

## WEDNESDAY, AUGUST 1

**Tours****TR10 Antelope Island and the Great Salt Lake**

8:00 a.m.–12:00 p.m. CC-South Foyer (200 South Street)

**TR11 Kennecott Copper Mine and Great Salt Lake**

8:00 a.m.–12:00 p.m. CC-South Foyer (200 South Street)

**TR12 Utah Olympic Park, Park City Main Street**

1:00 p.m.–5:00 p.m. CC-South Foyer (200 South Street)

**Committee/Business Meetings  
& Other Activities**

7:00 a.m.–8:30 a.m.

GA-Vienna

**Committee of Representatives to AAAS Meeting***Chair(s): Michael P. Cohen, Statistical Consultant*

7:00 a.m.–8:30 a.m.

Off Property

**Friends and Alumni of Brigham Young University Open House/Breakfast***Organizer(s): Del Scott, Brigham Young University*

7:00 a.m.–8:30 a.m.

GA-Milano

**Caucus for Women in Statistics Breakfast Roundtable Discussions***Organizer(s): Tena Katsaounis, The Ohio State University*

7:00 a.m.–8:30 a.m.

GA-Ambassador

**Committee on Career Development Meeting (closed)***Chair(s): Janice Lent, Energy Information Administration*

7:00 a.m.–8:30 a.m.

GA-Bagatelle

**Committee on Privacy and Confidentiality Meeting***Chair(s): Alvan Zarate, National Center for Health Statistics*

7:00 a.m.–8:30 a.m.

GA-Embassy

**Committee on Archives and Historic Materials Meeting (closed)***Chair(s): Carol J. Lancaster, Medical University of South Carolina*

7:00 a.m.–6:00 p.m.

CC-252 A, CC-252 B

**Speaker Work Rooms**

7:00 a.m.–9:00 p.m.

CC-South Foyer

**Cyber Center**

7:30 a.m.–4:30 p.m.

CC-South Foyer

**JSM Main Registration and ASA Membership/Special Assistance Desk**

8:00 a.m.–9:00 a.m.

GA-Sussex

**Noether Award Committee Business Meeting (closed)***Chair(s): James Higgins, Kansas State University*

8:00 a.m.–10:00 a.m.

GA-Fontainebleau

**Section on Statistical Education Executive Committee Meeting (closed)***Chair(s): Jessica Utts, University of California, Davis*

8:00 a.m.–2:00 p.m.

CC-Exhibit Hall D

**Exhibitor Lounge**

8:00 a.m.–4:30 p.m.

CC-Exhibit Hall C

**Career Placement Service**

8:00 a.m.–6:00 p.m.

CC-Main Lobby, Level 2

**Salt Lake City Visitors Information Center**

8:30 a.m.–10:30 a.m.

CC-Kenneth Knight Board Room

**Committee on Outreach Education Meeting (closed)***Chair(s): Wendy Martinez, Office of Naval Research*

9:00 a.m.–11:00 a.m.

GA-Audubon

**Council of Sections Publication and Newsletter Editors Meeting (closed)**

9:00 a.m.–2:00 p.m.

CC-Exhibit Hall D

**ASA Booth #101**

9:00 a.m.–2:00 p.m.

CC-Exhibit Hall D

**EXPO 2007**

# General Program Schedule

⦿ Themed Session

● Applied Session

❖ Presenter

CC-Salt Palace Convention Center

GA-The Grand America Hotel

9:00 a.m.–5:00 p.m.

## ASA Marketplace

CC-South Foyer

10:30 a.m.–11:30 a.m.

## ASA Special Interest Group on Volunteerism Meeting (closed)

*Chair(s): Robert Starbuck, Wyeth*

GA-Vienna

10:30 a.m.–12:30 p.m.

## Advisory Committee on Continuing Education Excellence in CE Meeting (closed)

*Chair(s): Katherine Halvorsen, Smith College*

GA-Sussex

11:30 a.m.–1:30 p.m.

## Committee on Meetings (closed)

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

CC-Kenneth Knight Board Room

12:00 p.m.–2:00 p.m.

## Committee on International Relations in Statistics Meeting (closed)

*Chair(s): Demissie Alemayehu, Pfizer Inc.*

GA-Ambassador

12:00 p.m.–2:30 p.m.

## ENAR 2008 Spring Meeting Planning Committee Luncheon (closed, by invitation only)

*Organizer(s): Kathy Hoskins, ENAR*

GA-Embassy

12:30 p.m.–2:00 p.m.

## Noether Award Committee Luncheon (closed)

*Chair(s): James Higgins, Kansas State University*

GA-Bagatelle

12:30 p.m.–2:00 p.m.

## Writing Workshop Lunch (closed)

*Chair(s): Nell Sedransk, National Institute of Statistical Sciences; Keith Crank, American Statistical Association*

GA-Fontainebleau

2:00 p.m.–8:00 p.m.

## Exhibitor Move Out

CC-Exhibit Hall D

5:00 p.m.–6:30 p.m.

## Section on Survey Research Methods Business Meeting

*Chair(s): William D. Kalsbeek, The University of North Carolina at Chapel Hill*

CC-151 AB

5:30 p.m.–8:30 p.m.

## IMS Council Meeting II (closed)

*Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics*

GA-Audubon

6:00 p.m.–7:00 p.m.

## International Chinese Statistical Association Annual Members Meeting

*Organizer(s): Ming-Hui Chen, University of Connecticut*

CC-155 A

6:00 p.m.–7:30 p.m.

## JSM Program Committee/ACCE/COM/Local Area Committee Reception (closed, by invitation only)

*Chair(s): William B. Smith, American Statistical Association*

GA-Room 2473

6:00 p.m.–7:30 p.m.

## Section on Statistical Education Business Meeting

*Chair(s): Jessica Utts, University of California, Davis*

CC-151 DE

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## Continuing Education (Fee Events)

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### CE\_29T

#### Introduction to CART: Data Mining with Decision Trees

8:00 a.m.–9:45 a.m.

ASA

CC-151 AB

*Instructor(s): Mikhail Golovnya, Salford Systems*

### CE\_30T

#### New Features for Clustered and Survey Data Analysis in SUDAAN Release 9.0.3

8:00 a.m.–9:45 a.m.

ASA

CC-151 C

*Instructor(s): Angela Pitts, RTI International; G. Gordon Brown, RTI International*

### CE\_31T

#### Modern Regression Analysis in SAS Software

8:00 a.m.–9:45 a.m.

ASA

CC-151 G

*Instructor(s): Robert Cohen, SAS Institute Inc.*

### CE\_32T

#### Power Analysis: A Simple and Effective Approach

8:00 a.m.–9:45 a.m.

ASA

CC-151 DE

*Instructor(s): Hannah Rothstein; Michael Borenstein*

**CE\_33T****East® 5: A Comprehensive Package for Adaptive and Group Sequential Design, Interim Monitoring, and Simulation**

8:00 a.m.–9:45 a.m.

CC-151 F

ASA

*Instructor(s): Cyrus Mehta, Cytel Inc.***CE\_34T****Introduction to MARS: Predictive Modeling with Nonlinear Automated Regression Tools**

10:00 a.m.–11:45 a.m.

CC-151 AB

ASA

*Instructor(s): Mikhail Golovnya, Salford Systems***CE\_35T****From Software to Solutions in Statistics and Risk Analysis**

10:00 a.m.–11:45 a.m.

CC-151 C

ASA

*Instructor(s): Shawn Harahush, Palisade Corporation***CE\_36T****Design and Analysis of Split-Plot Experiments Using the SAS ADX Interface**

10:00 a.m.–11:45 a.m.

CC-151 G

ASA

*Instructor(s): Sharad Prabhu, SAS Institute Inc.; José G. Ramírez, W.L. Gore & Associates, Inc.***CE\_37T****Meta-Analysis: Concepts and Applications**

10:00 a.m.–11:45 a.m.

CC-151 DE

ASA

*Instructor(s): Michael Borenstein; Hannah Rothstein***CE\_38T****Generalized Linear Modeling in SPSS**

10:00 a.m.–11:45 a.m.

CC-151 F

ASA

*Instructor(s): Weicai Zhong, SPSS Inc.***CE\_39T****Advances in Data Mining: Jerome Friedman's TreeNet/MART and Leo Breiman's Random Forests**

1:00 p.m.–2:45 p.m.

CC-151 AB

ASA

*Instructor(s): Mikhail Golovnya, Salford Systems***CE\_40T****Quantile Regression Using the SAS QUANTREG Procedure**

1:00 p.m.–2:45 p.m.

CC-151 G

ASA

*Instructor(s): Colin Chen, SAS Institute Inc.***Roundtables with Coffee 7:00 a.m.–8:15 a.m.****347****CC-Ballroom D****Section on Risk Analysis Roundtable with Coffee (fee event)**

Section on Risk Analysis

*Organizer(s): Anirban Basu, The University of Chicago***WL01** Assessing Risks in the Environment—❖Edward Boone, Virginia Commonwealth University**348****CC-Ballroom D****Section on Statistical Education Roundtable with Coffee (fee event)**

Section on Statistical Education

*Organizer(s): Jacqueline Miller, The Ohio State University***WL02** Study Design in Statistics Education—❖Felicity B. Enders, Mayo Clinic**349****CC-Ballroom D****Section on Statistical Graphics Roundtable with Coffee (fee event)**

Section on Statistical Graphics

*Organizer(s): David Hunter, The Pennsylvania State University***WL03** Introducing Multivariate Statistics Through Graphics and Geometry—❖Daniel Kaplan, Macalester College**350****CC-Ballroom D****Section on Statistics and the Environment Roundtables with Coffee (fee event)**

Section on Statistics and the Environment

*Organizer(s): Andrew B. Lawson, University of South Carolina***WL04** Multivariate Environmental Health Surveillance—❖Andrew B. Lawson, University of South Carolina  
**WL05** Bayesian Disease-Mapping Methods and Applications: Past, Present, and Future—❖Ying MacNab, University of British Columbia

## 351 CC-Ballroom D Section on Statistics in Epidemiology Roundtable with Coffee (fee event)

Section on Statistics in Epidemiology

Organizer(s): William E. Barlow, Cancer Research and Biostatistics

- WL06 Methods for Missing Data in Survey Response—  
❖ Xiaoming Sheng, University of Utah

## 352 CC-Ballroom D Section on Teaching Statistics in the Health Sciences Roundtables with Coffee (fee event)

Section on Teaching Statistics in the Health Sciences

Organizer(s): Jodi Lapidus, Oregon Health & Science University

- WL07 Biostatistics Curriculum for National Institutes of  
Health (NIH) Training Grants: Training, Expectation, and  
Outcome—❖ Madhu Mazumdar, Cornell University
- WL08 Balancing Teaching and Research: Statistics in the  
Health Sciences—❖ Novie Younger, The University of  
the West Indies at Mona, Jamaica

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

## 353 CC-Ballroom B Introductory Overview Lecture 4: How Scientists Can Work Effectively with the Media—Other

ASA, ENAR, IMS, WNAR, SSC

Organizer(s): G. David Williamson, Centers for Disease Control and  
Prevention

Chair(s): Tim Hesterberg, Insightful Corporation

- 8:35 a.m. How Scientists Can Work Effectively with the Media—  
❖ Richard Hayes, Union of Concern Scientists
- 10:05 a.m. Floor Discussion

## Invited Sessions 8:30 a.m.–10:20 a.m.

## 354 CC-355 E ⊕ Boosting and Related Methods for Machine Learning—Invited

IMS, Section on Physical and Engineering Sciences

Organizer(s): Peter Bühlmann, ETH Zurich

Chair(s): Ji Zhu, University of Michigan

- 8:35 a.m. Fast Boosting Algorithms for Regularized Linear  
Regression and Classification—❖ Jerome H.  
Friedman, Stanford University
- 9:05 a.m. mboost: A Package for Model-Based  
Boosting—❖ Torsten Hothorn, Institut fuer  
Medizininformatik
- 9:35 a.m. Greedy Methods, Weak Learning, and L1  
Optimization—❖ Tong Zhang, Yahoo! Inc.
- 10:05 a.m. Floor Discussion

## 355 CC-155 D ● ⊕ Robust Statistical Machine Learning—Invited

Section on Statisticians in Defense and National Security, Section on Sta-  
tistical Computing, Section on Physical and Engineering Sciences

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

Chair(s): Howard D. Bondell, North Carolina State University

- 8:35 a.m. SigClust: Statistical Significance of Clustering—  
❖ J. Stephen Marron, The University of North  
Carolina at Chapel Hill
- 9:00 a.m. A Robust Hybrid of Lasso and Ridge Regression—  
❖ Art Owen, Stanford University
- 9:25 a.m. Consistent Multicategory Support Vector  
Machines—Yufeng Liu, The University of North  
Carolina at Chapel Hill; ❖ Ming Yuan, Georgia  
Institute of Technology
- 9:50 a.m. Estimating Spatial Covariance Using Penalized  
Likelihood with Weighted L1 Penalty—  
❖ Zhengyuan Zhu, The University of North  
Carolina at Chapel Hill; Yufeng Liu, The  
University of North Carolina at Chapel Hill
- 10:15 a.m. Floor Discussion

## 356 CC-250 EF ● ⊕ Exploratory Centers for Cheminformatics Research from a Statistician's Point of View— Invited

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

Organizer(s): Jacqueline M. Hughes-Oliver, North Carolina State  
University

Chair(s): S. Stanley Young, National Institute of Statistical Sciences

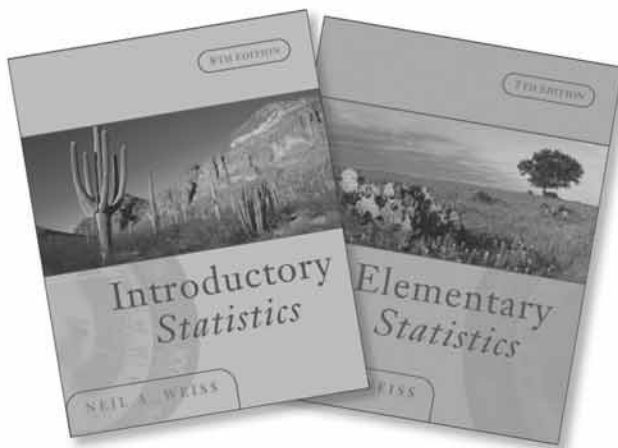
- 8:35 a.m. Multiple Mechanisms from a High-Throughput  
Screen—❖ Douglas M. Hawkins, The University  
of Minnesota; Lexin Li, North Carolina State  
University

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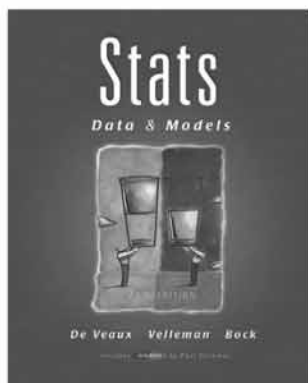
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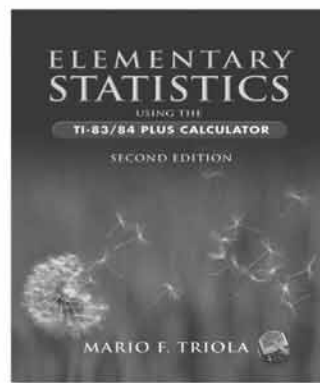
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- 9:05 a.m. **Projects in the Michigan Alliance for Cheminformatic Research**—❖ Kerby Shedden, University of Michigan
- 9:35 a.m. **Efficient Cross-Validation for Tuning and Ranking Cheminformatics Models**—❖ William J. Welch, University of British Columbia; Hui Shen, University of British Columbia
- 10:05 a.m. **Floor Discussion**

## 357 CC-250 C

### ● Application of Hierarchical Models To Study Genetic and Epidemiologic Risk Factors—Invited

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

*Organizer(s): Marinela Capanu, Memorial Sloan-Kettering Cancer Center*

*Chair(s): Colin B. Begg, Memorial Sloan-Kettering Cancer Center*

- 8:35 a.m. **The Use of Hierarchical Models for Estimating Relative Risks of Individual Genetic Variants**—❖ Marinela Capanu, Memorial Sloan-Kettering Cancer Center; Colin B. Begg, Memorial Sloan-Kettering Cancer Center
- 9:00 a.m. **Hierarchical Modeling and Stochastic Variable Selection in the Analysis of Multiple SNPs in Genetic Association Studies**—❖ David Conti, University of Southern California; Juan P. Lewinger, University of Southern California
- 9:25 a.m. **Multilevel Approaches to Genotype-Phenotype Association: VUS Classification and SNP Blocking**—❖ Giovanni Parmigiani, The Johns Hopkins University; Edwin Iversen, Duke University; Xi Zhou, Cornell University; Daniele Fallin, The Johns Hopkins University; Ingo Ruczinski, The Johns Hopkins University; Cristian Pattaro, Eurac
- 9:50 a.m. **Hierarchical Models for Biases in Observational Studies**—❖ Sander Greenland, University of California, Los Angeles
- 10:15 a.m. **Floor Discussion**

## 358 CC-355 B

### ⬢ Medallion Lecture IV—Invited

IMS, General Methodology

*Organizer(s): Bernard W. Silverman, St. Peter's College*

*Chair(s): Mark Low, University of Pennsylvania*

- 8:35 a.m. **Quantile Regression Under Censorship**—❖ Xuming He, University of Illinois
- 10:00 a.m. **Floor Discussion**

## 359 CC-255 E

### ● ⬢ Statistical Methodology for the Analysis of Sleep Studies—Invited

Biometrics Section, WNAR

*Organizer(s): Brian S. Caffo, Johns Hopkins Bloomberg School of Public Health*

*Chair(s): Karen Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health*

- 8:35 a.m. **Generalized Linear Mixed Model Analysis of Multistate Sleep Transition Data: The Sleep Heart Health Study**—❖ Brian S. Caffo, Johns Hopkins Bloomberg School of Public Health; Bruce Swihart, The Johns Hopkins University; Naresh Punjabi, Johns Hopkins Bayview Medical Center
- 9:00 a.m. **Methods for Signal Extraction from EEG Time Series with Application to Large Studies of Sleep**—❖ Chongzhi Di, The Johns Hopkins University; Ciprian M. Crainiceanu, The Johns Hopkins University
- 9:25 a.m. **Semiparametric Event History Models for Analyzing Human Sleep Data**—❖ Thomas Kneib, Ludwig-Maximilians-Universität München; Ludwig Fahrmeir, University of Munich; Alexander Yassouridis, Max-Planck-Institute for Psychiatry
- 9:50 a.m. **Disc: David Ruppert, Cornell University**
- 10:10 a.m. **Floor Discussion**

## 360 CC-150 A-C

### ● Recent Developments in Macroeconometrics—Invited

Business and Economics Statistics Section

*Organizer(s): Atsushi Inoue, University of British Columbia*

*Chair(s): Atsushi Inoue, University of British Columbia*

- 8:35 a.m. **Not All Oil Price Shocks Are Alike: Disentangling Demand and Supply Shocks in the Crude Oil Market**—❖ Lutz Kilian, University of Michigan
- 9:00 a.m. **Optimal Impulse Response Function Matching Estimation**—❖ Barbara Rossi, Duke University; Atsushi Inoue, University of British Columbia; Alastair R. Hall, University of Manchester; James Nason, Federal Reserve Bank of Atlanta
- 9:25 a.m. **Structural Vector Autoregressions: Theory and Application**—❖ Dan Waggoner, Federal Reserve Bank of Atlanta; Tao Zha, Federal Reserve Bank of Atlanta



- 9:50 a.m. **Projection Minimum Distance: An Estimator for Dynamic Models**—❖ Oscar Jorda, University of California, Davis
- 10:15 a.m. **Floor Discussion**

**361****CC-255 C**

### ● ⊛ Bayesian Modeling of Incomplete Heterogeneous Data—Invited

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

*Organizer(s): W. John Boscardin, University of California, Los Angeles*

*Chair(s): Xiao Zhang, The University of Alabama at Birmingham*

- 8:35 a.m. **Flexible Modeling of the Mean and Covariance Structure for Heterogeneous Incomplete Multiple Longitudinal Markers**—❖ W. John Boscardin, University of California, Los Angeles; Hector Lemus, University of California, Los Angeles
- 9:00 a.m. **Calculating the Effect of a Randomized Intervention from Panel Data Subject to Noncompliance**—❖ Siddhartha Chib, Washington University in St. Louis; Liana Jacobi, The University of Melbourne
- 9:25 a.m. **Temporal Configuration Analysis: Hidden Markov Models for Heterogeneous Multivariate Longitudinal Data**—❖ Steven L. Scott, University of Southern California
- 9:50 a.m. **Bayesian Modeling of Longitudinal Processes with Dropout and Noncompliance**—❖ Michael Daniels, University of Florida; Xuefeng Liu, Wayne State University
- 10:15 a.m. **Floor Discussion**

**362****CC-260**

### ⊛ Variable Selection and Related Statistical Inference—Invited

Section on Teaching Statistics in the Health Sciences, Biometrics Section, General Methodology

*Organizer(s): Hua Liang, University of Rochester*

*Chair(s): Steven Wang, York University*

- 8:35 a.m. **Variable Selection in Semiparametric Regression Modeling**—❖ Runze Li, The Pennsylvania State University; Hua Liang, University of Rochester
- 9:00 a.m. **Selections**—❖ Chih-Ling Tsai, University of California, Davis
- 9:25 a.m. **Overall AIC Selection Strategy for Linear Mixed-Effects Models**—❖ Hua Liang, University of Rochester; Guohua Zou, Chinese Academy of Sciences

- 9:50 a.m. **Conditional AIC for Nonlinear Mixed Effects Models**—❖ Florin Vaida, University of California, San Diego
- 10:15 a.m. **Floor Discussion**

## Invited Panels 8:30 a.m.–10:20 a.m.

**363****CC-251 E**

### ⊛ New Policies To Facilitate the Tenure Process for Women in Sciences—Invited

Committee on Career Development, Caucus for Women in Statistics

*Organizer(s): Tena Katsaounis, The Ohio State University*

*Chair(s): Anna Nevius, U.S. Food and Drug Administration*

- Panelists:** ❖ Rebecca Doerge, Purdue University  
❖ Regina Liu, Rutgers University  
❖ Mari Palta, University of Wisconsin-Madison  
❖ Nancy Reid, University of Toronto

- 10:15 a.m. **Floor Discussion**

**364****CC-254 A**

### ⊛ Improving the Agriculture Resources Management Survey: Dealing with Complexity in Government Surveys—Invited

Section on Survey Research Methods, Section on Government Statistics

*Organizer(s): Thomas J. Plewes, National Academy of Sciences*

*Chair(s): Thomas J. Plewes, National Academy of Sciences*

- Panelists:** ❖ David Binder, Statistics Canada (Retired)  
❖ Cynthia Clark, Office for National Statistics  
❖ Frederick Conrad, University of Michigan  
❖ Carol C. House, National Agricultural Statistics Service

- 10:15 a.m. **Floor Discussion**

**365****CC-255 B**

### ● Protecting Confidentiality in Public Use Data by Releasing Synthetic Datasets: Experiences with Genuine Applications—Invited

Committee on Privacy and Confidentiality, Section on Bayesian Statistical Science, Section on Survey Research Methods

*Organizer(s): Jerome P. Reiter, Duke University*

*Chair(s): Trivellore E. Raghunathan, University of Michigan*

- Panelists:** ❖ Jerome P. Reiter, Duke University  
❖ John Abowd, Cornell University

- ❖ Simon Woodcock, Simon Fraser University
- ❖ Sam Hawala, U.S. Census Bureau

10:15 a.m. **Floor Discussion**

**366**

**CC-254 C**

## Conflict of Interest Concerns in Medical Statistics—Invited

Committee on Professional Ethics, ENAR, Biometrics Section, Section on Teaching Statistics in the Health Sciences

*Organizer(s): Peter B. Imrey, The Cleveland Clinic*

*Chair(s): Janet Wittes, Statistics Collaborative*

- Panelists:**
- ❖ Peter B. Imrey, The Cleveland Clinic
  - ❖ Saskia le Cessie, Leiden University Medical Centre
  - ❖ Stephen Ruberg, Eli Lilly and Company
  - ❖ Lisa LaVange, The University of North Carolina at Chapel Hill
  - ❖ Susan S. Ellenberg, University of Pennsylvania
  - ❖ Niels Keiding, University of Copenhagen

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

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

**367**

**CC-150 G**

## ● ❖ Bayesian Applications in Astronomy and Physics—Topic-Contributed

Section on Bayesian Statistical Science, ENAR

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

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

- 8:35 a.m. **A Dempster-Shafer Bayesian Solution to the Banff A1 Challenge**—❖Paul Edlefsen, Harvard University
- 8:55 a.m. **An Exploratory Statistical Study of the Measured Motion of the Guide Star Used in a New Test of Einstein's Universe**—❖Jingchen Liu, Harvard University; Xiao-li Meng, Harvard University; Michael Ratner, Harvard-Smithsonian Center for Astrophysics; Irwin Shapiro, Harvard-Smithsonian Center for Astrophysics
- 9:15 a.m. **Upper Limits for Source Detection in the Three-Poisson Model**—❖Paul Baines, Harvard University
- 9:35 a.m. **A Statistical Approach to Stellar Archaeology**—❖Hyunsook Lee, Harvard-Smithsonian Center

for Astrophysics; Vinay L. Kashyap, Harvard-Smithsonian Center for Astrophysics; Andreas Zezas, Harvard-Smithsonian Center for Astrophysics

- 9:55 a.m. **Coherent Bayesian Inference on Compact Binary Inspirals Using a Network of Interferometric Gravitational Wave Detectors**—❖Christian Röver, The University of Auckland; Renate Meyer, The University of Auckland; Nelson Christensen, Carleton College

10:15 a.m. **Floor Discussion**

**368**

**CC-155 C**

## ● ❖ Keepers of the Fire—Topic-Contributed

Social Statistics Section

*Organizer(s): Olivia Blum, Israeli Central Bureau of Statistics*

*Chair(s): Virginia A. de Wolf, Consultant*

- 8:35 a.m. **Institutional Memory and Information Management**—❖Paul Johannis, Statistics Canada
- 8:55 a.m. **Transforming Statistical Knowledge into Institutional Memory**—❖Olivia Blum, Israeli Central Bureau of Statistics
- 9:15 a.m. **The Planning Database: Decennial Census Data for Historical, Real-Time, and Prospective Analysis**—❖J. Gregory Robinson, U.S. Census Bureau; Carrie L. Johanson, U.S. Census Bureau; Antonio Bruce, U.S. Census Bureau
- 9:35 a.m. **Disc: Fritz Scheuren, NORC at the University of Chicago**
- 9:55 a.m. **Floor Discussion**

**369**

**CC-355 A**

## ● ❖ Application and Issues of Crossover and Matched Design in Clinical Trials—Topic-Contributed

Biopharmaceutical Section, ENAR, WNAR

*Organizer(s): Yi Tsong, U.S. Food and Drug Administration*

*Chair(s): Sharon Murray, GlaxoSmithKline*

- 8:35 a.m. **A Study of Bioequivalence Trials with Missing Data**—❖Yiyun Zhang, The Pennsylvania State University
- 8:55 a.m. **Crossover Designs Based on Type I Orthogonal Arrays for a Self and Simple Mixed Carryover Effects Model with Correlated Errors**—❖Samad Hedayat, University of Illinois at Chicago; Zhiwu Yan, University of Illinois at Chicago



- 9:15 a.m. **Uniformly Balanced Repeated Measurements Designs in the Presence of Subject Dropout**—❖ Dibyen Majumdar, University of Illinois at Chicago
- 9:35 a.m. **A Monte Carlo Study for the Methods Used for Assessing Treatment Differences with Possible Carryover Effect in Crossover Designed Studies**—❖ Ling Chen, U.S. Food and Drug Administration; Ferrin D. Harrison, U.S. Food and Drug Administration
- 9:55 a.m. **Sample Size Re-estimation for Noninferior Study of Matched Data**—❖ Yi Tsong, U.S. Food and Drug Administration; Wu Yu-te, U.S. Food and Drug Administration
- 10:15 a.m. **Floor Discussion**

370

CC-355 C

### ● ⊛ Experimental Design and Analysis of Drug Combinations—Topic-Contributed

Biopharmaceutical Section, ENAR, WNAR

*Organizer(s): Ming T. Tan, University of Maryland Greenebaum Cancer Center**Chair(s): J. Jack Lee, The University of Texas M. D. Anderson Cancer Center*

8:35 a.m. **A Hierarchical Paradigm for Synergy Assessment Modeling Approaches**—❖ William Greco, Roswell Park Cancer Institute

8:55 a.m. **Nonlinear Blending: An Alternative to Dosewise Additivity, the Interaction Index, and Bliss Independence**—John Peterson, GlaxoSmithKline; ❖ Steven J. Novick, GlaxoSmithKline

9:15 a.m. **Experimental Design and Synergy Analysis for Drug Combination Studies Based on Log-Linear Dose Responses**—❖ Hong-Bin Fang, University of Maryland Greenebaum Cancer Center; Ming T. Tan, University of Maryland Greenebaum Cancer Center

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- 9:35 a.m. **A Semiparametric Response Surface Model for Assessing Drug Interaction**—❖ Maiying Kong, University of Louisville; J. Jack Lee, The University of Texas M. D. Anderson Cancer Center
- 9:55 a.m. Disc: Ming T. Tan, University of Maryland Greenebaum Cancer Center
- 10:15 a.m. **Floor Discussion**

## 371

## CC-255 D

### ● Current Issues in Risk Prediction Modeling—Topic-Contributed

ENAR, Biometrics Section

*Organizer(s): Nancy Cook, Brigham and Women's Hospital*

*Chair(s): Ralph B. D'Agostino, Sr., Boston University*

- 8:35 a.m. **Evaluating the Incremental Impact of a Risk Prediction Marker Using Predictiveness Curves**—❖ Margaret Pepe, Fred Hutchinson Cancer Research Center; Wen Gu, University of Washington; Ying Huang, University of Washington; Ziding Feng, Fred Hutchinson Cancer Research Center
- 8:55 a.m. **C-Statistics and Reclassification in Risk Prediction Models**—❖ Nancy Cook, Brigham and Women's Hospital
- 9:15 a.m. **Updating Clinical Prediction Models: Simple Methods Give Promising Results**—❖ Kristel J.M. Janssen, Julius Center UMC Utrecht; Karel G. Moons, Julius Center UMC Utrecht; Yvonne Vergouwe, Julius Center UMC Utrecht; Diederick E. Grobbee, Julius Center UMC Utrecht
- 9:35 a.m. **Rehabilitation of the Case-Control Design in Prediction Research**—❖ Karel G. Moons, Julius Center UMC Utrecht; Cornelis Biesheuvel, Julius Center UMC Utrecht; Yvonne Vergouwe, Julius Center UMC Utrecht; Ruud Oudega, Julius Center UMC Utrecht; Arno W. Hoes, Julius Center UMC Utrecht; Diederick E. Grobbee, Julius Center UMC Utrecht
- 9:55 a.m. Disc: Michael J. Pencina, Boston University
- 10:15 a.m. **Floor Discussion**

## 372

## CC-251 A

### ❖ Statistics for Nonlinear Dynamics—Topic-Contributed

IMS, Business and Economics Statistics Section

*Organizer(s): Giles Hooker, Cornell University*

*Chair(s): Anand Vidyashankar, Cornell University*

- 8:35 a.m. **Collocation Tempering for Differential Equation Models**—❖ David A. Campbell, Simon Fraser University Surrey
- 8:55 a.m. **Meta-Analysis Based on Summarized Data with Application to Drug-Drug Interaction**—❖ Lang Li, Indiana University
- 9:15 a.m. **Detecting Nonlinear Dynamics in a Psychoacoustics Experiment**—❖ Theodoro Koulis, JSS Medical Research
- 9:35 a.m. **Testing for Missing Dynamical Variables**—❖ Giles Hooker, Cornell University
- 9:55 a.m. **Statistical Data Assimilation for Marine Ecological Prediction**—❖ Michael Dowd, Dalhousie University
- 10:15 a.m. **Floor Discussion**

## 373

## CC-155 F

### ● ❖ Bayesian Statistics in Medical Device Clinical Trials—Topic-Contributed

Section on Bayesian Statistical Science, Biopharmaceutical Section, ENAR

*Organizer(s): Telba Irony, U.S. Food and Drug Administration*

*Chair(s): Jeffrey D. Blume, Brown University*

- 8:35 a.m. **Weighing Evidence and Loss in Clinical Decisionmaking**—❖ Jeng Mah, American Medical Systems
- 8:55 a.m. **Constructing Bayesian Trials in a Type I Error-Controlled Regulatory World: The Good, the Bad, and the Ugly**—❖ Scott Berry, Berry Consultants
- 9:15 a.m. **Bayesian Designs and Therapeutic Medical Device Trials**—❖ Pablo Bonangelino, U.S. Food and Drug Administration
- 9:35 a.m. **Examples from Medical Device Clinical Trials To Illustrate Advantages of the Bayesian Approach**—❖ Teresa Nelson, Technomics Research, LLC
- 9:55 a.m. **Bayesian Sample Size Calculation with Average Length Criterion Using Historical Control Data in Medical Device Trials**—❖ Liang Li, Genzyme Corporation; Ming-Hui Chen, University of Connecticut; Hong Wang, Boston Scientific Corporation
- 10:15 a.m. **Floor Discussion**

374

CC-251 D

### ● ⊛ Statistical Research in the VA Healthcare System—Topic-Contributed

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

*Organizer(s): Roslyn A. Stone, Veterans Affairs Pittsburgh Healthcare System*

*Chair(s): Xiao-Hua (Andrew) Zhou, University of Washington*

- 8:35 a.m. **Determining Sample Sizes for Estimating and Comparing Item Parameters from the Rasch Model**—❖ Linda Young, University of Florida
- 8:55 a.m. **The Impact of Imbalance in Two-level Logistic Models**—❖ Huanyu Chen, University of Pittsburgh; Roslyn A. Stone, Veterans Affairs Pittsburgh Healthcare System
- 9:15 a.m. **A Comparison of Methods To Impute Missing Race in VA Administrative Data**—❖ Maria Mor, CHERP/VA Pittsburgh Healthcare System; Chunrong Cheng, University of Pittsburgh; Bevanne Bean-Mayberry, Veterans Affairs Greater Los Angeles; Gong Tang, University of Pittsburgh; Roslyn A. Stone, Veterans Affairs Pittsburgh Healthcare System
- 9:35 a.m. **Estimating Concordance for a Hazard Scale in the Presence of Time-Varying Data**—❖ Peter Richardson, Baylor College of Medicine
- 9:55 a.m. **Analyzing Health Care Cost Data in the Presence of Heterogeneous Patients: Wouldn't Three Pieces Be Better Than One?**—❖ James F. Burgess, Jr., Boston University; ❖ Kevin L. Sloan, University of Washington
- 10:15 a.m. **Floor Discussion**

375

CC-250 B

### ● ⊛ Risk Measures in Actuarial Science—Topic-Contributed

Section on Nonparametric Statistics, Section on Risk Analysis, Business and Economics Statistics Section

*Organizer(s): Ricardas Zitikis, University of Western Ontario*

*Chair(s): Duncan Murdoch, University of Western Ontario*

- 8:35 a.m. **Risk Measures, Distortion Parameters, and their Empirical Estimation**—❖ Bruce Jones, University of Western Ontario; Ricardas Zitikis, University of Western Ontario
- 8:55 a.m. **Nested L-Statistics and Their Use in Comparing the Riskiness of Portfolios**—❖ Vytautas Brazauskas, University of Wisconsin-Milwaukee; Bruce

Jones, University of Western Ontario; Madan Puri, Indiana University; Ricardas Zitikis, University of Western Ontario

- 9:15 a.m. **Testing Hypotheses About the Equality of Several Risk Measure Values with Applications in Insurance**—❖ Madan Puri, Indiana University
- 9:35 a.m. **Estimating Conditional Tail Expectations with Actuarial Applications in View**—❖ Ricardas Zitikis, University of Western Ontario
- 9:55 a.m. **Floor Discussion**

## Contributed Sessions 8:30 a.m.–10:20 a.m.

376

CC-255 F

### Analysis of Binary Data and Directional Data—Contributed

Biometrics Section

*Chair(s): Tammy Massie, U.S. Food and Drug Administration*

- 8:35 a.m. **Some New Models and Procedures for Directional Data**—❖ Brett Presnell, University of Florida; Pavlina Rumcheva, C-BASS, LLC
- 8:50 a.m. **Analysis of Binary and Continuous Outcomes in Neonatal Clinical Trials with Twin Births**—❖ Michele Shaffer, The Pennsylvania State University; Kristi L. Watterberg, University of New Mexico; Allen Kunselman, The Pennsylvania State University
- 9:05 a.m. **Analysis of Relatively Large Sparse Binary Data**—❖ Ko-Kang Wang, The Australian National University; Susan Wilson, The Australian National University; Alan Welsh, The Australian National University; John Maindonald, The Australian National University
- 9:20 a.m. **Generalized Linear Mixed Models for Binary Outcome Data with a Low Number of Occurrences: Understanding When Estimation Procedures Fail**—❖ Marie-Eve Beauchamp, McGill University; Robert W. Platt, McGill University; James A. Hanley, McGill University
- 9:35 a.m. **Binary Time Series Modeling with Application to Kinetic**—❖ Ying Hung, Georgia Institute of Technology; Chien-Fu Jeff Wu, Georgia Institute of Technology

9:50 a.m. **Regional Spatial Cluster Detection for Repeated Measured Outcomes**—❖ Andrea Cook, Group Health Center for Health Studies; Diane R. Gold, Channing Laboratory, Brigham and Women's Hospital, and Harvard Medical School; Yi Li, Harvard School of Public Health

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

## 377

### ● ❖ Advances in Some Classic Tests of Hypotheses—Contributed

Biometrics Section

*Organizer(s): Gengsheng Qin, Georgia State University*

8:35 a.m. **Likelihood Ratio Tests of Correlated Multivariate Samples**—❖ Erning Li, Texas A&M University; Johan Lim, Texas A&M University

8:50 a.m. **A Comparison of Node-Splitting Rules in Recursive Partitioning Analysis of Multivariate Quantitative Structure Activity Data**—❖ Yujun Wu, University of Medicine and Dentistry of New Jersey; Marc Genton, University of Geneva; Leonard A. Stefanski, North Carolina State University

9:05 a.m. **On Identifying Minimum Efficacious Doses in Combination Drug Trials**—❖ Julia Soualakova, University of Nebraska-Lincoln; Allan Sampson, University of Pittsburgh

9:20 a.m. **Weighted Distance Measures for Metabolomic Data**—❖ Philip Dixon, Iowa State University

9:35 a.m. **A Combined Test for the Equality of Means**—❖ Yvonne Zubovic, Indiana University Purdue University Fort Wayne; Chand Chauhan, Indiana University Purdue University Fort Wayne

9:50 a.m. **Analysis of One-Way Layout of Overdispersed Count Data**—❖ Krishna Saha, Central Connecticut State University

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

## 378

### ● ❖ Bayesian Approaches in Drug Development—Contributed

Biopharmaceutical Section

*Chair(s): Susan Portugal, Wyeth*

8:35 a.m. **A Revisit to Sample Size Computation**—❖ Ruoyong Yang, Pfizer Inc.

8:50 a.m. **Joint Exploration of Haplotype Information and High-Order SNP-Phenotype Associations via Gibbs Sampling**—❖ Jing Zhao, Merck & Co., Inc.

## CC-257

9:05 a.m. **Using the Bayesian Approach for Pharmaceutical Process Optimization**—❖ Aili Cheng, GlaxoSmithKline; John Peterson, GlaxoSmithKline; Younan Chen, GlaxoSmithKline; Gregory Stockdale, GlaxoSmithKline

9:20 a.m. **Bayesian Spines To Infer Population Mean and Tolerance Region from Multivariate Longitudinal Data**—Qianqiu Li, Wyeth; ❖ Yonggang Zhao, Wyeth

9:35 a.m. **Bayesian Hierarchical Models for Detecting Safety Signals in Clinical Trials**—❖ Hong A. Xia, Amgen Inc.; Haijun Ma, Amgen Inc.

9:50 a.m. **Controlled Bayesian Optimal Designs for Dose-Response Studies**—❖ Wei Zhu, State University of New York at Stony Brook; Jiaqiao Hu, State University of New York at Stony Brook; Weng-Kee Wong, University of California, Los Angeles

10:05 a.m. **A Bayesian Approach to Utilizing Prior Data in New Drug Development**—❖ Todd Coffey, Amylin Pharmaceuticals, Inc.; Larry Z. Shen, Amylin Pharmaceuticals, Inc.; Wei Deng, Amylin Pharmaceuticals, Inc.

## 379

### Linear Models in Clinical Trials—Contributed

Biopharmaceutical Section

*Chair(s): Thomas J. Uryniak, AstraZeneca*

8:35 a.m. **Inverse Prediction: A Clinical Application**—❖ Jayawant Mandrekar, Mayo Clinic

8:50 a.m. **An Approach to Obtaining Initial Values for the Covariance Parameters for Repeated Measures Analysis with Unstructured Covariance Model**—❖ Kaifeng Lu, Merck & Co., Inc.

9:05 a.m. **Permutation Test-Based Significance Levels for Repeated Measures**—❖ Katie Spencer, Zimmer, Inc.; Daniel Reyner, Zimmer, Inc.

9:20 a.m. **A Multiplicative Heteroscedasticity-Based Transformation To Reduce Heteroscedasticity in General Linear Models**—❖ Mitchell Rosen, Omnicare Clinical Research

9:35 a.m. **Choosing an Appropriate Variance-Covariance Structure for Small Sample Size Data**—❖ Zhaoling Meng, sanofi-aventis; Xun Chen, sanofi-aventis; Robert Kringle, sanofi-aventis

9:50 a.m. **Modeling Covariance Structure in Unbalanced Longitudinal Data**—❖ Min Chen, Texas A&M University; Jianhua Z. Huang, Texas A&M University

## CC-355 F



10:05 a.m. **Permuted Block Randomization and Balance in Clinical Trials**—❖ John (Joong Hee) Han, Centocor, Inc.; Lee-Lian Kim, Centocor, Inc.

**380**

● **Applications in Statistical Genetics—Contributed**

ENAR, Section on Teaching Statistics in the Health Sciences, Biometrics Section  
Chair(s): Jared Lunceford, Merck & Co., Inc.

8:35 a.m. **Gene-Environment Interaction Test for Dichotomous Traits in Nuclear Families**—  
❖ Thomas Hoffmann, Harvard University; Nan Laird, Harvard University

8:50 a.m. **Oracle and Adaptive Compound Decision Rules for False Discovery Rate Control**—❖ Wenguang Sun, University of Pennsylvania; Tony Cai, University of Pennsylvania

**CC-255 A**

9:05 a.m. **A General Tree-Based Regression Model for Multivariate Outcomes**—❖ Kai Yu, National Institutes of Health; William Wheeler, Information Management Service Inc; Qizhai Li, National Institutes of Health; Jinbo Chen, University of Pennsylvania

9:20 a.m. **Using a Hybrid-Modified Genetic Algorithm To Find Feasible Regions of a Desirability Function**—  
❖ Wen Wan, Virginia Polytechnic Institute and State University; Jeffrey B. Birch, Virginia Polytechnic Institute and State University

9:35 a.m. **A Study of Variability in Mass Spectrometry Data**—❖ Ann L. Oberg, Mayo Clinic; Douglas W. Mahoney, Mayo Clinic; Jeanette E. Eckel-Passow, Mayo Clinic; Terry M. Therneau, Mayo Clinic; Christopher J. Mason, Mayo Clinic; Kenneth L. Johnson, Mayo Clinic; K. Sreekumaran Nair, Mayo Clinic; H. Robert Bergen, Mayo Clinic

Wednesday



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- 9:50 a.m. **An Approach to Infer Gene Interaction Networks—**  
 ♦ Alina Andrei, University of Wisconsin-Madison; Christina Kendzierski, University of Wisconsin-Madison
- 10:05 a.m. **Cluster-Based Phenotype Construction for Linkage Heterogeneity—**  
 ♦ Cavan Reilly, The University of Minnesota

## 381 CC-150 D-F

### ● ♦ Bayesian Methods in the Social Sciences—Contributed

Section on Bayesian Statistical Science

*Chair(s): Messan C. Setodji, RAND Corporation*

- 8:35 a.m. **A Bayesian Method for IRT Model Selection—**  
 ♦ Sherwin Toribio, University of Wisconsin-La Crosse
- 8:50 a.m. **A New Bayesian Approach for Misidentification with Applications for Survey Data—**Simon Cheng, University of Connecticut; ♦ Yingmei Xi, University of Connecticut; Ming-Hui Chen, University of Connecticut
- 9:05 a.m. **Model-Based Clustering of non-Gaussian Longitudinal Data—**♦ Miguel Juarez, University of Warwick; Mark F. J. Steel, University of Warwick
- 9:20 a.m. **Markov Chain Monte Carlo-Based Mixture Modeling Applications in Psychometrics—**  
 ♦ Dipendra Subedi, Michigan State University
- 9:35 a.m. **Bayesian Analysis of Repeated Behaviors Using Event-Dependent Frailty Models—**♦ Getachew Dagne, University of South Florida
- 9:50 a.m. **A Joint Multivariate Ordered Probit and Tobit Modeling of Households' Vehicle Choice and Usage—**  
 ♦ Hao Fang, University of California, Irvine
- 10:05 a.m. **Fusion, Pro and Con: Model-Based Fusion of MaxDiff and Ratings Data to Put Respondent Choice Parameters on a Common Scale and Consistency with Random Utility Theory—**♦ Peter Lenk, The University of Michigan; Lynd Bacon, Lynd Bacon Associates

## 382 CC-250 A

### ♦ Nonparametric Inference for Correlated Data—Contributed

Section on Nonparametric Statistics

*Chair(s): Mikyoung Jun, Texas A&M University*

- 8:35 a.m. **Spectral-Based Tests for Periodicities—**♦ Lai Wei, The Ohio State University; Peter F. Craigmile, The Ohio State University

- 8:50 a.m. **A Nonparametric Time Reversibility Test Based on U-Statistics—**♦ Nusrat Jahan, James Madison University; Yuji Tomita, James Madison University
- 9:05 a.m. **Asymptotic Properties of Discrete Fourier Transforms of Spatial Processes—**♦ Soutir Bandyopadhyay, Texas A&M University; Soumendra N. Lahiri, Texas A&M University
- 9:20 a.m. **Adaptive Density Estimation Under Dependence—**  
 ♦ Olivier Wintenberger, SAMOS; Irene Gannaz, University Joseph Fourier
- 9:35 a.m. **Model Selection for Multivariate Smoothing Splines with Correlated Random Errors—**♦ Eren Demirhan, North Carolina State University; Hao Zhang, North Carolina State University
- 9:50 a.m. **An Entropy-derived Measurement of Dependence Between Two Groups of Random Variables—**  
 ♦ Nan Kong, Educational Testing Services
- 10:05 a.m. **One-Sample Location Tests for Multilevel Data—**♦ Denis Larocque, HEC Montreal; Jaakko Nevalainen, University of Tampere; Hannu Oja, University of Tampere

## 383 CC-251 F

### ● Health Risk and Exposure Assessment—Contributed

Section on Risk Analysis

*Chair(s): Edmund Lau, Exponent, Inc.*

- 8:35 a.m. **Bayesian Exposure Assessment for Pesticide Intake from Multiple Food Products—**♦ Ayona Chatterjee, University of West Georgia; Graham Horgan, Biomathematics & Statistics of Scotland; Chris Theobald, University of Edinburgh
- 8:50 a.m. **The Application of the Benchmark Approach to the Study of the Joint Effect of Mixtures of Air Pollutants—**♦ David Svendsgaard, U.S. Environmental Protection Agency
- 9:05 a.m. **Bayesian Analysis of Physiologically Based Pharmacokinetics Modeling of Perchloroethylene in Humans—**♦ Junshan Qiu, University of Georgia
- 9:20 a.m. **Parametric Modeling of Melanoma Prognoses: An Alternative to the Cox Regression Model—**  
 ♦ Shouluan Ding, The University of Alabama at Birmingham; Huiyi Lin, The University of Alabama at Birmingham; Renee Desmond, The University of Alabama at Birmingham; Seng-jaw Soong, The University of Alabama at Birmingham

- 9:35 a.m. **A Bayesian Network-Driven Approach for Quantitative Risk Assessment of Foreign Body Injuries in Children**—❖ Cecilia Scarinzi, Università degli Studi di Torino; Paola Berchialla, University of Torino; Silvia Snidero, S&A S.r.l.; Alexander Stancu, University of Torino; Roberto Corradetti, University of Torino; Dario Gregori, University of Torino
- 9:50 a.m. **Confidence Intervals for Quantiles Using Generalized Lambda Distributions**—❖ Steve Yu Shuo Su, The George Institute for International Health
- 10:05 a.m. **Floor Discussion**

**384****CC-155 A****● ⊛ Graphs and Networks—Contributed**

Section on Statistical Computing, Section on Government Statistics, Section on Statistical Graphics, Section on Statisticians in Defense and National Security

*Chair(s): Stanley Wasserman, Indiana University*

- 8:35 a.m. **Structural Learning of Chain Graphs via Decomposition**—❖ Zongming Ma, Stanford University; Xianchao Xie, Harvard University; Zhi Geng, Peking University
- 8:50 a.m. **A Statistical Social Network Approach to Computer Network Optimization**—❖ Hadi Rezazad; Yasmin H. Said, George Mason University; Edward Wegman, George Mason University
- 9:05 a.m. **Scale-Free Origin-Destination Flow Statistics Estimation in a High-Speed Network**—❖ Aiyu Chen, Alcatel-Lucent; Jin Cao, Bell Labs; Tian Bu, Bell Labs
- 9:20 a.m. **Style of Author-Coauthorship Social Networks: Statisticians of Prominent U.S. Universities**—❖ Walid Sharabati, George Mason University; Yasmin H. Said, George Mason University; Edward Wegman, George Mason University
- 9:35 a.m. **Partitioning the Sample Space on Five Taxa for the Neighbor Joining Algorithm**—❖ Ruriko Yoshida, University of Kentucky; Kord Eickmeyer, Institute für Informatik, Humboldt-Universität zu Berlin
- 9:50 a.m. **De-stratified Importance Sampling**—❖ Joseph Blitzstein, Harvard University
- 10:05 a.m. **Process Modeling To Explain Ordinal Categorical Data**—❖ Simone Gray, Duke University; Alan E. Gelfand, Duke University

**385****CC-254 B****Creating Cognitive Thinking Opportunities in Introductory Statistics Classes—Contributed**

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

*Chair(s): Josephine Hamer, Western Connecticut State University*

- 8:35 a.m. **Shades of Gray: Ambiguity Tolerance and Inferential Thinking**—❖ Robert Carver, Stonehill College
- 8:50 a.m. **Using Student-Generated Survey Data To Reinforce Basic Concepts of Introductory Statistics**—❖ Elizabeth Walters, Loyola College in Maryland
- 9:05 a.m. **How Much Mathematics Is Appropriate in a Modern Statistics Course?**—❖ Brian E. Smith, McGill University
- 9:20 a.m. **Misconceptions in Interpreting Center and Variability in Graphical Representations**—❖ Linda Cooper, Towson University; Felice Shore, Towson University
- 9:35 a.m. **College Students' Intuitive Reasoning About Variation of Sample Mean**—❖ Carl Lee, Central Michigan University; Maria Meletiou-Mavrotheris, Cyprus College
- 9:50 a.m. **Observational Creativity: Statistical Reasoning and the Dead Sea Scrolls**—❖ Donald Bentley, Pomona College
- 10:05 a.m. **Discovering the Underlying Themes of Statistical Models**—❖ Steve Wang, Swarthmore College

**386****CC-251 B****Space-Time Modeling—Contributed**

Section on Statistics and the Environment, General Methodology, Section on Statisticians in Defense and National Security

*Chair(s): Lisa Madsen, Oregon State University*

- 8:35 a.m. **Characterizing the Dependence Structure of Space-Time Processes Using Computer-Model Output and Sparse Observations**—❖ Candace Berrett, The Ohio State University; Catherine A. Calder, The Ohio State University; Tao Shi, The Ohio State University
- 8:50 a.m. **Bayesian Hierarchical Models for Extreme Values Observed over Space and Time**—❖ Huiyan Sang, Duke University; Alan E. Gelfand, Duke University

- 9:05 a.m. **Semiparametric Zero-Inflated Poisson Models for Spatio-Temporal Environmental Processes**—❖ Ali Arab, University of Missouri-Columbia; Christopher K. Wikle, University of Missouri-Columbia; Scott Holan, University of Missouri-Columbia
- 9:20 a.m. **A Spatial-Temporal Point Process Model for Nowcasting Radar Reflectivities**—❖ Yong Song, University of Missouri-Columbia; Christopher K. Wikle, University of Missouri-Columbia
- 9:35 a.m. **Identification of Pollution Source Directions via MCMC**—❖ Basil Williams, Brigham Young University; William Christensen, Brigham Young University
- 9:50 a.m. **Bias in the Estimation of Self-Exciting Point Process Models for Earthquake Occurrences**—❖ Annie Chu, University of California, Los Angeles; Frederic Paik Schoenberg, University of California, Los Angeles; Alejandro Veen, IBM T.J. Watson Research Center
- 10:05 a.m. **An Application of Voronoi Diagrams to Modeling Earthquake Catalogs**—❖ Christopher Barr, University of California, Los Angeles; Frederic Paik Schoenberg, University of California, Los Angeles

## 387

## CC-250 D

### ● Bayesian Methods and Applications in Epidemiology—Contributed

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

*Chair(s): Bo Cai, University of South Carolina*

- 8:35 a.m. **HIV Dynamics and Natural History Studies: Joint Modeling with Interval-Censored Event Times and Sparse Longitudinal Data**—❖ Li Su, Brown University; Joseph W. Hogan, Brown University
- 8:50 a.m. **Covariate-Adjusted Constrained Bayes Predictions of Random Intercepts and Slopes**—❖ Robert Lyles, Emory University; Renee Moore, University of Pennsylvania; Amita K. Manatunga, Emory University; Kirk Easley, Emory University
- 9:05 a.m. **Family-Based Case-Control Studies**—❖ Li Zhang, The Cleveland Clinic; Bhramar Mukherjee, University of Michigan
- 9:20 a.m. **Association Test Using Pedigree and Multilocus Data with Missing Genotypes and Population Structure**—❖ Jie Ding, The Ohio State

- University; Shili Lin, The Ohio State University
- 9:35 a.m. **Regression Models for Paired Censored Exponential and Gamma Distributions**—❖ Michael P. Jones, Macquarie University; Don R. McNeil, Macquarie University
- 9:50 a.m. **Modeling a Cross-Sectional Response Variable with Longitudinal Predictors: An Example of Pulse Pressure and Pulse Wave Velocity**—❖ Veena Shetty, National Institutes of Health; Christopher Morrell, Loyola College in Maryland; Samer S. Najjar, National Institutes of Health
- 10:05 a.m. **ROC Analysis for Longitudinal Disease Diagnostic Data Without a Gold Standard Test**—❖ Chong Wang, Cornell University; Bruce W. Turnbull, Cornell University; Yrjö T. Gröhn, Cornell University; Søren S. Nielsen, The Royal Veterinary and Agricultural University

## 388

## CC-155 E

### ● Topics in Survey and Census Redesigns—Contributed

Section on Survey Research Methods

*Chair(s): Ismael Flores Cervantes, Westat*

- 8:35 a.m. **Strategic Directions for the 2011 Canadian Census of Population**—❖ David Dolson, Statistics Canada; Normand Laniel, Statistics Canada
- 8:50 a.m. **Alternative Allocation Designs for a Highly Stratified Establishment Survey**—❖ Ernest Lawley, Bureau of Labor Statistics
- 9:05 a.m. **Sampling with Uncertain Frame Counts: Challenges in Sampling Head Start Children for the FACES Study**—❖ Barbara L. Carlson, Mathematica Policy Research, Inc.
- 9:20 a.m. **Sample Design Research for the National Home and Hospice Care Survey**—❖ Karen Davis, National Center for Health Statistics; Iris Shimizu, National Center for Health Statistics
- 9:35 a.m. **Sample Design of the Canadian Health Measures Survey**—❖ Sarah M. Dion, Statistics Canada
- 9:50 a.m. **Sampling and Estimation Issues in the Redesign of the Canadian Survey of Household Spending**—❖ Christian Nadeau, Statistics Canada
- 10:05 a.m. **Sample Redesign for the FDIC's Asset Valuation Review**—❖ David W. Chapman, Federal Deposit Insurance Corporation



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CC-155 B

## ● Survey Estimation and Inference—Contributed

Section on Survey Research Methods

*Chair(s): James R. Chromy, RTI International*

- 8:35 a.m. **Design Effects of Sampling Frames in Establishment Surveys of Small Populations—**Monroe Sirken, National Center for Health Statistics; ❖ Iris Shimizu, National Center for Health Statistics
- 8:50 a.m. **Variance Estimation for Statistical Matching Using Multiple Imputation—**❖ James Reilly, University of Auckland
- 9:05 a.m. **Using Bootstrap Variance Calculations for a Survey with a Simple Design: The Case of the 2005 National Survey of the Work and Health of Nurses—**❖ Gildas Kleim, Statistics Canada; Yves Bélanger, Statistics Canada
- 9:20 a.m. **Balanced Repeated Replication Variance Estimates from the Medical Expenditure Panel Survey 1996–2003 Household Component—**❖ Dan Liao, University of Maryland
- 9:35 a.m. **Application of the Bootstrap Method in the International Price Program—**❖ Patrick Bobbitt, Bureau of Labor Statistics; Steven P. Paben, Bureau of Labor Statistics; Moon Jung Cho, Bureau of Labor Statistics; James A. Himelein Jr., Bureau of Labor Statistics; Te-Ching Chen, Bureau of Labor Statistics; Lawrence Ernst, Bureau of Labor Statistics
- 9:50 a.m. Floor Discussion

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CC-251 C

## ● Model Specification, Estimation, and Evaluation—Contributed

Social Statistics Section

*Chair(s): Frank J. Potter, Mathematica Policy Research, Inc.*

- 8:35 a.m. **A New Model for Interaction Effects—**❖ David Weakliem, University of Connecticut
- 8:50 a.m. **Linear Information Models: A Prototype—**❖ Philip E. Cheng, Academia Sinica; Jiun W. Liou, Academia Sinica; Michelle Liou, Academia Sinica; John Aston, Academia Sinica
- 9:05 a.m. **How Many Factors? A Strategy for Identifying Latent Structure in Factor Analysis—**❖ Mitchell Harris, Brigham Young University; Michael K. Lauritzen, Brigham Young University; Landon Poppleton, Brigham Young University; Robert

Bubb, Brigham Young University; Bruce Brown, Brigham Young University

- 9:20 a.m. **Comparing Factor Loadings in Exploratory Factor Analysis: Comparison of Asymptotic and Randomization Tests—**❖ Holmes Finch, Ball State University; Brian French, Purdue University
- 9:35 a.m. **Extensions to Latent Cluster Models for Social Networks—**❖ Pavel Krivitsky, University of Washington; Mark S. Handcock, University of Washington; Adrian E. Raftery, University of Washington; Peter D. Hoff, University of Washington
- 9:50 a.m. **Estimating Personal Network Size—**❖ Tyler H. McCormick, University of Connecticut; Tian Zheng, Columbia University; Matthew J. Salganik, Columbia University
- 10:05 a.m. Floor Discussion

## Invited Sessions 10:30 a.m.–12:20 p.m.

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CC-155 D

## ● Statistical Consulting in Games and Sports Organizations—Invited

Section on Statistics in Sports, Section on Statistical Consulting

*Organizer(s): Mark E. Glickman, Boston University*

*Chair(s): Eric T. Bradlow, University of Pennsylvania*

- 10:35 a.m. **Prediction of Hitting Performance in Baseball—**❖ Shane T. Jensen, University of Pennsylvania
- 11:00 a.m. **It's All Fair Game: Consulting for an Online Competitive Entertainment Company—**❖ Mark E. Glickman, Boston University
- 11:25 a.m. **Academic Sports Radio: Construction of Interpretable and Valid Metrics for Sports Consulting—**❖ C. Shane Reese, Brigham Young University
- 11:50 a.m. Disc: David H. Annis, Wachovia Corporation
- 12:10 p.m. Floor Discussion



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CC-355 F

### ● ⊛ Analyses and Applications in High-Throughput Screening Assays—Invited

Biopharmaceutical Section, WNAR

*Organizer(s): Xiaohua (Douglas) Zhang, Merck & Co., Inc.**Chair(s): Xiaodong (Eric) Wu, Johnson & Johnson PRD*

- 10:35 a.m. **High Throughput Screening (HTS) for Lead and Target Identification**—❖ Marc Ferrer, Merck & Co., Inc.
- 11:00 a.m. **Testing for Excess Over Highest Single Agent with an Application to High-Throughput Screening**—❖ John Peterson, GlaxoSmithKline
- 11:25 a.m. **Simple Statistical Parameters but Quick Solutions in High-Throughput Screening Assays**—❖ Xiaohua (Douglas) Zhang, Merck & Co., Inc.
- 11:50 a.m. **Applications of RNAi High-Throughput Screening in Drug Discovery**—❖ Amy S. Espeseth, Merck & Co., Inc.
- 12:15 p.m. **Floor Discussion**

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CC-355 D

### ● ⊛ Statistical Issues and Novel Models for Quantifying the Effects of Continuous Traits on Mortality: Examples from Obesity—Invited

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

*Organizer(s): Mai A. Elobeid, The University of Alabama at Birmingham**Chair(s): Mark Beasley, The University of Alabama at Birmingham*

- 10:35 a.m. **Methods for Correcting Regression Dilution and Reverse Causation Biases in Regression-Model Survival Analyses**—❖ James Greenberg, Brooklyn College
- 10:55 a.m. **Intentional Weight-Loss Effects on Mortality Rate Modeled as a Latent Variable Problem**—❖ Gary L. Gadbury, University of Missouri-Rolla
- 11:15 a.m. **In Search of the Law of Mortality**—❖ S. Jay Olshansky, University of Illinois at Chicago
- 11:35 a.m. **Accounting for Unobserved Confounders via Data Augmentation**—❖ David B. Allison, The University of Alabama at Birmingham
- 11:55 a.m. **Disc: Joseph Cappelleri, Pfizer Inc.**
- 12:15 p.m. **Floor Discussion**

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CC-251 F

### ● ⊛ Understanding and Measurement of Human Capital—Invited

Social Statistics Section, Section on Survey Research Methods

*Organizer(s): Juanita Tamayo Lott, U.S. Census Bureau**Chair(s): Daniel H. Weinberg, U.S. Census Bureau*

- 10:35 a.m. **The Whole Is Greater than the Sum of Its Parts: The U.S. Census Bureau Human Capital Management Information System**—❖ Juanita Tamayo Lott, U.S. Census Bureau; Tyra D. Smith, U.S. Census Bureau; Mark Holdrege, U.S. Census Bureau
- 10:55 a.m. **Measuring a Blended 21st-Century Work Force: Lessons from NASA**—❖ Stephen E. Chesley, National Aeronautics and Space Administration; Craig Conlin, National Aeronautics and Space Administration
- 11:15 a.m. **Accurately Measuring a Creative Economy**—❖ Steven W. Pedigo, Greater Washington Initiative
- 11:35 a.m. **Water, Water Everywhere and Not a Drop to Drink: Higher Education Access and Success Among America's Growing Population of Under-Represented Students of Color**—❖ Walter R. Allen, University of California, Los Angeles; Derek Mitchell, Stupski Foundation; Gloria Gonzalez, University of California, Los Angeles
- 11:55 a.m. **Disc: Ivan P. Fellegi, Statistics Canada**
- 12:15 p.m. **Floor Discussion**

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CC-355 E

### ● ⊛ Mighty Nonparametrics—Invited

Noether Award Committee, General Methodology

*Organizer(s): James Higgins, Kansas State University**Chair(s): James Higgins, Kansas State University*

- 10:35 a.m. **Nonparametric Modeling for Classification of High-Dimensional Data and Multiple Hypothesis Testing**—❖ Peter Hall, The University of Melbourne
- 11:20 a.m. **Nonparametric Hierarchical Models**—❖ Ciprian M. Crainiceanu, The Johns Hopkins University
- 12:05 p.m. **Floor Discussion**

## 396 CC-150 D-F Statistical Models and Methods for Microarray Data—Invited

IMS, Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): *Cun-Hui Zhang, Rutgers University*

Chair(s): *Cun-Hui Zhang, Rutgers University*

- 10:35 a.m. Inferences on the Proportion of Non-Null Effects in Large-Scale Multiple Comparisons—❖ Jia Shun Jin, Purdue University
- 11:05 a.m. Epigenomics: Some Statistical Applications—❖ Rafael Irizarry, Johns Hopkins Bloomberg School of Public Health
- 11:35 a.m. Simultaneous Subset Selection via Rate-Distortion Theory with Applications to Clustering and Significance Analysis of Gene Expression Data—❖ Rebecca Jörnsten, Rutgers University
- 12:05 p.m. Floor Discussion

## 397 CC-155 A ● ★ Causal Methods: Advances and Applications in Health—Invited

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

Organizer(s): *Amelia Haviland, RAND Corporation*

Chair(s): *Jason Connor, Berry Consultants*

- 10:35 a.m. Gangs and Teen Violence: A Matched Analysis Using Trajectory Groups and Propensity Scores—❖ Amelia Haviland, RAND Corporation; Daniel Nagin, Carnegie Mellon University; Paul Rosenbaum, University of Pennsylvania
- 11:00 a.m. Causal Inference of Nonrandomized Treatment Effects—❖ Heejung Bang, Cornell University; Yolanda Barrón, Cornell University
- 11:25 a.m. Dealing with Control Group Drop-Out: Using Historical Patient Information to Supplement a Randomized Trial—❖ Elizabeth A. Stuart, Johns Hopkins Bloomberg School of Public Health; Donald B. Rubin, Harvard University; Samantha Cook, Google
- 11:50 a.m. Propensity Scores and Multiple Treatments: An Application to Beneficiary Evaluations from the Medicare CAHPS Surveys—❖ Marc N. Elliott, RAND Corporation; Amelia Haviland, RAND Corporation
- 12:15 p.m. Floor Discussion

## 398 CC-155 F ★ New Developments on Quantile Regression—Invited

IMS

Organizer(s): *Xuming He, University of Illinois*

Chair(s): *Stephen Portnoy, University of Illinois*

- 10:35 a.m. Bayesian Model-Based Approaches to Semiparametric and Nonparametric Quantile Regression—❖ Athanasios Kottas, University of California, Santa Cruz; Milovan Krnjajic, Lawrence Livermore National Laboratory; Matthew Taddy, University of California, Santa Cruz
- 11:00 a.m. Some Recent Advances in Computing Regularized Quantile Regression Models—❖ Ji Zhu, University of Michigan
- 11:25 a.m. Learnability and Robustness of Nonparametric Quantile Regression—❖ Andreas Christmann, Free University of Brussels VUB; Ingo Steinwart, Los Alamos National Laboratory
- 11:50 a.m. Conditional Quantile Estimation for GARCH Models—❖ Zhijie Xiao, Boston College
- 12:15 p.m. Floor Discussion

## 399 CC-Ballroom B Wald Lecture II—Invited

IMS, General Methodology, Section on Bayesian Statistical Science

Organizer(s): *Tony Cai, University of Pennsylvania*

Chair(s): *Luis R. Pericchi, University of Puerto Rico, San Juan*

- 10:35 a.m. Model Selection: Multiplicities and Approximations—❖ James Berger, Duke University
- 11:40 a.m. Disc: Susie Bayarri, University of Valencia
- 12:00 p.m. Floor Discussion

## 400 CC-355 B ● Frailty Models for Survival Analysis—Invited

Biometrics Section, ENAR, Section on Risk Analysis

Organizer(s): *Xuelin Huang, The University of Texas M. D. Anderson Cancer Center*

Chair(s): *Lei Liu, University of Virginia*

- 10:35 a.m. Semiparametric Approaches for the Analysis of Multilevel Failure Time Data—❖ Joanna H. Shih, National Cancer Institute; Shou-En Lu, University of Medicine and Dentistry of New Jersey

- 11:00 a.m. **Frailty Models for Survival Data with Informative Censoring**—❖ Xuelin Huang, The University of Texas M. D. Anderson Cancer Center; Robert Wolfe, University of Michigan; Lei Liu, University of Virginia
- 11:25 a.m. **Goodness-of-Fit for Frailty Models**—❖ John Klein, Medical College of Wisconsin
- 11:50 a.m. Disc: Michael Kosorok, The University of North Carolina at Chapel Hill
- 12:10 p.m. **Floor Discussion**

## 401 CC-150 G ● ⊛ Remote Sensing in Environmental Statistics—Invited

Section on Statistics and the Environment, Section on Statisticians in Defense and National Security

*Organizer(s): Tao Shi, The Ohio State University*

*Chair(s): Tao Shi, The Ohio State University*

- 10:35 a.m. **Markov Random Fields, Remote Sensing, and Predicting Crop Yields**—❖ Stephan Sain, National Center for Atmospheric Research
- 10:55 a.m. **Nonstationary Covariance Models for TOMS Ozone Data**—❖ Mikyoung Jun, Texas A&M University
- 11:15 a.m. **Understanding Large-Scale Structure in Massive Remote-Sensing Datasets**—❖ Amy Braverman, Jet Propulsion Laboratory
- 11:35 a.m. **Space-Time Modeling of Biomass Burning and Regional Aerosols in Southeast Asia**—❖ Catherine A. Calder, The Ohio State University; Tao Shi, The Ohio State University
- 11:55 a.m. Disc: Eric D. Kolaczyk, Boston University
- 12:05 p.m. Disc: Bin Yu, University of California, Berkeley
- 12:15 p.m. **Floor Discussion**

## 402 CC-251 A Applications in Computational Biostatistics—Invited

Section on Statistical Computing, ENAR

*Organizer(s): Yasmin H. Said, George Mason University*

*Chair(s): Yasmin H. Said, George Mason University*

- 10:35 a.m. **Application of the State-Space Modeling Paradigm in Neuroscience Data Analysis**—Emery N. Brown, Massachusetts General Hospital; ❖ Uri Eden, Boston University
- 11:05 a.m. **The Use of Distances in Surveillance**—❖ Marcello Pagano, Harvard University

- 11:35 a.m. **Assessing Interventions Related to HIV Incidents Under the Influence of Ethanol**—Yasmin H. Said, George Mason University; ❖ Edward Wegman, George Mason University
- 12:05 p.m. **Floor Discussion**

## 403 CC-255 E ● ⊛ Advances in Statistical Quality Improvement—Invited

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

*Organizer(s): Joe Sullivan, Mississippi State University*

*Chair(s): Joe Sullivan, Mississippi State University*

- 10:35 a.m. **Bayesian Modeling of Accelerated Life Tests with Random Effects**—Ramon V. Leon, University of Tennessee; ❖ Avery J. Ashby, BlueCross BlueShield of Tennessee
- 11:00 a.m. **A Control Chart for the Coefficient of Variation**—❖ Chang W. Kang, Hanyang University; Man S. Lee, LG Philips LCD; Young J. Seong, Gyenggi Research Institute; Douglas M. Hawkins, The University of Minnesota
- 11:25 a.m. **An Optimal Filter Design Approach to Statistical Process Control**—❖ Daniel W. Apley, Northwestern University; Chang-Ho Chin, Kyung Hee University
- 11:50 a.m. **The Rate of False Signals in X-bar Control Charts with Estimated Limits**—❖ Diane P. Bischak, University of Calgary; Dan Trietsch, American University of Armenia
- 12:15 p.m. **Floor Discussion**

## 404 CC-150 A-C 2007 ASA Educational Ambassadorship—Invited

Committee on International Relations in Statistics

*Organizer(s): Demissie Alemayehu, Pfizer Inc.*

*Chair(s): Martha Aliaga, American Statistical Association*

- 10:35 a.m. **Challenges with Statistical Education in Developing Countries: A Case Study**—❖ Eshetu Wencheke, Alpha University College
- 12:00 p.m. **Floor Discussion**

## Invited Panels 10:30 a.m.–12:20 p.m.

### 405 CC-255 B

#### ● ⊕ Estimating Nonresponse Bias in Light of the New OMB Standards and Guidelines for Statistical Surveys—Invited

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

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

*Chair(s): Michael P. Battaglia, Abt Associates, Inc.*

**Panelists:** ❖ J. Michael Brick, Westat  
❖ Robert M. Groves, University of Michigan  
❖ Brian Harris-Kojetin, Office of Management and Budget

12:15 p.m. Floor Discussion

### 406 CC-251 E

#### The 20/20 of Statistical Education—Where We've Been and Where We're Going—Invited

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

*Organizer(s): Patti Collings, Brigham Young University*

*Chair(s): Brad Hartlaub, Kenyon College*

**Panelists:** ❖ Jeff Witmer, Oberlin College  
❖ Allan Rossman, California Polytechnic State University  
❖ Jessica Utts, University of California, Davis  
❖ George Cobb, Mount Holyoke College

12:15 p.m. Floor Discussion

## Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

### 407 CC-250 A

#### ● Seasonality and Statistics in Finance—Topic-Contributed

Business and Economics Statistics Section

*Organizer(s): Tucker S. McElroy, U.S. Census Bureau; Rituparna Sen, University of California, Davis*

*Chair(s): Tucker S. McElroy, U.S. Census Bureau*

10:35 a.m. Seasonal Heteroscedasticity in Time Series: Modeling, Estimation, and Testing—❖ William R. Bell, U.S. Census Bureau; Thomas M. Trimbur, Federal Reserve Board

10:55 a.m. A Local Goodness-of-Fit Diagnostic Based on the Log Determinant of the Sample Covariance Matrix—Tucker S. McElroy, U.S. Census Bureau; ❖ Scott Holan, University of Missouri-Columbia

11:15 a.m. Are Volatility Estimators Robust with Respect to Modeling Assumptions?—❖ Yingying Li, The University of Chicago; Per A. Mykland, The University of Chicago

11:35 a.m. Covariance Estimation for Nonsynchronous High-Frequency Data with Microstructure Noise—❖ Qiuyan Xu, University of California, Davis; Rituparna Sen, University of California, Davis

11:55 a.m. On Diagnostic Checking for Mixture Autoregressive Time Series—❖ Qin Shao, University of Toledo

12:15 p.m. Floor Discussion

### 408 CC-255 A

#### ● ⊕ Interacting with the FDA in Medical Device Pre-Market Applications: From Pre-IDE to PMA Submission—Topic-Contributed

Biopharmaceutical Section, WNAR

*Organizer(s): Lilly Yue, U.S. Food and Drug Administration*

*Chair(s): Yao Huang, U.S. Food and Drug Administration*

10:35 a.m. Challenges in Trial Design for the Next Generation Drug-Eluting Stents—❖ Zheng Zhou, Boston Scientific Corporation; Peter Lam, Boston Scientific Corporation

10:55 a.m. Pre-PMA Meetings with the FDA in Medical Device Submissions—Greg Campbell, U.S. Food and Drug Administration; Gerry Gray, U.S. Food and Drug Administration; ❖ Lilly Yue, U.S. Food and Drug Administration

11:15 a.m. Some Thoughts on the Variables in Communications on Medical Device Studies Between the Sponsor and the FDA from the View of the Statistical Consultant—❖ Dennis King, STATKING Consulting, Inc.

11:35 a.m. One Statistician's Thoughts on Nonstatistical Issues That Affect Statistical Considerations in Medical Device Studies—❖ Alicia Toledano, Biostatistics Consulting, LLC

11:55 a.m. Disc: Greg Campbell, U.S. Food and Drug Administration

12:15 p.m. Floor Discussion



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### ● Topics in Crossover Trial Design and Analysis— Topic-Contributed

Biopharmaceutical Section, WNAR, Section on Statistical Consulting, ENAR

Organizer(s): Mary Putt, University of Pennsylvania

Chair(s): Mary Putt, University of Pennsylvania

10:35 a.m. Carryover Effects in Crossover Designs—◆ John Stufken, University of Georgia

10:55 a.m. Optimal and Efficient Crossover Designs for Comparing Test Treatments to a Control Treatment Under Various Models—◆ Min Yang, University of Missouri-Columbia; John Stufken, University of Georgia

11:15 a.m. Optimal Crossover Designs: Investigating the Role of Baseline Measurements—◆ Yuanyuan Liang, University of Alberta; Kimmie C. Carriere, University of Alberta

11:35 a.m. A Robust Bayesian Analysis of a Crossover Trial in Smoking Cessation—◆ Pulak Ghosh, Georgia

CC-255 C

State University; Mary Putt, University of Pennsylvania

11:55 a.m. Disc: Vernon Chinchilli, The Pennsylvania State University

12:15 p.m. Floor Discussion

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CC-250 EF

### ● ⊛ Bayesian Applications Using Structured Stochastic Models—Topic-Contributed

Section on Bayesian Statistical Science

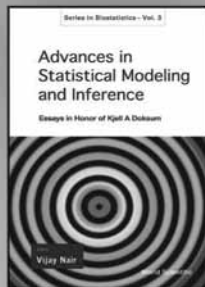
Organizer(s): Marco Ferreira, University of Missouri-Columbia

Chair(s): Ana Rappold, Duke University

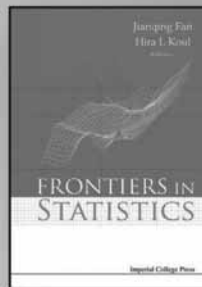
10:35 a.m. Evolutionary Markov Chain Monte Carlo Algorithms for Expected Utility Maximization—◆ Marco Ferreira, University of Missouri-Columbia; Ramiro Ruiz, Universidade Federal do Rio de Janeiro; Alexandra Schmidt, Universidade Federal do Rio de Janeiro



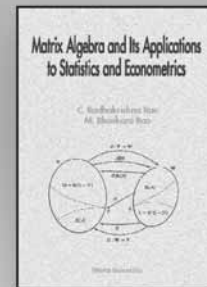
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- 10:55 a.m. **Bayesian Analysis of Inverse Gaussian Models for Response Time**—✦ Paul Speckman, University of Missouri-Columbia; Yue Yu, University of Missouri-Columbia; Jeffrey Rouder, University of Missouri-Columbia
- 11:15 a.m. **High-Resolution Space-Time Ozone Modeling for Assessing Trends**—✦ Sujit Sahu, University of Southampton
- 11:35 a.m. **Bayesian Model Selection by Smoothly Clipped Continuous Priors**—✦ Sounak Chakraborty, University of Missouri-Columbia
- 11:55 a.m. **A Reference Prior for AR(2) Models**—✦ Shawn Ni, University of Missouri-Columbia; Dongchu Sun, University of Missouri-Columbia
- 12:15 p.m. **Floor Discussion**

## 411 CC-250 C ● ✦ Image Analysis in Solar and Astrophysics— Topic-Contributed

Section on Bayesian Statistical Science

*Organizer(s): David van Dyk, University of California, Irvine; Thomas C.M. Lee, The Chinese University of Hong Kong; Yaming Yu, University of California, Irvine*

*Chair(s): Yaming Yu, University of California, Irvine*

- 10:35 a.m. **Astronomical Imaging Using the GLAST Large-Area Telescope**—✦ James Chiang, Stanford University
- 10:55 a.m. **Fully Bayesian Analysis of Low-Count Astronomical Images**—✦ David van Dyk, University of California, Irvine; Alanna Connors, Eureka Scientific
- 11:15 a.m. **Multiscale Solar Image Processing**—✦ C. Alex Young, National Aeronautics and Space Administration; Jack Ireland, ADNET Systems, Inc.; R. T. James McAteer, Catholic University of America; Peter T. Gallagher, Trinity College Dublin
- 11:35 a.m. **Automatic Detection and Classification of Sunspot Images**—✦ Thomas C.M. Lee, The Chinese University of Hong Kong; C. Alex Young, National Aeronautics and Space Administration
- 11:55 a.m. **How to Find Loops in the Solar Corona**—✦ Vinay L. Kashyap, Harvard-Smithsonian Center for Astrophysics; Julia Sandell, Barnard College; Thomas C.M. Lee, The Chinese University of Hong Kong
- 12:15 p.m. **Floor Discussion**

## 412 CC-251 B ● ✦ Applications of Nonparametric Smoothing to Spatial and Temporal Data—Topic-Contributed

Section on Nonparametric Statistics, ENAR

*Organizer(s): Lijian Yang, Michigan State University*

*Chair(s): Lijian Yang, Michigan State University*

- 10:35 a.m. **Generalized Semiparametric Linear Mixed Effects Models**—✦ Tatiyana Apanasovich, Cornell University
- 10:55 a.m. **Nonparametric Transfer Function Models: A Polynomial Spline Approach**—✦ Jun Liu, Georgia Southern University; Jing Wang, University of Illinois at Chicago
- 11:15 a.m. **Kernel Estimation of Multivariate Cumulative Distribution Function**—✦ Rong Liu, Michigan State University; Lijian Yang, Michigan State University
- 11:35 a.m. **Disc:** Jane Harvill, Baylor University
- 11:55 a.m. **Floor Discussion**

## 413 CC-254 B ● ✦ The Statistician's Contribution to Fact-Finding in Law—Topic-Contributed

Section on Statistical Consulting

*Organizer(s): William B. Fairley, Analysis and Inference, Inc.*

*Chair(s): Alan J. Izenman, Temple University*

- 10:35 a.m. **Proof of Changepoints in Securities Prices Litigation: Use and Misuse of Event History Analysis**—✦ Kenneth Swartz, Analysis and Inference, Inc.; Yulia R. Gel, University of Waterloo; R. Alan Miller, Philadelphia Investment Bank; William B. Fairley, Analysis and Inference, Inc.
- 10:55 a.m. **Bagging and Propensity Scores in Statistical Learning to Assign Ownership of Unclaimed Property**—✦ Marc Sobel, Temple University/Analysis and Inference, Inc.; Kenneth Swartz, Analysis and Inference, Inc.
- 11:15 a.m. **Resolving a Multimillion Dollar Contract Dispute with a Latin Square Design**—✦ Steven Crunk, San Jose State University; William B. Fairley, Analysis and Inference, Inc.; Marian Hofer, California State University, East Bay; Peter J. Kempthorne, Kempthorne Analytics, Inc.
- 11:35 a.m. **Statistical Assessment of the Fairness of a Firm's Allocation of Shares in Initial Public Offerings**—✦ Efstathia Bura, George Washington University
- 11:55 a.m. **Disc:** William B. Fairley, Analysis and Inference, Inc.
- 12:15 p.m. **Floor Discussion**

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#### Fundamental Statistics for the Behavioral Sciences, 6E

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### COMING SOON



#### Mathematical Statistics with Applications, 7E

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## 414 CC-155 B Use of Measures Related to the Survey Variables in Post-Survey Adjustment for Nonresponse—Topic-Contributed

Section on Survey Research Methods, Social Statistics Section

Organizer(s): Andy Peytchev, RTI International

Chair(s): Kristen Olson, University of Michigan

- 10:35 a.m. Preliminary Assessment of the Impact of Health Variables on Nonresponse Adjustment in the Medical Expenditure Panel Survey (MEPS)—  
♦ Trena Ezzati-Rice, Agency for Healthcare Research and Quality; Lap-Ming Wun, Agency for Healthcare Research and Quality
- 10:55 a.m. Using Interviewer Observations To Improve Nonresponse Adjustments: NES 2004—♦ Andy Peytchev, RTI International; Kristen Olson, University of Michigan
- 11:15 a.m. Use of Interviewer Judgments About Attributes of Selected Respondents in Post-Survey Adjustment for Unit Nonresponse: An Illustration with the National Survey of Family Growth—Robert M. Groves, University of Michigan; James Wagner, University of Michigan; ♦ Emilia Peytcheva, University of Michigan
- 11:35 a.m. Using Proxy Measures of Survey Outcomes in Post-Survey Adjustments: Examples from the Consumer Expenditure Survey (CES) and the Los Angeles Neighborhood Observations Study (LA FANS)—♦ Frauke Kreuter, University of Maryland; Carolina Casas-Cordero, University of Maryland
- 11:55 a.m. Using Proxy Measures of the Survey Variables in Post-Survey Adjustments in a Transportation Survey—♦ Ting Yan, University of Michigan; Trivellore E. Raghunathan, University of Michigan
- 12:15 p.m. Floor Discussion

## 415 CC-254 A ● ♦ Computationally Intensive Methods in AIDS Research I—Topic-Contributed

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

Organizer(s): Lilit Yeghiazarian, University of California, Los Angeles

Chair(s): Mark S. Handcock, University of Washington

- 10:35 a.m. Mathematical Modeling and Statistical Methods for AIDS Translational Research from Benchside to Bedside—♦ Hulin Wu, University of Rochester

- 10:55 a.m. A Multiscale Model of HIV Dynamics Linking In-Host Processes with Virus Spread in Human Populations—♦ Lilit Yeghiazarian, University of California, Los Angeles; William G. Cumberland, University of California, Los Angeles; Otto Yang, University of California, Los Angeles

- 11:15 a.m. A Stochastic Model of HIV Escape from the Cytotoxic T Lymphocyte Response—♦ Elissa Schwartz, Washington State University; Lisette G. De Pillis, Harvey Mudd College; William G. Cumberland, University of California, Los Angeles; Otto Yang, University of California, Los Angeles

- 11:35 a.m. Application of a Model with Two Types of CTL Regulation to Shiv Vaccination Trials—♦ Igor Rouzine, Tufts University

- 11:55 a.m. Two-Way Hierarchical Phylogenetic Models: An Application to HIV-1 Evolution During Fusion Inhibitor Therapy—♦ Christina Ramirez Kitchen, University of California, Los Angeles; Marc A. Suchard, University of California, Los Angeles

- 12:15 p.m. Floor Discussion

## Contributed Sessions 10:30 a.m.–12:20 p.m.

### 416 CC-260 ● ♦ Gene Expression and Genomics—Contributed

Biometrics Section

Chair(s): Brian S. Caffo, Johns Hopkins Bloomberg School of Public Health

- 10:35 a.m. Genome Phylogeny Accommodating Lateral Gene Transfer—♦ Hongmei Zhang, University of West Florida; Rohan Hemasinha, University of West Florida; Xun Gu, Iowa State University
- 10:50 a.m. A Simulation Study of the Operating Characteristics of Statistical Analysis Plans for Genome-Wide Association Studies—♦ John Barnard, The Cleveland Clinic
- 11:05 a.m. Analyzing Data from Gene Expression in Neuronal Activity—♦ Xiaofeng Wang, The Cleveland Clinic
- 11:20 a.m. Mutation Detection in Exon Grouping Analysis—  
♦ Yuan Yuan, Harvard University; Xin Lu, University of California, San Diego; Jun S. Liu, Harvard University; James D. Iglehart, Dana-Farber Cancer Institute; Alexander Miron, Dana-Farber Cancer Institute

- 11:35 a.m. **Gene-Gene and Gene-Environment Interactions for Complex Traits**—❖ Qinyi Cheng, New York University; Mengling Liu, New York University; Yongzhao Shao, New York University
- 11:50 a.m. **Characterization of Transcriptomes by Application of Reliability Analysis in Structural Genomics**—❖ Fisseha Abebe, Clark Atlanta University; William Seffens, Clark Atlanta University
- 12:05 p.m. **Floor Discussion**

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CC-257

### ● ⊛ Applications of Semiparametric and Nonparametric Modeling Techniques—Contributed

Biometrics Section, Section on Nonparametric Statistics

*Chair(s): Chunming Zhang, University of Wisconsin-Madison*

- 10:35 a.m. **Weighted Fourier Series Analysis of Anatomical Brain Structures**—❖ Shubing Wang, University of Wisconsin-Madison
- 10:50 a.m. **A Semiparametric Empirical Likelihood Method for ROC Curve Regression of Ordinal Diagnostic Test in the Presence of Verification Bias**—❖ Xiaofei Wang, Duke University; Haibo Zhou, The University of North Carolina at Chapel Hill
- 11:05 a.m. **A Novel Wavelet Approach for Denoising Mass Spectrometry Data**—❖ Jaesik Jeong, Texas A&M University
- 11:20 a.m. **Nonparametric Quantification of Protein Lysate Arrays**—❖ Jianhua Hu, The University of Texas M. D. Anderson Cancer Center
- 11:35 a.m. **Semiparametric Two-Sample Changepoint Model**—❖ Zonghui Hu, National Institutes of Health; Jing Qin, National Institutes of Health; Dean Follmann, National Institute of Allergy and Infectious Diseases
- 11:50 a.m. **Double Nonparametric Estimation for Relating Dose Distributions to Scalar Outcomes**—❖ Matthew Schipper, University of Michigan; Jeremy Taylor, University of Michigan
- 12:05 p.m. **Asymptotic Theories in Multiple-Sample Semiparametric Density Ratio Models**—❖ Guanhua Lu, University of Maryland; Benjamin Kedem, University of Maryland

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CC-355 C

### ● ⊛ Adaptive Group Sequential Designs in Drug and Vaccine Development—Contributed

Biopharmaceutical Section

*Chair(s): Naitee Ting, Pfizer Inc.*

- 10:35 a.m. **A Hybridized Two-Stage Design in an Ulcerative Colitis Pivotal Trial**—❖ Guohui Liu, Millennium Pharmaceuticals, Inc.; Mingxiu Hu, Millennium Pharmaceuticals, Inc.
- 10:50 a.m. **Multiplicity Adjustment for Testing of Multiple Endpoints in Group Sequential Study Design**—❖ Jianming Wang, Amgen Inc.; Xiang Zhang, Amgen Inc.; Chunlei Ke, Amgen Inc.
- 11:05 a.m. **Self-Designing Multiple Dose Study via Adaptive Randomization**—❖ Lin Wang, sanofi-aventis; Lu Cui, Eisai Medical Research Inc.
- 11:20 a.m. **Estimation Following an Adaptive Group Sequential Test**—❖ Cyrus Mehta, Cytel Inc.
- 11:35 a.m. **A Supremum Log-Rank Test for Adaptive Two-Stage Treatment Strategies and Corresponding Sample Size Formula**—❖ Wentao Feng, University of Pittsburgh; Abdus S. Wahed, University of Pittsburgh
- 11:50 a.m. **Sample Size Re-estimation for Adaptive Sequential Design in Clinical Trials**—❖ Ping Gao, The Medicines Company; James H. Ware, Harvard University
- 12:05 p.m. **On Group Sequential Adaptations in Vaccine Development**—❖ William Wang, Merck & Co., Inc.; Ivan Chan, Merck & Co., Inc.; Joseph Heyse, Merck & Co., Inc.

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CC-255 D

### ● ⊛ General Statistical Issues and the Role of Statisticians in Medical Research—Contributed

Biopharmaceutical Section, Biometrics Section

*Chair(s): Xiaolei Li, GlaxoSmithKline*

- 10:35 a.m. **The Role of the Statistician in Biomedical Research: Scientist, Shoe Clerk, or Hired Gun**—❖ Anthony Segreti, RTI Health Solutions
- 10:50 a.m. **Comparison of Predictive Values of Two Diagnostic Tests Using Conditional Model**—❖ Yoonjin Cho, North Carolina State University; Andrzej S. Kosinski, Duke University
- 11:05 a.m. **Statistical Performance of Cladistic Strategies for Haplotype Grouping in Pharmacogenetics**—❖ Jared Lunceford, Merck & Co., Inc.; Nancy Liu, Merck & Co., Inc.



- 11:20 a.m. **Statistics in Translational Medicine**—❖Dennis Cosmatos, Wyeth; Shein-Chung Chow, Duke University
- 11:35 a.m. **Working for a Medical Device Company versus a Pharmaceutical Firm**—❖Yanping Chang, Medtronic Inc.
- 11:50 a.m. **Assessment of the Placebo Effect in Quality-of-Life Evaluations**—❖Jens Eickhoff, University of Wisconsin-Madison
- 12:05 p.m. **On Errors in Stratifications**—❖Chunlei Ke, Amgen Inc.; Jianming Wang, Amgen Inc.; Xiang Zhang, Amgen Inc.; Qi Jiang, Amgen Inc.; Alan Rong, Amgen Inc.; Steven Snapinn, Amgen Inc.

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CC-355 A

## ● ⊛ Methods for Survival Analysis—Contributed

ENAR, Section on Risk Analysis

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

- 10:35 a.m. **Application of Survival Models to Vaccine Efficacy Evaluation**—❖Barbara Krasnicka, U.S. Food and Drug Administration; Sang Ahnn, U.S. Food and Drug Administration
- 10:50 a.m. **An Adjusted Cumulative Incidence Function Estimator for Unbalanced Groups**—❖Yongyun Zhao, University of Pittsburgh; Chung-Chou H. Chang, University of Pittsburgh
- 11:05 a.m. **Robust Estimation in the Presence of Extreme Censoring**—❖Ruta Bajorunaite, Marquette University; Vytautas Brazauskas, University of Wisconsin-Milwaukee
- 11:20 a.m. **Methods for Cox Regression with Nonclassical Measurement Error in the Covariates with an Application to Nutritional Epidemiology**—❖Pamela A. Shaw, National Institutes of Health; Ross L. Prentice, Fred Hutchinson Cancer Research Center
- 11:35 a.m. **Modeling Associations via Incidence Functions with Bivariate Competing Risks Data**—❖Yu Cheng, University of Pittsburgh; Jason Fine, University of Wisconsin-Madison
- 11:50 a.m. **A Generalized Bivariate Gamma Distribution and Its Characterization**—❖Norou Diawara, Old Dominion University; Mark Carpenter, Auburn University
- 12:05 p.m. **A Taxonomy of Hazards for the Generalized Gamma Distribution**—❖Christopher Cox, Johns Hopkins Bloomberg School of Public Health; Haitao Chu, Johns Hopkins Bloomberg School of Public

Health; Michael Schneider, Johns Hopkins Bloomberg School of Public Health; Alvaro Munoz, Johns Hopkins Bloomberg School of Public Health

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CC-250 B

## ● ⊛ Bayesian Applications in Genomics—Contributed

Section on Bayesian Statistical Science

*Chair(s): Faming Liang, Texas A&M University*

- 10:35 a.m. **Bayesian Pathway Annotation Analysis of Genomewide Expression Profiles**—❖Haige Shen, Duke University; Mike West, Duke University
- 10:50 a.m. **A Bayesian Approach to Pool Multiple Datasets for Periodically Expressed Genes Detection**—❖Xiaodan Fan, Harvard University; Jun S. Liu, Harvard University
- 11:05 a.m. **Bayesian Nonparametric Clustering of Amino Acid Usage Profiles**—❖Daniel Merl, Cornell University
- 11:20 a.m. **A Fast Bayesian Method for eQTL Linkage Analysis in Experimental Crosses**—❖Jinze Liu, The University of North Carolina at Chapel Hill; Fred Wright, The University of North Carolina at Chapel Hill; Fei Zou, The University of North Carolina at Chapel Hill; Yu-Ling Chang, The University of North Carolina at Chapel Hill
- 11:35 a.m. **Bayesian Variogram Modeling in a Metric Space**—❖Yan Zheng, sanofi-aventis; Cavan Reilly, The University of Minnesota
- 11:50 a.m. **A Bayesian Model for Genetic Association with Phenotype Defined in a Limited Range**—❖Ling Wang, Boston University; Vikki Nolan, Boston University; Clinton Baldwin, Boston University; Martin Steinberg, Boston University; Paola Sebastiani, Boston University
- 12:05 p.m. **Two-Way Clustering of DNA Microarray Data Using the Bayesian Plaid Model**—❖Jiajun Gu, Harvard University; Jun Gu, Harvard University



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### ● ⊛ Design and Analysis of Experiments—Contributed

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

*Chair(s): Charmaine Dean, Simon Fraser University*

- 10:35 a.m. **Nested Space-Filling Designs for Experiments with Multiple Levels of Accuracy**—❖ Zhiguang Qian, University of Wisconsin-Madison
- 10:50 a.m. **Mixed Effects Models for Prediction of Tool Wear**—❖ Arzu Onar, St. Jude Children's Research Hospital
- 11:05 a.m. **Geometric Equivalence of Symmetric Factorial Designs**—❖ Tena Katsaounis, The Ohio State University; Angela Dean, The Ohio State University; Cheryl Dingus, Battelle
- 11:20 a.m. **Comparison of Slack Variable and Mixture Approaches for Mixture Experiments**—❖ Greg Piepel, Battelle/PNNL
- 11:35 a.m. **Optimal Foldovers of Minimum Aberration Even Designs**—❖ Robert W. Mee, University of Tennessee; Jihua Xiao, University of Tennessee
- 11:50 a.m. **A Class of Optimal Three-Level Response Surface Designs**—❖ William Li, The University of Minnesota; Xuan Lu, Tsinghua University
- 12:05 p.m. **Projection Properties of Hadamard Designs and Their Application**—❖ Yingfu Li, University of Houston-Clear Lake

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### Estimation—Contributed

IMS, Section on Statistical Computing

*Chair(s): Daryl Pregibon, Google*

- 10:35 a.m. **A Generalized P-Value Approach to Inference on Common Mean**—❖ Pranab K. Mitra, Bristol-Myers Squibb Company
- 10:50 a.m. **Implementation of an Extended Familial Correlation Structure with Quasi-Least Squares**—❖ Jichun Xie, University of Pennsylvania; Justine Shults, University of Pennsylvania
- 11:05 a.m. **On the Asymptotic Properties of the Signed Composite Likelihood Ratio Statistic**—❖ Zi Jin, University of Toronto; Nancy Reid, University of Toronto
- 11:20 a.m. **Preferred Distribution Function for Estimating  $P(Y < X)$** —❖ Mohammed A. Shayib, Prairie View A&M University; Aliakbar Haghighi, Prairie View A&M University

CC-255 F

- 11:35 a.m. **A Stationary Stochastic Approximation Algorithm for Estimation in Generalized Linear Mixed Models**—❖ Sheng-Mao Chang, North Carolina State University; John F. Monahan, North Carolina State University

- 11:50 a.m. **Generalized Estimating Equations for Nonlinear Mixed Effect Model**—❖ Lawrence Lee, University of California, Davis; Jiming Jiang, University of California, Davis

- 12:05 p.m. **Floor Discussion**

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### ● Surveillance, Identity, and Other Issues in Defense Statistics—Contributed

Section on Statisticians in Defense and National Security

*Chair(s): Pranab Banerjee, Space Dynamics Laboratory*

- 10:35 a.m. **Military Requirements Forecasting: A Reliability-Based Approach**—❖ Dennis Mathaisel, Babson College
- 10:50 a.m. **An Optimization Approach for Identity Matching in the Federal Sector**—❖ David Lloyd, MITRE Corporation; Keith Miller, MITRE Corporation
- 11:05 a.m. **Addressing the Problem of Data Scarceness in Risk Analysis with Hierarchical Coordinated Bayesian Models**—❖ Zhenyu Yan, University of Virginia; Yacov Y. Haimes, University of Virginia
- 11:20 a.m. **An Environmental Sampling Model for Combining Judgment and Randomly Placed Samples**—❖ Landon Sego, Pacific Northwest National Laboratory; Anderson Kevin, Pacific Northwest National Laboratory; Brett Matzke, Pacific Northwest National Laboratory; Brent Pulsipher, Pacific Northwest National Laboratory; William K. Sieber, National Institute for Occupational Safety and Health; Stanley Shulman, National Institute for Occupational Safety and Health; Matt Gillen, National Institute for Occupational Safety and Health; James Bennett, National Institute for Occupational Safety and Health; Wilson John, Pacific Northwest National Laboratory; Richard Gilbert, Pacific Northwest National Laboratory
- 11:35 a.m. **Unveiling Significant Patterns in High-Speed Networks**—❖ Jin Cao, Bell Labs; Tian Bu, Bell Labs; Aiyu Chen, Alcatel-Lucent; Patrick Lee, Columbia University
- 11:50 a.m. **Floor Discussion**

CC-251 D

## 425 CC-250 D Modeling and Evaluating Customer Behavior—Contributed

Section on Statistics and Marketing

Chair(s): Peter Boatwright, Carnegie Mellon University

- 10:35 a.m. **A Bayesian Approach for the Multidimensional Scaling of Ordered Preference Data**—♦ Duncan K.H. Fong, The Pennsylvania State University
- 10:50 a.m. **Quantifying the Indirect Effects of a Marketing Contact**—♦ Dingxi Qiu, Northwestern University; Edward C. Malthouse, Northwestern University; Ajit Tamhane, Northwestern University
- 11:05 a.m. **Development of Personal Proposals from Financial Institutes During Interactive Real-Time Browsing of Potential Clients**—♦ Hye-Kyoung Kim, Intellidyn Corp.; Dmitri Kuznetsov, Intellidyn Corp.; Peter E. Harvey, Intellidyn Corp.
- 11:20 a.m. **Channel Partner Runoff Detection for Retention**—♦ Wei Chai, GE Global Research; Deniz Senturk-Doganaksoy, GE Global Research; Kareem Aggour, GE Global Research; James Williams, GE Global Research
- 11:35 a.m. **Dynamics of Opinion Spreading in Marketing**—♦ Dmitri Kuznetsov, Intellidyn Corp.
- 11:50 a.m. **On Models for Identifying Likely Lapsers**—♦ Enping Mai, Syracuse University; Raja Velu, Syracuse University
- 12:05 p.m. **Evaluating Database Marketing Models: More Than Meets the Eye**—♦ Samuel Koslowsky, Harte Hanks Analytics

## 426 CC-254 C Correlated Data Methods and Analyses in Epidemiology—Contributed

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

Chair(s): Alula Hadgu, Centers for Disease Control and Prevention

- 10:35 a.m. **Analysis of Smoking Cessation Patterns Using a Stochastic Mixed Effects Model with a Latent Cured State**—♦ Sheng Luo, The Johns Hopkins University; Ciprian M. Crainiceanu, The Johns Hopkins University; Thomas A. Louis, The Johns Hopkins University; Nilanjan Chatterjee, National Cancer Institute
- 10:50 a.m. **Assessing Baseline and Post-Baseline Effects in Repeated Measures Data Analyses: An Example Using Smoking Cessation Data**—♦ Xiaolei

Zhou, RTI International; Beth Sherrill, RTI International; Jianmin Wang, RTI Health Solutions

- 11:05 a.m. **Systolic Blood Pressure in Childhood Predicts Hypertension and Metabolic Syndrome Later in Life**—♦ Shumei Sun, Wright State University; Ruohong Liang, Wright State University
- 11:20 a.m. **Modeling Correlated Longitudinal Processes with Some Processes Partially Observed**—♦ Qilu Yu, The Johns Hopkins University; Laurel Beckett, University of California, Davis; David Bennett, Rush University; Robert Wilson, Rush University
- 11:35 a.m. **Assessing Trend in Longitudinal Data**—♦ Shailendra Banerjee, Centers for Disease Control and Prevention
- 11:50 a.m. **Regression Analysis of Multivariate Panel Count Data**—♦ Xin He, University of Missouri-Columbia; Xingwei Tong, Beijing Normal University; Jianguo Sun, University of Missouri-Columbia; Richard J. Cook, University of Waterloo
- 12:05 p.m. **Analysis of Recurrent Event Data in Case-Crossover Studies**—♦ Xianghua Luo, The University of Minnesota; Chiung-Yu Huang, National Institutes of Health; Gary S. Sorock, Johns Hopkins Bloomberg School of Public Health

## 427 CC-155 C Topics in Confidence Intervals and Inference—Contributed

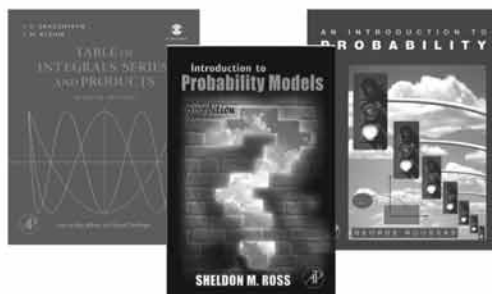
Section on Survey Research Methods

Chair(s): Jill Dever, University of Maryland

- 10:35 a.m. **Parametric Bootstrap Confidence Interval in a Small-Area Estimation Problem**—♦ Huilin Li, University of Maryland; Partha Lahiri, University of Maryland
- 10:50 a.m. **Setting Precision Requirements for Estimating Proportions**—♦ James R. Chromy, RTI International
- 11:05 a.m. **Confidence Intervals for Statistics for Categorical Variables from Complex Samples**—♦ Valerie Hsu, Westat; Keith Rust, Westat
- 11:20 a.m. **One-Sided Coverage Intervals for the Extreme Binomial Proportion Under Complex Sample Design**—♦ Yan Liu, Internal Revenue Service; Phillip S. Kott, USDA National Agricultural Statistics Service

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- 11:35 a.m. **Investigation of Empirical Bayesian Confidence Intervals for Expenditure Data in the Medical Expenditure Panel Survey**—❖ Robert Baskin, Agency for Healthcare Research and Quality; Malay Ghosh, University of Florida
- 11:50 a.m. **Tailoring Survey Data Products and Reliability Criteria To Best Match Customers' Revenue Needs**—❖ Mandy Webb, Arbitron Inc.; Alan R. Tupek, Arbitron, Inc.
- 12:05 p.m. **Properties of the Combined Ratio Estimator and a Best Linear Unbiased Estimator When Design Control Is Problematic**—❖ Stephen Woodruff, Retired

## 428 CC-155 E Analysis and Disclosure of Survey Data—Contributed

Section on Survey Research Methods

*Chair(s): Karol Krotki, RTI International*

- 10:35 a.m. **Multiyear Estimation for a Single Stratum from the Continuous National Health and Nutrition Examination Survey (NHANES)**—❖ R. Lee Harding, Westat; Jay Clark, Westat; Jill M. Montaquila, Westat
- 10:50 a.m. **The Effectiveness of Stepwise Discriminate Analysis as a Post Hoc Procedure to a Significant Manova**—❖ Erik Heiny, Western Carolina University
- 11:05 a.m. **Researcher Access to Microdata: Measuring the Impact of Different Access Protocols on Data Utility**—❖ Stephanie Shipp, National Institute of Standards and Technology; Julia Lane, NORC at the University of Chicago
- 11:20 a.m. **Measuring Privacy Loss Due to Data Release: A New Perspective**—❖ Lei Liu, Yale University; Heping Zhang, Yale University
- 11:35 a.m. **The Use of Propensity Score Matching Methods in Mixed Mode Studies**—❖ John Bremer, Harris Interactive; Kerri Miller, Harris Interactive
- 11:50 a.m. **Practical Considerations in Applying the pq-Rule for Primary Disclosure Suppressions**—❖ Meghan O'Malley, Bureau of Labor Statistics; Lawrence Ernst, Bureau of Labor Statistics
- 12:05 p.m. **Floor Discussion**

## Speaker with Lunch 12:30 p.m.–1:50 p.m.

### 429 CC-Ballroom D Section on Health Policy Statistics Speaker with Lunch (fee event)—Speaker with Lunch

Section on Health Policy Statistics

*Organizer(s): Anirban Basu, The University of Chicago*

- WL09 **Importance of Using Cost-Effectiveness Analysis To Inform Health Policy in the United States**—❖ David Meltzer, The University of Chicago

## Roundtables with Lunch 12:30 p.m.–1:50 p.m.

### 430 CC-Ballroom A Biopharmaceutical Section Roundtables with Lunch (fee event)

Biopharmaceutical Section

*Organizer(s): Kaylan Ghosh, Visitation*

- WL10 **Incomplete Data in Longitudinal Studies**—❖ Geert Molenberghs, Hasselt University
- WL11 **Clinical Trial Simulation: Beyond Statistics**—❖ Bret Musser, Merck & Co., Inc.
- WL12 **Statistical Concerns and Methodology Regarding Radiographic Data in Rheumatoid Arthritis**—❖ Lifeng Zhou, Amgen Inc.
- WL13 **Design-Based Multiplicity Adjusting Strategies in Late-Phase Clinical Trials**—❖ Jianjun Li, Merck & Co., Inc.

### 431 CC-Ballroom A Business and Economics Statistics Section Roundtables with Lunch (fee event)

Business and Economics Statistics Section

*Organizer(s): Clifford M. Hurvich, New York University*

- WL14 **Model Selection**—❖ David Findley, U.S. Census Bureau
- WL15 **Statistical Analysis of Large Panels of Economic Data**—❖ Serena Ng, University of Michigan

## 432 CC-Ballroom A Section on Bayesian Statistical Science Roundtable with Lunch (fee event)

Section on Bayesian Statistical Science

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

- WL16 The Quasi-Bayesian Approach to Risk Management at the Department of Homeland Security—❖David Banks, Duke University

## 433 CC-Ballroom A Section on Physical and Engineering Sciences Roundtables with Lunch (fee event)

Section on Physical and Engineering Sciences

Organizer(s): Randall Tobias, SAS Institute Inc.

- WL17 Verifying Computer Experiments with Physical Experiments—❖William Notz, The Ohio State University
- WL18 Publishing an Industrial Case Study: Advice for Would-Be Authors—❖Robert Rodriguez, SAS Institute Inc.

## 434 CC-Ballroom A Section on Quality and Productivity Roundtables with Lunch (fee event)

Section on Quality and Productivity

Organizer(s): James Williams, GE Global Research

- WL19 Communicating with Nonstatisticians—❖Mark Bailey, SAS Institute Inc.
- WL20 Risk-Adjusted Charts in Health-Care Monitoring—❖Landon Sego, Pacific Northwest National Laboratory

## 435 CC-Ballroom C Section on Statistical Consulting Roundtable with Lunch (fee event)

Section on Statistical Consulting

Organizer(s): James Grady, The University of Texas Medical Branch

- WL21 Recognizing and Resolving Breakdowns in Your Consulting Practice—❖Doug Zahn, Zahn and Associates

## 436 CC-Ballroom C Section on Statistical Education Roundtables with Lunch (fee event)

Section on Statistical Education

Organizer(s): Jacqueline Miller, The Ohio State University

- WL22 User-Friendly Jargon for Statistics—❖Larry Weldon, Simon Fraser University

- WL23 Statistics and Research Design: Oil and Vinegar?—❖Seth Hirshorn, University of Michigan-Dearborn
- WL24 Academic Integrity in a High-Tech Classroom—❖John McKenzie, Babson College

## 437 CC-Ballroom C Section on Statistical Graphics Roundtable with Lunch (fee event)

Section on Statistical Graphics

Organizer(s): David Hunter, The Pennsylvania State University

- WL25 Visualizing Model and Parameter Uncertainty—❖David W. Scott, Rice University

## 438 CC-Ballroom C Section on Statisticians in Defense and National Security Roundtable with Lunch (fee event)

Section on Statisticians in Defense and National Security

Organizer(s): David Marchette, Naval Surface Warfare Center

- WL26 Text Data Mining for Defense Applications—❖Jeffrey Solka, Naval Surface Warfare Center

## 439 CC-Ballroom C Section on Statistics in Epidemiology Roundtable with Lunch (fee event)

Section on Statistics in Epidemiology

Organizer(s): William E. Barlow, Cancer Research and Biostatistics

- WL27 Longitudinal Causal Modeling—❖James Robins, Harvard School of Public Health

## 440 CC-Ballroom C Section on Survey Research Methods Roundtable with Lunch (fee event)

Section on Survey Research Methods

Organizer(s): David Marker, Westat

- WL28 Auditing Election Results—❖Wendy Rotz, Ernst & Young

## 441 CC-Ballroom C Social Statistics Section Roundtable with Lunch (fee event)

Social Statistics Section

Organizer(s): Jana Asher, Carnegie Mellon University

- WL29 Media Coverage Regarding Data on Mortality in Iraq—❖Leslie Roberts, Columbia Mailman School of Public Health; Gilbert Burnham, The Johns Hopkins University; Shannon Doocy, The Johns Hopkins University



## 442 CC-Ballroom C Statistical Society of Canada Roundtable with Lunch (fee event)

SSC

Organizer(s): X. Joan Hu, Simon Fraser University

WL30 Fifty Years of Empirical Bayes/Shrinkage Inference: Past, Present, and Future Outlook—❖ S. Ejaz Ahmed, University of Windsor

## Special Presentation 2:00 p.m.–3:50 p.m.

## 443 CC-Ballroom B ● Late-Breaking Session 2: War and Death in Iraq—Other

ASA, ENAR, SSC, WNAR, IMS, Section on Survey Research Methods, Section on Statisticians in Defense and National Security, Social Statistics Section

Organizer(s): Mathew R. Marler, University of California, Irvine

Chair(s): Stephen Fienberg, Carnegie Mellon University

- 2:05 p.m. Results of a Survey Estimating Mortality Before and After the 2003 Invasion of Iraq—❖ Leslie Roberts, Columbia Mailman School of Public Health
- 2:55 p.m. Disc: Jana Asher, Carnegie Mellon University
- 3:15 p.m. Disc: Fritz Scheuren, NORC at the University of Chicago
- 3:35 p.m. Floor Discussion

## Invited Sessions 2:00 p.m.–3:50 p.m.

## 444 CC-251 A ● Recent Advances in Causal Modeling—Invited

ENAR, Section on Statistics in Epidemiology, Section on Health Policy Statistics, Biometrics Section, Section on Teaching Statistics in the Health Sciences, WNAR

Organizer(s): Jason Roy, Geisinger Health System

Chair(s): Jason Roy, Geisinger Health System

- 2:05 p.m. Mediation Analysis Using Random Assignment Interacted with Baseline Covariates as Instrumental Variables—❖ Dylan Small, University of Pennsylvania
- 2:35 p.m. Inference in Randomly Censored Regression Models Using Conditional Moment Inequalities—

❖ Shakeeb Khan, Duke University

- 3:05 p.m. Causal Comparisons in Randomized Trials of Two Active Treatments—Jason Roy, Geisinger Health System; ❖ Joseph W. Hogan, Brown University
- 3:35 p.m. Floor Discussion

## 445 CC-355 B ● Recent Advances in Noninferiority Trials—Invited

Biopharmaceutical Section, ENAR, Biometrics Section, WNAR

Organizer(s): Brian L. Wiens, Gilead Colorado

Chair(s): Brian L. Wiens, Gilead Colorado

- 2:05 p.m. Early Developments in Clinical Equivalence and Similarity Trials—❖ William C. Blackwelder, University of Maryland, Baltimore County
- 2:30 p.m. The Establishment of Efficacy on the Basis of Noninferiority Trials: Updating Our Approach—❖ Steven Snapinn, Amgen Inc.
- 2:55 p.m. Bayesian Perspectives on the Issue of Noninferiority—❖ Andrew P. Grieve, King's College
- 3:20 p.m. Disc: Susan S. Ellenberg, University of Pennsylvania
- 3:40 p.m. Floor Discussion

## 446 CC-155 E ● Recent Advances in Statistical Learning: Modern Regularization Methods and Semisupervised Learning—Invited

Section on Statistical Computing, Section on Nonparametric Statistics

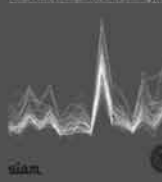
Organizer(s): Hui Zou, The University of Minnesota

Chair(s): Jinchi Lv, Princeton University

- 2:05 p.m. Efficient Large-Margin Semisupervised Learning—Junhui Wang, Columbia University; ❖ Xiaotong Shen, The University of Minnesota
- 2:35 p.m. Infinite Dimensional Lasso—❖ Nathan Srebro, Toyota Technological Institute at Chicago; Saharon Rosset, IBM T.J. Watson Research Center; Ji Zhu, University of Michigan; Grzegorz Swirszcz, IBM T.J. Watson Research Center
- 3:05 p.m. Grouped and Hierarchical Model Selection through Composite Absolute Penalties—Peng Zhao, University of California, Berkeley; ❖ Guilherme V. Rocha, University of California, Berkeley; Bin Yu, University of California, Berkeley
- 3:35 p.m. Floor Discussion

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447

CC-150 D-F

## ● Risk Analysis in National Defense—Invited

Section on Risk Analysis, Section on Statisticians in Defense and National Security, Section on Physical and Engineering Sciences

Organizer(s): David Banks, Duke University

Chair(s): David Banks, Duke University

- 2:05 p.m. Risk Estimation and National Security: Introduction and Overview—❖A. John Bailer, Miami University
- 2:30 p.m. Biosurveillance and the BioSense Program—❖Henry Rolka, Centers for Disease Control and Prevention
- 2:55 p.m. Risk Analysis at Los Alamos National Laboratory—❖Alyson G. Wilson, Los Alamos National Laboratory
- 3:20 p.m. Disc: Ed Melnick, New York University
- 3:40 p.m. Floor Discussion

448

CC-150 A-C

## ● ☆ Preventing, Correcting, and Measuring Overcoverage in Censuses—Invited

SSC

Organizer(s): David Dolson, Statistics Canada

Chair(s): David Dolson, Statistics Canada

- 2:05 p.m. Preventing and Correcting Coverage Errors in the United States Decennial Census—❖David Sheppard, U.S. Census Bureau
- 2:30 p.m. Unduplication in the 2010 United States Decennial Census—❖Robin A. Pennington, U.S. Census Bureau
- 2:55 p.m. Measuring Person Duplication: The 2006 Canadian Census Overcoverage Study—❖Heather Farr, Statistics Canada; José Morel, Statistics Canada
- 3:20 p.m. Overcoverage in the 2011 UK Census—❖Owen Abbott, Office for National Statistics; James Brown, University of Southampton
- 3:45 p.m. Floor Discussion

449

CC-254 B

## ● ☆ Sparse Inference and Large-Scale Multiple Comparisons—Invited

IMS, Section on Nonparametric Statistics

Organizer(s): Jiashun Jin, Purdue University

Chair(s): Bruce Craig, Purdue University

- 2:05 p.m. Maxima of Discretely Sampled Random Fields, with an Application to 'Bubbles'—❖Keith J. Worsley, McGill University; Jonathan E. Taylor,

University of Montréal

- 2:35 p.m. Network Kriging—❖Eric D. Kolaczyk, Boston University; David Chua, Boston University; Mark Crovella, Boston University
- 3:05 p.m. Bayes and Empirical Bayes Approaches to Controlling the FDR—❖Cun-Hui Zhang, Rutgers University; Weihua Tang, Rutgers University
- 3:35 p.m. Floor Discussion

450

CC-155 B

## ● ☆ JASA, Applications and Case Studies Invited Session—Invited

JASA, Applications and Case Studies, General Methodology

Organizer(s): David Banks, Duke University

Chair(s): Robert B. Lund, Clemson University

- 2:05 p.m. Subjective Likelihood for the Assessment of Trends in the Ocean's Mixed-Layer Depth—❖Michael Lavine, Duke University; Ana Rappold, Duke University; Susan Lozier, Duke University
- 3:10 p.m. Disc: C. Shane Reese, Brigham Young University
- 3:30 p.m. Floor Discussion

451

CC-155 C

## ☆ Increasing Statistical Literacy in Nonstatistical Professions—Invited

Committee on Outreach Education, Section on Statisticians in Defense and National Security

Organizer(s): Anna Nevius, U.S. Food and Drug Administration

Chair(s): Owen Devine, Centers for Disease Control and Prevention

- 2:05 p.m. Teaching Medical Statistics—❖Mary A. Foulkes, George Washington University
- 2:30 p.m. Lessons Learned in Teaching a Statistics Workshop—❖Jeffrey Solka, Naval Surface Warfare Center; Daniel Carr, George Mason University
- 2:55 p.m. Statistics in a Legal Context—❖Mary W. Gray, American University
- 3:20 p.m. Disc: Wendy Martinez, Office of Naval Research
- 3:40 p.m. Floor Discussion

**452****Adaptive Monte Carlo Methods—Invited**

Section on Bayesian Statistical Science, ENAR

*Organizer(s): Antonietta Mira, University of Insubria**Chair(s): Antonietta Mira, University of Insubria*

- 2:05 p.m. **Adaptive Independent Metropolis-Hastings Using Normal Mixtures**—❖ Robert Kohn, University of New South Wales; Paolo Giordani, Bank of Sweden
- 2:25 p.m. **Combining Adaptation with MCMC Sampling Methods**—❖ Heikki Haario, Lappeenranta University of Technology; Antti Solonen, Lappeenranta University of Technology
- 2:45 p.m. **Adaptive MCMC, Intractable Likelihood Functions, and Phylogenetic Inference**—❖ Yves F. Atchade, University of Michigan
- 3:05 p.m. **Adaptive Population Monte Carlo**—❖ Christian P. Robert, Université Paris Dauphine

**CC-255 E**

3:25 p.m.

**Recent Advances in Monte Carlo Methods—**

❖ Christophe Andrieu, University of Bristol

3:45 p.m.

**Floor Discussion****453****Medallion Lecture V—Invited**

IMS, General Methodology, Biometrics Section

*Organizer(s): Tony Cai, University of Pennsylvania**Chair(s): Xihong Lin, Harvard School of Public Health*

2:10 p.m.

**Joint Modeling of Longitudinal and Survival Data—**

❖ Jane-Ling Wang, University of California, Davis

3:00 p.m.

Disc: Jeremy Taylor, University of Michigan

3:20 p.m.

Disc: Robin Henderson, Newcastle University

3:40 p.m.

**Floor Discussion****CC-355 E**

See You in Denver  
for JSM 2008!



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CC-150 G

## ● ⊗ Multicriteria Prioritization and Ranking with Partial Order Without Compositing Multiple Indicators into an Index in Social, Environmental, and Infrastructure Work—Invited

Environmental and Ecological Statistics, Section on Statistics and the Environment

Organizer(s): Ganapati P. Patil, The Pennsylvania State University

Chair(s): Ganapati P. Patil, The Pennsylvania State University

- 2:05 p.m. **Multicriteria Prioritization, Partial Order, and Hasse Diagrams in Environmental Sciences and Chemistry**—❖ Rainer Bruggemann, Leibniz Institute of Freshwater Ecology and Inland Fisheries
- 2:30 p.m. **Exploring Partial Order of European Countries**—❖ Paola Annoni, University of Milan; Rainer Bruggemann, Leibniz Institute of Freshwater Ecology and Inland Fisheries
- 2:55 p.m. **Unmasking Weight Camouflage of a Composite Index Based on Multiple Indicators**—❖ K. Sham Bhat, The Pennsylvania State University; Ganapati P. Patil, The Pennsylvania State University
- 3:20 p.m. **Disc: N. Phillip Ross, Radiation Effects Research Foundation**
- 3:40 p.m. **Floor Discussion**

455

CC-250 A

## ● ⊗ Web Panel Surveys: A Solution to Declining Response Rates?—Invited

Section on Survey Research Methods

Organizer(s): Karol Krotki, RTI International

Chair(s): Mansour Fahimi, RTI International

- 2:05 p.m. **Nonresponse Bias in Two Methods of Panel Recruitment**—❖ Charles DiSogra, Knowledge Networks, Inc.; Daniel Slotwiner, Knowledge Networks, Inc.; Sarah Clinton, Knowledge Networks, Inc.; Elisa Chan, Knowledge Networks, Inc.; Erlina Hendarwan, Knowledge Networks, Inc.
- 2:30 p.m. **Combining RDD and Web Panel Surveys**—❖ Karol Krotki, RTI International
- 2:55 p.m. **Sample Matching for Web Surveys: Theory and Application**—❖ Douglas Rivers, Stanford University
- 3:20 p.m. **Disc: Robert Santos, The Urban Institute**
- 3:30 p.m. **Disc: John Bremer, Harris Interactive**
- 3:40 p.m. **Floor Discussion**

## Topic-Contributed Sessions

2:00 p.m.–3:50 p.m.

456

CC-155 A

## ● Statistical Graphics for Analysis of Drug Safety and Efficacy—Topic-Contributed

Section on Statistical Graphics, Section on Risk Analysis, WNAR

Organizer(s): Michael O'Connell, Insightful Corporation

Chair(s): Stephen Kaluzny, Insightful Corporation

- 2:05 p.m. **Statistical and Graphical Analysis of Adverse Event Counts in Clinical Trials**—❖ Michael O'Connell, Insightful Corporation
- 2:30 p.m. **Using Graphics To Discover and Explore**—❖ Julia Wang, Johnson & Johnson PRD
- 2:45 p.m. **Statistical Graphics for the Analysis of Safety and Efficacy Data from Clinical Trials**—❖ Ohad Amit, GlaxoSmithKline
- 3:05 p.m. **Graphical Analyses of Clinical Trial Safety Data**—Kefei Zhou, Amgen Inc.; ❖ Haijun Ma, Amgen Inc.; Hong A. Xia, Amgen Inc.; Matthew Austin, Amgen Inc.; George Li, Amgen Inc.; Michael O'Connell, Insightful Corporation
- 3:25 p.m. **Design of Statistical Graphics for Clinical Data**—❖ Richard M. Heiberger, Temple University
- 3:45 p.m. **Floor Discussion**

457

CC-355 D

## ● ⊗ Phase I Trials in Cancer—Topic-Contributed

Biometrics Section, WNAR, Biopharmaceutical Section, ENAR

Organizer(s): Terry Hyslop, Thomas Jefferson University

Chair(s): Terry Hyslop, Thomas Jefferson University

- 2:05 p.m. **New Phase I Trial Designs for Combinations of Two Agents**—Shenghua (Kelly) Fan, California State University, East Bay; Alan P. Venook, University of California, San Francisco; ❖ Ying Lu, University of California, San Francisco
- 2:25 p.m. **An Application of the Time-to-Event Continual Reassessment Method: Dose Escalation in Patients with Lymphoma Undergoing Chemotherapy over an Extended Period**—❖ Ken Cheung, Columbia University
- 2:45 p.m. **A Hierarchical Bayesian Design for Phase I Trials of Novel Drug Combinations**—❖ Thomas M. Braun, University of Michigan



- 3:05 p.m. **An Adaptive Bayesian Approach to Incorporating PG Information in Phase I Trials**—❖ Meihua Wang, University of Pittsburgh; Roger Day, University of Pittsburgh
- 3:25 p.m. **Toward a Benchmark for Sequential Phase I Cancer Trial Designs**—❖ Jay Bartroff, University of Southern California; Tze Leung Lai, Stanford University
- 3:45 p.m. **Floor Discussion**

**458****CC-250 D**

### ● ⊛ Noninferiority Trial Designs in Medical Devices—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, WNAR, ENAR

*Organizer(s): David Snead, Cordis, a Johnson & Johnson Company**Chair(s): Dennis King, STATKING Consulting, Inc.*

- 2:05 p.m. **Statistics and Clinical, and Regulatory Considerations in the Selection of an Offset for Noninferiority Designs**—❖ Philip Lavin, Averion International Corp.
- 2:25 p.m. **Considerations for the Development of a Set of Noninferiority Trials for a Second-Generation Drug Eluting Stent**—❖ Joe Bero, Boston Scientific Corporation
- 2:45 p.m. **A Noninferiority Trial Utilizing a Closed Hierarchical Testing Procedure**—❖ Peggy Pereda, Boston Scientific Corporation; Eric Bass, Boston Scientific Corporation; Peter Lam, Boston Scientific Corporation
- 3:05 p.m. **Bayesian Noninferiority Trial Design Using Hierarchical Models**—❖ Yongyi Yu, Boston Scientific Corporation.; Frank Zhou, Boston Scientific Corporation; Scott Wehrenberg, Boston Scientific Corporation; Ming-Hui Chen, University of Connecticut
- 3:25 p.m. **Comparison Between Hierarchical Model and Power Prior Approach in a Bayesian Noninferiority Trial Design**—❖ Peter Lam, Boston Scientific Corporation; Alan Yu, Boston Scientific Corporation; Ming-Hui Chen, University of Connecticut
- 3:45 p.m. **Floor Discussion**

**459****CC-254 C**

### Shrinkage Theory and Its Applications—Topic-Contributed

IMS, Section on Nonparametric Statistics

*Organizer(s): Jing Qiu, University of Missouri-Columbia**Chair(s): Chong Wang, Cornell University*

- 2:05 p.m. **Accounting for Selection Bias in the Estimation of Fold Change in Microarray Experiments**—❖ George Wright, National Institutes of Health
- 2:25 p.m. **Objective Bayesian Analysis for Estimating the KL Divergence Between Two Normal Populations with Common Covariance Matrix**—❖ Zhonggai Li, Virginia Polytechnic Institute and State University; Dongchu Sun, University of Missouri-Columbia
- 2:45 p.m. **Optimal Tests Shrinking Both Means and Variances Applicable to Microarray Data Analysis**—❖ Peng Liu, Iowa State University; Gene J. T. Hwang, Cornell University
- 3:05 p.m. **Hard and Soft Parameter Shrinkage in Microarray Data Analysis**—❖ Gordon Smyth, Walter & Eliza Hall Institute
- 3:25 p.m. **Double Shrinkage Empirical Bayesian Confidence Intervals for Multiple Parameters When the Variances Are Unequal and Unknown**—❖ Jing Qiu, University of Missouri-Columbia; Gene J. T. Hwang, Cornell University; Zhigen Zhao, Cornell University
- 4:45 p.m. **Floor Discussion**

**460****CC-355 F**

### Monte Carlo Methods and Their Applications—Topic-Contributed

IMS, General Methodology

*Organizer(s): Yuguo Chen, University of Illinois at Urbana-Champaign**Chair(s): Yuguo Chen, University of Illinois at Urbana-Champaign*

- 2:05 p.m. **Improving SAMC Using Smoothing Methods: Theory and Applications**—❖ Faming Liang, Texas A&M University
- 2:25 p.m. **Sampling Issues for Largish Tables**—❖ Ian Dinwoodie, Duke University; Yuguo Chen, University of Illinois at Urbana-Champaign
- 2:45 p.m. **Ensemble Sampling**—❖ Hedibert Lopes, The University of Chicago Graduate School of Business; Nicholas Polson, The University of Chicago Graduate School of Business

- 3:05 p.m. **Interweaving Data Augmentation Schemes for Faster MCMC**—❖ Yaming Yu, University of California, Irvine
- 3:25 p.m. **The Evolutionary Forest**—❖ Leman Scotland, Duke University
- 3:45 p.m. **Floor Discussion**

**461**

**CC-257**

## ● ⊛ The Current Trend of Bayesian Model Comparison and Variable Selection—Topic-Contributed

Section on Bayesian Statistical Science, ENAR

*Organizer(s):* Ming-Hui Chen, University of Connecticut

*Chair(s):* Carlos Carvalho, Duke University

- 2:05 p.m. **Objective Bayesian Model Selection for a Linear Mixed Model**—❖ Dongchu Sun, University of Missouri-Columbia
- 2:25 p.m. **An Extended BIC for Model Selection**—❖ Surajit Ray, Boston University; James Berger, Duke University; Susie Bayarri, University of Valencia; Woncheol Jang, University of Georgia; Luis R. Pericchi, University of Puerto Rico, San Juan
- 2:45 p.m. **Random Effects Selection with Nonparametric Settings**—❖ Bo Cai, University of South Carolina; David B. Dunson, National Institute of Environmental Health Sciences
- 3:05 p.m. **Objective Bayesian Variable Selection for Logistic Regression Models with Jeffreys' Prior**—❖ Ming-Hui Chen, University of Connecticut; Joseph G. Ibrahim, The University of North Carolina at Chapel Hill; Sung Duk Kim, University of Connecticut
- 3:25 p.m. **Disc:** Dipak Dey, University of Connecticut
- 3:45 p.m. **Floor Discussion**

**462**

**CC-251 D**

## ⊛ Reducing Disclosure Risk Through Statistical Methods and Administrative Procedures—Topic-Contributed

Section on Government Statistics, Section on Health Policy Statistics, Social Statistics Section

*Organizer(s):* Alvan Zarate, National Center for Health Statistics

*Chair(s):* Alvan Zarate, National Center for Health Statistics

- 2:05 p.m. **Comparative Evaluation of Four Sensitive Tabular Data Protection Methods Using a Real-Life Table Structure of Complex Hierarchies and**

**Links**—❖ Ramesh Dandekar, Energy Information Administration

- 2:25 p.m. **Implementing a Portfolio Approach to the Protection of Confidential Data**—❖ Tim Mulcahy, NORC at the University of Chicago; Julia Lane, NORC at the University of Chicago

- 2:45 p.m. **Matching NCES Data to External Databases To Assess Disclosure Risk**—Elizabeth Steiner, Carnegie Mellon University; ❖ J. Neil Russell, National Center for Education Statistics; Marilyn Seastrom, National Center for Education Statistics

- 3:05 p.m. **Analytically Valid Microdata Files and Reidentification**—❖ William Winkler, U.S. Census Bureau

- 3:25 p.m. **Measuring Disclosure Risk and an Examination of the Possibilities of Using Synthetic Data in the Individual Income Tax Return Public Use File**—❖ Michael Weber, Internal Revenue Service; John Czajka, Mathematica Policy Research, Inc.; Sonya Vartivarian, Mathematica Policy Research, Inc.

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

**463**

**CC-251 F**

## Nonparametric and Semiparametric Methods in Brain Imaging Studies—Topic-Contributed

Section on Nonparametric Statistics, International Indian Statistical Association

*Organizer(s):* R. Todd Ogden, Columbia University

*Chair(s):* Ranjan Maitra, Iowa State University

- 2:05 p.m. **Multisubject Independent Component Analysis Using a Maximum Likelihood Approach**—❖ Ying Guo, Emory University

- 2:25 p.m. **Detecting Activations in fMRI Experiments with Maximum Cross-Correlation Statistics**—❖ Kinfemichael Gedif, Southern Methodist University; William R. Schucany, Southern Methodist University; Richard Gunst, Southern Methodist University; Wayne Woodward, Southern Methodist University; Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas; Patrick Carmack, The University of Texas Southwestern Medical Center at Dallas; Qihua Lin, The University of Texas Southwestern Medical Center at Dallas

- 2:45 p.m. **Thresholding Methods Applied on fMRI Data—**  
❖ Martina Pavlicova, Columbia University
- 3:05 p.m. **A Bootstrap Resampling Approach: Tests of Significance on Brain Imaging Data—**❖ Chung Chang, Columbia University; R. Todd Ogden, Columbia University
- 3:25 p.m. **Bayesian Hierarchical Spatiotemporal Models for fMRI Data—**❖ Qihua Lin, The University of Texas Southwestern Medical Center at Dallas; Richard Gunst, Southern Methodist University; Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas; Patrick Carmack, The University of Texas Southwestern Medical Center at Dallas; William R. Schucany, Southern Methodist University
- 3:45 p.m. **Floor Discussion**

#### 464 CC-155 F ● ⊛ **Dimension Reduction That Informs Science—Topic-Contributed**

Section on Physical and Engineering Sciences

*Organizer(s): Jacqueline M. Hughes-Oliver, North Carolina State University*

*Chair(s): Jacqueline M. Hughes-Oliver, North Carolina State University*

- 2:05 p.m. **Model Selection and Estimation for Semiparametric Stochastic Mixed Models for Longitudinal Data—**❖ Xiao Ni, North Carolina State University; Daowen Zhang, North Carolina State University; Hao Zhang, North Carolina State University
- 2:25 p.m. **Shrinkage Inverse Regression for Model-Free Variable Selection—**❖ Lexin Li, North Carolina State University; Howard D. Bondell, North Carolina State University
- 2:45 p.m. **Gene Expression Data Analysis Using the Gene Ontology—**❖ Jiajun Liu, North Carolina State University; Jacqueline M. Hughes-Oliver, North Carolina State University; J. Alan Menius, GlaxoSmithKline
- 3:05 p.m. **Recent Directions in Predictor Selection—**❖ Jessica Kraker, University of Wisconsin-Eau Claire; Douglas M. Hawkins, The University of Minnesota
- 3:25 p.m. **Dimension Reduction in Systems Biology—**❖ Lei Zhu, GlaxoSmithKline; Kwan Lee, GlaxoSmithKline; Amit Bhattacharyya, GlaxoSmithKline; Edit Kurali, GlaxoSmithKline;

Amber Anderson, GlaxoSmithKline

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

#### 465 CC-255 F **Innovative Ideas for Teaching Statistics—Topic-Contributed**

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

*Organizer(s): Patti Collings, Brigham Young University*

*Chair(s): Kirk Anderson, Grand Valley State University*

- 2:05 p.m. **Teaching Introductory Statistics with a Blended Method Approach—**❖ Leonard Gaines, Empire State Development
- 2:25 p.m. **Teaching Introductory Statistics with Constraints and High Expectations—**❖ William Seaver, University of Tennessee
- 2:45 p.m. **To Service Learn (SL) or Not To Service Learn?—**❖ Amy Phelps, Duquesne University
- 3:05 p.m. **Engaging Students in Elementary Statistics—**❖ Greg Knofczynski, Armstrong Atlantic State University; Paul Hadavas, Armstrong Atlantic State University; Lorrie Hoffman, Armstrong Atlantic State University
- 3:25 p.m. **Enhancing the Teaching of Statistics with Technology Using the Statistics Online Computational Resource (SOCR)—**❖ Nicolas Christou, University of California, Los Angeles; Ivo D. Dinov, University of California, Los Angeles; Juana Sanchez, University of California, Los Angeles
- 3:45 p.m. **Floor Discussion**

#### 466 CC-251 B ● ⊛ **Computationally Intensive Methods in AIDS Research II—Topic-Contributed**

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

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

*Chair(s): Florin Vaida, University of California, San Diego*

- 2:05 p.m. **Nonparametric Tests with Application to RNA Viral Load Decline—**❖ Susanne May, University of California, San Diego; Victor De Gruttola, Harvard University
- 2:25 p.m. **Non- and Semiparametric Subset and Model Selection for Multiple Categorical Predictors and Several Outcomes—**❖ A. G. Di Rienzo, Harvard School of Public Health

- 2:45 p.m. **Survey of Recombination in the HIV Genome: Hot Spots and Cold Spots**—❖Karin Dorman, Iowa State University; Misha L. Rajaram, Iowa State University; Marc A. Suchard, University of California, Los Angeles; Vladimir N. Minin, University of California, Los Angeles
- 3:05 p.m. **Numeric EM for Linear and Nonlinear Mixed Effects Models with Censored Responses**—❖Lin Liu, University of California, San Diego; Florin Vaida, University of California, San Diego
- 3:25 p.m. **Disc:** William G. Cumberland, University of California, Los Angeles
- 3:45 p.m. **Floor Discussion**

## 467 CC-255 A ● **Bayesian Approaches to Clinical Trials—Topic-Contributed**

Section on Bayesian Statistical Science, Biopharmaceutical Section

*Organizer(s): Pulak Ghosh, Georgia State University*

*Chair(s): Peter F. Thall, The University of Texas M. D. Anderson Cancer Center*

- 2:05 p.m. **Monitoring Late Onset Toxicities in Phase I Trials Using Predicted Risks**—❖Benjamin N. Bekele, The University of Texas M. D. Anderson Cancer Center
- 2:25 p.m. **Decision Analysis in Support of Clinical Trial Protocol Decisions**—❖Joseph Kahn, Novartis Pharmaceuticals
- 2:45 p.m. **Could Bayesians and Frequentists Agree When Designing Clinical Trials?**—❖Lurdes Inoue, University of Washington
- 3:05 p.m. **Bayesian Optimal Design in Phase II Studies**—❖Gary Rosner, The University of Texas M. D. Anderson Cancer Center; Peter Mueller, The University of Texas M. D. Anderson Cancer Center; Meichun Ding, Amgen Inc.
- 3:25 p.m. **Incorporating Patient's Characteristics in Cancer Phase I Clinical Trials Using Escalation with Overdose Control**—❖Mourad Tighiouart, Emory University; André Rogatko, Emory University; Zhiheng Xu, Emory University
- 3:45 p.m. **Floor Discussion**

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

### 468 CC-355 A

#### ● **Recent Advance in Analysis of Incomplete Data—Contributed**

Biometrics Section

*Chair(s): Xiaofei Wang, Duke University*

- 2:05 p.m. **Examining Benefits and Drawbacks of Multiple Imputation for Disease Rate and Demographic Data**—❖Irene Helenowski, Northwestern University; Hakan Demirtas, University of Illinois at Chicago; Chiang-Ching Huang, Northwestern University
- 2:20 p.m. **Imputation Based on Propensity Score: A Comparative Study of the Penalized Spline Propensity Prediction Method with Alternative Double Robust Estimators**—❖Guangyu Zhang, University of Michigan; Roderick J. Little, University of Michigan
- 2:35 p.m. **Variable Selection with Missing Data in Survival Analysis**—❖Kun Liang, Iowa State University; Michael D. Larsen, Iowa State University; Terry M. Therneau, Mayo Clinic
- 2:50 p.m. **Which Missing Value Imputation Method To Use in Expression Profiles: A Comparative Study and Two Selection Schemes**—❖Guy Brock, University of Louisville; John Shaffer, University of Pittsburgh; Richard Blakesley, University of Pittsburgh; Meredith Lotz, University of Pittsburgh; George C. Tseng, University of Pittsburgh
- 3:05 p.m. **Interval Estimation for the Difference in Median Survival Times Based on Multiple Imputation**—❖Maria Kocherginsky, The University of Chicago; Theodore G. Karrison, The University of Chicago
- 3:20 p.m. **Analysis of Longitudinal Data with Informative Dropout**—❖Li Chen, The University of North Carolina at Chapel Hill; Danyu Lin, The University of North Carolina at Chapel Hill; Donglin Zeng, The University of North Carolina at Chapel Hill
- 3:35 p.m. **Semiparametric Marginalized Model for Longitudinal Data with a Terminating Event**—❖Mengling Liu, New York University; Wenbin Lu, North Carolina State University



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**Survival Data Analysis I—Contributed**

Biometrics Section

*Chair(s): Joanna H. Shih, National Cancer Institute*

- 2:05 p.m. **Correlating Large-Scale Biological Data with Censored Survival Data**—❖Karthik Devarajan, Fox Chase Cancer Center
- 2:20 p.m. **Empirical Likelihood-Based Inference for the Calibration Regression Model with Medical Cost**—❖Yichuan Zhao, Georgia State University
- 2:35 p.m. **Martingale Residuals for Nested Case-Control Data**—❖Ornulf Borgan, University of Oslo; Bryan Langholz, University of Southern California
- 2:50 p.m. **Power of Nonparametric Logrank and Wilcoxon Tests with Adjustment for Covariates: A Simulation Study**—❖Honghua Jiang, Eli Lilly and Company; James Symanowski, Nevada Cancer Institute; Sofia Paul, Novartis Pharmaceuticals; Yongming Qu, Eli Lilly and Company; Anothyy Zagar, Eli Lilly and Company; Shengyan Hong, Eli Lilly and Company
- 3:05 p.m. **The Cost of Checking Proportional Hazards**—❖Bryan Shepherd, Vanderbilt University
- 3:20 p.m. **Nonparametric Estimation of State Occupation, Entry, and Exit Times with Current Status Data**—❖Ling Lan, University of Louisville; Somnath Datta, University of Louisville
- 3:35 p.m. **Assessing Fit in Cure-Mixture Models**—❖E. Paul Wiletyo, University of Pennsylvania; Daniel F. Heitjan, University of Pennsylvania

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**● ⊛ Statistical Issues in Analyzing Clinical Trials Data—Contributed**

Biopharmaceutical Section

*Chair(s): Yuehui Wu, GlaxoSmithKline*

- 2:05 p.m. **Analysis of Cumulative Distribution of Responders in Clinical Trials**—❖Manuela Buzoianu, Johnson & Johnson PRD; Akiko Okamoto, Johnson & Johnson PRD; Surya Mohanty, Johnson & Johnson PRD; Yi-Wen Ma, Johnson & Johnson PRD
- 2:20 p.m. **Binary Clinical Trials Data Analysis Using Pairwise Likelihood**—❖Juanmei Liu, University of California, Los Angeles; Peter M. Bentler, University of California, Los Angeles

CC-251 C

- 2:35 p.m. **A Mathematical Comparison of a Randomized Withdrawal Clinical Trial Design and a Parallel Groups Design To Demonstrate Disease Modification**—❖Suzanne Hendrix, Myriad Pharmaceuticals; Scott Horton, Myriad Pharmaceuticals; Alexander Gutin, Myriad Pharmaceuticals
- 2:50 p.m. **Futility Assessment with Two Correlated Endpoints**—❖Meehyung Cho, sanofi-aventis; Bill Stager, sanofi-aventis
- 3:05 p.m. **Reporting Quality-of-Life Results Using Percent Change from Baseline Analysis**—❖Jen-Fue Maa, Bristol-Myers Squibb Company; Kao-Tai Tsai, Bristol-Myers Squibb Company; Daniel Seekins, Bristol-Myers Squibb Company; Rozina Khanna, Bristol-Myers Squibb Company
- 3:20 p.m. **Distributional Approach for Measure of Agreement**—❖Weishi Yuan, U.S. Food and Drug Administration; Tie-Hua Ng, U.S. Food and Drug Administration
- 3:35 p.m. **Test Homogeneity of Risk Difference Across Subgroups in Clinical Trials**—❖Lanju Zhang, MedImmune, Inc.; Harry Yang, MedImmune, Inc.

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CC-250 EF

**● ⊛ Application of Innovative Analysis in Clinical Trials—Contributed**

Biopharmaceutical Section

*Chair(s): Mandy Bergquist, GlaxoSmithKline*

- 2:05 p.m. **Using Latent Sleepiness To Evaluate an Important Side Effect of Promethazine**—❖Alan Feiveson, National Aeronautics and Space Administration; Matthew Hayat, National Aeronautics and Space Administration; Zalman Vaksman, Wyeth; Lakshmi Putcha, National Aeronautics and Space Administration; Jason L. Boyd, National Aeronautics and Space Administration
- 2:20 p.m. **The Entropy Correlation Coefficient and Its Application to Clinical Data Analysis**—❖Ronald Pearson, ProSanos Corporation; Jaakko Astola, Tampere University of Technology
- 2:35 p.m. **Propensity Score Application in Historically Controlled Clinical Trials**—❖Daniel Reynier, Zimmer, Inc
- 2:50 p.m. **Improving the Delta Method**—❖Paul Duty, Montgomery College; Nancy Flournoy, University of Missouri-Columbia



- 3:05 p.m. **The Range Disparity Distribution and Its Applications**—❖ Lawrence Marinucci, Acorda Therapeutics Inc; Tailiang Xie, Brightech International
- 3:20 p.m. **Preference-Based Analysis for Estimating Treatment Efficacy Among Compliant Patients in a Randomized Clinical Trial**—❖ Afisi S. Ismaila, McMaster University; Stephen Walter, McMaster University
- 3:35 p.m. **Bootstrap Test for Assessing the Efficacy of Drug Combinations**—❖ Liwen Xi, Johnson & Johnson PRD; Guoyong Jiang, Cephalon, Inc.; Jianjun Li, Merck & Co., Inc.

## 472 CC-260 Copulas, Covariances, and Risk—Contributed

Business and Economics Statistics Section

*Chair(s): Douglas Noe, Miami University*

- 2:05 p.m. **Efficient Estimation of Elliptical Copula Models**—❖ Mei-Mei Zen, National Cheng-Kung University
- 2:20 p.m. **Bayesian Wavelet Estimation of Copulas for Dependence Modeling**—❖ Leming Qu, Boise State University
- 2:35 p.m. **Statistical Analysis for Financial Ultra-High Frequency Data: A Filtering Approach**—❖ Yong Zeng, University of Missouri-Kansas City
- 2:50 p.m. **The Economic Value of Intelligently Subsampled Realized Covariance Estimation of Asynchronous and Noisy High-Frequency Data**—❖ Lada Kyj, Rice University; Katherine Ensor, Rice University; Barbara Ostdiek, Rice University
- 3:05 p.m. **Optimal Investment in a Defaultable Bond**—❖ Weijian Liang, New York University; Peter Lakner, New York University
- 3:20 p.m. **Portfolio-Tracking Performance When Optimized with Estimation Error**—❖ Andrew Siegel, University of Washington
- 3:35 p.m. **Biased Bootstrap Methods for Semiparametric Models**—❖ Mihai Giurcanu, University of Florida

## 473 CC-255 B ⊛ Investing Optimally —Contributed

Business and Economics Statistics Section

*Chair(s): Amit Sen, Xavier University*

- 2:05 p.m. **Competitive Inventory Management in Treasury Markets**—❖ Rohan Christie-David, University of Louisville; William T. Moore, University of

South Carolina; Arjun Chatrath, University of Portland

- 2:20 p.m. **Time-Varying Coefficient Model for Corporate Bond Credit Spread**—❖ Yuejiao Ma, The Pennsylvania State University
- 2:35 p.m. **Trading American Stock Options Amidst Market/Model Disparity**—❖ Scott Nickleach, University of Pittsburgh
- 2:50 p.m. **Testing the Informational Efficiency of Municipal Bond Market**—❖ Lei Zhang, Syracuse University; Chunchi Wu, Syracuse University; Raja Velu, Syracuse University
- 3:05 p.m. **Principal Analysis and Price Dynamics for Sparse Auction Data**—❖ Bitao Liu, University of California, Davis; Hans-Georg Müller, University of California, Davis
- 3:20 p.m. **Empirically Confronting Stochastic Singularity: An Application to the Cox, Ingersoll, and Ross Model**—❖ Kenneth Roskelley, The University of Arizona; Christopher Lamoureux, The University of Arizona
- 3:35 p.m. **Floor Discussion**

## 474 CC-255 C ● ⊛ Regression and Forecasting—Contributed

Business and Economics Statistics Section

*Chair(s): Kimberly S. Weems, North Carolina State University*

- 2:05 p.m. **Testing the Equivalence of Regressions for the Capital Asset Pricing Models**—❖ Hubert J. Chen, National Cheng Kung University; Jevons Lee, Zhejiang University; Li-Wei You, National Cheng Kung University
- 2:20 p.m. **Inferences in Regression with Correlated Residuals**—❖ Yue Fang, University of Oregon
- 2:35 p.m. **Performance Comparison of Simple Forecasting Methods for Macroeconomic Indicators**—❖ Bogong T. Li, Bank of America
- 2:50 p.m. **A Statistical Model of a Firm's Expenditure**—❖ Jonathan Hosking, IBM T. J. Watson Research Center; Bibhas Chakraborty, University of Michigan
- 3:05 p.m. **A Comparison of Inference Procedures for the Simple Linear Errors-in-Variables Regression Model**—❖ Stephen M. Miller, Bureau of Labor Statistics

- 3:20 p.m. **Multiple Imputation of Right-Censored Wages in the German IAB-Employment Register Considering Heteroscedasticity**—❖ Thomas Buettner, Institute for Employment Research; Susanne Raessler, Institute for Employment Research
- 3:35 p.m. **Measuring Liquidity Costs in Agricultural Futures Markets: Conventional and Bayesian Approaches**—❖ Julieta Frank, University of Illinois at Urbana-Champaign; Philip Garcia, University of Illinois at Urbana-Champaign

**475****CC-254 A****⊛ MCMC and Gibbs Sampling—Contributed**

IMS

*Chair(s): Scotland Leman, Duke University*

- 2:05 p.m. **Using Subsampling in Markov Chain Monte Carlo**—❖ James Flegal, The University of Minnesota
- 2:20 p.m. **Gibbs Sampling for Bayesian Models**—❖ Alicia Johnson, The University of Minnesota
- 2:35 p.m. **Markovian Dynamics in a RAM with Applications to Classification**—❖ Zach Dietz, Tulane University
- 2:50 p.m. **Goodness-of-Fit Tests for Generalized Linear Models When Some Covariates Are Missing**—❖ Lei Jin, Texas A&M University; Suojin Wang, Texas A&M University
- 3:05 p.m. **Floor Discussion**

**476****CC-255 D****● New Developments in Spatial Modeling—Contributed**

Section on Bayesian Statistical Science

*Chair(s): Luyan Dai, University of Missouri-Columbia*

- 2:05 p.m. **Point Estimates for Variance-Structure Parameters in Bayesian Analysis of Hierarchical Models**—❖ Yi He, sanofi-aventis; James S. Hodges, The University of Minnesota
- 2:20 p.m. **Smoothed ANOVA with Spatial Effects as a Competitor to MCAR**—❖ Yufen Zhang, The University of Minnesota; Hodges S. James, The University of Minnesota
- 2:35 p.m. **Bayesian Spatial Models with Repeated Measurements**—❖ Xiaoqian Sun, Clemson University
- 2:50 p.m. **Loglinear Modeling for Point-Referenced Spatial Data**—❖ Eric Tassone, Duke University; Marie Lynn Miranda, Duke University; Alan E. Gelfand, Duke University

- 3:05 p.m. **Bayesian Modeling of Semicontinuous Spatial Data**—❖ Virginia Recta, U.S. Food and Drug Administration; James L. Rosenberger, The Pennsylvania State University; Murali Haran, The Pennsylvania State University
- 3:20 p.m. **Sparsity and Smoothness for Disease Rate Mapping via Spatial Bayesian LASSO**—❖ Haoda Fu, University of Wisconsin-Madison
- 3:35 p.m. **Modeling Wind Fields Using Process Convolutions**—❖ Margaret Short, University of Alaska Fairbanks

**477****CC-251 E****● ⊛ Methods for Administrative and National Survey Data—Contributed**

Section on Health Policy Statistics

*Chair(s): Byron Gajewski, The University of Kansas Medical Center*

- 2:05 p.m. **Evaluation of Consumer Panel Survey Data for Public Health Communication Planning: An Analysis of Annual Survey Data from 1995–2006**—❖ William Pollard, Centers for Disease Control and Prevention
- 2:20 p.m. **Statistical Modeling of Longitudinal Mental Distress Among Rural Seniors Who Participated in the National Population Health Survey**—❖ Chandima Karunanayake, University of Saskatchewan; Punam Pahwa, University of Saskatchewan
- 2:35 p.m. **Statistical Methods for Constructing Canadian Growth Curves**—❖ Stephane Tremblay, Statistics Canada
- 2:50 p.m. **Evaluation of New Programs in State Medicaid Agencies**—❖ Mark Carpenter, Auburn University
- 3:05 p.m. **Classification Models for Identifying Chronic Disease Cases and Noncases in Administrative Claims Data**—❖ Lisa M. Lix, University of Manitoba; William D. Leslie, University of Manitoba; Marina Yogendran, Manitoba Centre for Health Policy; Richard Baumgartner, National Research Council Canada; Christopher Bowman, National Research Council Canada; Souradet Shaw, University of Manitoba
- 3:20 p.m. **The Minimum Level of Sensitivity and Predictive Value Positive in the Evaluation of Health Outcomes with Administrative Data**—❖ Yong-Fang Kuo, The University of Texas Medical Branch; Tracy Nguyen-Oghalai, The University of Texas Medical Branch

3:35 p.m. **The Impact of Deidentification on Statistical Information in Limited Access Datasets**—✧ April Slee, Axio Research; Paula Diehr, University of Washington; Kenneth Rice, University of Washington

## 478 CC-155 D

### ●✧ Financial Data Mining and Risk—Contributed

Section on Statistical Computing, Business and Economics Statistics Section, Society for Risk Analysis, Section on Statistical Graphics, Section on Nonparametric Statistics

*Chair(s): Nozer D. Singpurwalla, The George Washington University*

2:05 p.m. **Statistical Methods for Detecting Financial Crimes: Applications and Challenges**—✧ Agus Sudjianto, Bank of America; Sheela Nair, University of California, Los Angeles

2:20 p.m. **An Efficient Sequential Design Method for Detecting Money Laundering**—✧ Xinwei Deng, Georgia Institute of Technology; Roshan Joseph, Georgia Institute of Technology; Agus Sudjianto, Bank of America; Chien-Fu Jeff Wu, Georgia Institute of Technology

2:35 p.m. **Unsupervised Quantile Learning To Identify Principal Direction of Anomaly**—✧ Aijun Zhang, University of Michigan; Agus Sudjianto, Bank of America; Ming Yuan, Georgia Institute of Technology

2:50 p.m. **Rule and Rule Ensemble-Based Methods for Financial Crime Detection**—✧ Fernando Cela Diaz, Bank of America; Agus Sudjianto, Bank of America

3:05 p.m. **Feature Extraction and Classification to Identify Suspicious Activities**—✧ Alireza Darvish, The University of North Carolina at Charlotte; Kayvan Najarian, The University of North Carolina at Charlotte

3:20 p.m. **Simulating Goodness-of-Fit: Ensuring Fair Online Auctions**—Andrew Ostarello, Exponent, Inc.; ✧Michael Orkin, Exponent, Inc.

3:35 p.m. **The Netflix Challenge for Statisticians**—✧ J. Brian Gray, The University of Alabama

## 479 CC-250 B

### ● Compensating for Survey Nonresponse and Nonsampling Error—Contributed

Section on Survey Research Methods

*Chair(s): Vicki Burt, National Center for Health Statistics*

2:05 p.m. **An Assessment of the Effect of Misreporting of Phone Line Information on Key Weighted Estimates from Four National RDD Surveys**—✧ Ashley Bowers, University of Michigan; Jeffrey Gonzalez, Bureau of Labor Statistics

2:20 p.m. **Improvements in Coverage and Sample Weighting for Telephia's 2007 Attitude and Behavior Survey (TABS) of U.S. Cellular Phone Subscribers**—✧ Vicki Pineau, Telephia Inc.; Jim Baer, Telephia Inc.; Christianne Pang, Telephia Inc.; Glenn Atias, Telephia Inc.; Elisa Chan, Knowledge Networks, Inc.

2:35 p.m. **Nonresponse in Surveys of the College Educated Revisited**—✧ Patrick Flanagan, U.S. Census Bureau; Nancy Dexter, U.S. Census Bureau

2:50 p.m. **Nonresponse in the Survey of Industrial Research and Development**—✧ Perez Adriana, The University of Texas at Houston Health Science Center

3:05 p.m. **Adjusting for Missing Covariates Using the EM Algorithm for Logistic Regression Models: A Study of the Effect of Childhood Overweight on the Age of Onset of Menses**—✧ Yi Liu, The Ohio State University; Elizabeth A. Stasny, The Ohio State University; Pamela Salsberry, The Ohio State University; Patricia Reagan, The Ohio State University

3:20 p.m. **An Evaluation of Basic Calibration Estimators in Presence of Nonresponse**—✧ Yves Thibaudeau, U.S. Census Bureau; Jun Shao, University of Wisconsin-Madison; Jeri Mulrow, National Science Foundation

3:35 p.m. **The Nonparametric Regression with Missing Responses and Its Applications to the U.S. Census**—✧ Cheng Yong Tang, Iowa State University; Song Xi Chen, Iowa State University

## 480 CC-250 C

### ● Methods and Analysis of Failure Time Data in Epidemiological Studies—Contributed

Section on Statistics in Epidemiology

*Chair(s): Jayawant Mandrekar, Mayo Clinic*

2:05 p.m. **Regression Analysis of a Disease Onset Distribution Using Diagnosis Data**—✧ Jessica G. Young, University of California, Berkeley; Nicholas P. Jewell, University of California, Berkeley; Steven J. Samuels, University at Albany-SUNY

- 2:20 p.m. **Semiparametric Methods for Estimating Cumulative Treatment Effects**—❖Guanghui Wei, University of Michigan; Douglas Schaubel, University of Michigan
- 2:35 p.m. **Impact of Duration of Follow-Up Time on Predictors of Cardiovascular Disease in Survival Models**—❖Lei Zhu, Boston University; Michael J. Pencina, Boston University; Ralph B. D'Agostino, Sr., Boston University
- 2:50 p.m. **Semiparametric Regression with Time-Dependent Coefficient for Failure Time Data Analysis**—❖Zhangsheng Yu, The Ohio State University; Xihong Lin, Harvard School of Public Health
- 3:05 p.m. **The Exclusion of Prevalent Cases from Incident Dementia Risk Factor Studies Sacrifices Lots of Information**—❖Daniel Tancredi, University of California, Davis
- 3:20 p.m. **Comparison of Adjusted Survival Curves with Different Reference Populations**—❖Xu Zhang, Georgia State University
- 3:35 p.m. **Proportional Odds Modeling of Discrete Survival**

**Data with Application to Reproductive Study**—  
❖Huichao Chen, Emory University; Limin Peng, Emory University; Amita K. Manatunga, Emory University; Michele Marcus, Emory University

### Invited Sessions 4:00 p.m.–5:50 p.m.

#### 481 **CC-Ballrooms E-J** **COPSS Awards and Fisher Lecture—Invited**

ASA, Committee of Presidents of Statistics Societies, IMS, ENAR, WNAR, SSC

*Organizer(s): Madhuri S. Mulekar, University of South Alabama*

*Chair(s): Jessica Utts, University of California, Davis*

- 4:00 p.m. **Presentation of Awards**—❖Madhuri S. Mulekar, University of South Alabama
- 4:20 p.m. **R. A. Fisher, Randomization, and Current Practice in Multicenter Clinical Trials**—❖Marvin Zelen, Harvard School of Public Health
- 5:30 p.m. **Floor Discussion**



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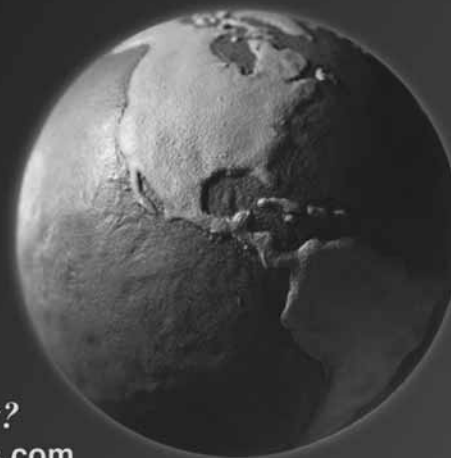
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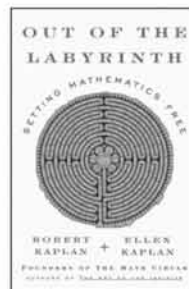
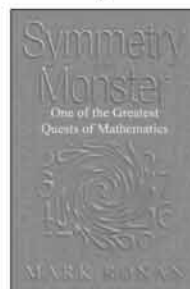
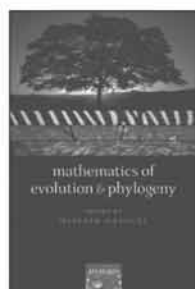
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