of Medicine; Naisyin Wang, Texas A&M University

524 CC-208B

Bayesian Theory and Estimation—Contributed

Section on Bayesian Statistical Science

Chair(s): Leanna House, Virginia Polytechnic Institute and State University

2:05 p.m. **Bayesian Parameter Estimation for Partial Differential Equation Models**—◆Darren E. Gemoets, University of Wyoming; Kiona Ogle, University of Wyoming; Jarrett Barber, University of Wyoming

2:20 p.m. **Some New Application Results of the C-Characteristics Function**—◆Thomas J.M. Jiang, National Chengchi University

2:35 p.m. **Density Estimation on Riemannian Manifolds**—◆Justin Jacobs, University of Maryland, Baltimore County

2:50 p.m. **Bayesian Estimation of Burr Type XII Distribution from Progressively Type II--Censored Samples**—Seongho Song, University of Cincinnati; ◆Younshik Chung, Pusan National University; Chansoo Kim, Kongju National University; Junghoon Jang, Korea Food and Drug Association

3:05 p.m. **Consistency in Multivariate Bayesian Density Estimation**—◆Subhashis Ghoshal, North Carolina State University; Yuefeng Wu, North Carolina State University

3:20 p.m. **Bayes and Empirical Bayes Estimation in Lognormal Regression Model**—◆Yogendra P. Chaubey, Concordia University; Fassil Nebebe, Concordia University

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

525 CC-203A

Bayesian Analysis—Contributed

Biometrics Section, Section on Bayesian Statistical Science

Chair(s): Jennifer Schumi, Statistics Collaborative, Inc.

2:05 p.m. **Using Dynamic Bayesian Networks with Hidden States to Infer Gene Regulatory Networks**—◆Andrea Rau, Purdue University; Florence Jaffrézic, French National Institute for Agricultural Research; Jean-Louis Foulley, French National Institute for Agricultural Research; Rebecca W. Doerge, Purdue University

2:20 p.m. **Mixed Effects and Multilevel Models in the Presence of Random Effects Heterogeneity**—◆David Afshartous, University of Miami; Geert Verbeke, Katholieke Universiteit Leuven; Richard A. Preston, University of Miami

2:35 p.m. **Model Averaging for Multifactor Stability Studies**—◆Seth Clark, Merck & Co., Inc.; Robert Noble, Miami University of Ohio

2:50 p.m. **Estimation of Disease Prevalence from Imperfect Diagnostic Tests on Pooled Samples with Varying Pool Sizes**—◆Christopher J. Williams, University of Idaho

3:05 p.m. **Estimation of Correlation Using Bayesian Approach for Measuring Co-Expression of Genes to Improve Functional Inference in Co-Expression Networks**—◆Suman Duvvuru, The University of Tennessee

3:20 p.m. **A Bayesian Hierarchical Model for Clustering Bernstein Polynomial Density Estimates**—◆Charlotte C. Gard, University of Washington; Elizabeth R. Brown, University of Washington

3:35 p.m. **A Bayesian Approach to Model Robust Designs**—◆Vincent Agboto, Meharry Medical College; Christopher Nachtsheim, The University of Minnesota; W. Li, University of Minnesota

526 CC-203B

Microarray Data—Contributed

Biometrics Section

Chair(s): Scarlett L. Bellamy, University of Pennsylvania

2:05 p.m. **Maximum Entropy Modeling for Gene Expression Microarray Data**—◆Xue Lin, FDA; Daniel Q. Naiman, Johns Hopkins University; Donald Geman, Johns Hopkins University

2:20 p.m. **Testing Biological Processes in Microarray Experiments Using Prespecified Gene Sets**—◆Shuyan (Sabrina) Wan, Merck Research Laboratories; Xiang Yu, Merck Research Laboratories

2:35 p.m. **Generalized A-Optimality for Microarray Experimental Designs**—◆Nilgun Ferhatosmanoglu, Bilkent University

2:50 p.m. **Identification and Classification of Expressed RNA Probes in Microarray Experiments**—◆Sigrun H. Lund, University of Iceland; Daniel F. Gudbjartsson, deCODE genetics; Julius Gudmundsson, deCODE genetics; Gunnar Stefansson, University Iceland; Thorunn Rafnar, deCODE genetics

3:05 p.m. **A Mixture Model for Microarray Data with Saturated Pixels**—◆Yan Yang, Arizona State University

3:20 p.m. **Improved Variance Smoothing Method for Testing Differential Expression in Affymetrix Oligonucleotide Microarrays**—◆Parul Gulati, The Ohio State University; David Jarjoura, The Ohio State University; Soledad Fernandez, The Ohio State University; Lianbo Yu, The Ohio State University; Michael Pennell, The Ohio State University

3:35 p.m. **Noise Reduction for Array CGH Data Using Technical Covariates and Probe-Level Information**—◆Tobias Guennel, Virginia Commonwealth University; Mark Reimers, Virginia Commonwealth University

527 CC-208A

Time Series—Contributed

IMS

Chair(s): Natallia Katenka, University of Michigan

2:05 p.m. **Testing Regression Means with Autoregressive Errors**—◆Sheng-Mao Chang, National Cheng Kung University

2:20 p.m. **Memory-Length Parameter Estimation for the Rosenblatt Process Using Longer Filters**—◆Alexandra Chronopoulou, Purdue University

2:35 p.m. **Long-Range Dependence and Operator Self-Similarity**—◆Gustavo Didier, Tulane University

2:50 p.m. **First-Order Bias Correction for Fractionally Integrated Time Series**—◆Jaechoul Lee, Boise State University; Kyungduk Ko, Boise State University

3:05 p.m. **Malaria Transmission Dynamics: A Formal Comparison of Rival Hypotheses**—◆Anindya Bhadra, University of Michigan; Edward Ionides, University of Michigan

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

528 CC-201

■ Issues in Multi-Regional Trials, Medical Device Trials, and Sample Size—Contributed

Biopharmaceutical Section

Chair(s): Kyung Sook Kim, FDA

2:05 p.m. **A New Approach to Model Region Treatment Effects in Clinical Trials**—◆Hua Guo, Merck Research Laboratories

2:20 p.m. **Power and Multiplicity Assessment for a Composite Endpoint and Its Components in Multi-Regional Clinical Trials**—Hongwei Wang, Merck & Co., Inc.; Weili He, Merck & Co., Inc.; ◆Liang Chen, Merck & Co., Inc.

2:35 p.m. **Determination of Sample Size in Multi-Regional Clinical Trials**—◆Feng-shou Ko, National Health Research Institutes; Hsiao-hui Tsou, National Health Research Institutes; Chin-fu Hsiao, National Health Research Institutes

2:50 p.m. **An Algorithm for Selecting Cases to Evaluate a Digital Mammography System**—◆David C. Hoaglin, Abt Bio-Pharma Solutions, Inc.; Lynn Fletcher-Heath, Carestream Health, Inc.

3:05 p.m. **Adjusting for Nonignorable and Partially Ignorable Verification Bias in Estimating ROC Curve and Its Area**—◆Danping Liu, University of Washington; Xiao-Hua (Andrew) Zhou, University of Washington

3:20 p.m. **Ceiling and Regression Effects on Clinical Endpoints in Medical Device Studies**—◆Daniel P. Reyner, Zimmer Holdings, Inc

3:35 p.m. **Sample Size Determination and Interpretation of Safety Findings in Clinical Studies with an MTD Expansion Cohort**—◆Guohui Li, Millennium Pharmaceuticals; Noe Dennis, Millennium Pharmaceuticals

529 CC-204B

■ Topics in Linear Models—Contributed

Biopharmaceutical Section

Chair(s): Jing Han, FDA

2:05 p.m. **Invariance in Multivariate Linear Models with High Dimension, Low Sample Size**—◆Yueh-Yun Chi, University of Florida; Keith E. Muller, University of Florida

2:20 p.m. **Estimation of Treatment Efficacy in the Presence of Noncompliance and Competing Risks in Randomized Controlled Trials**—◆Lily Altstein, University of California, Los Angeles

2:35 p.m. **Analysis of Zero-Inflated Continuous Data**—◆Madhuja Mallick, Merck Research Laboratories

2:50 p.m. **Sigmoid Curves and a Case for Close-to-Linear Nonlinear Models**—◆Charles Tan, Merck Research Laboratories; Ying Su, Merck Research Laboratories

3:05 p.m. **The Impact of a Misspecified Error Distribution on the Inference in the Linear Mixed Model**—◆Li Liu, sanofi-aventis; Donghui Zhang, sanofi-aventis

3:20 p.m. **Estimating Shelf Life Using Quantile Regression with Random Batch Effects**—◆Michelle Quinlan, University of Nebraska-Lincoln; Walter Stroup, University of Nebraska-Lincoln; James Schwenke, Boehringer Ingelheim Pharmaceuticals, Inc.

3:35 p.m. **A Power Transformation for Minimizing Heteroscedasticity in the General Linear Model**—◆Mitchell J. Rosen, ICON Clinical Research

Poster Presentations 2:00 p.m.–3:30 p.m.

530 CC-L Street Bridge

Topic-Contributed Oral Poster Presentations: Reproducible Statistical Analysis—Topic-Contributed

Section on Statistical Computing, Interface Foundation of North America

Organizer(s): Russell V. Lenth, The University of Iowa

Chair(s): Lara Schmidt, RAND Corporation

Applications and case studies

01 **Reproducible Statistical Analyses With StatWeave**—◆Russell V. Lenth, The University of Iowa

02 **Rapid Reproducible Training: From Outline to Slides and Handouts in One Click**—◆William Rising, StataCorp LP

Biometrics, bioinformatics, computational biology

03 **Using SASweave to Integrate SAS and R Code and Results in a Book**—◆Ken Kleinman, Harvard Medical School/Harvard Pilgrim Health Care; Nicholas Horton, Smith College

Sampling and survey methodology

04 **Reproducible Teaching: Using Stat/SASWeave in the Classroom**—◆Bonnie LaFleur, University of Arizona

531 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

Section on Statistical Computing

Computational statistics, numerical methods, simulation

05 **Model for Fitting Two Lines to Data**—◆Penelope M. Ellis, Texas Tech University; Chris Monico, Texas Tech University; Clyde Martin, Texas Tech University

06 **Six Sigma and Fuzzy Logic**—◆Morteza Marzjarani, Saginaw Valley State University

07 **Stepwise Discriminant Analysis as a Post-Hoc to a Significant MANOVA**—◆Raj Chandran, University of Northern Colorado; Daniel J. Mundfrom, University of Northern Colorado

08 **Potentiating Sample-Based Constrained Optimization Problems**—◆Martin Levy, University of Cincinnati; Zhiyuan Dong, University of Cincinnati; James J. Cochran, Louisiana Tech University

09 **Comparisons of Model Selection Strategies in Time-to-Event Models**—◆Lin Pan, Emory University; Zhiheng Xu, Emory University; Haibin Wang, Emory University; Mourad Tighiouart, Emory University

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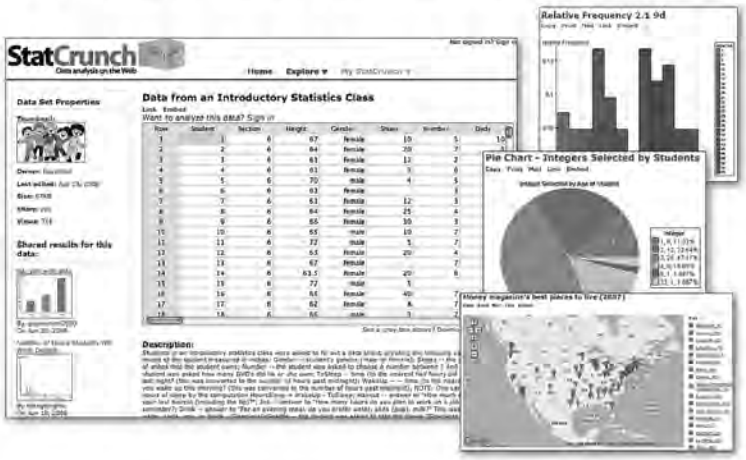

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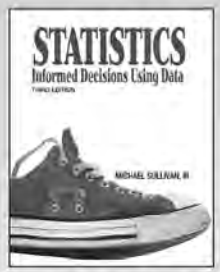

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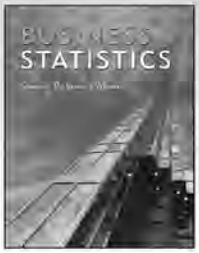

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10 Sequential Monte Carlo Samplers for Bayesian Generalized Linear Mixed Models—◆Yi-Ju Chen, University of Wisconsin-Madison; Yi-Liang Tung, Consultant

532 CC-L Street Bridge

Contributed Oral Poster Presentations—Contributed

Section on Statistics and the Environment

Chair(s): Lara Schmidt, RAND Corporation

Reliability and survival modeling, risk analysis

11 Reliability Goodness-of-Fit for Oil Spills in the Gulf of Mexico—◆William V. Harper, Otterbein College; Ted G. Eschenbach, TEG Consulting; Thomas R. James, Otterbein College

Spatial statistics, spatio-temporal modeling, GIS

12 Statistical Tools for Evaluating Spatial Seasonal Fire Potential Indices—◆Cindy S. Leary, University of Montana; Jonathan M. Graham, University of Montana; Patricia L. Andrews, USDA Forest Service; William M. Jolly, USDA Forest Service

Environmetrics, ecology, agriculture, wildlife management

13 Locating Changes in Land Use from Long-Term Remote Sensing Data in Morocco—◆Maliha S. Nash, U.S. Environmental Protection Agency; Deborah J. Chaloud, U.S. Environmental Protection Agency; William Kepner, U.S. Environmental Protection Agency

Time series, wavelet analysis, signal processing

14 Model Prediction of Ambient Ozone Concentrations—◆Katerina G. Tsakiri, State University of New York at Albany; Igor Zurbenko, State University of New York at Albany

Environmetrics, ecology, agriculture, wildlife management

15 Ecological Thresholds Using Aquatic Macroinvertebrates as Indicators of Stream Health in the Mid-Atlantic and Eastern Rivers and Mountains Vital Signs Networks—◆Ying Liu, Virginia Polytechnic Institute and State University; Jianying Lou, Virginia Polytechnic Institute and State University; Eric Smith, Virginia Polytechnic Institute and State University

Transportation statistics

16 Targeting Polluting Vehicles for Car Scrappage Programs Using Factor Analysis—◆Peng Wu, University of California, Davis; Shuang Liu, University of California, Davis

Environmetrics, ecology, agriculture, wildlife management

17 Investigating Spatial and Seasonal Variations in Radiation Levels—◆Madhuri S. Mulekar, University of South Alabama; Sytske Kimball, University of South Alabama

18 The Role of Statistics in Ecological Risk Assessment for Pesticide Registration—◆Christine Hartless, U.S. Environmental Protection Agency

Invited Sessions 4:00 p.m.–5:50 p.m.

533 CC-Ballroom A-B

COPSS Awards and Fisher Lecture—Invited

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

Organizer(s): Madhuri S. Mulekar, University of South Alabama

Chair(s): Jessica M. Utts, University of California, Irvine

4:05 p.m. Where, When, and Then Why—◆Noel A. Cressie, The Ohio State University

5:30 p.m. Floor Discussion

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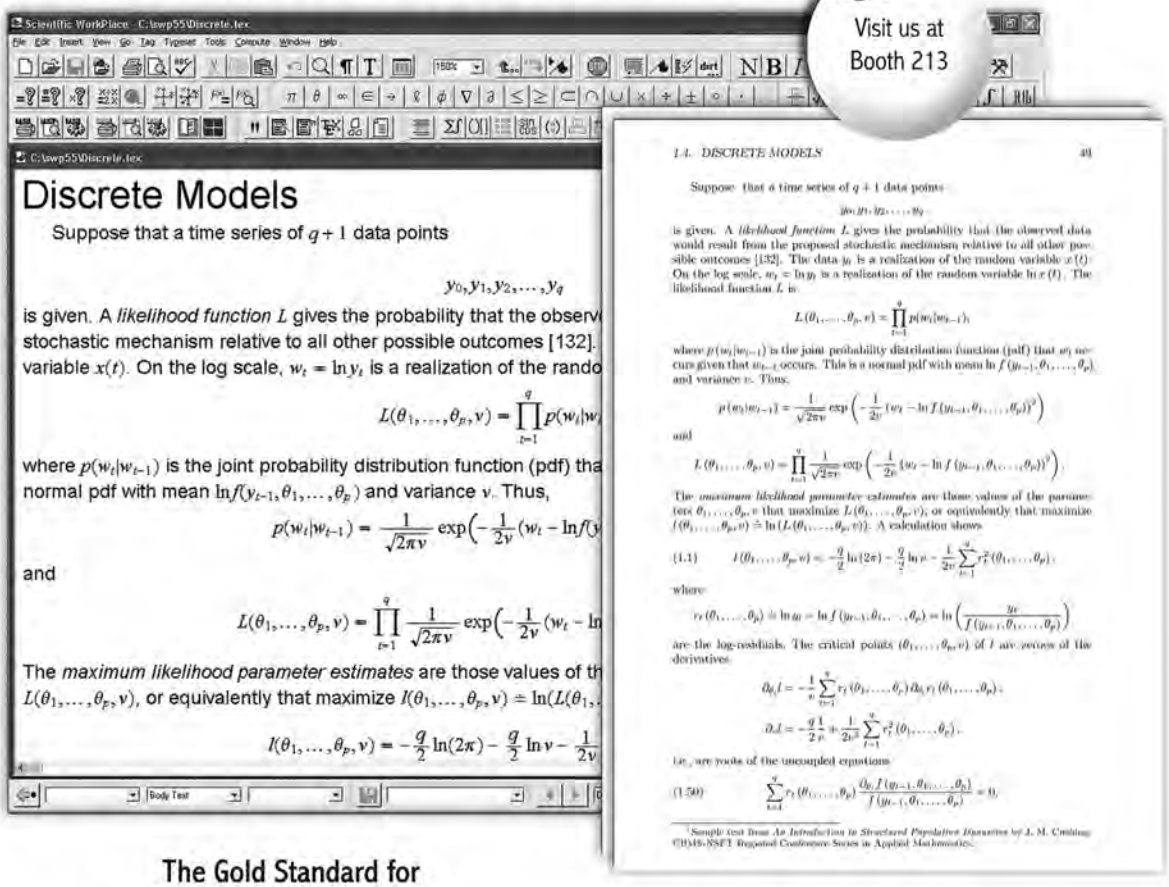

1.4. DISCRETE MODELS 49

Suppose that a time series of $q+1$ data points

$$y_0, y_1, y_2, \ldots, y_q$$

is given. A *likelihood function* L gives the probability that the observed data would result from the proposed stochastic mechanism relative to all other possible outcomes [132]. The data y_t is a realization of the random variable $x(t)$. On the log scale, $w_t = \ln y_t$ is a realization of the random variable $\ln x(t)$. The likelihood function L is

$$L(\theta_1, \ldots, \theta_p, v) = \prod_{t=1}^{q} p(w_t|w_{t-1}),$$

where $p(w_t|w_{t-1})$ is the joint probability distribution function (pdf) that w_t occurs given that w_{t-1} occurs. This is a normal pdf with mean $\ln f(y_{t-1}, \theta_1, \ldots, \theta_p)$ and variance v. Thus,

$$p(w_t|w_{t-1}) = \frac{1}{\sqrt{2\pi v}} \exp\left(-\frac{1}{2v}(w_t - \ln f(y_{t-1}, \theta_1, \ldots, \theta_p))^2\right)$$

and

$$L(\theta_1, \ldots, \theta_p, v) = \prod_{t=1}^{q} \frac{1}{\sqrt{2\pi v}} \exp\left(-\frac{1}{2v}(w_t - \ln f(y_{t-1}, \theta_1, \ldots, \theta_p))^2\right).$$

The *maximum likelihood parameter estimates* are those values of the parameters $\theta_1, \ldots, \theta_p, v$ that maximize $L(\theta_1, \ldots, \theta_p, v)$, or equivalently that maximize $l(\theta_1, \ldots, \theta_p, v) = \ln(L(\theta_1, \ldots, \theta_p, v))$. A calculation shows

$$l(\theta_1, \ldots, \theta_p, v) = -\frac{q}{2}\ln(2\pi) - \frac{q}{2}\ln v - \frac{1}{2v}\sum_{t=1}^{q} r_t^2(\theta_1, \ldots, \theta_p), \tag{1.1}$$

where

$$r_t(\theta_1, \ldots, \theta_p) = \ln y_t - \ln f(y_{t-1}, \theta_1, \ldots, \theta_p) = \ln\left(\frac{y_t}{f(y_{t-1}, \theta_1, \ldots, \theta_p)}\right)$$

are the log-residuals. The critical points $(\theta_1, \ldots, \theta_p, v)$ of l are zeroes of the derivatives

$$\partial_{\theta_j} l = -\frac{1}{v}\sum_{t=1}^{q} r_t(\theta_1, \ldots, \theta_p)\,\partial_{\theta_j} r_t(\theta_1, \ldots, \theta_p),$$

$$\partial_v l = -\frac{q}{2}\frac{1}{v} + \frac{1}{2v^2}\sum_{t=1}^{q} r_t^2(\theta_1, \ldots, \theta_p).$$

i.e., are roots of the uncoupled equations

$$\sum_{t=1}^{q} r_t(\theta_1, \ldots, \theta_p)\frac{\partial_{\theta_j} f(y_{t-1}, \theta_1, \ldots, \theta_p)}{f(y_{t-1}, \theta_1, \ldots, \theta_p)} = 0, \tag{1.5a}$$

[1] Sample text from *An Introduction to Structured Population Dynamics* by J. M. Cushing ©1998-SIAM. Regional Conference Series in Applied Mathematics.

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THURSDAY, AUGUST 6

Tours

TR15 - Annapolis: Highlighting the U.S. Naval Academy
9:00 a.m.–2:00 p.m.

TR16 - Historic Tour of Mt. Vernon
10:00 a.m.–2:00 p.m.

Committee/Business Meetings & Other Activities

7:00 a.m.–10:30 a.m. CC-East Registration
Cyber Center

7:00 a.m.–12:00 p.m. CC-154A
Speaker Management Room

7:30 a.m.–10:00 a.m. CC-East Registration
ASA Marketplace

7:30 a.m.–10:30 a.m. CC-East Registration
ASA Membership/Special Assistance/Press Desk

7:30 a.m.–10:30 a.m. CC-East Registration
JSM Main Registration

8:00 a.m.–10:00 a.m. RH-Meeting Room 16
COS Business Meeting II
Chair(s): Janet Buckingham, Southwest Research Institute

8:00 a.m.–1:00 p.m. CC-East Registration
JSM Luggage Storage

10:00 a.m.–11:00 a.m. RH-Meeting Room 16
COSGB Business Meeting II
Chair(s): Janet Buckingham, Southwest Research Institute

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

534 CC-207A
Introductory Overview Lecture: Statistical Learning and Data Mining—Other
ASA, ENAR, IMS, SSC, WNAR, International Chinese Statistical Association, International Indian Statistical Association
Organizer(s): Ji Zhu, University of Michigan
Chair(s): Simon Sheather, Texas A&M University

8:35 a.m. **Statistical Learning and Data Mining**—◆David J. Hand, Imperial College
10:00 a.m. **Floor Discussion**

Invited Sessions 8:30 a.m.–10:20 a.m.

535 CC-143B
High-Dimensional Variable Selection: At the Crossroad of Bayes' Frequentist Interface—Invited
Section on Bayesian Statistical Science
Organizer(s): Samiran Ghosh, Indiana University Purdue University Indianapolis
Chair(s): Dipankar Bandyopadhyay, Medical University of South Carolina

8:35 a.m. **Spike and Slab Priors for Bayesian Variable Selection**—◆Marina Vannucci, Rice University
9:00 a.m. **Structured Variable Selection and Estimation**—◆Ming Yuan, Georgia Institute of Technology
9:25 a.m. **Model Selection for Partial Smoothing Splines**—◆Hao (Helen) Zhang, North Carolina State University; Guang Cheng, Purdue University
9:50 a.m. **Enforced Spike and Slab Sparsity**—◆Hemant Ishwaran, Cleveland Clinic Foundation
10:15 a.m. **Floor Discussion**

536 CC-102B

■ ✪ Perspectives in Genomics Research—Invited

Committee of Representatives to AAAS

Organizer(s): Turkan K. Gardenier, Pragmatica Corp.
Chair(s): Turkan K. Gardenier, Pragmatica Corp.

8:35 a.m. **Search for Genetic Markers of Susceptibility for Breast and Prostate Cancer**—◆Gilles F. Thomas, National Cancer Institute

9:00 a.m. **A Novel Nonparametric Approach to Genetics, Genomics, and Phenomics**—◆Knut M. Wittkowski, The Rockefeller University

9:25 a.m. **Genome-Wide Association Studies: A Look at Their Past, Present, and Future**—◆John Barnard, The Cleveland Clinic Foundation

9:50 a.m. Disc: Robert C. Elston, Case Western Reserve University

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

537 CC-201

■ Pharmacokinetic and Pharmacodynamic Modeling—Invited

Biopharmaceutical Section, Biometrics Section

Organizer(s): Alan H. Hartford, Merck & Co., Inc.
Chair(s): Alan H. Hartford, Merck & Co., Inc.

8:35 a.m. **A Model-Based Framework for Quantitative Decisionmaking in Drug Development**—◆Kenneth G. Kowalski, Ann Arbor Pharmacometrics Group; Jonathan L. French, Pfizer Inc.; Mike K. Smith, Pfizer Inc.; Matthew M. Hutmacher, Ann Arbor Pharmacometrics Group

9:00 a.m. **Leveraging Pharmacokinetic (PK) and Pharmacodynamic (PD) Knowledge in Early Clinical Drug Development**—◆Ene I. Ette, Anoixis Corporation

9:25 a.m. **Computational Methods for Nonlinear Mixed Models**—◆Douglas M. Bates, University of Wisconsin-Madison

9:50 a.m. **Leveraging Exposure Response Information for Efficient Drug Development: Impact of Pharmacometrics**—◆Pravin R. Jadhav, FDA

10:15 a.m. **Floor Discussion**

538 CC-149B

■ Chemometrics—Invited

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

Organizer(s): Kerby Shedden, University of Michigan
Chair(s): Ji Zhu, University of Michigan

8:35 a.m. **Understanding Heterogeneity of Chemical Localization in Live Cells**—◆Kerby Shedden, University of Michigan

9:05 a.m. **Screening Compounds for Monotone Association with Convex Combinations of Activity Predictors Over Unspecified Subpopulations of Cell-Lines**—◆Joseph S. Verducci, The Ohio State University; Li Yu, The Ohio State University; Paul Blower, The Ohio State University

9:35 a.m. **A Co-Training Algorithm for Multiview Data with Applications in Data Fusion**—◆Mark Culp, West Virginia University; George Michailidis, University of Michigan

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

539 CC-206

The Influence of Psychology, Cartography, and Computer Science on the Design of Interactive Graphics for Spatial Statistical Data—Invited

Section on Statistical Graphics, Section on Government Statistics, Interface Foundation of North America

Organizer(s): Linda Williams Pickle, StatNet Consulting LLC
Chair(s): Linda Williams Pickle, StatNet Consulting LLC

8:35 a.m. **Cognitive Psychology and Statistical Map Reading**—◆Douglas J. Herrmann, Indiana State University (retired)

9:00 a.m. **Grounding Exploratory Spatial Data Analysis Tool Design in Cartographic Theory, Practice, and Empirical Research**—◆Alan MacEachren, Penn State University

9:25 a.m. **Data Cartography: The View from Human Computer Interaction**—◆Danyel A. Fisher, Microsoft Research

9:50 a.m. **Visualizing Patterns in Data with Micromaps**—◆Daniel B. Carr, George Mason University

10:15 a.m. **Floor Discussion**

540 CC-144A

■ ✪ From Data to Decisionmaking: Applied Statisticians Protecting the Environment—Invited

Section on Statistics and the Environment, Section on Statistics in Epidemiology, Social Statistics Section, Section on Government Statistics

Organizer(s): Jenise Swall, U.S. Environmental Protection Agency; Kristen M. Foley, U.S. Environmental Protection Agency

Chair(s): Kristen M. Foley, U.S. Environmental Protection Agency

8:35 a.m. **Given Limited Resources, What Can Be Done to Reduce Elevated Blood Lead Levels in Children?**—◆William F. Hunt, Jr., North Carolina State University; Barry D. Nussbaum, U.S. Environmental Protection Agency; Steve Somers, North Carolina State University; Josh Drukenbrod, U.S. Environmental Protection Agency; Ashley Myers, North Carolina State University

9:00 a.m. **As the Population Turns: The Case of Elevated Blood Lead Levels and Changing Social Phenomena**—◆Barry D. Nussbaum, U.S. Environmental Protection Agency; Ronnie Levin, U.S. Environmental Protection Agency

9:25 a.m. **Science Policy Interface at U.S. EPA: Some Views from One Who's Been There**—◆Rita Schoeny, U.S. Environmental Protection Agency

9:50 a.m. **Putting a Regulation Through: Where Statistics Fit In**—◆Elizabeth H. Margosches, U.S. Environmental Protection Agency

10:15 a.m. **Floor Discussion**

541 CC-202B

New Developments in Financial Econometrics—Invited

WNAR

Organizer(s): Yingying Fan, University of Southern California

Chair(s): Tao Huang, University of Virginia

8:35 a.m. **Vast Volatility Matrix Estimation for High-Frequency Financial Data**—◆Yazhen Wang, National Science Foundation

9:05 a.m. **Modeling and Forecasting Bond Yield Curves with Functional Dynamic Models**—◆Rong Chen, Rutgers University

9:35 a.m. **Parameter Estimation and Model Testing for Markov Processes via Conditional Characteristic Functions**—◆Song Xi Chen, Iowa State University; Liang Peng, Georgia Tech; Cindy L. Yu, Iowa State University

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

542 CC-204C

■ Recent Advances in Nonparametric Methods for Interval-Censored Data—Invited

ENAR, Biometrics Section, Biopharmaceutical Section

Organizer(s): Dipankar Bandyopadhyay, Medical University of South Carolina

Chair(s): Samiran Ghosh, Indiana University Purdue University Indianapolis

8:35 a.m. **Confidence Intervals for Current Status Data with Competing Risks**—◆Marloes H. Maathuis, ETH Zurich; Michael Hudgens, The University of North Carolina at Chapel Hill

9:00 a.m. **Asymptotics of Interval-Censored Data Under Various Observation Time Schemes**—◆Moulinath Banerjee, University of Michigan

9:25 a.m. **Nonparametric Inference in Multistate Models with Interval-Censored Data**—◆Somnath Datta, University of Louisville; Ling Lan, Medical College of Georgia

9:50 a.m. **Multistate Analysis of Bivariate Interval-Censored Failure Time Data**—◆Richard Cook, University of Waterloo

10:15 a.m. **Floor Discussion**

543 CC-102A

■ Statistical Methods in Bioinformatics—Invited

SSC, Section on Bayesian Statistical Science, Biopharmaceutical Section

Organizer(s): Karen A. Kopciuk, Alberta Cancer Board

Chair(s): Karen A. Kopciuk, Alberta Cancer Board

8:35 a.m. **Current Issues in Genome-Wide Association Studies of Complex Traits**—◆Shelley B. Bull, Samuel Lunenfeld Research Institute of Mount Sinai Hospital; Lei Sun, University of Toronto

9:05 a.m. **Statistical Issues Involved in the Analysis of High-Throughput ChIP Assays**—◆Raphael Gottardo, Institut de Recherche Cliniques de Montreal

9:35 a.m. **Effects of Measurement Error in Microarray Data Analysis**—◆Wenqing He, University of Western Ontario

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

544 CC-143C

Bayesian Methods for Model Uncertainty—Invited

IMS, Section on Bayesian Statistical Science

Organizer(s): David Dunson, Duke University
Chair(s): David Dunson, Duke University

8:35 a.m. **Bayesian Subgroup Analysis**—◆James Berger, Statistical and Applied Mathematical Sciences Institute

9:05 a.m. **Flexible Approaches for Computing Marginal Likelihoods**—◆Robert J. Kohn, University of New South Wales

9:35 a.m. **Effective Sample Size in Linear Models**—◆Susie Bayarri, University of Valencia; James Berger, Statistical and Applied Mathematical Sciences Institute; Luis R. Pericchi, University of Puerto Rico

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

545 CC-143A

Inference for Parameters of Biological and Biochemical Processes Modeled via Branching Processes and Their Variants—Invited

IMS

Organizer(s): Anand Vidyashankar, Cornell University
Chair(s): Anand Vidyashankar, Cornell University

8:35 a.m. **Inference for Quantitation Parameters in Polymerase Chain Reactions via Branching Processes with Random Effects**—◆Bret Hanlon, Cornell University; Anand Vidyashankar, Cornell University

9:05 a.m. **Composite Likelihood Estimation for Age-Dependent Branching Processes Using CFSE-Labeling Data**—◆Ollivier Hyrien, University of Rochester; Rui Chen, University of Rochester Medical Center; Martin S. Zand, University of Rochester

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

Invited Panels 8:30 a.m.–10:20 a.m.

546 CC-149A

Memorial for Hubert Lilliefors—Invited

Memorial

Organizer(s): Fritz Scheuren, NORC at the University of Chicago
Chair(s): Shail J. Butani, Bureau of Labor Statistics

Panelists:
◆Reza Modarres, The George Washington University
◆Bob Smythe, Oregon State University
◆Fritz Scheuren, NORC at the University of Chicago
◆Robert Shumway, University of California, Davis
◆Nozer Singpurwalla, The George Washington University

10:15 a.m. **Floor Discussion**

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

547 CC-204B

■ Considerations on Design and Analysis for Multi-Regional Trials—Topic-Contributed

Biopharmaceutical Section

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

8:35 a.m. **Considerations on Criteria for Consistency Across Regions in Multi-Regional Trials**—◆Kimitoshi Ikeda, Novartis Pharma K.K.

8:55 a.m. **Issues in Evaluating Multiregional Clinical Trials**—◆Yuki Ando, Pharmaceuticals and Medical Devices Agency

9:15 a.m. **Prediction of Fracture Risk Based Upon Baseline Characteristics**—◆Kyoungah See, Eli Lilly and Company

9:35 a.m. **Sample Size Considerations for Japanese Patients in a Multi-Regional Trial Based on MHLW Guidance**—◆Hui Quan, sanofi-aventis; Peng-Liang Zhao, sanofi-aventis; Ji Zhang, sanofi-aventis; Martin Roessner, sanofi-aventis; Kyo Aizawa, sanofi-aventis

9:55 a.m. Disc: James Hung, FDA

10:15 a.m. **Floor Discussion**

548 CC-144B

■ ✪ Bayesian Semiparametric Methods in Biostatistics—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Sujit Ghosh, North Carolina State University
Chair(s): Sujit Ghosh, North Carolina State University

8:35 a.m. **A Bayesian Semiparametric Accelerated Failure Time Cure Model for Censored Data**—◆Elizabeth C. Nelson, North Carolina State University; Sujit Ghosh, North Carolina State University; Wenbin Lu, North Carolina State University

8:55 a.m. **Center-Adjusted Inference for a Nonparametric Bayesian Random Effect Distribution**—◆Yisheng Li, The University of Texas M.D. Anderson Cancer Center; Peter Müller, The University of Texas M.D. Anderson Cancer Center; Xihong Lin, Harvard School of Public Health

9:15 a.m. **A Variable Selection Approach to Bayesian Monotonic Regression with Bernstein Polynomials**—◆S. McKay Curtis, University of Washington; Sujit Ghosh, North Carolina State University

9:35 a.m. **Bayesian Independent Component Analysis Using Mixture Priors**—◆Ani Eloyan, North Carolina State University; Sujit Ghosh, North Carolina State University

9:55 a.m. **Semiparametric Bayesian Approach for Testing Noninferiority Using Relative Risk and Odds Ratio for Binary Data**—◆Muhtarjan Osman, North Carolina State University; Sujit Ghosh, North Carolina State University

10:15 a.m. **Floor Discussion**

549 CC-158A

✪ Semiparametric Procedures in Statistical Analysis—Topic-Contributed

Section on Risk Analysis

Organizer(s): Norou Diawara, Old Dominion University
Chair(s): Mohammad Ahsanullah, Rider University

8:35 a.m. **Forecasting Mortality Rates via Density Ratio Modeling**—◆Benjamin Kedem, University of Maryland

8:55 a.m. **Mixture of Bivariate Exponential Distributions**—◆Norou Diawara, Old Dominion University

9:15 a.m. **Approximate Bayesian Computation for Flexible Quantile Distributions**—◆Robert King, Newcastle University

9:35 a.m. **Neural Networks: A Flexible Nonlinear Model**—◆Barbara Bailey, San Diego State University

9:55 a.m. **On the Exchangeable Multinomial Distribution**—◆E. Olusegun George, The University of Memphis; Kyeongmi Cheon, The University of Memphis; L. Yuan, The University of Memphis

10:15 a.m. **Floor Discussion**

550 CC-155

■ ✪ Temporal and Cross-Sectional Consistency in Purchasing Power Parities—Topic-Contributed

Business and Economic Statistics Section

Organizer(s): Kim Zieschang, International Monetary Fund
Chair(s): Alan Heston, The University of Pennsylvania

8:35 a.m. **An Econometric Approach to Construct World Tables of Purchasing Power Parities and Real Incomes: Analytical Properties and Tables for 1970–2005**—D.S. Prasada Rao, University of Queensland; ◆Alicia Rambaldi, University of Queensland; H.E. Doran, University of Queensland

8:55 a.m. **Index Number Approaches to Spatial and Temporal Consistency: Comparing the 1985 and 2005 ICP Global Benchmarks**—W. Erwin Diewert, University of British Columbia; ◆D.S. Prasada Rao, University of Queensland; Kim Zieschang, International Monetary Fund

9:15 a.m. **Updating and Backdating the 2005 ICP Results: Isolating Sample Design Effects with Application to Asia**—◆Yuri Dikhanov, World Bank

9:35 a.m. **Intertemporal Comparisons of Regional Price Parities in the United States, 2003–2007**—◆Bettina H. Aten, Bureau of Economic Analysis

9:55 a.m. **Floor Discussion**

551 CC-150A

■ ✪ Using the Current Population Survey to Analyze the Labor Force Characteristics of Persons with Disabilities—Topic-Contributed

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

Organizer(s): Stephen M. Miller, Bureau of Labor Statistics
Chair(s): Donsig Jang, Mathematica Policy Research, Inc.

8:35 a.m. **Statistical Estimation for Persons with Disabilities as Measured in the Current Population Survey**—◆Stephen M. Miller, Bureau of Labor Statistics

8:55 a.m. **Labor Force Analysis of Those Identified as Disabled in the CPS**—◆Anne E. Polivka, Bureau of Labor Statistics

9:15 a.m. **An Evaluation of Efforts to Use a Work Disability Question to Evaluate the Labor Force Situation of Persons with a Disability**—◆Terence M. McMenamin, Bureau of Labor Statistics

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9:35 a.m. **The Addition of Questions on Disability to the Current Population Survey**—◆Steven F. Hipple, Bureau of Labor Statistics

9:55 a.m. Disc: Thomas W. Hale, Social Security Administration

10:15 a.m. **Floor Discussion**

552 CC-202A

Designs for Early-Phase Clinical Trials—Topic-Contributed

Biometrics Section, Biopharmaceutical Section, Section on Bayesian Statistical Science

Organizer(s): Xuelin Huang, The University of Texas M.D. Anderson Cancer Center

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

8:35 a.m. **Bayesian Methods in Clinical Research**—◆Wei Chen, Karmanos Cancer Institute

8:55 a.m. **Calibration of the Continual Reassessment Method**—◆Shing Lee, Columbia University; Ying Kuen Cheung, Columbia University

9:15 a.m. **Achieving Covariate Balance in Clinical Trials with Outcome-Adaptive Randomization**—Jing Ning, The University of Texas M.D. Anderson Cancer Center; ◆Xuelin Huang, The University of Texas M.D. Anderson Cancer Center

9:35 a.m. **Dose-Schedule Finding in Phase I/II Clinical Trials Using a Bayesian Isotonic Transformation**—◆Benjamin N. Bekele, The University of Texas M.D. Anderson Cancer Center; Yisheng Li, The University of Texas M.D. Anderson Cancer Center; Yuan Ji, The University of Texas M.D. Anderson Cancer Center

9:55 a.m. **Adaptive Randomization Designs for Oncology Trials with Both Short-Term and Long-Term Outcomes**—◆Hao Liu, Baylor College of Medicine; Xuelin Huang, The University of Texas M.D. Anderson Cancer Center

10:15 a.m. **Floor Discussion**

553 CC-207B

■ ✪ Computing Environments and Large Data Sets—Topic-Contributed

Section on Statistical Computing

Organizer(s): Yasmin Said, George Mason University

Chair(s): Yasmin Said, George Mason University

8:35 a.m. **Multivariate Data Adaptive Compression and Density Estimation**—◆Edward J. Wegman, George Mason University; Roger Shores, U.S. Census Bureau

8:55 a.m. **A Swift Swiftian Look at Massive Data Sets**—◆Antony Unwin, Uni Augsburg

9:15 a.m. **Streaming Poisson Data**—◆David W. Scott, Rice University

9:35 a.m. **Nonparametric Density Estimation of Streaming Data Using Orthogonal Series**—◆Kyle A. Caudle, U.S. Naval Academy; Edward J. Wegman, George Mason University

9:55 a.m. **Grid Computing and Applications**—◆Abdullah A. Alnoshan, The George Washington University; Shmuel Rotenstreich, The George Washington University

10:15 a.m. **Floor Discussion**

554 CC-158B

Nonresponse Bias Analysis—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Shail J. Butani, Bureau of Labor Statistics

Chair(s): Larry L. Huff, Bureau of Labor Statistics

8:35 a.m. **An Assessment of the Effect of Calibration on Nonresponse Bias in the 2006 Agricultural Resource Management Survey**—◆Morgan S. Earp, National Agricultural Statistics Service; Jaki McCarthy, National Agricultural Statistics Service; Nick D. Schauer, National Agricultural Statistics Service; Phillip S. Kott, U.S. Department of Agriculture

8:55 a.m. **Assessing Nonresponse Bias in the Consumer Expenditure Interview Survey**—◆Susan King, Bureau of Labor Statistics; Boriana Chopova, Bureau of Labor Statistics; Jennifer Edgar, Bureau of Labor Statistics; Jeffrey Gonzalez, Bureau of Labor Statistics; David McGrath, Bureau of Labor Statistics; Lucilla Tan, Bureau of Labor Statistics

9:15 a.m. **Conducting Nonresponse Bias Analyses for Two Business Surveys at the U.S. Census Bureau: Methods and (Some) Results**—◆Katherine J. Thompson, U.S. Census Bureau

9:35 a.m. **Components of Error Analysis in the Current Employment Statistics Survey**—Larry L. Huff, Bureau of Labor Statistics; ◆Julie Gershunskaya, Bureau of Labor Statistics

9:55 a.m. Disc: Clyde Tucker, Bureau of Labor Statistics

10:15 a.m. **Floor Discussion**

555 CC-204A

■ Abdominal Obesity: Searching for the Best Measure—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Marike Vuga, University of Pittsburgh

Chair(s): Kenneth Schechtman, Washington University in St. Louis

8:35 a.m. **Characterization of the Conicity Index in the US Adult Population**—◆Rodolfo Valdez, CDC; Tiebin Liu, CDC

8:55 a.m. **Where to Draw the Line for Abdominal Obesity: Evidence from International Data**—◆Mark Woodward, Mount Sinai School of Medicine

9:15 a.m. **Conceptual Review of Issues with Practical Abdominal Obesity Measures**—◆Marike Vuga, University of Pittsburgh

9:35 a.m. **Abdominal Volume Index**—◆Fernando Guerrero-Romero, Mexican Social Security Institute; Martha Rodriguez-Moran, Mexican Social Security Institute

9:55 a.m. **Methodological Issues in the Use of Anthropometric Surrogates of Abdominal Obesity**—◆Ike S. Okosun, Georgia State University

10:15 a.m. **Floor Discussion**

556 CC-159A

■ ✪ 2007 Census of Agriculture—Topic-Contributed

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

Organizer(s): Carol House, National Agricultural Statistics Service

Chair(s): Mark Harris, National Agricultural Statistics Service

8:35 a.m. **Coverage Adjustment on the 2007 Census of Agriculture**—◆Matt Fetter, National Agricultural Statistics Service

8:55 a.m. **Overview of the Census of Agriculture**—◆Chris S. Messer, National Agricultural Statistics Service

9:15 a.m. **Searching for Donors: Refining an Imputation Strategy**—◆Michael Hogye, National Agricultural Statistics Service; Peter Quan, National Agricultural Statistics Service

9:35 a.m. **2007 Census of Agriculture Nonresponse Methodology**—◆William Cecere, National Agricultural Statistics Service

9:55 a.m. **Impact of Outreach Initiatives on the 2007 Census of Agriculture**—◆William Iwig, National Agricultural Statistics Service

10:15 a.m. **Floor Discussion**

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

557 CC-101

■ GAISE in the Online Course—Topic-Contributed

Section on Statistical Education

Organizer(s): David Zeitler, Grand Valley State University

Chair(s): David Zeitler, Grand Valley State University

Panelists: ◆Michelle Everson, The University of Minnesota
◆Sue Schou, Idaho State University
◆Patti B. Collings, Brigham Young University
◆Jamis Perrett, Texas A&M University

8:55 a.m. **Floor Discussion**

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

558 CC-144C

Bayesian Methods—Contributed

IMS, Section on Bayesian Statistical Science

Chair(s): Ali Shojaie, University of Michigan

8:35 a.m. **Batch Means and Spectral Variance Estimators in Markov Chain Monte Carlo**—◆James M. Flegal, University of California, Riverside; Galin L. Jones, The University of Minnesota

8:50 a.m. **Conditional Simulation in the Two-Stage Hierarchical Model**—◆Ronald Neath, Baruch College; Galin L. Jones, The University of Minnesota

9:05 a.m. **On Estimating the Spectral Densities of a Class of Stationary Spatio-Temporal Processes**—◆Hui Xu, St. Cloud State University; Herman Rubin, Purdue University

9:20 a.m. **Misspecification in the Latent Class and Latent Markov Model**—◆David Kaplan, University of Wisconsin-Madison

9:35 a.m. **Recurrent Sets and Communcation for Monotonically Decreasing Nonstationarity**—◆Zach Dietz, Hamilton College

9:50 a.m. **Some Admissible Minimax Formal Bayes Estimators of a Multivariate Normal Mean**—◆Brian Shea, The University of Minnesota

10:05 a.m. **General Maximum Likelihood Empirical Bayes Estimation of Normal Means**—◆Wenhua Jiang, Rutgers University; Cun-Hui Zhang, Rutgers University

559 CC-142

■ Bayesian Control of Error Rates and Networks—Contributed

Section on Bayesian Statistical Science

Chair(s): Leanne Streja, University of California, Los Angeles

8:35 a.m. **Empirical Bayes FCR Controlling Confidence Intervals**—◆Zhigen Zhao, Cornell University; J.T. Gene Hwang, Cornell University

8:50 a.m. **Insights into p-values and Bayes Factors from False Positive and False Negative Bayes Factors**—◆Hormuzd Katki, National Cancer Institute

9:05 a.m. **Assessing Frequentist Operating Characteristics for a Bayesian Design: A Case Study**—◆Zachary Skrivanek, Eli Lilly and Company; Brenda Gaydos, Eli Lilly and Company; Scott Berry, Berry Consultants

9:20 a.m. **Gaussian Graphical Models Using Covariance Selection**—◆Rajesh Talluri, Texas A&M University; Bani K. Mallick, Texas A&M University

9:35 a.m. **Posterior Distributions on Networks**—◆Lili Zhuang, The Ohio State University; Noel A. Cressie, The Ohio State University

9:50 a.m. **Objective Bayesian Graphical Model Selection with Bayes Factors Based on Test Statistics and Nonlocal Alternative Priors: How Do Interactions of DNA Components Lead to a Disease?**—◆Adarsh Joshi, The University of Texas M.D. Anderson Cancer Center; Jianhua Hu, The University of Texas M.D. Anderson Cancer Center; Valen E. Johnson, The University of Texas M.D. Anderson Cancer Center

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

560 CC-160

Analytic: IRT, MCMC, SEM—Contributed

Social Statistics Section

Chair(s): Sherri Pals, CDC

8:35 a.m. **Line Search Algorithm for Maximum Likelihood in Exponential Families**—◆Saisuke Okabayashi, The University of Minnesota; Charles J. Geyer, The University of Minnesota

8:50 a.m. **A Choice of the Number of Factors and Hyper-Parameter Selection in Bayesian Factor Analysis Model**—◆Kei Hirose, Kyushu University; Shuichi Kawano, Kyushu University; Sadanori Konishi, Kyushu University; Masanori Ichikawa, Tokyo University of Foreign Studies

9:05 a.m. **Identification of Latent Structure: Inside or Outside Structural Equation Model?**—◆Hee-Choon Shin, NORC at the University of Chicago

9:20 a.m. **Structural Equation Model Diagnosis Using Two Scatter Plots**—◆Ke-Hai Yuan, University of Notre Dame; Kentaro Hayashi, University of Hawaii

9:35 a.m. **Extra Variation Logistic Regression Models Over Time**—◆Winston A. Richards, Penn State University Harrisburg

9:50 a.m. **A Consequence of Ignoring Clustering of Item Responses Obtained from Complex Samples During Item Response Theory Scaling: Biased Estimation of Item Discrimination Parameters**—◆Aaron Douglas, Mathematica Policy Research, Inc.

10:05 a.m. **Specification and Interpretation of Models for Monotonic Change to an Asymptote: A Nonlinear Mixed Effects Approach**—◆Joseph R. Rausch, Cincinnati Children's Hospital Medical Center

561 CC-203A

Survival Analysis Methods in Epidemiology—Contributed

Section on Statistics in Epidemiology

Chair(s): Ronald Gangnon, University of Wisconsin-Madison

8:35 a.m. **Efficiency of the Maximum Partial Likelihood Estimator Under Nested Case-Control Design**—Larry Goldstein, University of Southern California; ◆Haimeng Zhang, Mississippi State University

8:50 a.m. **Time-Varying Effects of Prognostic Factors Associated with Disease-Free Survival in Breast Cancer**—◆Karen Messer, University of California, San Diego; Minya Pu, University of California, San Diego; Barbara Parker, University of California, San Diego; Cynthia Thomson, University of Arizona; Bette Caan, Kaiser Permanente Northern California; Shirley Flatt, University of California, San Diego; Lisa Madlensky, University of California, San Diego; Richard Hajek, The University of Texas M.D. Anderson Cancer Center; Wael Al-Delaimy, University of California, San Diego; Nazmus Saquib, University of California, San Diego; Ellen Gold, University of California, Davis; John Pierce, University of California, San Diego; Loki Natarajan, University of California, San Diego

9:05 a.m. **Analyzing Bivariate Survival Data with Interval Sampling and Application to Cancer Epidemiology**—◆Hong Zhu, Johns Hopkins Bloomberg School of Public Health; Mei-Cheng Wang, Johns Hopkins Bloomberg School of Public Health

9:20 a.m. **Covariate Bias Induced by Length-Biased Sampling of Failure Times**—◆Pierre-Jerome Bergeron, University of Ottawa; Masoud Asgharian, McGill University; David B. Wolfson, McGill University

9:35 a.m. **Survival Function with Informative Drop-Outs: Using FGM Copula**—◆Md Monir Hossain, The University of Texas Health Science Center at Houston; Tosiya S. Sato, Kyoto University; Mohammad H. Rahbar, The University of Texas Health Science Center at Houston

9:50 a.m. **Semiparametric Method for Cure Rate Model**—◆Feifei Zhou, The University of Hong Kong

10:05 a.m. **Modeling Exchangeable Binary Data with Dependence Between the Design and Outcome Success Probabilities**—◆David Todem, Michigan State University; Karen P. Williams, Michigan State University

562 CC-157
Dimension Reduction in Regression—Contributed

Interface Foundation of North America, Section on Statistical Learning and Data Mining

Chair(s): Mark Fiecas, Brown University

8:35 a.m. **Weighted Bidimensional Regression**—◆Kendra K. Schmid, University of Nebraska Medical Center; David Marx, University of Nebraska-Lincoln; Ashok Samal, University of Nebraska-Lincoln

8:50 a.m. **On Ridge Regression, Convexity, and Nonlinear Problems**—◆Prasenjit Kapat, The Ohio State University; Prem K. Goel, The Ohio State University

9:05 a.m. **Network Exploration via the Adaptive LASSO and SCAD Penalties**—Jianqing Fan, Princeton University; ◆Yang Feng, Princeton University; Yichao Wu, North Carolina State University

9:20 a.m. **Nonlinear Regression Modeling via Bayesian Regularization with Lasso-Type Penalties**—◆Shohei Tateishi, Kyushu University; Sadanori Konishi, Kyushu University

9:35 a.m. **Cancer Microarray Feature Selection Using Support Vector Machines: Comparing Regularization Techniques**—◆Tim Peters, Macquarie University; David Bulger, Macquarie University; Jean Y.H. Yang, University of Sydney; To-ha Loi, St. Vincent's Hospital; David Ma, St. Vincent's Hospital

9:50 a.m. **Random Lasso**—◆Sijian Wang, University of Wisconsin-Madison; Bin Nan, University of Michigan; Saharon Rosset, Tel Aviv University; Ji Zhu, University of Michigan

10:05 a.m. **Variable Selection for the Varying Coefficient Cox Model**—◆Lifeng Wang, Michigan State University; Hongzhe Li, University of Pennsylvania; Jianhua Huang, Texas A&M University

563 CC-210
Teaching and Technology—Contributed

Section on Statistical Education

Chair(s): Kellie Keeling, University of Denver

8:35 a.m. **Expect More, Get More: Joys of Teaching Online**—◆Olcay Akman, Illinois State University

8:50 a.m. **Searching Our Collective Consciousness: A Google Trends Activity for Introductory Statistics**—◆Eric Nordmoe, Kalamazoo College

9:05 a.m. **Use of Podcast Technology for an Online Business Statistics Course**—◆Begona Perez-Mira, Louisiana State University; Joni Ancona Nunnery, Louisiana State University

9:20 a.m. **Interactive Quizzes for Continuous Learning and Evaluation**—◆Gunnar Stefansson, University Iceland; Asta J. Sigurdardottir, The Commercial College of Iceland

9:35 a.m. **Using Personal Laptops to Improve Statistics Education**—Andrew G. Glen, West Point; ◆JoAnna Crixell, West Point; Richard Bell, Auburn University

9:50 a.m. **Throw Away the Calculator and Teach Statistics**—◆Gerald Keller, Wilfrid Laurier University

10:05 a.m. **Developmental Trajectories of Health Science Students' Statistics Reasoning and Mastery**—◆Ralph M. Turner, University of the Sciences

564 CC-205
Sparsity and Shrinkage in Modern Statistical Modeling—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Jeffrey L. Solka, Naval Surface Warfare Center

8:35 a.m. **Sparse Sufficient Dimension Reduction and Variable Selection**—◆Xin Chen, University of Minnesota; R. Dennis Cook, The University of Minnesota

8:50 a.m. **Shrinkage Estimators and Their Efficiency in Reliability Calculations**—◆Mohammed A. Shayib, Prairie View A&M University; Aliakbar Montazer Haghighi, Prairie View A&M University

9:05 a.m. **Coordinate Descent Algorithms for Nonconvex Penalized Regression Methods**—◆Patrick Breheny, The University of Iowa; Jian Huang, The University of Iowa

9:20 a.m. **Estimation of the Proportion of Exponential Signals**—◆Deepak Ayyala, University of Maryland, Baltimore County; Junyong Park, University of Maryland, Baltimore County; Anindya Roy, University of Maryland, Baltimore County

9:35 a.m. **Estimating the Continuous Mixing Distribution by Cross-Validation in Mixture Models**—◆Ji-Ping Wang, Northwestern University

9:50 a.m. **On the Use of K-Fold Cross-Validation to Choose Cutoff Values and Assess the Performance of Predictive Models in Stepwise Regression**—◆Salahuddin Khan, University of Peshawar

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

565 CC-148
Advanced Topics—Contributed

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

Chair(s): Elizabeth Martínez-Gómez, National Autonomous University of Mexico

8:35 a.m. **Numerical Algorithm-Based Estimation Methods for ODE Models**—◆Arun Kumar, University of Rochester; Hulin Wu, University of Rochester; Hongqi Xue, Rochester University

8:50 a.m. **Optimal Block Designs for Correlated Observations**—◆Nizam Uddin, University of Central Florida

9:05 a.m. **A Robust Nonlinear Method for Spectral Analysis**—◆Ta-Hsin Li, IBM T. J. Watson Research Center

9:20 a.m. **Statistical Response of Chaotic Networks to Structured Noise**—◆Morris H. Morgan, Hampton University; Carolyn B. Morgan, Hampton University

9:35 a.m. **The Optimum Combination of Full System and Subsystem Tests for Estimating the Reliability of a System**—◆Coire J. Maranzano, Johns Hopkins University Applied Physics Laboratory; James C. Spall, Johns Hopkins University Applied Physics Laboratory

9:50 a.m. **Floor Discussion**

566 CC-141
Empirical Likelihood—Contributed

Section on Nonparametric Statistics

Chair(s): R. Webster West, Texas A&M University

8:35 a.m. **Bivariate Models with Partially Known Marginals: An Empirical Likelihood Approach with Infinitely Many Constraints**—◆Anton Schick, Binghamton University; Hanxiang Peng, Indiana University Purdue University Indianapolis

8:50 a.m. **Bayesian Empirical Likelihood for Quantile Regression**—◆Yunwen Yang, University of Illinois at Urbana-Champaign

9:05 a.m. **Entropy-Based Empirical Likelihood Ratio Change Point Detection Policies**—◆Albert Vexler, New York State University at Buffalo; Gregory Gurevich, Sami Shamoon College

9:20 a.m. **An Empirical Likelihood--Based Method for Comparison of Treatment Effects: Test of Equality of Coefficients in Linear Models**—◆Haiyan Su, University of Rochester; Hua Liang, University of Rochester

9:35 a.m. **Nonparametric Maximum Likelihood Estimation of the Probability Density Function and Hazard Function**—◆Ilya Shvartsman, Penn State University Harrisburg

9:50 a.m. **Coherence Analysis of EEG Signals: A Nonparametric Likelihood Approach**—◆Suddhasatta Acharyya, Novartis Pharmaceuticals; Hernando Ombao, Brown University

10:05 a.m. **Assessing Time-Changing Hurst Exponent and Variance in Multifractional Brownian Motion**—◆Kichun S. Lee, Georgia Institute of Technology; Brani Vidakovic, Georgia Tech/Emory University

567 CC-150B
■ ✪ Policy-Impacting Estimation Issues—Contributed

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

Chair(s): Iris Shimizu, National Center for Health Statistics

8:35 a.m. **A Three-Phase Model of Census Inclusion**—◆Douglas Olson, U.S. Census Bureau

8:50 a.m. **Assessing the Effects of Imputation on Income Estimates in the U.S. Consumer Expenditure Survey: Comparison with the Current Population Survey**—◆William D. Passero, Bureau of Labor Statistics

9:20 a.m. **The Impact of Allocations as a Tool for Statistical Editing of Corporate Taxpayer Administrative Records**—◆Marty Harris, IRS, Statistics of Income

9:35 a.m. **Propensity Scoring: An IRS Case Study in Determining the Relationship Between Bank Products and Noncompliance**—◆Karen C. Masken, IRS; Mark Mazur, IRS; Joanne Meikle, IRS; Roy Nord, IRS

9:50 a.m. **Trends in Early Childhood Vaccination Coverage: Progress Toward U.S. Healthy People 2010 Goals**—◆Zhen Zhao, CDC; Philip J. Smith, CDC; Elizabeth T. Luman, CDC

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

568 CC-203B
Causal Inference—Contributed

Biometrics Section

Chair(s): Jing Cheng, University of Florida

8:35 a.m. **Entire Matching and Its Application in an Observational Study of Treatments for Melanoma**—◆Frank B. Yoon, University of Pennsylvania; Paul R. Rosenbaum, University of Pennsylvania

8:50 a.m. **A General Approach to Causal Mediation Analysis**—◆Kosuke Imai, Princeton University; Luke Keele, The Ohio State University; Dustin Tingley, Princeton University

9:05 a.m. **Extending Propensity Score Subclassification Approach for Causal Effect Estimation Allowing Covariate Measurement Error**—◆Yi Huang, University of Maryland, Baltimore County; Karen Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health

9:20 a.m. **Generalized Causal Mediation Analysis**—◆Jeffrey M. Albert, Case Western Reserve University

9:35 a.m. **Free-Living Inferential Glucose Dynamic Modeling Using Only Noninvasive Input**—◆Derrick Rollins, Iowa State University; Lucas Beverlin, Iowa State University; Nisarg Vyas, BodyMedia, Inc.; Gregory Welk, Iowa State University; Warren Franke, Iowa State University

9:50 a.m. **Identify Qualitative Interaction Through Value of Information**—◆Peng Zhang, University of Michigan; James Robins, Harvard School of Public Health; Susan Murphy, University of Michigan

10:05 a.m. **Effect Modification of Prenatal Mercury Exposure Association with Developmental Outcomes by Social and Environmental Factors**—◆Tanzy Love, Carnegie Mellon University; Sally W. Thurston, University of Rochester

569 CC-208A

Microarray Analysis and Missing Data—Contributed

Biometrics Section, Section on Survey Research Methods

Chair(s): Tao Liu, Brown University

8:35 a.m. **A Random Pattern Mixture Model for Longitudinal Binary Outcome with Informative Dropouts**—◆Chengcheng Liu, Merck & Co., Inc.; Wensheng Guo, University of Pennsylvania; Sarah Ratcliffe, University of Pennsylvania

8:50 a.m. **Outfluence: The Impact of Missing Values**—◆Ofer Harel, University of Connecticut

9:05 a.m. **Multiple Imputation for Drop-Out in Longitudinal Studies**—Xiaodong Li, Columbia University; ◆Jingchen Liu, Columbia University; Naihua Duan, Columbia University; Huiping Jiang, Columbia University; Jeffrey Lieberman, Columbia University; Ragy Girgis, Columbia University

9:20 a.m. **Multiple Imputation in Right-Truncated Multivariate Normal Distribution, with Applications to RT-PCR**—◆Abhijit Dasgupta, Thomas Jefferson University; Terry Hysolp, Thomas Jefferson University; Scott Waldman, Thomas Jefferson University

9:35 a.m. **Robust Variable and Model Selection with Missing Data**—◆Greg DiRienzo, State University of New York at Albany

9:50 a.m. **Floor Discussion**

570 CC-153

Statistical Methods—Contributed

Business and Economic Statistics Section

Chair(s): Marco A.R. Ferreira, University of Missouri-Columbia

8:35 a.m. **An Analysis of Segmented Ratios**—◆William D. Heavlin, Google, Inc.

8:50 a.m. **Just a Few More Moments: The g-and-h Distribution**—◆James B. McDonald, Brigham Young University; Patrick Turley, Brigham Young University

9:05 a.m. **Toward Learning Similarity Measures for Uncertain Features**—◆Ming Xie, IBM China Research Laboratory; Bin Zhang, IBM China Research Laboratory; Li Xia, IBM China Research Laboratory; Jin Yan Shao, IBM China Research Laboratory; Wenjun Yin, IBM; Jin Dong, IBM China Research Laboratory

9:20 a.m. **Temporal Aggregation of Long Memory Processes and ARFIMA Approximations**—◆Ka S. Man, Western Illinois University

9:35 a.m. **Testing the Equivalence of Means from a Multivariate Normal Population and Its Application to Investment**—◆Hubert J. Chen, National Cheng-Kung University; Yen-Chi Huang, National Cheng-Kung University; Minglong A. Wang, National Cheng-Kung University

9:50 a.m. **Computational Methods for Production-Based Asset Pricing Models**—◆Eric M. Aldrich, Duke University; Howard Kung, Duke University

10:05 a.m. **On the Optimal Degree of Smoothness for a Hodrick Prescott Filter**—◆Munir Jalil, Universidad Nacional de Colombia; Javier Acosta, Universidad Nacional de Colombia

571 CC-159B

■ ✪ Improvements in Sample Design for Government-Sponsored Surveys—Contributed

Section on Survey Research Methods, Section on Government Statistics

Chair(s): Sarjinder Singh, Texas A&M University-Kingsville

8:35 a.m. **Achieving the Unique Objectives of the Canadian Health Measures Survey**—◆Sarah-Maude Dion, Statistics Canada; Suzelle Giroux, Statistics Canada

8:50 a.m. **Sample Redesign of Canadian Local Government Surveys**—◆James Ahkong, Statistics Canada; Martin Renaud, Statistics Canada

9:05 a.m. **Reducing the Public Employment Survey Sample Size**—◆Joseph Barth, U.S. Census Bureau

9:20 a.m. **National Sample Reallocation for the Occupational Employment Statistics Survey**—◆David Piccone, Bureau of Labor Statistics; Marie Stetser, Bureau of Labor Statistics

9:35 a.m. **Evaluation of Methods for Increasing Precision in DAWN: Stratification and Ratio Estimation**—◆Peter Frechtel, RTI International

9:50 a.m. **Progress on the Redesign of the Quarterly Tax Survey**—◆Amy Couzens, U.S. Census Bureau; Carma Hogue, U.S. Census Bureau; Paul Villena, U.S. Census Bureau

10:05 a.m. **Exploring Statistical Issues of Annual Sampling for the Current Population Survey**—◆Benjamin M. Reist, U.S. Census Bureau; Antoinette Lubich, U.S. Census Bureau; Reid Rottach, U.S. Census Bureau

572 CC-208B

■ Microarray and Genomics—Contributed

Biopharmaceutical Section

Chair(s): Shiowjen Lee, FDA

8:35 a.m. **A Rank Approach to Identify Outlier Tissue**—◆Dung-Tsa Chen, Moffitt Cancer Center & Research Institute; Lin-An Chen, National Chiao-Tung University

8:50 a.m. **A Cluster Binomial Model for Resistance-Mutations Detectable in Clonal Sequencing Analysis**—◆Jianliang Zhang, MedImmune, LLC

9:05 a.m. **Deforestation of a Random Forest**—◆Matthew Mitchell, Metabolon, Inc.

9:20 a.m. **Determination of Sample Size for Validation Study in Pharmacogenomics**—◆Youlan Rao, The Ohio State University; Yoonkyung Lee, The Ohio State University; Jason Hsu, The Ohio State University

9:35 a.m. **Robust Test for Time-Course Microarray Data**—◆Insuk Sohn, Duke University; Kouros Owzar, Duke University; Stephen L. George, Duke University Medical Center; Sin-Ho Jung, Duke University

9:50 a.m. **Time Course Analysis of Microarray Data for the Pathway of Reproductive Development in Female Rainbow Trout**—◆Yushi Liu, The Ohio State University; Joseph S. Verducci, The Ohio State University

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

Invited Sessions 10:30 a.m.–12:20 p.m.

573 CC-102B

■ ✪ Nonparametric Regression Estimators in Survey Sampling—Invited

Section on Survey Research Methods

Organizer(s): Daniell Toth, Bureau of Labor Statistics

Chair(s): John L. Eltinge, Bureau of Labor Statistics

10:35 a.m. **Nonparametric Regression Estimators in Survey Sampling**—◆Sharon Lohr, Arizona State University; Guillermo Mendez, American Express

11:00 a.m. **Penalized Balanced Sampling: Nonparametric Guidance for Survey Design**—◆Jay Breidt, Colorado State University; Guillaume Chauvet, National Institute for Statistics and Economic Studies

11:25 a.m. **Nonparametric Regression and the Two Sample Problem**—◆Alan H. Dorfman, Bureau of Labor Statistics

11:50 a.m. Disc: Jean Opsomer, Colorado State University

12:10 p.m. **Floor Discussion**

574 CC-150A

■ Statistical Issues and the Second Code of Life: Epigenomics—Invited

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

Organizer(s): Rebecca W. Doerge, Purdue University; Jaya Satagopan, Memorial Sloan-Kettering Cancer Center

Chair(s): Rebecca W. Doerge, Purdue University

10:35 a.m. **Epigenetic Natural Variation in Arabidopsis Thaliana**—◆Robert A. Martienssen, Cold Spring Harbor Laboratory

11:00 a.m. **Statistical Issues Surrounding Testing for Epigenomic Alterations**—◆Hongmei Jiang, Northwestern University

11:25 a.m. **Whole Genome DNA Methylation Studies: Prioritization of Candidate Loci**—◆Melissa J. Fazzari, Albert Einstein College of Medicine

11:50 a.m. **Inferring the Past: How Did Your Cancer Grow?**—◆Kimberly Siegmund, University of Southern California; Paul Marjoram, University of Southern California; Darryl Shibata, University of Southern California

12:15 p.m. **Floor Discussion**

575 CC-207B

■ Who Is Teaching the Statistics Courses?—Invited

Section on Statistical Education

Organizer(s): Peter Westfall, Texas Tech University
Chair(s): Katherine T. Halvorson, Smith College

10:35 a.m. **A National Survey on Teaching Practices in Undergraduate Statistics Instruction**—◆Robert delMas, The University of Minnesota; Joan B. Garfield, The University of Minnesota; Andrew Zieffler, The University of Minnesota

11:00 a.m. **An Inventory of (Bio)statistics Courses at an Academic Health Science Center: Is Duplication Really Necessary?**—◆Adriana Perez, University of Louisville; Mourad Atlas, University of Louisville; Carl A. Hornung, University of Louisville

11:25 a.m. **Who Is Teaching the Statistics Courses?**—◆Aaron Satterlee, Northwood University

11:50 a.m. **Duplication in Graduate-Level Courses in Statistics**—◆Peter Westfall, Texas Tech University

12:15 p.m. **Floor Discussion**

576 CC-150B

■ Extending the Marginal Structural Model—Invited

Section on Statistics in Epidemiology

Organizer(s): Stephen R. Cole, The University of North Carolina at Chapel Hill
Chair(s): Stephen R. Cole, The University of North Carolina at Chapel Hill

10:35 a.m. **Survival Analysis with Dynamic Marginal Structural Models**—◆Miguel A. Hernan, Harvard School of Public Health

11:00 a.m. **Estimation of Dynamic Treatment Regimes and Extrapolation to Populations with Distinct Monitoring Structures: The Use of Laboratory Monitoring to Detect HIV Treatment Failure**—◆Maya L. Petersen, University of California, Berkeley

11:25 a.m. **Extending Marginal Structural Models to Surrogate Outcomes**—◆Marshall Joffe, University of Pennsylvania

11:50 a.m. Disc: James Robins, Harvard School of Public Health

12:10 p.m. **Floor Discussion**

577 CC-207A

■ ✪ Collaborative and Value-Creating Processes for Statistical Computing: Transforming Data Evidence Into Successful Policies, Decisions, and Actions—Invited

Section on Statistical Computing, Interface Foundation of North America

Organizer(s): Arnold Goodman, Collaborative Data Solutions
Chair(s): Necip Doganaksoy, GE Global Research

10:35 a.m. **Collaborative and Value-Creating Processes for Statistical Computing**—◆Arnold Goodman, Collaborative Data Solutions

10:55 a.m. **Model Misspecification versus Problem Misspecification**—◆David J. Hand, Imperial College

11:15 a.m. **An Essential Aspect of the Climb from Competition to Collaboration: The Relationships Among the Climbers**—◆Doug Zahn, Zahn and Associates

11:35 a.m. **The Evolving Role of Statistics in Business and Industry**—◆Necip Doganaksoy, GE Global Research; ◆Gerald Hahn, GE Corporate Research and Development Center, Retired

11:55 a.m. Disc: Janet Myhre, Claremont McKenna College

12:15 p.m. **Floor Discussion**

578 CC-155

■ ✪ Measuring Financial and Real Sector Linkages—Invited

Business and Economic Statistics Section

Organizer(s): Kim Zieschang, International Monetary Fund
Chair(s): Kim Zieschang, International Monetary Fund

10:35 a.m. **The End of the Great Moderation? How Better Monetary Statistics Could Have Signaled the Systemic Risk Precipitating the Financial Crisis**—◆William A. Barnett, The University of Kansas; Marcelle Chauvet, University of California, Riverside

11:05 a.m. **Computing Real Bank Services**—◆Dennis Fixler, Bureau of Economic Analysis; Marshall B. Reinsdorf, Bureau of Economic Analysis

11:35 a.m. **Measurement Error in Monetary Aggregates: A Markov Switching Factor Approach**—William A. Barnett, The University of Kansas; ◆Marcelle Chauvet, University of California, Riverside; Tierney Heather, College of Charleston

12:05 p.m. **Floor Discussion**

579 CC-102A

■ ✪ Using National Center for Health Statistics Data to Study Access to Health Care—Invited

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

Organizer(s): Jane F. Gentleman, National Center for Health Statistics

Chair(s): Jane F. Gentleman, National Center for Health Statistics

10:35 a.m. **Using the National Health Interview Survey to Monitor Health Insurance and Access to Care**—◆Robin A. Cohen, National Center for Health Statistics

10:55 a.m. **Access to Care and Objective Measures of Health: Results from the National Health and Nutrition Examination Survey (NHANES)**—◆Vicki L. Burt, National Center for Health Statistics; Lester R. Curtin, CDC; Clifford Johnson, National Center for Health Statistics; Cindy Zhang, Harris Associates

11:15 a.m. **Health care access data for children and adolescents from the National Survey of Children with Special Health Care Needs and the National Survey of Children's Health**—◆Rosa Avila, National Center for Health Statistics

11:35 a.m. **Using the National Health Care Surveys to Monitor Use and Access to Health Care**—◆Nancy Sonnenfeld, National Center for Health Statistics; Sandra L. Decker, National Center for Health Statistics

11:55 a.m. Disc: Diane M. Makuc, National Center for Health Statistics

12:15 a.m. **Floor Discussion**

580 CC-201

Best of Statistics Surveys: The Open Access Journal for Review Articles—Invited

ASA Special Interest Group on Statistical Learning and Data Mining, International Indian Statistical Association

Organizer(s): Wendy Martinez, U.S. Department of Defense

Chair(s): Jon A. Wellner, University of Washington

10:35 a.m. **Navigating Random Forests and Related Algorithms**—◆David S. Siroky, Duke University

11:00 a.m. **Text Data Mining: Theory and Methods**—◆Jeffrey L. Solka, Naval Surface Warfare Center

11:25 a.m. **Least Angle and L1 Penalized Regression: A Review**—◆Tim Hesterberg, Google, Inc.; Nam Hee Choi, University of Michigan; Lukas Meier, ETH; Chris Fraley, Insilicos

11:50 a.m. Disc: Edward J. Wegman, George Mason University

12:10 p.m. **Floor Discussion**

581 CC-143C

■ ✪ Case Studies in the Area of Dynamic Treatment Regimes—Invited

ENAR, Biometrics Section, Biopharmaceutical Section

Organizer(s): Qi Long, Emory University

Chair(s): Brent Johnson, Emory University

10:35 a.m. **Structural Nested Mean Modeling of Response-Maximized Breastfeeding Strategies**—Erica E.M. Moodie, McGill University; ◆Susan Shortreed, McGill University

11:00 a.m. **Targeted Maximum Likelihood Estimation of Individualized Treatment Rule Effects**—◆Kelly Moore, University of California, Berkeley; Mark J. van der Laan, University of California, Berkeley; Ira Tager, University of California, Berkeley; Romain Neugebauer, University of California, Berkeley

11:25 a.m. **Dynamic Treatment Regimes in Leukemia Treatment**—◆Abdus S. Wahed, University of Pittsburgh

11:50 a.m. Disc: Andrea Rotnitzky, Universidad Di Tella and Harvard University

12:10 p.m. **Floor Discussion**

582 CC-202B

Bayesian Methods—Invited

IMS, Section on Bayesian Statistical Science

Organizer(s): Mario Peruggia, The Ohio State University

Chair(s): Mario Peruggia, The Ohio State University

10:35 a.m. **Aggregation Modeling**—◆Steven N. MacEachern, The Ohio State University; Zhen Wang, The Ohio State University

11:05 a.m. **A Clusterwise Approach for Heterogeneous Variable Selection**—◆Feng Liang, University of Illinois at Urbana-Champaign

11:35 a.m. **Nonlocal Prior Densities for Default Bayesian Hypothesis Tests**—◆Valen E. Johnson, The University of Texas M.D. Anderson Cancer Center; David Rossell, IRB Barcelona

12:05 p.m. **Floor Discussion**

583 CC-202A

Wald Lecture III—Invited

IMS

Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill

Chair(s): Peihua Qiu, The University of Minnesota

10:35 a.m. **Predictive Learning via Rule Ensembles**—◆Jerome H. Friedman, Stanford University

12:00 p.m. **Floor Discussion**

✪ Themed Session ■ Applied Session ◆ Presenter CC-Walter E. Washington Convention Center RH-Renaissance Washington, DC, Hotel

Invited Panels 10:30 a.m.–12:20 p.m.

584 CC-101

■ ✪ The Federal Statistical System: Opportunities and Challenges for the Next 5–10 Years—Invited

The National Academies, Section on Survey Research Methods, Social Statistics Section, Section on Government Statistics

Organizer(s): Constance F. Citro, The National Academies
Chair(s): William F. Eddy, Carnegie Mellon University

Panelists:
- ◆Cynthia Clark, National Agriculture Statistics Service
- ◆Hermann Habermann, Consultant
- ◆Nancy Kirkendall, Consultant
- ◆Katherine Wallman, Office of Management and Budget

12:15 p.m. **Floor Discussion**

Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

585 CC-143A

■ ✪ The Guatemalan Police Archive Project: Sample Design, Weighting, and Analysis—Topic-Contributed

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

Organizer(s): Paul Zador, Westat, Inc.
Chair(s): Paul Zador, Westat, Inc.

10:35 a.m. **Studying Millions of Rescued Documents: Sampling Plan at the Guatemalan National Police Archive (GNPA)**—◆Daniel R. Guzmán, Benetech; Tamy Guberek, Benetech; Gary M. Shapiro, Westat, Inc.; Paul Zador, Westat, Inc.

10:55 a.m. **Weighting for the Guatemalan National Police Archive Sample: Unusual Challenges and Problems**—◆Gary M. Shapiro, Westat, Inc.; Daniel Guzman, Benetech; Paul Zador, Westat, Inc.; Tamy Guberek, Benetech

11:15 a.m. **Analyzing Command and Control of the Guatemalan National Police Leadership Over Human Rights Violations: A Statistical Analysis of the National Police Archive**—◆Megan Price, Benetech; Daniel Guzman, Benetech; Paul Zador, Westat, Inc.; Gary M. Shapiro, Westat, Inc.; Tamy Guberek, Benetech

11:35 a.m. Disc: Patrick Ball, The Benetech Initiative

11:55 a.m. Disc: Hyunshik Lee, Westat, Inc.

12:15 p.m. **Floor Discussion**

586 CC-142

Recent Advances in Statistical Inference Using Order Statistics—Topic-Contributed

International Chinese Statistical Association

Organizer(s): Gang Zheng, National Heart, Lung, and Blood Institute
Chair(s): Reza Modarres, The George Washington University

10:35 a.m. **Pitman Closeness of Estimators and Predictors for Exponential Distribution**—◆Katherine Davies, University of Manitoba; Narayanaswamy Balakrishnan, McMaster University; Jerome P. Keating, The University of Texas at San Antonio

10:55 a.m. **Statistical Analysis of Adaptive Progressively Censored Data**—◆Hon Keung (Tony) Ng, Southern Methodist University; Debasis Kundu, Indian Institute of Technology Kanpur; Ping Shing Chan, Chinese University of Hong Kong

11:15 a.m. **Parametic Inference in Ranked Set Sampling Based on a Missing Data Model**—◆Omer Ozturk, The Ohio State University

11:35 a.m. **A Multivariate Wilcoxon Rank Sum Test Based on the Triangle Data Depth**—◆Zhenyu Liu, The George Washington University

11:55 a.m. **A Very Flexible Hybrid Censoring Scheme and Its Fisher Information**—◆Sangun Park, Yonsei University; Narayanaswamy Balakrishnan, McMaster University

12:15 p.m. **Floor Discussion**

587 CC-149B

Methods, Computing, and Application of Copulas—Topic-Contributed

Business and Economic Statistics Section, SSC

Organizer(s): Jun Yan, University of Connecticut
Chair(s): Jun Yan, University of Connecticut

10:35 a.m. **Properties and Uses of the Empirical Copula Process**—◆Christian Genest, Université Laval

10:55 a.m. **Copula-Based Tests of Independence Among Continuous Random Vectors**—◆Ivan Kojadinovic, The University of Auckland

11:15 a.m. **Archimedean Copulas and Beyond**—◆Johanna Neslehova, ETH Zurich

11:35 a.m. **Local Power Analyses of Goodness-of-Fit Tests for Copulas**—◆Jean-Francois Quessy, Universite du Quebec a Trois-Rivieres

11:55 a.m. **Hierarchical Insurance Claims Modeling**—◆Emiliano A. Valdez, University of Connecticut; Edward W. Frees, University of Wisconsin-Madison

12:15 p.m. **Floor Discussion**

588 CC-204A

✪ Data User Experience: Working with Data Protected by Synthetic Methods: Moving from Theory to Practice: Synthetic Data in the Public Domain—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods

Organizer(s): J. Neil Russell, National Center for Education Statistics
Chair(s): J. Neil Russell, National Center for Education Statistics

10:35 a.m. **Partial Synthesis of the Longitudinal Employer-Household Dynamics Database**—◆Simon Woodcock, Simon Fraser University; Gary Benedetto, U.S. Census Bureau

10:55 a.m. **The Synthetic Public-Use Release of the Longitudinal Business Database**—◆Satkartar Kinney, National Institute of Statistical Sciences; Jerome Reiter, Duke University; Ron Jarmin, U.S. Census Bureau; Arnold Reznek, U.S. Census Bureau; Javier Miranda, U.S. Census Bureau; John M. Abowd, Cornell University

11:15 a.m. **Generating Multiply Imputed Synthetic Data Sets for a German Establishment Survey: The Agency's Perspective**—◆Joerg Drechsler, Institute for Employment Research

11:35 a.m. **Improving the Usefulness of Synthetic Data: Some Recent Advances**—◆Jerome Reiter, Duke University

11:55 a.m. Disc: Jack Buckley, New York University

12:15 p.m. **Floor Discussion**

589 CC-159A

■ Statistical Consulting with Limited Resources—Topic-Contributed

Section on Statistical Consulting

Organizer(s): Richard F. Ittenbach, Cincinnati Children's Hospital Medical Center
Chair(s): Mi-Ok Kim, Cincinnati Children's Hospital Medical Center

10:35 a.m. **Scale Development on a Limited Budget: Guidelines for Statisticians**—◆Richard F. Ittenbach, Cincinnati Children's Hospital Medical Center; Amy E. Cassedy, Cincinnati Children's Hospital Medical Center; Todd G. Nick, Cincinnati Children's Hospital Medical Center; Justine Shults, University of Pennsylvania

10:55 a.m. **Creative Problem Solving in Statistical Consulting with Limited Time and a Limited Budget**—◆Mark Glickman, Boston University School of Public Health

11:15 a.m. **Grant Proposal Development Assistance on a Limited Budget: Guidelines for Statisticians**—◆Todd G. Nick, Cincinnati Children's Hospital Medical Center; Ralph G. O'Brien, Case Western Reserve University

11:35 a.m. **Developing an Independent Research Program on a Limited Budget and with Limited Time: Some Ideas for Biostatisticians**—◆Justine Shults, University of Pennsylvania; Richard F. Ittenbach, Cincinnati Children's Hospital Medical Center; Todd G. Nick, Cincinnati Children's Hospital Medical Center

11:55 a.m. Disc: Sarah Ratcliffe, University of Pennsylvania

12:15 p.m. **Floor Discussion**

590 CC-206

■ ✪ Statistics at West Point: No Lies—Topic-Contributed

Section on Statistics in Defense and National Security

Organizer(s): Adam Wright, U.S. Military Academy at West Point
Chair(s): Howard Burkom, Johns Hopkins applied Physics Laboratory

10:35 a.m. **Periodic Spatio-Temporal Improvised Explosive Device Attack Pattern Analysis**—◆Matthew Benigni, U.S. Military Academy; Reinhard Furrer, Colorado School of Mines

10:55 a.m. **Using Variable Screening and Logistic Regression to Determine the Impact of Friendly Activity on Improvised Explosive Device Incidents**—◆Darryl Ahner, U.S. Military Academy

11:15 a.m. **Epidemiological Studies in the Military**—◆Rodney Sturdivant, U.S. Military Academy; Robert Burks, U.S. Military Academy; Brett Owens, William Beaumont Army Medical Center; Jennifer Wolf, University of Colorado Denver; Ken Cameron, Keller Army Hospital

11:35 a.m. **Analysis of Refractive Surgery Data from a Young and Extremely Healthy Population**—◆Vaughn DeLong, U.S. Military Academy; Scott T. Nestler, U.S. Military Academy at West Point; Chris Grauel, U.S. Military Academy

11:55 a.m. **Small Arms Effective Life Studies**—◆Matthew Benigni, U.S. Military Academy; Scott T. Nestler, U.S. Military Academy at West Point; Dana Gingrich, U.S. Military Academy; Gary Kramlich, U.S. Army

12:15 p.m. **Floor Discussion**

591 CC-144C

■ Bayesian Approaches in Clinical Trials: Regulatory Perspectives—Topic-Contributed

Biopharmaceutical Section, Section on Bayesian Statistical Science

Organizer(s): Tie-Hua Ng, FDA
Chair(s): Henry Hsu, FDA

10:35 a.m. **Safety Evaluation of Factor VIII Products: Bayesian Approaches**—◆Ghanshyam Gupta, FDA

10:55 a.m. **Bayesian Approaches: Basic Concepts**—◆Tie-Hua Ng, FDA

11:15 a.m. **Bayesian Analyses of Binary Outcomes**—◆Chunrong Cheng, FDA; Tie-Hua Ng, FDA

11:35 a.m. **Bayesian Methods in Lot Release**—◆Yunling Xu, FDA; Boguang Zhen, FDA

11:55 a.m. **Bayesian vs. Frequentist Hypotheses Testing in Clinical Trials with Dichotomous and Countable Outcomes**—◆Boris G. Zaslavsky, FDA

12:15 p.m. **Floor Discussion**

592 CC-144B

Statistical Topics in the Study of Medical Devices—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Heng Li, FDA

Chair(s): Heng Li, FDA

10:35 a.m. **A Unified Approach in Data Analysis After Sample Size Is Increased in Adaptive Design Trial**—◆Yonghong Gao, FDA

10:55 a.m. **Analysis of Gender Differences in a Medical Device Trial That Was Not Constructed for Gender Comparisons**—◆David C. Naftel, The University of Alabama at Birmingham; Margaret T. Foushee, The University of Alabama at Birmingham; Susan L. Myers, The University of Alabama at Birmingham

11:15 a.m. **Comparing Statistical Approaches in Analysis of Clinical Trial Data with Patient Crossover**—◆Tailiang Xie, Brightech International

11:35 a.m. **Demonstrating Treatment Effect Using a Bootstrap Simulation**—◆Xiaolong Shih, Boston Scientific Corporation

11:55 a.m. **Some Comments and Recommendations on Interim Data Review of Data from Medical Device Studies**—◆Dennis W. King, STATKING Consulting, Inc.

12:15 p.m. **Floor Discussion**

593 CC-204B

■ ✪ Bayesian Philosophies and Practicalities—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Scotland Leman, Virginia Polytechnic Institute and State University

Chair(s): Gavino Puggioni, The University of North Carolina at Chapel Hill

10:35 a.m. **An Application of Reification for a Rainfall-Runoff Computer Model**—◆Leanna House, Virginia Polytechnic Institute and State University; Ian Vernon, University of Durham; Allan Seheult, University of Durham

10:55 a.m. **Understanding the Size of p-Values**—◆Scotland Leman, Virginia Polytechnic Institute and State University

11:15 a.m. **Multi-Scale Spatial Inference of Pollutant Concentrations**—◆Dawn Woodard, Cornell University

11:35 a.m. **What Scientists Really Want to Know**—◆Eric Vance, Virginia Polytechnic Institute and State University; Scotland Leman, Virginia Polytechnic Institute and State University; Leanna House, Virginia Polytechnic Institute and State University

11:55 a.m. **Inverse Bayes**—◆Golde I. Holtzman, Virginia Polytechnic Institute and State University

12:15 p.m. **Floor Discussion**

594 CC-204C

■ ✪ Modern Statistical Approaches to Phylogenetics—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Jennifer Tom, University of California, Los Angeles

Chair(s): Marc A. Suchard, University of California, Los Angeles

10:35 a.m. **Bayesian Hierarchical Modeling Using an Iterative Reweighting Algorithm Within Gibbs: An Analysis of Individual Posterior Distributions of Phylogenetic Influenza Data**—◆Jennifer Tom, University of California, Los Angeles

10:55 a.m. **Modeling Indel Hot Spots When Inferring Alignments**—◆Benjamin D. Redelings, North Carolina State University

11:15 a.m. **Bayesian Estimation of Parameters Along a Species Phylogeny Subject to Hybridization and Coalescence**—◆Chen Meng, Monsanto Company

11:35 a.m. **Phyloclustering: New Phylogenetic Methods for Inferring Population Structure**—◆Karin S. Dorman, Iowa State University; Ranjan Maitra, Iowa State University; Wei-Chen Chen, Iowa State University

11:55 a.m. **Assessing Selective Influence of Amino Acid Properties**—◆Saheli Datta, University of California, Santa Cruz; Raquel Prado, University of California, Santa Cruz; Abel Rodriguez, University of California, Santa Cruz

12:15 p.m. **Floor Discussion**

595 CC-203A

Inference in Nonstandard Problems—Topic-Contributed

Section on Nonparametric Statistics

Organizer(s): Bodhisattva Sen, Columbia University
Chair(s): Bodhisattva Sen, Columbia University

10:35 a.m. **A Two-Stage Hybrid Procedure for Estimating an Inverse Regression Function**—◆Runlong Tang, University of Michigan; Moulinath Banerjee, University of Michigan; George Michailidis, University of Michigan

10:55 a.m. **Bootstrapping Lasso Estimators**—◆Arindam Chatterjee, Texas A&M University

11:15 a.m. **Inference in Nonparametric Shape-Restricted Problems**—◆Emilio Seijo, Columbia University

11:35 a.m. **General Semiparametric Inference via Bootstrap Sampling**—◆Guang Cheng, Purdue University

11:55 a.m. Disc: Bikramjit Das, Cornell University

12:15 p.m. **Floor Discussion**

596 CC-141

■ ✪ Overview of Methods to Improve Quality in Petroleum Data—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Paula Mason, Energy Information Administration
Chair(s): James Knaub, Energy Information Administration

10:35 a.m. **The Changing Petroleum Marketing Industry as Viewed Through an Attribute Frame**—◆Amerine Woodyard, Energy Information Administration; Paula Mason, Energy Information Administration

10:55 a.m. **Improvement of Data Quality Assurance in the EIA Weekly Gasoline Prices Survey**—◆Bin Zhang, Energy Information Administration; Paula Mason, Energy Information Administration; Amerine Woodyard, Energy Information Administration; Benita O'Colmain, ICF Macro

11:15 a.m. **Improving the Edits in Petroleum Supply Surveys**—◆Jason D. Marley, SAIC; Paula Mason, Energy Information Administration; Julie Harris, Energy Information Administration

11:35 a.m. **An Improved Imputation Methodology Derived Through Regression Trees**—◆Pedro J. Saavedra, ICF Macro; Paula Mason, Energy Information Administration; Benita O'Colmain, ICF Macro; Jeffrey Foarde, ICF Macro

11:55 a.m. Disc: Paula Mason, Energy Information Administration

12:15 p.m. **Floor Discussion**

Topic-Contributed Panels 10:30 a.m.–12:20 p.m.

597 CC-149A

■ What Can I Do with an Undergraduate Degree in Statistics?—Topic-Contributed

ASA-MAA Joint Committee on Undergraduate Statistics, Section on Statistics in Defense and National Security, Social Statistics Section

Organizer(s): Robin H. Lock, St. Lawrence University
Chair(s): Robin H. Lock, St. Lawrence University

Panelists: ◆Carol J. Blumberg, U.S. Department of Energy
◆Deanna Egelston, National Security Agency
◆Brian Bot, Mayo Clinic

12:15 p.m. **Floor Discussion**

Contributed Sessions 10:30 a.m.–12:20 p.m.

598 CC-158A

Topics in Quality and Productivity—Contributed

Section on Quality and Productivity

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

10:35 a.m. **Virtual Prototyping in Marketing Research**—◆Norbert Wirth, MarketTools; Frank Hedler, MarketTools; Dimitri Liakhovitski, MarketTools

10:50 a.m. **Estimating Tradeoff Exchange Rate in Conjoint Analysis: An Application of Fieller's Theorem**—◆Pallavi Chitturi, Temple University; Ravi Chitturi, Lehigh University; Damaraju Raghavarao, Temple University

11:05 a.m. **Nonparametric Estimation in Ranked Set Sampling with a Concomitant**—◆Nader M. Gemayel, The Ohio State University; Doug Wolfe, The Ohio State University; Elizabeth Stasny, The Ohio State University

11:20 a.m. **Adaptive Break Detection and Combining: Application to Electricity Load Forecast**—◆Yannig Goude, EDF

11:35 a.m. **Stochastic Production Line Model of Multiple Workstations and Buffers with Continuous Materials Flow**—◆Mohammad Quasem, Howard University

11:50 a.m. **Developing a Sampling Plan Based on Cpk**—◆Itay Negrin, Ben Gurion University of the Negev; Yisrael Parmet, Ben Gurion University of the Negev; Edna Schechtman, Ben Gurion University of the Negev

12:05 p.m. **How to Be the Most Popular Statistician in Your Company: Affordable Quality Approaches to Guarantee Project Director and Client Satisfaction**—◆Larry N. Campbell, RTI International; Victoria Albright, RTI International

599 CC-144A

■ Issues Related to Surrogate Endpoints, Biomarkers, and Survival Analysis—Contributed

Biopharmaceutical Section

Chair(s): B. Christine Clark, ReSearch Pharmaceutical Services, Inc.

10:35 a.m. **Adjustment for the Measurement Error in Evaluating Biomarkers**—◆Wen Li, Iowa State University; Yongming Qu, Eli Lilly and Company

10:50 a.m. **Efficiency Impact of Proportional Hazards Assumption Violation**—◆Amarjot Kaur, Merck & Co., Inc.; Yabing Mai, FDA

11:05 a.m. **Effect of Predictive Performance of a Biomarker for the Sample Size of Targeted Clinical Trials**—◆Xiwu Lin, GlaxoSmithKline; Daniel Parks, GlaxoSmithKline; Kwan R. Lee, GlaxoSmithKline

11:20 a.m. **An Assessment of Several Trial-Level Surrogacy Measures in the Meta-Analytical Framework of Evaluating Surrogate Endpoints in Clinical Trials**—◆Qian Shi, Mayo Clinic; Daniel Sargent, Mayo Clinic

11:35 a.m. **Comparison of Vaccine Effects of LAIV and TIV on Pneumonia and Influenza-Related Medical Encounters**—◆Jean A. Roayaei, National Institutes of Health

11:50 a.m. **Statistical Application of Survival Analysis to Clinical Trials of Antiepileptic Drugs**—◆Baldeo K. Taneja, Supernus Pharmaceuticals, Inc.

12:05 p.m. **Floor Discussion**

600 CC-159B

■ Mixed Effects Models in Modern Epidemiologic Studies—Contributed

Section on Statistics in Epidemiology

Chair(s): Novie Younger, Tropical Medicine Research Institute, Jamaica

10:35 a.m. **Modeling Menstrual Cycle Lengths at the Approach of Menopause Using Bayesian Change Point Models**—◆Xiaobi Huang, University of Michigan; Michael Elliott, University of Michigan

10:50 a.m. **Multi-City Time Series Analyses of Air Pollution and Mortality Data Using Generalized Geoadditive Mixed Models**—◆Lung-Chang Chien, The University of North Carolina at Chapel Hill; Shrikant Bangdiwala, The University of North Carolina at Chapel Hill; Jiu-Chiuan Chen, The University of North Carolina at Chapel Hill; Mark Weaver, Family Health International; Todd Schwartz, The University of North Carolina at Chapel Hill; John S. Preisser, The University of North Carolina at Chapel Hill

11:05 a.m. **Joint Variable Selection of Fixed and Random Effects in a Linear Mixed-Effects Model and Its Oracle Properties**—◆Arun Krishna, North Carolina State University; Howard D. Bondell, North Carolina State University; Sujit Ghosh, North Carolina State University

11:20 a.m. **A Likelihood Approach to Pooled Prevalence Estimation with Random Effects**—◆Chengxing Lu, CDC; Mikyong Shin, CDC; Adolfo Correa, CDC

11:35 a.m. **A Two-Stage Estimation Method for Random Coefficient Differential Equation Models with Application to Longitudinal HIV Dynamic Data**—◆Yun Fang, East China Normal University; Hulin Wu, University of Rochester; Li-Xing Zhu, Hong Kong Baptist University

11:50 a.m. **GEMANOVA and Mixed Models**—◆Heather M. Bush, University of Kentucky; William S. Rayens, University of Kentucky

12:05 p.m. **Longitudinal Analysis of Intraclass Correlation Coefficients**—Aiyi Liu, National Institute of Child Health and Human Development; Enrique Schisterman, National Institutes of Health; ◆Chunling Liu, The Eunice Kennedy Shriver National Institute of Child Health and Human Development

601 CC-208A

Modeling Seasonal Data in Environmental Studies—Contributed

Section on Statistics and the Environment

Chair(s): Jenise Swall, U.S. Environmental Protection Agency

10:35 a.m. **Back-Fitting and Penalized Iteratively Reweighted Least Squares Algorithm in Generalized Additive Models**—◆Long H. Ngo, Beth Israel Deaconess Medical Center/Harvard Medical School

10:50 a.m. **Stochastic Modeling of Stream Flow Measurements in the Mississippi and Missouri Rivers**—◆Jonathan F. Joseph, The Ohio State University; Haikady N. Nagaraja, The Ohio State University

11:05 a.m. **Modeling Seasonal Effects in Radon Emissions Data**—◆Órlaith Burke, University College Dublin; Stephanie Long, Radiological Protection Institute of Ireland; Patrick Murphy, University College Dublin; Catherine Organo, Radiological Protection Institute of Ireland; David Fenton, Radiological Protection Institute of Ireland

11:20 a.m. **Statistical Analysis of Trend and Change Point in Vegetation**—◆Nicolle Goble, Virginia Polytechnic Institute and State University; Dong-Yun Kim, Virginia Polytechnic Institute and State University; Matthew Williams, Virginia Polytechnic Institute and State University

11:35 a.m. **An MDL Approach to the Climate Segmentation Problem**—◆QiQi Lu, Mississippi State University

11:50 a.m. **Testing for Changepoint in Time Series: A Comparative Study**—◆Jennifer Kensler, Virginia Polytechnic Institute and State University; Dong-Yun Kim, Virginia Polytechnic Institute and State University

12:05 p.m. **Floor Discussion**

602 CC-210
Resampling and Random Number Generation—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Elizabeth L. Hohman, Naval Surface Warfare Center

10:35 a.m. **An Accept-Reject Algorithm for the Positive Multivariate Normal Distribution**—◆Carsten H. Botts, Williams College

10:50 a.m. **Generating Bounded Accuracy Continuous Uniform Variates**—◆Timothy G. Hall, PQI Consulting

11:05 a.m. **Parallel Multivariate Slice Sampling**—◆Matthew M. Tibbits, Penn State University; Murali Haran, Penn State University; John C. Liechty, Penn State University

11:20 a.m. **Another Look at the Bootstrap: Resampling with Random Noises**—◆Haiyan Bai, University of Central Florida

11:35 a.m. **Spatial Bootstrap Method Using Pairs of Equidistant Points**—◆Jose H. Guardiola, Texas A&M University; Hassan Elsalloukh, University of Arkansas at Little Rock

11:50 a.m. **A Sieve Bootstrap Approach to Constructing Prediction Intervals for Long Memory Time Series**—◆Amjad Ali, University of Peshawar; Xiaofeng Shao, University of Illinois at Urbana-Champaign; Salahuddin Khan, University of Peshawar

12:05 p.m. **Resampling Methods for Queue Inference**—◆Harry Ma, GE Global Research; Thomas Willemain, Rensselaer Polytechnic Institute

603 CC-143B
■ ✪ Censoring and Selection in Regression—Contributed

Section on Risk Analysis

Chair(s): Jeremy R. Porter, Rice University

10:35 a.m. **A Proportional Hazards Regression Model for the Subdistribution with Right-Censored and Left-Truncated Competing Risks Data**—◆Xu Zhang, Georgia State University; Mei-Jie Zhang, Medical College of Wisconsin; Jason Fine, The University of North Carolina at Chapel Hill

10:50 a.m. **Quantile Regression with Left-Truncated Semi-Competing Risks Data**—◆Ruosha Li, Emory University; Limin Peng, Emory University

11:05 a.m. **Variable Selection in Partial Linear Cox Model**—◆Pang Du, Virginia Polytechnic Institute and State University; Shuangge Ma, Yale University; Hua Liang, University of Rochester

11:20 a.m. **Statistical Estimation for Generalized Exponential Distribution Under Progressive Type I Interval Censoring**—◆Din Chen, South Dakota State University; Yuhlong Lio, University of South Dakota

11:35 a.m. **Empirical Variance Estimation of the Buckley-James Estimator Under Continuous Assumptions**—◆Yishi Wang, The University of North Carolina at Wilmington; Cuixian Chen, The University of North Carolina at Wilmington

11:50 a.m. **Analysis of Interval-Censored Data with Informative Cluster Size**—◆Xinyan Zhang, University of Missouri; Jianguo Sun, University of Missouri

12:05 p.m. **Floor Discussion**

604 CC-157
Reliability and Other Topics—Contributed

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

Chair(s): Kevin S. Robinson, Millersville University of Pennsylvania

10:35 a.m. **Waiting Time in the Sequential Occupancy Problem**—◆Tamar Gadrich, Ort Braude College; Rachel Ravid, Ort Braude College

10:50 a.m. **Functional Regression Using the 'fda' Package in R**—◆Spencer Graves, Productive Systems Engineering; Giles Hooker, Cornell University ; James O. Ramsay, McGill University

11:05 a.m. **The Beta-Exponential Distribution: An Alternative to the Weibull Distribution**—◆Jacinth A. Maynard, Lok Haven University of Pennsylvania

11:20 a.m. **Bootstrap Integration of Multiple Measurement Sources with Applications to Inference on Extremes**—◆Russell L. Zaretzki, The University of Tennessee

11:35 a.m. **Optimal Goodness-of-Fit Tests for Recurrent Event Data**—◆Russell Stocker, Mississippi State University

11:50 a.m. **Floor Discussion**

605 CC-203B
Dimension Reduction—Contributed

Section on Nonparametric Statistics

Chair(s): Michael Longnecker, Texas A&M University

10:35 a.m. **Sufficient Dimension Reduction for Proportional Censorship Model with Covariates**—◆Meggie Wen, Missouri University of Science and Technology

10:50 a.m. **Optimal Dimension Reduction Based on Central Solution Space**—◆Yuexiao Dong, Penn State University; Bing Li, Penn State University

11:05 a.m. **Asymptotic Expansions for Dimension Reduction Methods with Application to Bias Correction**—◆Zhou Yu, East China Normal University; Bing Li, Penn State University; Li-Xing Zhu, Hong Kong Baptist University

11:20 a.m. **Sufficient Dimension Reduction for the Conditional Mean with a Categorical Predictor in Multivariate Regression**—◆Jae Keun Yoo, University of Louisville

11:35 a.m. **Sliced Inverse Regression in a Hilbert Space via Basis Approch**—◆Haobo Ren, sanofi-aventis; Cathy Zhao, Bristol-Myers Squibb Company

11:50 a.m. **Over-Fitting Effects of Trimming and Statistical Applications**—◆Eustasio del Barrio, Universidad de Valladolid

12:05 p.m. **Floor Discussion**

606 CC-160
ROC Analysis—Contributed

Biometrics Section

Chair(s): Chengcheng Liu, Merck & Co., Inc.

10:35 a.m. **Semiparametric Inference for the Partial Area Under the ROC Curve**—◆Gengsheng Qin, Georgia State University

10:50 a.m. **Using Relative Utility Curves to Evaluate Risk Prediction**—◆Stuart Baker, National Cancer Institute

11:05 a.m. **Nonparametric Estimation of Time-Dependent Predictive Accuracy Curve**—◆Paramita Saha, University of Washington; Patrick Heagerty, University of Washington

11:20 a.m. **Nonparametric Empirical Likelihood Estimation of AUC and Partial AUC for Test-Result-Dependent Sampling Study**—◆Ma Junling, Duke University Medical Center; Wang Xiaofei, Duke University Medical Center

11:35 a.m. **Nonparametric Comparison of Multiple ROCs Using Polar Coordinates**—◆Michael E. Schuckers, St. Lawrence University

11:50 a.m. **Time-Dependent ROC Methods and Concordance Measures**—◆Norberto Pantoja-Galicia, Harvard School of Public Health; Rebecca Betensky, Harvard School of Public Health

12:05 p.m. **A Class of Generalized Nonparametric ROC Summary Statistics for Clustered Diagnostic Marker Data**—◆Liansheng Tang, George Mason University

607 CC-153
FDR and Classification—Contributed

Biometrics Section

Chair(s): Renee Moore, University of Pennsylvania

10:35 a.m. **Adjusting for Matched Samples in Discriminant Analysis of Schizophrenia Biomarkers for Post-Mortem Tissue Studies**—◆Josephine Asafu-Adjei, University of Pittsburgh; Allan Sampson, University of Pittsburgh; Robert Sweet, University of Pittsburgh

10:50 a.m. **Novel Estimators of the Number of True**—Yi-Ting Hwang, National Taipei University; Shu-Yu Liao, National Taipei University; ◆Hsun-Chih Kuo, National Chengchi University

11:05 a.m. **Optimal Nearest Shrunken Centroids Method for High-Dimensional Classification**—◆Tiejun Tong, University of Colorado; Herbert Pang, Duke University

11:20 a.m. **A General Framework for Multiple Testing Dependence**—◆Jeffrey Leek, Johns Hopkins University; John Storey, Princeton University

11:35 a.m. **Estimating the Cumulative Risk of a False-Positive Test in a Repeated Screening Program with Multiple Modalities**—◆Jian-Lun Xu, National Cancer Institute; Richard M. Fagerstrom, National Cancer Institute; Philip C. Prorok, National Cancer Institute; Barnett S. Kramer, Office of Disease Prevention

11:50 a.m. **Classification Analysis with a Twist: Identification of the Writership of Handwritten Documents by Pairwise Application of Linear Discriminant Analysis**—◆John J. Miller, George Mason University; Amanda B. Hepler, George Mason University; Donald T. Gantz, George Mason University; Daniel B. Carr, George Mason University; Clifton Sutton, George Mason University; Robert Patterson, George Mason University

12:05 p.m. **Pairwise Likelihood for Binary Data**—◆Zi Jin, University of Toronto; Nancy Reid, University of Toronto

608 CC-208B

Miscellaneous Methodology III—Contributed

IMS

Chair(s): Anindya Bhadra, University of Michigan

10:35 a.m. **Change-Point Analysis for Stochastic Systems with Poisson Inputs**—◆Stergios B. Fotopoulos, Washington State University

10:50 a.m. **Testing for a Changepoint in the Linear Hazard Rate Under Staggered Entry and Type I Censoring**—◆Matthew Williams, Virginia Polytechnic Institute and State University; Dong-Yun Kim, Virginia Polytechnic Institute and State University

11:05 a.m. **An Asymptotic Test for a Changepoint in Densities of a General Class**—◆Dong-Yun Kim, Virginia Polytechnic Institute and State University

11:20 a.m. **On a Unified Approach for Phase I Shewhart-Type Control Charts for Location**—◆Schalk W. Human, University of Pretoria; Subhabrata Chakraborti, The University of Alabama

11:35 a.m. **Decentralized Sequential Hypothesis Testing**—◆Georgios Fellouris, Columbia University; George V. Moustakides, University of Patras

11:50 a.m. **Statistical Fundamentals for Rebuilding the Methodology of Piecewise Analysis**—◆Ligong Chen, Uniformed Services University of the Health Sciences; Yongmei Chen, Uniformed Services University of the Health Science

12:05 p.m. **Assessing the Influence of Individual Treatment Effect Variability in Multiple Time Points Trials for Binary Response**—◆Edwin A. Ndum, Kansas State University; Gary L. Gadbury, Kansas State University

609 CC-148

Missing Data and Microarray Analysis—Contributed

Biometrics Section

Chair(s): Yichuan Zhao, Georgia State University

10:35 a.m. **Inferring the True Correlation in Cross-Species Microarray Data**—George C. Tseng, University of Pittsburgh; ◆Xingbin Wang, University of Pittsburgh; Sunghee Oh, University of Pittsburgh

10:50 a.m. **Modeling Cancer-Related Epigenetic Changes in DNA Tandem Repeats**—◆Michelle Lacey, Tulane University

11:05 a.m. **Effects of Missing Value Imputation on Down-Stream Analyses in the Microarray Data**—◆Sunghee Oh, University of Pittsburgh; George C. Tseng, University of Pittsburgh; Guy N. Brock, University of Louisville

11:20 a.m. **A Semiparametric Unified Approach for the Detection of Differential Gene Expression in Microarrays**—◆Jan R. De Neve, Ghent University; Olivier Thas, Ghent University; Lieven Clement, Ghent University; Jean-Pierre Ottoy, Ghent University

11:35 a.m. **Multiple Imputation for Microarray Missing Data**—◆Hui Xie, Tulane University; Leann Myers, Tulane University; Steven Smith, Pennington Biomedical Research Center

11:50 a.m. **MDQC: A New Quality Assessment Method for Microarrays**—◆Gabriela Cohen Freue, The University of British Columbia; Zsuzsanna Hollander, The James Hogg iCAPTURE Centre for Cardiovascular & Pulmonary Research; Raymond Ng, The University of British Columbia; Robert Balshaw, The University of British Columbia

12:05 p.m. **Inverse Probability of Censoring Weighting and Regularized Estimation in AFT Models**—◆Mai Zhou, University of Kentucky; Liping Huang, University of Kentucky

610 CC-158B

Default, Multivariate Risk, and Copula Models—Contributed

Business and Economic Statistics Section

Chair(s): Zhaogang Song, Cornell University

10:35 a.m. **Building Default Models for Subprime Mortgages: Assessing the Risk in a Rapidly Changing Environment**—◆Vladimir Ladyzhets, Babson Capital Management LLC

10:50 a.m. **The Time of Recovery and Ruin Probabilities in Risk Model**—◆Min Deng, Maryville University of St. Louis

11:05 a.m. **Contagion, Confusion, and the Panic of 2008**—◆David J. Hamrick, Boston University

11:20 a.m. **Modeling Currency Exchange Rate Dependency Between Taiwan and Japan**—◆Yi-Kuan Jong, St. John's University

11:35 a.m. **Tracking Problems, Hedge Fund Replication, and Alternative Beta**—◆Guillaume Weisang, Bentley University; Thierry Roncalli, University of Evry

11:50 a.m. **Border Region Municipal Water Consumption Forecast Accuracy**—◆Angel L. Molina, Jr., The University of Texas at El Paso; Thomas M. Fullerton, Jr., The University of Texas at El Paso

12:05 p.m. **Multivariate Mixture Transition Distribution Model for Financial Transaction Data**—◆Musen Wen, University of California, Riverside; Keh-Shin Lii, University of California, Riverside

611 CC-205

■ Bayesian Modeling with Applications to Climate, Air Pollution, the Environment, and Flu Dynamics—Contributed

Section on Bayesian Statistical Science, Section on Statistics and the Environment

Chair(s): Sudipto Banerjee, The University of Minnesota

10:35 a.m. **Using 2D Wavelets to Blend Grid- and Point-Based Air Quality Model Output with Ambient Monitor Observations: Resolving the Intra-Urban Air Pollution Field**—◆James L. Crooks, U.S. Environmental Protection Agency; Vlad Isakov, U.S. Environmental Protection Agency

10:50 a.m. **Bayesian Modeling of Wind Fields Using Surface Data Collected Over Land**—◆Margaret Short, University of Alaska Fairbanks; Javier Fochesatto, Geophysical Institute Atmospheric Science Group

11:05 a.m. **Data Augmentation Methods for Bayesian Modeling of Spatially Dependent Categorical Data**—◆Candace Berrett, The Ohio State University; Catherine Calder, The Ohio State University

11:20 a.m. **The Variational Bayes Method for an Inverse Problem with Application to the Palaeoclimate Reconstruction**—◆Richa Vatsa, Trinity College Dublin

11:35 a.m. **Estimation of a Population Size Through Capture-Mark-Recapture Method: A Comparison of Various Point and Interval Estimators**—◆Xing Yang, University of Louisiana-Lafayette

11:50 a.m. **Bayesian Sensitivity Analysis**—◆Yeonok Lee, The University of Rochester; Hulin Wu, University of Rochester

12:05 p.m. **Assessing and Accounting for Large-Scale Climate Projection Uncertainty in Regional Climate-Change Impact Studies**—◆Gardar Johannesson, Lawrence Livermore National Laboratory

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