

# THURSDAY, AUGUST 6

## Tours

TR15 - Annapolis: Highlighting the U.S. Naval Academy  
9:00 a.m.–2:00 p.m.

TR16 - Historic Tour of Mt. Vernon  
10:00 a.m.–2:00 p.m.

## Committee/Business Meetings & Other Activities

7:00 a.m.–10:30 a.m. CC-East Registration  
Cyber Center

7:00 a.m.–12:00 p.m. CC-154A  
Speaker Management Room

7:30 a.m.–10:00 a.m. CC-East Registration  
ASA Marketplace

7:30 a.m.–10:30 a.m. CC-East Registration  
ASA Membership/Special Assistance/Press Desk

7:30 a.m.–10:30 a.m. CC-East Registration  
JSM Main Registration

8:00 a.m.–10:00 a.m. RH-Meeting Room 16  
COS Business Meeting II  
Chair(s): Janet Buckingham, Southwest Research Institute

8:00 a.m.–1:00 p.m. CC-East Registration  
JSM Luggage Storage

10:00 a.m.–11:00 a.m. RH-Meeting Room 16  
COSGB Business Meeting II  
Chair(s): Janet Buckingham, Southwest Research Institute

## Special Presentation

8:30 a.m.–10:20 a.m.

534 CC-207A

### Introductory Overview Lecture: Statistical Learning and Data Mining—Other

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

Organizer(s): Ji Zhu, University of Michigan

Chair(s): Simon Sheather, Texas A&M University

8:35 a.m. Statistical Learning and Data Mining—◆David J. Hand, Imperial College

10:00 a.m. Floor Discussion

## Invited Sessions

8:30 a.m.–10:20 a.m.

535 CC-143B

### High-Dimensional Variable Selection: At the Crossroad of Bayes' Frequentist Interface—Invited

Section on Bayesian Statistical Science

Organizer(s): Samiran Ghosh, Indiana University Purdue University Indianapolis

Chair(s): Dipankar Bandyopadhyay, Medical University of South Carolina

8:35 a.m. Spike and Slab Priors for Bayesian Variable Selection—◆Marina Vannucci, Rice University

9:00 a.m. Structured Variable Selection and Estimation—◆Ming Yuan, Georgia Institute of Technology

9:25 a.m. Model Selection for Partial Smoothing Splines—◆Hao (Helen) Zhang, North Carolina State University; Guang Cheng, Purdue University

9:50 a.m. Enforced Spike and Slab Sparsity—◆Hemant Ishwaran, Cleveland Clinic Foundation

10:15 a.m. Floor Discussion



# GENERAL PROGRAM SCHEDULE

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

## 536 CC-102B 538 CC-149B ■ ★ Perspectives in Genomics Research—Invited

Committee of Representatives to AAAS

Organizer(s): Turkan K. Gardenier, Pragmatica Corp.

Chair(s): Turkan K. Gardenier, Pragmatica Corp.

- 8:35 a.m. **Search for Genetic Markers of Susceptibility for Breast and Prostate Cancer**—◆ Gilles F. Thomas, National Cancer Institute
- 9:00 a.m. **A Novel Nonparametric Approach to Genetics, Genomics, and Phenomics**—◆ Knut M. Wittkowski, The Rockefeller University
- 9:25 a.m. **Genome-Wide Association Studies: A Look at Their Past, Present, and Future**—◆ John Barnard, The Cleveland Clinic Foundation
- 9:50 a.m. **Disc: Robert C. Elston, Case Western Reserve University**
- 10:10 a.m. **Floor Discussion**

## ■ Chemometrics—Invited

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

Organizer(s): Kerby Shedden, University of Michigan

Chair(s): Ji Zhu, University of Michigan

- 8:35 a.m. **Understanding Heterogeneity of Chemical Localization in Live Cells**—◆ Kerby Shedden, University of Michigan
- 9:05 a.m. **Screening Compounds for Monotone Association with Convex Combinations of Activity Predictors Over Unspecified Subpopulations of Cell-Lines**—◆ Joseph S. Verducci, The Ohio State University; Li Yu, The Ohio State University; Paul Blower, The Ohio State University
- 9:35 a.m. **A Co-Training Algorithm for Multiview Data with Applications in Data Fusion**—◆ Mark Culp, West Virginia University; George Michailidis, University of Michigan
- 10:05 a.m. **Floor Discussion**

## 537 CC-201 ■ Pharmacokinetic and Pharmacodynamic Modeling—Invited

Biopharmaceutical Section, Biometrics Section

Organizer(s): Alan H. Hartford, Merck & Co., Inc.

Chair(s): Alan H. Hartford, Merck & Co., Inc.

- 8:35 a.m. **A Model-Based Framework for Quantitative Decisionmaking in Drug Development**—◆ Kenneth G. Kowalski, Ann Arbor Pharmacometrics Group; Jonathan L. French, Pfizer Inc.; Mike K. Smith, Pfizer Inc.; Matthew M. Hutmacher, Ann Arbor Pharmacometrics Group
- 9:00 a.m. **Leveraging Pharmacokinetic (PK) and Pharmacodynamic (PD) Knowledge in Early Clinical Drug Development**—◆ Ene I. Ette, Anoxis Corporation
- 9:25 a.m. **Computational Methods for Nonlinear Mixed Models**—◆ Douglas M. Bates, University of Wisconsin-Madison
- 9:50 a.m. **Leveraging Exposure Response Information for Efficient Drug Development: Impact of Pharmacometrics**—◆ Pravin R. Jadhav, FDA
- 10:15 a.m. **Floor Discussion**

## 539 CC-206 The Influence of Psychology, Cartography, and Computer Science on the Design of Interactive Graphics for Spatial Statistical Data—Invited

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

Organizer(s): Linda Williams Pickle, StatNet Consulting LLC

Chair(s): Linda Williams Pickle, StatNet Consulting LLC

- 8:35 a.m. **Cognitive Psychology and Statistical Map Reading**—◆ Douglas J. Herrmann, Indiana State University (retired)
- 9:00 a.m. **Grounding Exploratory Spatial Data Analysis Tool Design in Cartographic Theory, Practice, and Empirical Research**—◆ Alan MacEachren, Penn State University
- 9:25 a.m. **Data Cartography: The View from Human Computer Interaction**—◆ Danyel A. Fisher, Microsoft Research
- 9:50 a.m. **Visualizing Patterns in Data with Micromaps**—◆ Daniel B. Carr, George Mason University
- 10:15 a.m. **Floor Discussion**

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

## 540 CC-144A **■ ★ From Data to Decisionmaking: Applied Statisticians Protecting the Environment—Invited**

Section on Statistics and the Environment, Section on Statistics in Epidemiology, Social Statistics Section, Section on Government Statistics

Organizer(s): Jenise Swall, U.S. Environmental Protection Agency; Kristen M. Foley, U.S. Environmental Protection Agency  
 Chair(s): Kristen M. Foley, U.S. Environmental Protection Agency

- 8:35 a.m. **Given Limited Resources, What Can Be Done to Reduce Elevated Blood Lead Levels in Children?**—◆William F. Hunt, Jr., North Carolina State University; Barry D. Nussbaum, U.S. Environmental Protection Agency; Steve Somers, North Carolina State University; Josh Drukenbrod, U.S. Environmental Protection Agency; Ashley Myers, North Carolina State University
- 9:00 a.m. **As the Population Turns: The Case of Elevated Blood Lead Levels and Changing Social Phenomena**—◆Barry D. Nussbaum, U.S. Environmental Protection Agency; Ronnie Levin, U.S. Environmental Protection Agency
- 9:25 a.m. **Science Policy Interface at U.S. EPA: Some Views from One Who's Been There**—◆Rita Schoeny, U.S. Environmental Protection Agency
- 9:50 a.m. **Putting a Regulation Through: Where Statistics Fit In**—◆Elizabeth H. Margosches, U.S. Environmental Protection Agency
- 10:15 a.m. **Floor Discussion**

## 541 CC-202B **New Developments in Financial Econometrics—Invited**

WNAR

Organizer(s): Yingying Fan, University of Southern California  
 Chair(s): Tao Huang, University of Virginia

- 8:35 a.m. **Vast Volatility Matrix Estimation for High-Frequency Financial Data**—◆Yazhen Wang, National Science Foundation
- 9:05 a.m. **Modeling and Forecasting Bond Yield Curves with Functional Dynamic Models**—◆Rong Chen, Rutgers University
- 9:35 a.m. **Parameter Estimation and Model Testing for Markov Processes via Conditional Characteristic Functions**—◆Song Xi Chen, Iowa State University; Liang Peng, Georgia Tech; Cindy L. Yu, Iowa State University
- 10:05 a.m. **Floor Discussion**

## 542 CC-204C **■ Recent Advances in Nonparametric Methods for Interval-Censored Data—Invited**

ENAR, Biometrics Section, Biopharmaceutical Section

Organizer(s): Dipankar Bandyopadhyay, Medical University of South Carolina

Chair(s): Samiran Ghosh, Indiana University Purdue University Indianapolis

- 8:35 a.m. **Confidence Intervals for Current Status Data with Competing Risks**—◆Marloes H. Maathuis, ETH Zurich; Michael Hudgens, The University of North Carolina at Chapel Hill
- 9:00 a.m. **Asymptotics of Interval-Censored Data Under Various Observation Time Schemes**—◆Moulinath Banerjee, University of Michigan
- 9:25 a.m. **Nonparametric Inference in Multistate Models with Interval-Censored Data**—◆Somnath Datta, University of Louisville; Ling Lan, Medical College of Georgia
- 9:50 a.m. **Multistate Analysis of Bivariate Interval-Censored Failure Time Data**—◆Richard Cook, University of Waterloo
- 10:15 a.m. **Floor Discussion**

## 543 CC-102A **■ Statistical Methods in Bioinformatics—Invited**

SSC, Section on Bayesian Statistical Science, Biopharmaceutical Section

Organizer(s): Karen A. Kopciuk, Alberta Cancer Board

Chair(s): Karen A. Kopciuk, Alberta Cancer Board

- 8:35 a.m. **Current Issues in Genome-Wide Association Studies of Complex Traits**—◆Shelley B. Bull, Samuel Lunenfeld Research Institute of Mount Sinai Hospital; Lei Sun, University of Toronto
- 9:05 a.m. **Statistical Issues Involved in the Analysis of High-Throughput ChIP Assays**—◆Raphael Gottardo, Institut de Recherche Cliniques de Montreal
- 9:35 a.m. **Effects of Measurement Error in Microarray Data Analysis**—◆Wenqing He, University of Western Ontario
- 10:05 a.m. **Floor Discussion**



# GENERAL PROGRAM SCHEDULE

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

## 544 CC-143C Bayesian Methods for Model Uncertainty— Invited

IMS, Section on Bayesian Statistical Science

Organizer(s): David Dunson, Duke University

Chair(s): David Dunson, Duke University

- 8:35 a.m. **Bayesian Subgroup Analysis**—◆ James Berger, Statistical and Applied Mathematical Sciences Institute
- 9:05 a.m. **Flexible Approaches for Computing Marginal Likelihoods**—◆ Robert J. Kohn, University of New South Wales
- 9:35 a.m. **Effective Sample Size in Linear Models**—◆ Susie Bayarri, University of Valencia; James Berger, Statistical and Applied Mathematical Sciences Institute; Luis R. Pericchi, University of Puerto Rico
- 10:05 a.m. **Floor Discussion**

## 545 CC-143A Inference for Parameters of Biological and Biochemical Processes Modeled via Branching Processes and Their Variants—Invited

IMS

Organizer(s): Anand Vidyashankar, Cornell University

Chair(s): Anand Vidyashankar, Cornell University

- 8:35 a.m. **Inference for Quantitation Parameters in Polymerase Chain Reactions via Branching Processes with Random Effects**—◆ Bret Hanlon, Cornell University; Anand Vidyashankar, Cornell University
- 9:05 a.m. **Composite Likelihood Estimation for Age-Dependent Branching Processes Using CFSE-Labeling Data**—◆ Ollivier Hyrien, University of Rochester; Rui Chen, University of Rochester Medical Center; Martin S. Zand, University of Rochester
- 10:05 a.m. **Floor Discussion**

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

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### 546 CC-149A Memorial for Hubert Lilliefors—Invited

Memorial

Organizer(s): Fritz Scheuren, NORC at the University of Chicago

Chair(s): Shail J. Butani, Bureau of Labor Statistics

- Panelists:**
- ◆ Reza Modarres, The George Washington University
  - ◆ Bob Smythe, Oregon State University
  - ◆ Fritz Scheuren, NORC at the University of Chicago
  - ◆ Robert Shumway, University of California, Davis
  - ◆ Nozer Singpurwalla, The George Washington University

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

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

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### 547 CC-204B ■ Considerations on Design and Analysis for Multi-Regional Trials—Topic-Contributed

Biopharmaceutical Section

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

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

- 8:35 a.m. **Considerations on Criteria for Consistency Across Regions in Multi-Regional Trials**—◆ Kimitoshi Ikeda, Novartis Pharma K.K.
- 8:55 a.m. **Issues in Evaluating Multiregional Clinical Trials**—◆ Yuki Ando, Pharmaceuticals and Medical Devices Agency
- 9:15 a.m. **Prediction of Fracture Risk Based Upon Baseline Characteristics**—◆ Kyoungah See, Eli Lilly and Company
- 9:35 a.m. **Sample Size Considerations for Japanese Patients in a Multi-Regional Trial Based on MHLW Guidance**—◆ Hui Quan, sanofi-aventis; Peng-Liang Zhao, sanofi-aventis; Ji Zhang, sanofi-aventis; Martin Roessner, sanofi-aventis; Kyo Aizawa, sanofi-aventis
- 9:55 a.m. **Disc:** James Hung, FDA
- 10:15 a.m. **Floor Discussion**

**548** **CC-144B**  
**■ ★ Bayesian Semiparametric Methods in Biostatistics—Topic-Contributed**

Section on Bayesian Statistical Science  
 Organizer(s): Sujit Ghosh, North Carolina State University  
 Chair(s): Sujit Ghosh, North Carolina State University

- 8:35 a.m. **A Bayesian Semiparametric Accelerated Failure Time Cure Model for Censored Data—◆** Elizabeth C. Nelson, North Carolina State University; Sujit Ghosh, North Carolina State University; Wenbin Lu, North Carolina State University
- 8:55 a.m. **Center-Adjusted Inference for a Nonparametric Bayesian Random Effect Distribution—◆** Yisheng Li, The University of Texas M.D. Anderson Cancer Center; Peter Müller, The University of Texas M.D. Anderson Cancer Center; Xihong Lin, Harvard School of Public Health
- 9:15 a.m. **A Variable Selection Approach to Bayesian Monotonic Regression with Bernstein Polynomials—◆** S. McKay Curtis, University of Washington; Sujit Ghosh, North Carolina State University
- 9:35 a.m. **Bayesian Independent Component Analysis Using Mixture Priors—◆** Ani Eloyan, North Carolina State University; Sujit Ghosh, North Carolina State University
- 9:55 a.m. **Semiparametric Bayesian Approach for Testing Noninferiority Using Relative Risk and Odds Ratio for Binary Data—◆** Muhtarjan Osman, North Carolina State University; Sujit Ghosh, North Carolina State University
- 10:15 a.m. **Floor Discussion**

- 9:55 a.m. **On the Exchangeable Multinomial Distribution—◆** E. Olusegun George, The University of Memphis; Kyeongmi Cheon, The University of Memphis; L. Yuan, The University of Memphis
- 10:15 a.m. **Floor Discussion**

**549** **CC-158A**  
**★ Semiparametric Procedures in Statistical Analysis—Topic-Contributed**

Section on Risk Analysis  
 Organizer(s): Norou Diawara, Old Dominion University  
 Chair(s): Mohammad Ahsanullah, Rider University

- 8:35 a.m. **Forecasting Mortality Rates via Density Ratio Modeling—◆** Benjamin Kedem, University of Maryland
- 8:55 a.m. **Mixture of Bivariate Exponential Distributions—◆** Norou Diawara, Old Dominion University
- 9:15 a.m. **Approximate Bayesian Computation for Flexible Quantile Distributions—◆** Robert King, Newcastle University
- 9:35 a.m. **Neural Networks: A Flexible Nonlinear Model—◆** Barbara Bailey, San Diego State University

**550** **CC-155**  
**■ ★ Temporal and Cross-Sectional Consistency in Purchasing Power Parities—Topic-Contributed**

Business and Economic Statistics Section  
 Organizer(s): Kim Zieschang, International Monetary Fund  
 Chair(s): Alan Heston, The University of Pennsylvania

- 8:35 a.m. **An Econometric Approach to Construct World Tables of Purchasing Power Parities and Real Incomes: Analytical Properties and Tables for 1970–2005—D.S. Prasada Rao, University of Queensland; ◆** Alicia Rambaldi, University of Queensland; H.E. Doran, University of Queensland
- 8:55 a.m. **Index Number Approaches to Spatial and Temporal Consistency: Comparing the 1985 and 2005 ICP Global Benchmarks—W. Erwin Diewert, University of British Columbia; ◆** D.S. Prasada Rao, University of Queensland; Kim Zieschang, International Monetary Fund
- 9:15 a.m. **Updating and Backdating the 2005 ICP Results: Isolating Sample Design Effects with Application to Asia—◆** Yuri Dikhanov, World Bank
- 9:35 a.m. **Intertemporal Comparisons of Regional Price Parities in the United States, 2003–2007—◆** Bettina H. Aten, Bureau of Economic Analysis
- 9:55 a.m. **Floor Discussion**

**551** **CC-150A**  
**■ ★ Using the Current Population Survey to Analyze the Labor Force Characteristics of Persons with Disabilities—Topic-Contributed**

Section on Survey Research Methods, Social Statistics Section, Section on Government Statistics  
 Organizer(s): Stephen M. Miller, Bureau of Labor Statistics  
 Chair(s): Donsig Jang, Mathematica Policy Research, Inc.

- 8:35 a.m. **Statistical Estimation for Persons with Disabilities as Measured in the Current Population Survey—◆** Stephen M. Miller, Bureau of Labor Statistics
- 8:55 a.m. **Labor Force Analysis of Those Identified as Disabled in the CPS—◆** Anne E. Polivka, Bureau of Labor Statistics
- 9:15 a.m. **An Evaluation of Efforts to Use a Work Disability Question to Evaluate the Labor Force Situation of Persons with a Disability—◆** Terence M. McMenamin, Bureau of Labor Statistics



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# GENERAL PROGRAM SCHEDULE

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

- 9:35 a.m. **The Addition of Questions on Disability to the Current Population Survey**—◆Steven F. Hipple, Bureau of Labor Statistics
- 9:55 a.m. Disc: Thomas W. Hale, Social Security Administration
- 10:15 a.m. **Floor Discussion**

- 9:15 a.m. **Streaming Poisson Data**—◆David W. Scott, Rice University
- 9:35 a.m. **Nonparametric Density Estimation of Streaming Data Using Orthogonal Series**—◆Kyle A. Caudle, U.S. Naval Academy; Edward J. Wegman, George Mason University
- 9:55 a.m. **Grid Computing and Applications**—◆Abdullah A. Alnoshan, The George Washington University; Shmuel Rotenstreich, The George Washington University
- 10:15 a.m. **Floor Discussion**

## 552 CC-202A Designs for Early-Phase Clinical Trials— Topic-Contributed

Biometrics Section, Biopharmaceutical Section, Section on Bayesian Statistical Science

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

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

- 8:35 a.m. **Bayesian Methods in Clinical Research**—◆Wei Chen, Karmanos Cancer Institute
- 8:55 a.m. **Calibration of the Continual Reassessment Method**—◆Shing Lee, Columbia University; Ying Kuen Cheung, Columbia University
- 9:15 a.m. **Achieving Covariate Balance in Clinical Trials with Outcome-Adaptive Randomization**—Jing Ning, The University of Texas M.D. Anderson Cancer Center; ◆Xuelin Huang, The University of Texas M.D. Anderson Cancer Center
- 9:35 a.m. **Dose-Schedule Finding in Phase I/II Clinical Trials Using a Bayesian Isotonic Transformation**—◆Benjamin N. Bekele, The University of Texas M.D. Anderson Cancer Center; Yisheng Li, The University of Texas M.D. Anderson Cancer Center; Yuan Ji, The University of Texas M.D. Anderson Cancer Center
- 9:55 a.m. **Adaptive Randomization Designs for Oncology Trials with Both Short-Term and Long-Term Outcomes**—◆Hao Liu, Baylor College of Medicine; Xuelin Huang, The University of Texas M.D. Anderson Cancer Center
- 10:15 a.m. **Floor Discussion**

## 553 CC-207B ■ ★ Computing Environments and Large Data Sets—Topic-Contributed

Section on Statistical Computing

Organizer(s): Yasmin Said, George Mason University

Chair(s): Yasmin Said, George Mason University

- 8:35 a.m. **Multivariate Data Adaptive Compression and Density Estimation**—◆Edward J. Wegman, George Mason University; Roger Shores, U.S. Census Bureau
- 8:55 a.m. **A Swift Swiftian Look at Massive Data Sets**—◆Antony Unwin, Uni Augsburg

## 554 CC-158B Nonresponse Bias Analysis—Topic-Contributed

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Shail J. Butani, Bureau of Labor Statistics

Chair(s): Larry L. Huff, Bureau of Labor Statistics

- 8:35 a.m. **An Assessment of the Effect of Calibration on Nonresponse Bias in the 2006 Agricultural Resource Management Survey**—◆Morgan S. Earp, National Agricultural Statistics Service; Jaki McCarthy, National Agricultural Statistics Service; Nick D. Schauer, National Agricultural Statistics Service; Phillip S. Kott, U.S. Department of Agriculture
- 8:55 a.m. **Assessing Nonresponse Bias in the Consumer Expenditure Interview Survey**—◆Susan King, Bureau of Labor Statistics; Borianna Chopova, Bureau of Labor Statistics; Jennifer Edgar, Bureau of Labor Statistics; Jeffrey Gonzalez, Bureau of Labor Statistics; David McGrath, Bureau of Labor Statistics; Lucilla Tan, Bureau of Labor Statistics
- 9:15 a.m. **Conducting Nonresponse Bias Analyses for Two Business Surveys at the U.S. Census Bureau: Methods and (Some) Results**—◆Katherine J. Thompson, U.S. Census Bureau
- 9:35 a.m. **Components of Error Analysis in the Current Employment Statistics Survey**—Larry L. Huff, Bureau of Labor Statistics; ◆Julie Gershunskaya, Bureau of Labor Statistics
- 9:55 a.m. Disc: Clyde Tucker, Bureau of Labor Statistics
- 10:15 a.m. **Floor Discussion**



**555** **CC-204A**  
**■ Abdominal Obesity: Searching for the Best Measure—Topic-Contributed**

Section on Statistics in Epidemiology  
 Organizer(s): Marike Vuga, University of Pittsburgh  
 Chair(s): Kenneth Schechtman, Washington University in St. Louis

- 8:35 a.m. **Characterization of the Conicity Index in the US Adult Population**—◆Rodolfo Valdez, CDC; Tiebin Liu, CDC
- 8:55 a.m. **Where to Draw the Line for Abdominal Obesity: Evidence from International Data**—◆Mark Woodward, Mount Sinai School of Medicine
- 9:15 a.m. **Conceptual Review of Issues with Practical Abdominal Obesity Measures**—◆Marike Vuga, University of Pittsburgh
- 9:35 a.m. **Abdominal Volume Index**—◆Fernando Guerrero-Romero, Mexican Social Security Institute; Martha Rodriguez-Moran, Mexican Social Security Institute
- 9:55 a.m. **Methodological Issues in the Use of Anthropometric Surrogates of Abdominal Obesity**—◆Ike S. Okosun, Georgia State University
- 10:15 a.m. **Floor Discussion**

**556** **CC-159A**  
**■ ★ 2007 Census of Agriculture—Topic-Contributed**

Section on Government Statistics, SSC, Section on Survey Research Methods  
 Organizer(s): Carol House, National Agricultural Statistics Service  
 Chair(s): Mark Harris, National Agricultural Statistics Service

- 8:35 a.m. **Coverage Adjustment on the 2007 Census of Agriculture**—◆Matt Fetter, National Agricultural Statistics Service
- 8:55 a.m. **Overview of the Census of Agriculture**—◆Chris S. Messer, National Agricultural Statistics Service
- 9:15 a.m. **Searching for Donors: Refining an Imputation Strategy**—◆Michael Hogye, National Agricultural Statistics Service; Peter Quan, National Agricultural Statistics Service
- 9:35 a.m. **2007 Census of Agriculture Nonresponse Methodology**—◆William Cecere, National Agricultural Statistics Service
- 9:55 a.m. **Impact of Outreach Initiatives on the 2007 Census of Agriculture**—◆William Iwig, National Agricultural Statistics Service
- 10:15 a.m. **Floor Discussion**

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

**557** **CC-101**  
**■ GAISE in the Online Course—Topic-Contributed**

Section on Statistical Education  
 Organizer(s): David Zeitler, Grand Valley State University  
 Chair(s): David Zeitler, Grand Valley State University

- Panelists:**
- ◆Michelle Everson, The University of Minnesota
  - ◆Sue Schou, Idaho State University
  - ◆Patti B. Collings, Brigham Young University
  - ◆Jamis Perrett, Texas A&M University
- 8:55 a.m. **Floor Discussion**

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

**558** **CC-144C**  
**Bayesian Methods—Contributed**

IMS, Section on Bayesian Statistical Science  
 Chair(s): Ali Shojaie, University of Michigan

- 8:35 a.m. **Batch Means and Spectral Variance Estimators in Markov Chain Monte Carlo**—◆James M. Flegal, University of California, Riverside; Galin L. Jones, The University of Minnesota
- 8:50 a.m. **Conditional Simulation in the Two-Stage Hierarchical Model**—◆Ronald Neath, Baruch College; Galin L. Jones, The University of Minnesota
- 9:05 a.m. **On Estimating the Spectral Densities of a Class of Stationary Spatio-Temporal Processes**—◆Hui Xu, St. Cloud State University; Herman Rubin, Purdue University
- 9:20 a.m. **Misspecification in the Latent Class and Latent Markov Model**—◆David Kaplan, University of Wisconsin-Madison
- 9:35 a.m. **Recurrent Sets and Communcation for Monotonically Decreasing Nonstationarity**—◆Zach Dietz, Hamilton College
- 9:50 a.m. **Some Admissible Minimax Formal Bayes Estimators of a Multivariate Normal Mean**—◆Brian Shea, The University of Minnesota
- 10:05 a.m. **General Maximum Likelihood Empirical Bayes Estimation of Normal Means**—◆Wenhua Jiang, Rutgers University; Cun-Hui Zhang, Rutgers University



# GENERAL PROGRAM SCHEDULE

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

559

## ■ Bayesian Control of Error Rates and Networks—Contributed

Section on Bayesian Statistical Science

Chair(s): Leanne Streja, University of California, Los Angeles

- 8:35 a.m. Empirical Bayes FCR Controlling Confidence Intervals—◆Zhigen Zhao, Cornell University; J.T. Gene Hwang, Cornell University
- 8:50 a.m. Insights into p-values and Bayes Factors from False Positive and False Negative Bayes Factors—◆Hormuzd Katki, National Cancer Institute
- 9:05 a.m. Assessing Frequentist Operating Characteristics for a Bayesian Design: A Case Study—◆Zachary Skrivanek, Eli Lilly and Company; Brenda Gaydos, Eli Lilly and Company; Scott Berry, Berry Consultants
- 9:20 a.m. Gaussian Graphical Models Using Covariance Selection—◆Rajesh Talluri, Texas A&M University; Bani K. Mallick, Texas A&M University
- 9:35 a.m. Posterior Distributions on Networks—◆Lili Zhuang, The Ohio State University; Noel A. Cressie, The Ohio State University
- 9:50 a.m. Objective Bayesian Graphical Model Selection with Bayes Factors Based on Test Statistics and Nonlocal Alternative Priors: How Do Interactions of DNA Components Lead to a Disease?—◆Adarsh Joshi, The University of Texas M.D. Anderson Cancer Center; Jianhua Hu, The University of Texas M.D. Anderson Cancer Center; Valen E. Johnson, The University of Texas M.D. Anderson Cancer Center
- 10:05 a.m. Floor Discussion

CC-142

- 9:35 a.m. Extra Variation Logistic Regression Models Over Time—◆Winston A. Richards, Penn State University Harrisburg
- 9:50 a.m. A Consequence of Ignoring Clustering of Item Responses Obtained from Complex Samples During Item Response Theory Scaling: Biased Estimation of Item Discrimination Parameters—◆Aaron Douglas, Mathematica Policy Research, Inc.
- 10:05 a.m. Specification and Interpretation of Models for Monotonic Change to an Asymptote: A Nonlinear Mixed Effects Approach—◆Joseph R. Rausch, Cincinnati Children's Hospital Medical Center

560

## Analytic: IRT, MCMC, SEM—Contributed

Social Statistics Section

Chair(s): Sherri Pals, CDC

- 8:35 a.m. Line Search Algorithm for Maximum Likelihood in Exponential Families—◆Saisuke Okabayashi, The University of Minnesota; Charles J. Geyer, The University of Minnesota
- 8:50 a.m. A Choice of the Number of Factors and Hyper-Parameter Selection in Bayesian Factor Analysis Model—◆Kei Hirose, Kyushu University; Shuichi Kawano, Kyushu University; Sadanori Konishi, Kyushu University; Masanori Ichikawa, Tokyo University of Foreign Studies
- 9:05 a.m. Identification of Latent Structure: Inside or Outside Structural Equation Model?—◆Hee-Choon Shin, NORC at the University of Chicago
- 9:20 a.m. Structural Equation Model Diagnosis Using Two Scatter Plots—◆Ke-Hai Yuan, University of Notre Dame; Kentaro Hayashi, University of Hawaii

CC-160

561

## Survival Analysis Methods in Epidemiology—Contributed

Section on Statistics in Epidemiology

Chair(s): Ronald Gangnon, University of Wisconsin-Madison

- 8:35 a.m. Efficiency of the Maximum Partial Likelihood Estimator Under Nested Case-Control Design—Larry Goldstein, University of Southern California; ◆Haimeng Zhang, Mississippi State University
- 8:50 a.m. Time-Varying Effects of Prognostic Factors Associated with Disease-Free Survival in Breast Cancer—◆Karen Messer, University of California, San Diego; Minya Pu, University of California, San Diego; Barbara Parker, University of California, San Diego; Cynthia Thomson, University of Arizona; Bette Caan, Kaiser Permanente Northern California; Shirley Flatt, University of California, San Diego; Lisa Madlensky, University of California, San Diego; Richard Hajek, The University of Texas M.D. Anderson Cancer Center; Wael Al-Delaimy, University of California, San Diego; Nazmus Saquib, University of California, San Diego; Ellen Gold, University of California, Davis; John Pierce, University of California, San Diego; Loki Natarajan, University of California, San Diego
- 9:05 a.m. Analyzing Bivariate Survival Data with Interval Sampling and Application to Cancer Epidemiology—◆Hong Zhu, Johns Hopkins Bloomberg School of Public Health; Mei-Cheng Wang, Johns Hopkins Bloomberg School of Public Health
- 9:20 a.m. Covariate Bias Induced by Length-Biased Sampling of Failure Times—◆Pierre-Jerome Bergeron, University of Ottawa; Masoud Asgharian, McGill University; David B. Wolfson, McGill University
- 9:35 a.m. Survival Function with Informative Drop-Outs: Using FGM Copula—◆Md Monir Hossain, The University of Texas Health Science Center at Houston; Tosiya S. Sato, Kyoto University; Mohammad H. Rahbar, The University of Texas Health Science Center at Houston
- 9:50 a.m. Semiparametric Method for Cure Rate Model—◆Feifei Zhou, The University of Hong Kong

CC-203A



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

10:05 a.m. **Modeling Exchangeable Binary Data with Dependence Between the Design and Outcome Success Probabilities**—◆David Todem, Michigan State University; Karen P. Williams, Michigan State University

## 562 CC-157 Dimension Reduction in Regression—Contributed

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

Chair(s): Mark Fiecas, Brown University

8:35 a.m. **Weighted Bidimensional Regression**—◆Kendra K. Schmid, University of Nebraska Medical Center; David Marx, University of Nebraska-Lincoln; Ashok Samal, University of Nebraska-Lincoln

8:50 a.m. **On Ridge Regression, Convexity, and Nonlinear Problems**—◆Prasenjit Kapat, The Ohio State University; Prem K. Goel, The Ohio State University

9:05 a.m. **Network Exploration via the Adaptive LASSO and SCAD Penalties**—Jianqing Fan, Princeton University; ◆Yang Feng, Princeton University; Yichao Wu, North Carolina State University

9:20 a.m. **Nonlinear Regression Modeling via Bayesian Regularization with Lasso-Type Penalties**—◆Shohei Tateishi, Kyushu University; Sadanori Konishi, Kyushu University

9:35 a.m. **Cancer Microarray Feature Selection Using Support Vector Machines: Comparing Regularization Techniques**—◆Tim Peters, Macquarie University; David Bulger, Macquarie University; Jean Y.H. Yang, University of Sydney; To-ha Loi, St. Vincent's Hospital; David Ma, St. Vincent's Hospital

9:50 a.m. **Random Lasso**—◆Sijian Wang, University of Wisconsin-Madison; Bin Nan, University of Michigan; Saharon Rosset, Tel Aviv University; Ji Zhu, University of Michigan

10:05 a.m. **Variable Selection for the Varying Coefficient Cox Model**—◆Lifeng Wang, Michigan State University; Hongzhe Li, University of Pennsylvania; Jianhua Huang, Texas A&M University

## 563 CC-210 Teaching and Technology—Contributed

Section on Statistical Education

Chair(s): Kellie Keeling, University of Denver

8:35 a.m. **Expect More, Get More: Joys of Teaching Online**—◆Olcay Akman, Illinois State University

8:50 a.m. **Searching Our Collective Consciousness: A Google Trends Activity for Introductory Statistics**—◆Eric Nordmoe, Kalamazoo College

9:05 a.m. **Use of Podcast Technology for an Online Business Statistics Course**—◆Begona Perez-Mira, Louisiana State University; Joni Ancona Nunnery, Louisiana State University

9:20 a.m. **Interactive Quizzes for Continuous Learning and Evaluation**—◆Gunnar Stefansson, University Iceland; Asta J. Sigurdardottir, The Commercial College of Iceland

9:35 a.m. **Using Personal Laptops to Improve Statistics Education**—Andrew G. Glen, West Point; ◆JoAnna Crixell, West Point; Richard Bell, Auburn University

9:50 a.m. **Throw Away the Calculator and Teach Statistics**—◆Gerald Keller, Wilfrid Laurier University

10:05 a.m. **Developmental Trajectories of Health Science Students' Statistics Reasoning and Mastery**—◆Ralph M. Turner, University of the Sciences

## 564 CC-205 Sparsity and Shrinkage in Modern Statistical Modeling—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Jeffrey L. Solka, Naval Surface Warfare Center

8:35 a.m. **Sparse Sufficient Dimension Reduction and Variable Selection**—◆Xin Chen, University of Minnesota; R. Dennis Cook, The University of Minnesota

8:50 a.m. **Shrinkage Estimators and Their Efficiency in Reliability Calculations**—◆Mohammed A. Shayib, Prairie View A&M University; Aliakbar Montazer Haghighi, Prairie View A&M University

9:05 a.m. **Coordinate Descent Algorithms for Nonconvex Penalized Regression Methods**—◆Patrick Breheny, The University of Iowa; Jian Huang, The University of Iowa

9:20 a.m. **Estimation of the Proportion of Exponential Signals**—◆Deepak Ayyala, University of Maryland, Baltimore County; Junyong Park, University of Maryland, Baltimore County; Anindya Roy, University of Maryland, Baltimore County

9:35 a.m. **Estimating the Continuous Mixing Distribution by Cross-Validation in Mixture Models**—◆Ji-Ping Wang, Northwestern University

9:50 a.m. **On the Use of K-Fold Cross-Validation to Choose Cutoff Values and Assess the Performance of Predictive Models in Stepwise Regression**—◆Salahuddin Khan, University of Peshawar

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



# GENERAL PROGRAM SCHEDULE

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

## 565 Advanced Topics—Contributed

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

Chair(s): Elizabeth Martínez-Gómez, National Autonomous University of Mexico

- 8:35 a.m. **Numerical Algorithm-Based Estimation Methods for ODE Models**—◆Arun Kumar, University of Rochester; Hulin Wu, University of Rochester; Hongqi Xue, Rochester University
- 8:50 a.m. **Optimal Block Designs for Correlated Observations**—◆Nizam Uddin, University of Central Florida
- 9:05 a.m. **A Robust Nonlinear Method for Spectral Analysis**—◆Ta-Hsin Li, IBM T. J. Watson Research Center
- 9:20 a.m. **Statistical Response of Chaotic Networks to Structured Noise**—◆Morris H. Morgan, Hampton University; Carolyn B. Morgan, Hampton University
- 9:35 a.m. **The Optimum Combination of Full System and Subsystem Tests for Estimating the Reliability of a System**—◆Coire J. Maranzano, Johns Hopkins University Applied Physics Laboratory; James C. Spall, Johns Hopkins University Applied Physics Laboratory
- 9:50 a.m. **Floor Discussion**

## 566 Empirical Likelihood—Contributed

Section on Nonparametric Statistics

Chair(s): R. Webster West, Texas A&M University

- 8:35 a.m. **Bivariate Models with Partially Known Marginals: An Empirical Likelihood Approach with Infinitely Many Constraints**—◆Anton Schick, Binghamton University; Hanxiang Peng, Indiana University Purdue University Indianapolis
- 8:50 a.m. **Bayesian Empirical Likelihood for Quantile Regression**—◆Yunwen Yang, University of Illinois at Urbana-Champaign
- 9:05 a.m. **Entropy-Based Empirical Likelihood Ratio Change Point Detection Policies**—◆Albert Vexler, New York State University at Buffalo; Gregory Gurevich, Sami Shamoon College
- 9:20 a.m. **An Empirical Likelihood-Based Method for Comparison of Treatment Effects: Test of Equality of Coefficients in Linear Models**—◆Haiyan Su, University of Rochester; Hua Liang, University of Rochester
- 9:35 a.m. **Nonparametric Maximum Likelihood Estimation of the Probability Density Function and Hazard Function**—◆Ilya Shvartsman, Penn State University Harrisburg

## CC-148 9:50 a.m. Coherence Analysis of EEG Signals: A Nonparametric Likelihood Approach—

◆Suddhasatta Acharyya, Novartis Pharmaceuticals; Hernando Ombao, Brown University

## 10:05 a.m. Assessing Time-Changing Hurst Exponent and Variance in Multifractional Brownian Motion—

◆Kichun S. Lee, Georgia Institute of Technology; Brani Vidakovic, Georgia Tech/Emory University

## 567 Policy-Impacting Estimation Issues—Contributed

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

Chair(s): Iris Shimizu, National Center for Health Statistics

- 8:35 a.m. **A Three-Phase Model of Census Inclusion**—◆Douglas Olson, U.S. Census Bureau
- 8:50 a.m. **Assessing the Effects of Imputation on Income Estimates in the U.S. Consumer Expenditure Survey: Comparison with the Current Population Survey**—◆William D. Passero, Bureau of Labor Statistics
- 9:20 a.m. **The Impact of Allocations as a Tool for Statistical Editing of Corporate Taxpayer Administrative Records**—◆Marty Harris, IRS, Statistics of Income
- 9:35 a.m. **Propensity Scoring: An IRS Case Study in Determining the Relationship Between Bank Products and Noncompliance**—◆Karen C. Masken, IRS; Mark Mazur, IRS; Joanne Meikle, IRS; Roy Nord, IRS
- 9:50 a.m. **Trends in Early Childhood Vaccination Coverage: Progress Toward U.S. Healthy People 2010 Goals**—◆Zhen Zhao, CDC; Philip J. Smith, CDC; Elizabeth T. Luman, CDC
- 10:05 a.m. **Floor Discussion**

## 568 Causal Inference—Contributed

Biometrics Section

Chair(s): Jing Cheng, University of Florida

- 8:35 a.m. **Entire Matching and Its Application in an Observational Study of Treatments for Melanoma**—◆Frank B. Yoon, University of Pennsylvania; Paul R. Rosenbaum, University of Pennsylvania
- 8:50 a.m. **A General Approach to Causal Mediation Analysis**—◆Kosuke Imai, Princeton University; Luke Keele, The Ohio State University; Dustin Tingley, Princeton University

## CC-141

## CC-150B

## CC-203B



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

- 9:05 a.m. **Extending Propensity Score Subclassification Approach for Causal Effect Estimation Allowing Covariate Measurement Error**—◆ Yi Huang, University of Maryland, Baltimore County; Karen Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health
- 9:20 a.m. **Generalized Causal Mediation Analysis**—◆ Jeffrey M. Albert, Case Western Reserve University
- 9:35 a.m. **Free-Living Inferential Glucose Dynamic Modeling Using Only Noninvasive Input**—◆ Derrick Rollins, Iowa State University; Lucas Beverlin, Iowa State University; Nisarg Vyas, BodyMedia, Inc.; Gregory Welk, Iowa State University; Warren Franke, Iowa State University
- 9:50 a.m. **Identify Qualitative Interaction Through Value of Information**—◆ Peng Zhang, University of Michigan; James Robins, Harvard School of Public Health; Susan Murphy, University of Michigan
- 10:05 a.m. **Effect Modification of Prenatal Mercury Exposure Association with Developmental Outcomes by Social and Environmental Factors**—◆ Tanzy Love, Carnegie Mellon University; Sally W. Thurston, University of Rochester

## 569 CC-208A Microarray Analysis and Missing Data—Contributed

Biometrics Section, Section on Survey Research Methods  
Chair(s): Tao Liu, Brown University

- 8:35 a.m. **A Random Pattern Mixture Model for Longitudinal Binary Outcome with Informative Dropouts**—◆ Chengcheng Liu, Merck & Co., Inc.; Wensheng Guo, University of Pennsylvania; Sarah Ratcliffe, University of Pennsylvania
- 8:50 a.m. **Outfluence: The Impact of Missing Values**—◆ Ofer Harel, University of Connecticut
- 9:05 a.m. **Multiple Imputation for Drop-Out in Longitudinal Studies**—Xiaodong Li, Columbia University; ◆ Jingchen Liu, Columbia University; Naihua Duan, Columbia University; Huiping Jiang, Columbia University; Jeffrey Lieberman, Columbia University; Ragy Girgis, Columbia University
- 9:20 a.m. **Multiple Imputation in Right-Truncated Multivariate Normal Distribution, with Applications to RT-PCR**—◆ Abhijit Dasgupta, Thomas Jefferson University; Terry Hyslop, Thomas Jefferson University; Scott Waldman, Thomas Jefferson University
- 9:35 a.m. **Robust Variable and Model Selection with Missing Data**—◆ Greg DiRienzo, State University of New York at Albany
- 9:50 a.m. **Floor Discussion**

## 570 CC-153 Statistical Methods—Contributed

Business and Economic Statistics Section  
Chair(s): Marco A.R. Ferreira, University of Missouri-Columbia

- 8:35 a.m. **An Analysis of Segmented Ratios**—◆ William D. Heavlin, Google, Inc.
- 8:50 a.m. **Just a Few More Moments: The g-and-h Distribution**—◆ James B. McDonald, Brigham Young University; Patrick Turley, Brigham Young University
- 9:05 a.m. **Toward Learning Similarity Measures for Uncertain Features**—◆ Ming Xie, IBM China Research Laboratory; Bin Zhang, IBM China Research Laboratory; Li Xia, IBM China Research Laboratory; Jin Yan Shao, IBM China Research Laboratory; Wenjun Yin, IBM; Jin Dong, IBM China Research Laboratory
- 9:20 a.m. **Temporal Aggregation of Long Memory Processes and ARFIMA Approximations**—◆ Ka S. Man, Western Illinois University
- 9:35 a.m. **Testing the Equivalence of Means from a Multivariate Normal Population and Its Application to Investment**—◆ Hubert J. Chen, National Cheng-Kung University; Yen-Chi Huang, National Cheng-Kung University; Minglong A. Wang, National Cheng-Kung University
- 9:50 a.m. **Computational Methods for Production-Based Asset Pricing Models**—◆ Eric M. Aldrich, Duke University; Howard Kung, Duke University
- 10:05 a.m. **On the Optimal Degree of Smoothness for a Hodrick Prescott Filter**—◆ Munir Jalil, Universidad Nacional de Colombia; Javier Acosta, Universidad Nacional de Colombia

## 571 CC-159B ◆ ★ Improvements in Sample Design for Government-Sponsored Surveys—Contributed

Section on Survey Research Methods, Section on Government Statistics  
Chair(s): Sarjinder Singh, Texas A&M University-Kingsville

- 8:35 a.m. **Achieving the Unique Objectives of the Canadian Health Measures Survey**—◆ Sarah-Maude Dion, Statistics Canada; Suzelle Giroux, Statistics Canada
- 8:50 a.m. **Sample Redesign of Canadian Local Government Surveys**—◆ James Ahkong, Statistics Canada; Martin Renaud, Statistics Canada
- 9:05 a.m. **Reducing the Public Employment Survey Sample Size**—◆ Joseph Barth, U.S. Census Bureau
- 9:20 a.m. **National Sample Reallocation for the Occupational Employment Statistics Survey**—◆ David Piccone, Bureau of Labor Statistics; Marie Stetser, Bureau of Labor Statistics



# GENERAL PROGRAM SCHEDULE

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

- 9:35 a.m. **Evaluation of Methods for Increasing Precision in DAWN: Stratification and Ratio Estimation—**  
◆ Peter Frechtel, RTI International
- 9:50 a.m. **Progress on the Redesign of the Quarterly Tax Survey—**◆ Amy Couzens, U.S. Census Bureau; Carma Hogue, U.S. Census Bureau; Paul Villena, U.S. Census Bureau
- 10:05 a.m. **Exploring Statistical Issues of Annual Sampling for the Current Population Survey—**◆ Benjamin M. Reist, U.S. Census Bureau; Antoinette Lubich, U.S. Census Bureau; Reid Rottach, U.S. Census Bureau

## 572 CC-208B

### ■ Microarray and Genomics—Contributed

Biopharmaceutical Section

Chair(s): Shiojwen Lee, FDA

- 8:35 a.m. **A Rank Approach to Identify Outlier Tissue—**  
◆ Dung-Tsa Chen, Moffitt Cancer Center & Research Institute; Lin-An Chen, National Chiao-Tung University
- 8:50 a.m. **A Cluster Binomial Model for Resistance-Mutations Detectable in Clonal Sequencing Analysis—**  
◆ Jianliang Zhang, MedImmune, LLC
- 9:05 a.m. **Deforestation of a Random Forest—**◆ Matthew Mitchell, Metabolon, Inc.
- 9:20 a.m. **Determination of Sample Size for Validation Study in Pharmacogenomics—**◆ Youlan Rao, The Ohio State University; Yoonkyung Lee, The Ohio State University; Jason Hsu, The Ohio State University
- 9:35 a.m. **Robust Test for Time-Course Microarray Data—**  
◆ Insuk Sohn, Duke University; Kouros Owzar, Duke University; Stephen L. George, Duke University Medical Center; Sin-Ho Jung, Duke University
- 9:50 a.m. **Time Course Analysis of Microarray Data for the Pathway of Reproductive Development in Female Rainbow Trout—**◆ Yushi Liu, The Ohio State University; Joseph S. Verducci, The Ohio State University
- 10:05 a.m. **Floor Discussion**

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

### 573 CC-102B

#### ■ ★ Nonparametric Regression Estimators in Survey Sampling—Invited

Section on Survey Research Methods

Organizer(s): Daniell Toth, Bureau of Labor Statistics

Chair(s): John L. Eltinge, Bureau of Labor Statistics

- 10:35 a.m. **Nonparametric Regression Estimators in Survey Sampling—**◆ Sharon Lohr, Arizona State University; Guillermo Mendez, American Express
- 11:00 a.m. **Penalized Balanced Sampling: Nonparametric Guidance for Survey Design—**◆ Jay Breidt, Colorado State University; Guillaume Chauvet, National Institute for Statistics and Economic Studies
- 11:25 a.m. **Nonparametric Regression and the Two Sample Problem—**◆ Alan H. Dorfman, Bureau of Labor Statistics
- 11:50 a.m. **Disc:** Jean Opsomer, Colorado State University
- 12:10 p.m. **Floor Discussion**

### 574 CC-150A

#### ■ Statistical Issues and the Second Code of Life: Epigenomics—Invited

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

Organizer(s): Rebecca W. Doerge, Purdue University; Jaya Satagopan, Memorial Sloan-Kettering Cancer Center

Chair(s): Rebecca W. Doerge, Purdue University

- 10:35 a.m. **Epigenetic Natural Variation in Arabidopsis Thaliana—**◆ Robert A. Martienssen, Cold Spring Harbor Laboratory
- 11:00 a.m. **Statistical Issues Surrounding Testing for Epigenomic Alterations—**◆ Hongmei Jiang, Northwestern University
- 11:25 a.m. **Whole Genome DNA Methylation Studies: Prioritization of Candidate Loci—**◆ Melissa J. Fazzari, Albert Einstein College of Medicine
- 11:50 a.m. **Inferring the Past: How Did Your Cancer Grow?—**  
◆ Kimberly Siegmund, University of Southern California; Paul Marjoram, University of Southern California; Darryl Shibata, University of Southern California
- 12:15 p.m. **Floor Discussion**



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

**575** **CC-207B**  
**■ Who Is Teaching the Statistics Courses?—Invited**

Section on Statistical Education

Organizer(s): Peter Westfall, Texas Tech University

Chair(s): Katherine T. Halvorson, Smith College

- 10:35 a.m. **A National Survey on Teaching Practices in Undergraduate Statistics Instruction—◆**Robert delMas, The University of Minnesota; Joan B. Garfield, The University of Minnesota; Andrew Zieffler, The University of Minnesota
- 11:00 a.m. **An Inventory of (Bio)statistics Courses at an Academic Health Science Center: Is Duplication Really Necessary?—◆**Adriana Perez, University of Louisville; Mourad Atlas, University of Louisville; Carl A. Hornung, University of Louisville
- 11:25 a.m. **Who Is Teaching the Statistics Courses?—◆**Aaron Satterlee, Northwood University
- 11:50 a.m. **Duplication in Graduate-Level Courses in Statistics—◆**Peter Westfall, Texas Tech University
- 12:15 p.m. **Floor Discussion**

**576** **CC-150B**  
**■ Extending the Marginal Structural Model—Invited**

Section on Statistics in Epidemiology

Organizer(s): Stephen R. Cole, The University of North Carolina at Chapel Hill

Chair(s): Stephen R. Cole, The University of North Carolina at Chapel Hill

- 10:35 a.m. **Survival Analysis with Dynamic Marginal Structural Models—◆**Miguel A. Hernan, Harvard School of Public Health
- 11:00 a.m. **Estimation of Dynamic Treatment Regimes and Extrapolation to Populations with Distinct Monitoring Structures: The Use of Laboratory Monitoring to Detect HIV Treatment Failure—◆**Maya L. Petersen, University of California, Berkeley
- 11:25 a.m. **Extending Marginal Structural Models to Surrogate Outcomes—◆**Marshall Joffe, University of Pennsylvania
- 11:50 a.m. **Disc:** James Robins, Harvard School of Public Health
- 12:10 p.m. **Floor Discussion**

**577** **CC-207A**  
**■ ★ Collaborative and Value-Creating Processes for Statistical Computing: Transforming Data Evidence Into Successful Policies, Decisions, and Actions—Invited**

Section on Statistical Computing, Interface Foundation of North America

Organizer(s): Arnold Goodman, Collaborative Data Solutions

Chair(s): Necip Doganaksoy, GE Global Research

- 10:35 a.m. **Collaborative and Value-Creating Processes for Statistical Computing—◆**Arnold Goodman, Collaborative Data Solutions
- 10:55 a.m. **Model Misspecification versus Problem Misspecification—◆**David J. Hand, Imperial College
- 11:15 a.m. **An Essential Aspect of the Climb from Competition to Collaboration: The Relationships Among the Climbers—◆**Doug Zahn, Zahn and Associates
- 11:35 a.m. **The Evolving Role of Statistics in Business and Industry—◆**Necip Doganaksoy, GE Global Research; ◆Gerald Hahn, GE Corporate Research and Development Center, Retired
- 11:55 a.m. **Disc:** Janet Myhre, Claremont McKenna College
- 12:15 p.m. **Floor Discussion**

**578** **CC-155**  
**■ ★ Measuring Financial and Real Sector Linkages—Invited**

Business and Economic Statistics Section

Organizer(s): Kim Zieschang, International Monetary Fund

Chair(s): Kim Zieschang, International Monetary Fund

- 10:35 a.m. **The End of the Great Moderation? How Better Monetary Statistics Could Have Signaled the Systemic Risk Precipitating the Financial Crisis—◆**William A. Barnett, The University of Kansas; Marcelle Chauvet, University of California, Riverside
- 11:05 a.m. **Computing Real Bank Services—◆**Dennis Fixler, Bureau of Economic Analysis; Marshall B. Reinsdorf, Bureau of Economic Analysis
- 11:35 a.m. **Measurement Error in Monetary Aggregates: A Markov Switching Factor Approach—**William A. Barnett, The University of Kansas; ◆Marcelle Chauvet, University of California, Riverside; Tierney Heather, College of Charleston
- 12:05 p.m. **Floor Discussion**



# GENERAL PROGRAM SCHEDULE

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

## 579 CC-102A ■ ★ Using National Center for Health Statistics Data to Study Access to Health Care—Invited

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

Organizer(s): Jane F. Gentleman, National Center for Health Statistics

Chair(s): Jane F. Gentleman, National Center for Health Statistics

10:35 a.m. **Using the National Health Interview Survey to Monitor Health Insurance and Access to Care—**◆Robin A. Cohen, National Center for Health Statistics

10:55 a.m. **Access to Care and Objective Measures of Health: Results from the National Health and Nutrition Examination Survey (NHANES)—**◆Vicki L. Burt, National Center for Health Statistics; Lester R. Curtin, CDC; Clifford Johnson, National Center for Health Statistics; Cindy Zhang, Harris Associates

11:15 a.m. **Health care access data for children and adolescents from the National Survey of Children with Special Health Care Needs and the National Survey of Children’s Health—**◆Rosa Avila, National Center for Health Statistics

11:35 a.m. **Using the National Health Care Surveys to Monitor Use and Access to Health Care—**◆Nancy Sonnenfeld, National Center for Health Statistics; Sandra L. Decker, National Center for Health Statistics

11:55 a.m. Disc: Diane M. Makuc, National Center for Health Statistics

12:15 a.m. **Floor Discussion**

## 580 CC-201 Best of Statistics Surveys: The Open Access Journal for Review Articles—Invited

ASA Special Interest Group on Statistical Learning and Data Mining, International Indian Statistical Association

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

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

10:35 a.m. **Navigating Random Forests and Related Algorithms—**◆David S. Siroky, Duke University

11:00 a.m. **Text Data Mining: Theory and Methods—**◆Jeffrey L. Solka, Naval Surface Warfare Center

11:25 a.m. **Least Angle and L1 Penalized Regression: A Review—**◆Tim Hesterberg, Google, Inc.; Nam Hee Choi, University of Michigan; Lukas Meier, ETH; Chris Fraley, Insilicos

11:50 a.m. Disc: Edward J. Wegman, George Mason University

12:10 p.m. **Floor Discussion**

## 581 CC-143C ■ ★ Case Studies in the Area of Dynamic Treatment Regimes—Invited

ENAR, Biometrics Section, Biopharmaceutical Section

Organizer(s): Qi Long, Emory University

Chair(s): Brent Johnson, Emory University

10:35 a.m. **Structural Nested Mean Modeling of Response-Maximized Breastfeeding Strategies—**Erica E.M. Moodie, McGill University; ◆Susan Shortreed, McGill University

11:00 a.m. **Targeted Maximum Likelihood Estimation of Individualized Treatment Rule Effects—**◆Kelly Moore, University of California, Berkeley; Mark J. van der Laan, University of California, Berkeley; Ira Tager, University of California, Berkeley; Romain Neugebauer, University of California, Berkeley

11:25 a.m. **Dynamic Treatment Regimes in Leukemia Treatment—**◆Abdus S. Wahed, University of Pittsburgh

11:50 a.m. Disc: Andrea Rotnitzky, Universidad Di Tella and Harvard University

12:10 p.m. **Floor Discussion**

## 582 CC-202B Bayesian Methods—Invited

IMS, Section on Bayesian Statistical Science

Organizer(s): Mario Peruggia, The Ohio State University

Chair(s): Mario Peruggia, The Ohio State University

10:35 a.m. **Aggregation Modeling—**◆Steven N. MacEachern, The Ohio State University; Zhen Wang, The Ohio State University

11:05 a.m. **A Clusterwise Approach for Heterogeneous Variable Selection—**◆Feng Liang, University of Illinois at Urbana-Champaign

11:35 a.m. **Nonlocal Prior Densities for Default Bayesian Hypothesis Tests—**◆Valen E. Johnson, The University of Texas M.D. Anderson Cancer Center; David Rossell, IRB Barcelona

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

## 583 CC-202A Wald Lecture III—Invited

IMS

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

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

10:35 a.m. **Predictive Learning via Rule Ensembles—**◆Jerome H. Friedman, Stanford University

12:00 p.m. **Floor Discussion**



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

### 584 CC-101 ■ ★ The Federal Statistical System: Opportunities and Challenges for the Next 5–10 Years—Invited

The National Academies, Section on Survey Research Methods,  
 Social Statistics Section, Section on Government Statistics  
 Organizer(s): Constance F. Citro, The National Academies  
 Chair(s): William F. Eddy, Carnegie Mellon University

- Panelists:** ◆ Cynthia Clark, National Agriculture  
 Statistics Service  
 ◆ Hermann Habermann, Consultant  
 ◆ Nancy Kirkendall, Consultant  
 ◆ Katherine Wallman, Office of Management  
 and Budget

12:15 p.m. Floor Discussion

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

### 585 CC-143A ■ ★ The Guatemalan Police Archive Project: Sample Design, Weighting, and Analysis— Topic-Contributed

Social Statistics Section, Section on Government Statistics,  
 Section on Survey Research Methods  
 Organizer(s): Paul Zador, Westat, Inc.  
 Chair(s): Paul Zador, Westat, Inc.

- 10:35 a.m. **Studying Millions of Rescued Documents: Sampling  
 Plan at the Guatemalan National Police Archive  
 (GNPA)**—◆ Daniel R. Guzmán, Benetech; Tamy  
 Guberek, Benetech; Gary M. Shapiro, Westat, Inc.;  
 Paul Zador, Westat, Inc.
- 10:55 a.m. **Weighting for the Guatemalan National Police  
 Archive Sample: Unusual Challenges and  
 Problems**—◆ Gary M. Shapiro, Westat, Inc.;  
 Daniel Guzman, Benetech; Paul Zador, Westat, Inc.;  
 Tamy Guberek, Benetech
- 11:15 a.m. **Analyzing Command and Control of the  
 Guatemalan National Police Leadership Over  
 Human Rights Violations: A Statistical Analysis  
 of the National Police Archive**—◆ Megan Price,  
 Benetech; Daniel Guzman, Benetech; Paul Zador,  
 Westat, Inc.; Gary M. Shapiro, Westat, Inc.; Tamy  
 Guberek, Benetech
- 11:35 a.m. Disc: Patrick Ball, The Benetech Initiative
- 11:55 a.m. Disc: Hyunshik Lee, Westat, Inc.
- 12:15 p.m. Floor Discussion

### 586 CC-142 Recent Advances in Statistical Inference Using Order Statistics—Topic-Contributed

International Chinese Statistical Association  
 Organizer(s): Gang Zheng, National Heart, Lung, and Blood Institute  
 Chair(s): Reza Modarres, The George Washington University

- 10:35 a.m. **Pitman Closeness of Estimators and Predictors  
 for Exponential Distribution**—◆ Katherine  
 Davies, University of Manitoba; Narayanaswamy  
 Balakrishnan, McMaster University; Jerome P.  
 Keating, The University of Texas at San Antonio
- 10:55 a.m. **Statistical Analysis of Adaptive Progressively  
 Censored Data**—◆ Hon Keung (Tony) Ng, Southern  
 Methodist University; Debasis Kundu, Indian  
 Institute of Technology Kanpur; Ping Shing Chan,  
 Chinese University of Hong Kong
- 11:15 a.m. **Parametric Inference in Ranked Set Sampling Based  
 on a Missing Data Model**—◆ Omer Ozturk, The Ohio  
 State University
- 11:35 a.m. **A Multivariate Wilcoxon Rank Sum Test Based on  
 the Triangle Data Depth**—◆ Zhenyu Liu, The George  
 Washington University
- 11:55 a.m. **A Very Flexible Hybrid Censoring Scheme and  
 Its Fisher Information**—◆ Sangun Park, Yonsei  
 University; Narayanaswamy Balakrishnan,  
 McMaster University
- 12:15 p.m. Floor Discussion

### 587 CC-149B Methods, Computing, and Application of Copulas—Topic-Contributed

Business and Economic Statistics Section, SSC  
 Organizer(s): Jun Yan, University of Connecticut  
 Chair(s): Jun Yan, University of Connecticut

- 10:35 a.m. **Properties and Uses of the Empirical Copula  
 Process**—◆ Christian Genest, Université Laval
- 10:55 a.m. **Copula-Based Tests of Independence Among  
 Continuous Random Vectors**—◆ Ivan Kojadinovic,  
 The University of Auckland
- 11:15 a.m. **Archimedean Copulas and Beyond**—◆ Johanna  
 Neslehova, ETH Zurich
- 11:35 a.m. **Local Power Analyses of Goodness-of-Fit Tests for  
 Copulas**—◆ Jean-Francois Quessy, Université du  
 Québec à Trois-Rivières
- 11:55 a.m. **Hierarchical Insurance Claims Modeling**—  
 ◆ Emiliano A. Valdez, University of Connecticut;  
 Edward W. Frees, University of Wisconsin-Madison
- 12:15 p.m. Floor Discussion



# GENERAL PROGRAM SCHEDULE

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

## 588 CC-204A

### ★ Data User Experience: Working with Data Protected by Synthetic Methods: Moving from Theory to Practice: Synthetic Data in the Public Domain—Topic-Contributed

Section on Government Statistics, Section on Survey Research Methods

Organizer(s): J. Neil Russell, National Center for Education Statistics

Chair(s): J. Neil Russell, National Center for Education Statistics

10:35 a.m. **Partial Synthesis of the Longitudinal Employer-Household Dynamics Database—**  
◆ Simon Woodcock, Simon Fraser University;  
Gary Benedetto, U.S. Census Bureau

10:55 a.m. **The Synthetic Public-Use Release of the Longitudinal Business Database—**◆ Satkartar Kinney, National Institute of Statistical Sciences; Jerome Reiter, Duke University; Ron Jarmin, U.S. Census Bureau; Arnold Reznick, U.S. Census Bureau; Javier Miranda, U.S. Census Bureau; John M. Abowd, Cornell University

11:15 a.m. **Generating Multiply Imputed Synthetic Data Sets for a German Establishment Survey: The Agency's Perspective—**◆ Joerg Drechsler, Institute for Employment Research

11:35 a.m. **Improving the Usefulness of Synthetic Data: Some Recent Advances—**◆ Jerome Reiter, Duke University

11:55 a.m. Disc: Jack Buckley, New York University

12:15 p.m. **Floor Discussion**

## 589 CC-159A

### ■ Statistical Consulting with Limited Resources—Topic-Contributed

Section on Statistical Consulting

Organizer(s): Richard F. Ittenbach, Cincinnati Children's Hospital Medical Center

Chair(s): Mi-Ok Kim, Cincinnati Children's Hospital Medical Center

10:35 a.m. **Scale Development on a Limited Budget: Guidelines for Statisticians—**◆ Richard F. Ittenbach, Cincinnati Children's Hospital Medical Center; Amy E. Cassidy, Cincinnati Children's Hospital Medical Center; Todd G. Nick, Cincinnati Children's Hospital Medical Center; Justine Shults, University of Pennsylvania

10:55 a.m. **Creative Problem Solving in Statistical Consulting with Limited Time and a Limited Budget—**◆ Mark Glickman, Boston University School of Public Health

11:15 a.m. **Grant Proposal Development Assistance on a Limited Budget: Guidelines for Statisticians—**  
◆ Todd G. Nick, Cincinnati Children's Hospital Medical Center; Ralph G. O'Brien, Case Western Reserve University

11:35 a.m. **Developing an Independent Research Program on a Limited Budget and with Limited Time: Some Ideas for Biostatisticians—**◆ Justine Shults, University of Pennsylvania; Richard F. Ittenbach, Cincinnati Children's Hospital Medical Center; Todd G. Nick, Cincinnati Children's Hospital Medical Center

11:55 a.m. Disc: Sarah Ratcliffe, University of Pennsylvania

12:15 p.m. **Floor Discussion**

## 590 CC-206

### ■ ★ Statistics at West Point: No Lies—Topic-Contributed

Section on Statistics in Defense and National Security

Organizer(s): Adam Wright, U.S. Military Academy at West Point

Chair(s): Howard Burkom, Johns Hopkins applied Physics Laboratory

10:35 a.m. **Periodic Spatio-Temporal Improvised Explosive Device Attack Pattern Analysis—**◆ Matthew Benigni, U.S. Military Academy; Reinhard Furrer, Colorado School of Mines

10:55 a.m. **Using Variable Screening and Logistic Regression to Determine the Impact of Friendly Activity on Improvised Explosive Device Incidents—**◆ Darryl Ahner, U.S. Military Academy

11:15 a.m. **Epidemiological Studies in the Military—**◆ Rodney Sturdivant, U.S. Military Academy; Robert Burks, U.S. Military Academy; Brett Owens, William Beaumont Army Medical Center; Jennifer Wolf, University of Colorado Denver; Ken Cameron, Keller Army Hospital

11:35 a.m. **Analysis of Refractive Surgery Data from a Young and Extremely Healthy Population—**◆ Vaughn DeLong, U.S. Military Academy; Scott T. Nestler, U.S. Military Academy at West Point; Chris Grauel, U.S. Military Academy

11:55 a.m. **Small Arms Effective Life Studies—**◆ Matthew Benigni, U.S. Military Academy; Scott T. Nestler, U.S. Military Academy at West Point; Dana Gingrich, U.S. Military Academy; Gary Kramlich, U.S. Army

12:15 p.m. **Floor Discussion**

## 591 CC-144C

### ■ Bayesian Approaches in Clinical Trials: Regulatory Perspectives—Topic-Contributed

Biopharmaceutical Section, Section on Bayesian Statistical Science

Organizer(s): Tie-Hua Ng, FDA

Chair(s): Henry Hsu, FDA

10:35 a.m. **Safety Evaluation of Factor VIII Products: Bayesian Approaches—**◆ Ghanshyam Gupta, FDA

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

- 10:55 a.m. **Bayesian Approaches: Basic Concepts**—  
◆Tie-Hua Ng, FDA
- 11:15 a.m. **Bayesian Analyses of Binary Outcomes**—  
◆Chunrong Cheng, FDA; Tie-Hua Ng, FDA
- 11:35 a.m. **Bayesian Methods in Lot Release**—◆Yunling Xu,  
FDA; Boguang Zhen, FDA
- 11:55 a.m. **Bayesian vs. Frequentist Hypotheses Testing in  
Clinical Trials with Dichotomous and Countable  
Outcomes**—◆Boris G. Zaslavsky, FDA
- 12:15 p.m. **Floor Discussion**

- 10:55 a.m. **Understanding the Size of p-Values**—◆Scotland  
Leman, Virginia Polytechnic Institute and  
State University
- 11:15 a.m. **Multi-Scale Spatial Inference of Pollutant  
Concentrations**—◆Dawn Woodard, Cornell  
University
- 11:35 a.m. **What Scientists Really Want to Know**—◆Eric Vance,  
Virginia Polytechnic Institute and State University;  
Scotland Leman, Virginia Polytechnic Institute and  
State University; Leanna House, Virginia Polytechnic  
Institute and State University
- 11:55 a.m. **Inverse Bayes**—◆Golde I. Holtzman, Virginia  
Polytechnic Institute and State University
- 12:15 p.m. **Floor Discussion**

## 592 CC-144B Statistical Topics in the Study of Medical Devices—Topic-Contributed

Biopharmaceutical Section

Organizer(s): Heng Li, FDA

Chair(s): Heng Li, FDA

- 10:35 a.m. **A Unified Approach in Data Analysis After Sample  
Size Is Increased in Adaptive Design Trial**—  
◆Yonghong Gao, FDA
- 10:55 a.m. **Analysis of Gender Differences in a Medical  
Device Trial That Was Not Constructed for Gender  
Comparisons**—◆David C. Naftel, The University  
of Alabama at Birmingham; Margaret T. Foushee,  
The University of Alabama at Birmingham; Susan L.  
Myers, The University of Alabama at Birmingham
- 11:15 a.m. **Comparing Statistical Approaches in Analysis  
of Clinical Trial Data with Patient Crossover**—  
◆Tailiang Xie, Brightech International
- 11:35 a.m. **Demonstrating Treatment Effect Using a Bootstrap  
Simulation**—◆Xiaolong Shih, Boston Scientific  
Corporation
- 11:55 a.m. **Some Comments and Recommendations on Interim  
Data Review of Data from Medical Device Studies**—  
◆Dennis W. King, STATKING Consulting, Inc.
- 12:15 p.m. **Floor Discussion**

## 593 CC-204B Bayesian Philosophies and Practicalities— Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Scotland Leman, Virginia Polytechnic Institute and  
State University

Chair(s): Gavino Puggioni, The University of North Carolina at  
Chapel Hill

- 10:35 a.m. **An Application of Reification for a Rainfall-Runoff  
Computer Model**—◆Leanna House, Virginia  
Polytechnic Institute and State University; Ian  
Vernon, University of Durham; Allan Seheult,  
University of Durham

## 594 CC-204C Modern Statistical Approaches to Phylogenetics—Topic-Contributed

Section on Bayesian Statistical Science

Organizer(s): Jennifer Tom, University of California, Los Angeles

Chair(s): Marc A. Suchard, University of California, Los Angeles

- 10:35 a.m. **Bayesian Hierarchical Modeling Using an Iterative  
Reweighting Algorithm Within Gibbs: An Analysis  
of Individual Posterior Distributions of Phylogenetic  
Influenza Data**—◆Jennifer Tom, University of  
California, Los Angeles
- 10:55 a.m. **Modeling Indel Hot Spots When Inferring  
Alignments**—◆Benjamin D. Redelings, North  
Carolina State University
- 11:15 a.m. **Bayesian Estimation of Parameters Along a  
Species Phylogeny Subject to Hybridization and  
Coalescence**—◆Chen Meng, Monsanto Company
- 11:35 a.m. **Phyloclustering: New Phylogenetic Methods for  
Inferring Population Structure**—◆Karin S. Dorman,  
Iowa State University; Ranjan Maitra, Iowa State  
University; Wei-Chen Chen, Iowa State University
- 11:55 a.m. **Assessing Selective Influence of Amino Acid  
Properties**—◆Saheli Datta, University of California,  
Santa Cruz; Raquel Prado, University of California,  
Santa Cruz; Abel Rodriguez, University of California,  
Santa Cruz
- 12:15 p.m. **Floor Discussion**



# GENERAL PROGRAM SCHEDULE

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

## 595 CC-203A Inference in Nonstandard Problems—Topic-Contributed

Section on Nonparametric Statistics

Organizer(s): Bodhisattva Sen, Columbia University

Chair(s): Bodhisattva Sen, Columbia University

- 10:35 a.m. **A Two-Stage Hybrid Procedure for Estimating an Inverse Regression Function**—◆Runlong Tang, University of Michigan; Moulinath Banerjee, University of Michigan; George Michailidis, University of Michigan
- 10:55 a.m. **Bootstrapping Lasso Estimators**—◆Arindam Chatterjee, Texas A&M University
- 11:15 a.m. **Inference in Nonparametric Shape-Restricted Problems**—◆Emilio Seijo, Columbia University
- 11:35 a.m. **General Semiparametric Inference via Bootstrap Sampling**—◆Guang Cheng, Purdue University
- 11:55 a.m. Disc: Bikramjit Das, Cornell University
- 12:15 p.m. Floor Discussion

## 596 CC-141 ★ Overview of Methods to Improve Quality in Petroleum Data—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Paula Mason, Energy Information Administration

Chair(s): James Knaub, Energy Information Administration

- 10:35 a.m. **The Changing Petroleum Marketing Industry as Viewed Through an Attribute Frame**—◆Amerine Woodyard, Energy Information Administration; Paula Mason, Energy Information Administration
- 10:55 a.m. **Improvement of Data Quality Assurance in the EIA Weekly Gasoline Prices Survey**—◆Bin Zhang, Energy Information Administration; Paula Mason, Energy Information Administration; Amerine Woodyard, Energy Information Administration; Benita O'Colmain, ICF Macro
- 11:15 a.m. **Improving the Edits in Petroleum Supply Surveys**—◆Jason D. Marley, SAIC; Paula Mason, Energy Information Administration; Julie Harris, Energy Information Administration
- 11:35 a.m. **An Improved Imputation Methodology Derived Through Regression Trees**—◆Pedro J. Saavedra, ICF Macro; Paula Mason, Energy Information Administration; Benita O'Colmain, ICF Macro; Jeffrey Foarde, ICF Macro
- 11:55 a.m. Disc: Paula Mason, Energy Information Administration
- 12:15 p.m. Floor Discussion

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

### 597 CC-149A ■ What Can I Do with an Undergraduate Degree in Statistics?—Topic-Contributed

ASA-MAA Joint Committee on Undergraduate Statistics, Section on Statistics in Defense and National Security, Social Statistics Section

Organizer(s): Robin H. Lock, St. Lawrence University

Chair(s): Robin H. Lock, St. Lawrence University

- Panelists:**
- ◆ Carol J. Blumberg, U.S. Department of Energy
  - ◆ Deanna Egelston, National Security Agency
  - ◆ Brian Bot, Mayo Clinic

12:15 p.m. Floor Discussion

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

### 598 CC-158A Topics in Quality and Productivity—Contributed

Section on Quality and Productivity

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

- 10:35 a.m. **Virtual Prototyping in Marketing Research**—◆Norbert Wirth, MarketTools; Frank Hedler, MarketTools; Dimitri Liakhovitski, MarketTools
- 10:50 a.m. **Estimating Tradeoff Exchange Rate in Conjoint Analysis: An Application of Fieller's Theorem**—◆Pallavi Chitturi, Temple University; Ravi Chitturi, Lehigh University; Damaraju Raghavarao, Temple University
- 11:05 a.m. **Nonparametric Estimation in Ranked Set Sampling with a Concomitant**—◆Nader M. Gemayel, The Ohio State University; Doug Wolfe, The Ohio State University; Elizabeth Stasny, The Ohio State University
- 11:20 a.m. **Adaptive Break Detection and Combining: Application to Electricity Load Forecast**—◆Yannig Goude, EDF
- 11:35 a.m. **Stochastic Production Line Model of Multiple Workstations and Buffers with Continuous Materials Flow**—◆Mohammad Quasem, Howard University
- 11:50 a.m. **Developing a Sampling Plan Based on Cpk**—◆Itay Negrin, Ben Gurion University of the Negev; Yisrael Parmet, Ben Gurion University of the Negev; Edna Schechtman, Ben Gurion University of the Negev



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

12:05 p.m. **How to Be the Most Popular Statistician in Your Company: Affordable Quality Approaches to Guarantee Project Director and Client Satisfaction—**  
◆ Larry N. Campbell, RTI International; Victoria Albright, RTI International

10:50 a.m. **Multi-City Time Series Analyses of Air Pollution and Mortality Data Using Generalized Geosadditive Mixed Models—**◆ Lung-Chang Chien, The University of North Carolina at Chapel Hill; Shrikant Bangdiwala, The University of North Carolina at Chapel Hill; Jiu-Chiuan Chen, The University of North Carolina at Chapel Hill; Mark Weaver, Family Health International; Todd Schwartz, The University of North Carolina at Chapel Hill; John S. Preisser, The University of North Carolina at Chapel Hill

## 599 CC-144A

### ■ Issues Related to Surrogate Endpoints, Biomarkers, and Survival Analysis—Contributed

Biopharmaceutical Section

Chair(s): B. Christine Clark, ReSearch Pharmaceutical Services, Inc.

10:35 a.m. **Adjustment for the Measurement Error in Evaluating Biomarkers—**◆ Wen Li, Iowa State University; Yongming Qu, Eli Lilly and Company

11:05 a.m. **Joint Variable Selection of Fixed and Random Effects in a Linear Mixed-Effects Model and Its Oracle Properties—**◆ Arun Krishna, North Carolina State University; Howard D. Bondell, North Carolina State University; Sujit Ghosh, North Carolina State University

10:50 a.m. **Efficiency Impact of Proportional Hazards Assumption Violation—**◆ Amarjot Kaur, Merck & Co., Inc.; Yabing Mai, FDA

11:20 a.m. **A Likelihood Approach to Pooled Prevalence Estimation with Random Effects—**◆ Chengxing Lu, CDC; Mikyong Shin, CDC; Adolfo Correa, CDC

11:05 a.m. **Effect of Predictive Performance of a Biomarker for the Sample Size of Targeted Clinical Trials—**  
◆ Xiwu Lin, GlaxoSmithKline; Daniel Parks, GlaxoSmithKline; Kwan R. Lee, GlaxoSmithKline

11:35 a.m. **A Two-Stage Estimation Method for Random Coefficient Differential Equation Models with Application to Longitudinal HIV Dynamic Data—**  
◆ Yun Fang, East China Normal University; Hulin Wu, University of Rochester; Li-Xing Zhu, Hong Kong Baptist University

11:20 a.m. **An Assessment of Several Trial-Level Surrogacy Measures in the Meta-Analytical Framework of Evaluating Surrogate Endpoints in Clinical Trials—**  
◆ Qian Shi, Mayo Clinic; Daniel Sargent, Mayo Clinic

11:50 a.m. **GEMANOVA and Mixed Models—**◆ Heather M. Bush, University of Kentucky; William S. Rayens, University of Kentucky

11:35 a.m. **Comparison of Vaccine Effects of LAIV and TIV on Pneumonia and Influenza-Related Medical Encounters—**◆ Jean A. Roayaei, National Institutes of Health

12:05 p.m. **Longitudinal Analysis of Intraclass Correlation Coefficients—**Aiyi Liu, National Institute of Child Health and Human Development; Enrique Schisterman, National Institutes of Health; ◆ Chunling Liu, The Eunice Kennedy Shriver National Institute of Child Health and Human Development

11:50 a.m. **Statistical Application of Survival Analysis to Clinical Trials of Antiepileptic Drugs—**◆ Baldeo K. Taneja, Supernus Pharmaceuticals, Inc.

12:05 p.m. Floor Discussion

## 601 CC-208A

### Modeling Seasonal Data in Environmental Studies—Contributed

Section on Statistics and the Environment

Chair(s): Jenise Swall, U.S. Environmental Protection Agency

## 600 CC-159B

### ■ Mixed Effects Models in Modern Epidemiologic Studies—Contributed

Section on Statistics in Epidemiology

Chair(s): Novie Younger, Tropical Medicine Research Institute, Jamaica

10:35 a.m. **Back-Fitting and Penalized Iteratively Reweighted Least Squares Algorithm in Generalized Additive Models—**◆ Long H. Ngo, Beth Israel Deaconess Medical Center/Harvard Medical School

10:35 a.m. **Modeling Menstrual Cycle Lengths at the Approach of Menopause Using Bayesian Change Point Models—**◆ Xiaobi Huang, University of Michigan; Michael Elliott, University of Michigan

10:50 a.m. **Stochastic Modeling of Stream Flow Measurements in the Mississippi and Missouri Rivers—**◆ Jonathan F. Joseph, The Ohio State University; Haikady N. Nagaraja, The Ohio State University

11:05 a.m. **Modeling Seasonal Effects in Radon Emissions Data—**◆ Órlaith Burke, University College Dublin; Stephanie Long, Radiological Protection Institute of Ireland; Patrick Murphy, University College Dublin; Catherine Organo, Radiological Protection Institute of Ireland; David Fenton, Radiological Protection Institute of Ireland



# GENERAL PROGRAM SCHEDULE

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

- 11:20 a.m. **Statistical Analysis of Trend and Change Point in Vegetation**—◆Nicolle Goble, Virginia Polytechnic Institute and State University; Dong-Yun Kim, Virginia Polytechnic Institute and State University; Matthew Williams, Virginia Polytechnic Institute and State University
- 11:35 a.m. **An MDL Approach to the Climate Segmentation Problem**—◆QiQi Lu, Mississippi State University
- 11:50 a.m. **Testing for Change point in Time Series: A Comparative Study**—◆Jennifer Kensler, Virginia Polytechnic Institute and State University; Dong-Yun Kim, Virginia Polytechnic Institute and State University
- 12:05 p.m. **Floor Discussion**

## 602 CC-210 Resampling and Random Number Generation—Contributed

Section on Statistical Computing, Interface Foundation of North America

Chair(s): Elizabeth L. Hohman, Naval Surface Warfare Center

- 10:35 a.m. **An Accept-Reject Algorithm for the Positive Multivariate Normal Distribution**—◆Carsten H. Botts, Williams College
- 10:50 a.m. **Generating Bounded Accuracy Continuous Uniform Variates**—◆Timothy G. Hall, PQI Consulting
- 11:05 a.m. **Parallel Multivariate Slice Sampling**—◆Matthew M. Tibbits, Penn State University; Murali Haran, Penn State University; John C. Liechty, Penn State University
- 11:20 a.m. **Another Look at the Bootstrap: Resampling with Random Noises**—◆Haiyan Bai, University of Central Florida
- 11:35 a.m. **Spatial Bootstrap Method Using Pairs of Equidistant Points**—◆Jose H. Guardiola, Texas A&M University; Hassan Elsalloukh, University of Arkansas at Little Rock
- 11:50 a.m. **A Sieve Bootstrap Approach to Constructing Prediction Intervals for Long Memory Time Series**—◆Amjad Ali, University of Peshawar; Xiaofeng Shao, University of Illinois at Urbana-Champaign; Salahuddin Khan, University of Peshawar
- 12:05 p.m. **Resampling Methods for Queue Inference**—◆Harry Ma, GE Global Research; Thomas Willemain, Rensselaer Polytechnic Institute

## 603 CC-143B ■ ★ Censoring and Selection in Regression—Contributed

Section on Risk Analysis

Chair(s): Jeremy R. Porter, Rice University

- 10:35 a.m. **A Proportional Hazards Regression Model for the Subdistribution with Right-Censored and Left-Truncated Competing Risks Data**—◆Xu Zhang, Georgia State University; Mei-Jie Zhang, Medical College of Wisconsin; Jason Fine, The University of North Carolina at Chapel Hill
- 10:50 a.m. **Quantile Regression with Left-Truncated Semi-Competing Risks Data**—◆Ruosha Li, Emory University; Limin Peng, Emory University
- 11:05 a.m. **Variable Selection in Partial Linear Cox Model**—◆Pang Du, Virginia Polytechnic Institute and State University; Shuangge Ma, Yale University; Hua Liang, University of Rochester
- 11:20 a.m. **Statistical Estimation for Generalized Exponential Distribution Under Progressive Type I Interval Censoring**—◆Din Chen, South Dakota State University; Yuhlong Lio, University of South Dakota
- 11:35 a.m. **Empirical Variance Estimation of the Buckley-James Estimator Under Continuous Assumptions**—◆Yishi Wang, The University of North Carolina at Wilmington; Cuixian Chen, The University of North Carolina at Wilmington
- 11:50 a.m. **Analysis of Interval-Censored Data with Informative Cluster Size**—◆Xinyan Zhang, University of Missouri; Jianguo Sun, University of Missouri
- 12:05 p.m. **Floor Discussion**

## 604 CC-157 Reliability and Other Topics—Contributed

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

Chair(s): Kevin S. Robinson, Millersville University of Pennsylvania

- 10:35 a.m. **Waiting Time in the Sequential Occupancy Problem**—◆Tamar Gadrach, Ort Braude College; Rachel Ravid, Ort Braude College
- 10:50 a.m. **Functional Regression Using the 'fda' Package in R**—◆Spencer Graves, Productive Systems Engineering; Giles Hooker, Cornell University; James O. Ramsay, McGill University
- 11:05 a.m. **The Beta-Exponential Distribution: An Alternative to the Weibull Distribution**—◆Jacinth A. Maynard, Lok Haven University of Pennsylvania
- 11:20 a.m. **Bootstrap Integration of Multiple Measurement Sources with Applications to Inference on Extremes**—◆Russell L. Zaretzki, The University of Tennessee



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

- 11:35 a.m. **Optimal Goodness-of-Fit Tests for Recurrent Event Data**—◆ Russell Stocker, Mississippi State University
- 11:50 a.m. **Floor Discussion**

- 11:50 a.m. **Time-Dependent ROC Methods and Concordance Measures**—◆ Norberto Pantoja-Galicia, Harvard School of Public Health; Rebecca Betensky, Harvard School of Public Health
- 12:05 p.m. **A Class of Generalized Nonparametric ROC Summary Statistics for Clustered Diagnostic Marker Data**—◆ Liansheng Tang, George Mason University

## 605 Dimension Reduction—Contributed

CC-203B

Section on Nonparametric Statistics

Chair(s): Michael Longnecker, Texas A&M University

- 10:35 a.m. **Sufficient Dimension Reduction for Proportional Censorship Model with Covariates**—◆ Meggie Wen, Missouri University of Science and Technology
- 10:50 a.m. **Optimal Dimension Reduction Based on Central Solution Space**—◆ Yuexiao Dong, Penn State University; Bing Li, Penn State University
- 11:05 a.m. **Asymptotic Expansions for Dimension Reduction Methods with Application to Bias Correction**—◆ Zhou Yu, East China Normal University; Bing Li, Penn State University; Li-Xing Zhu, Hong Kong Baptist University
- 11:20 a.m. **Sufficient Dimension Reduction for the Conditional Mean with a Categorical Predictor in Multivariate Regression**—◆ Jae Keun Yoo, University of Louisville
- 11:35 a.m. **Sliced Inverse Regression in a Hilbert Space via Basis Approach**—◆ Haobo Ren, sanofi-aventis; Cathy Zhao, Bristol-Myers Squibb Company
- 11:50 a.m. **Over-Fitting Effects of Trimming and Statistical Applications**—◆ Eustasio del Barrio, Universidad de Valladolid
- 12:05 p.m. **Floor Discussion**

## 607 FDR and Classification—Contributed

CC-153

Biometrics Section

Chair(s): Renee Moore, University of Pennsylvania

- 10:35 a.m. **Adjusting for Matched Samples in Discriminant Analysis of Schizophrenia Biomarkers for Post-Mortem Tissue Studies**—◆ Josephine Asafu-Adjei, University of Pittsburgh; Allan Sampson, University of Pittsburgh; Robert Sweet, University of Pittsburgh
- 10:50 a.m. **Novel Estimators of the Number of True**—Yi-Ting Hwang, National Taipei University; Shu-Yu Liao, National Taipei University; ◆ Hsun-Chih Kuo, National Chengchi University
- 11:05 a.m. **Optimal Nearest Shrunken Centroids Method for High-Dimensional Classification**—◆ Tiejun Tong, University of Colorado; Herbert Pang, Duke University
- 11:20 a.m. **A General Framework for Multiple Testing Dependence**—◆ Jeffrey Leek, Johns Hopkins University; John Storey, Princeton University
- 11:35 a.m. **Estimating the Cumulative Risk of a False-Positive Test in a Repeated Screening Program with Multiple Modalities**—◆ Jian-Lun Xu, National Cancer Institute; Richard M. Fagerstrom, National Cancer Institute; Philip C. Prorok, National Cancer Institute; Barnett S. Kramer, Office of Disease Prevention
- 11:50 a.m. **Classification Analysis with a Twist: Identification of the Writership of Handwritten Documents by Pairwise Application of Linear Discriminant Analysis**—◆ John J. Miller, George Mason University; Amanda B. Hepler, George Mason University; Donald T. Gantz, George Mason University; Daniel B. Carr, George Mason University; Clifton Sutton, George Mason University; Robert Patterson, George Mason University
- 12:05 p.m. **Pairwise Likelihood for Binary Data**—◆ Zi Jin, University of Toronto; Nancy Reid, University of Toronto

## 606 ROC Analysis—Contributed

CC-160

Biometrics Section

Chair(s): Chengcheng Liu, Merck & Co., Inc.

- 10:35 a.m. **Semiparametric Inference for the Partial Area Under the ROC Curve**—◆ Gengsheng Qin, Georgia State University
- 10:50 a.m. **Using Relative Utility Curves to Evaluate Risk Prediction**—◆ Stuart Baker, National Cancer Institute
- 11:05 a.m. **Nonparametric Estimation of Time-Dependent Predictive Accuracy Curve**—◆ Paramita Saha, University of Washington; Patrick Heagerty, University of Washington
- 11:20 a.m. **Nonparametric Empirical Likelihood Estimation of AUC and Partial AUC for Test-Result-Dependent Sampling Study**—◆ Ma Junling, Duke University Medical Center; Wang Xiaofei, Duke University Medical Center
- 11:35 a.m. **Nonparametric Comparison of Multiple ROCs Using Polar Coordinates**—◆ Michael E. Schuckers, St. Lawrence University



# GENERAL PROGRAM SCHEDULE

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

## 608 Miscellaneous Methodology III—Contributed

IMS

Chair(s): Anindya Bhadra, University of Michigan

- 10:35 a.m. **Change-Point Analysis for Stochastic Systems with Poisson Inputs**—◆Stergios B. Fotopoulos, Washington State University
- 10:50 a.m. **Testing for a Change-point in the Linear Hazard Rate Under Staggered Entry and Type I Censoring**—◆Matthew Williams, Virginia Polytechnic Institute and State University; Dong-Yun Kim, Virginia Polytechnic Institute and State University
- 11:05 a.m. **An Asymptotic Test for a Change-point in Densities of a General Class**—◆Dong-Yun Kim, Virginia Polytechnic Institute and State University
- 11:20 a.m. **On a Unified Approach for Phase I Shewhart-Type Control Charts for Location**—◆Schalk W. Human, University of Pretoria; Subhabrata Chakraborti, The University of Alabama
- 11:35 a.m. **Decentralized Sequential Hypothesis Testing**—◆Georgios Fellouris, Columbia University; George V. Moustakides, University of Patras
- 11:50 a.m. **Statistical Fundamentals for Rebuilding the Methodology of Piecewise Analysis**—◆Ligong Chen, Uniformed Services University of the Health Sciences; Yongmei Chen, Uniformed Services University of the Health Science
- 12:05 p.m. **Assessing the Influence of Individual Treatment Effect Variability in Multiple Time Points Trials for Binary Response**—◆Edwin A. Ndum, Kansas State University; Gary L. Gadbury, Kansas State University

## 609 Missing Data and Microarray Analysis—Contributed

Biometrics Section

Chair(s): Yichuan Zhao, Georgia State University

- 10:35 a.m. **Inferring the True Correlation in Cross-Species Microarray Data**—George C. Tseng, University of Pittsburgh; ◆Xingbin Wang, University of Pittsburgh; Sunghee Oh, University of Pittsburgh
- 10:50 a.m. **Modeling Cancer-Related Epigenetic Changes in DNA Tandem Repeats**—◆Michelle Lacey, Tulane University
- 11:05 a.m. **Effects of Missing Value Imputation on Down-Stream Analyses in the Microarray Data**—◆Sunghee Oh, University of Pittsburgh; George C. Tseng, University of Pittsburgh; Guy N. Brock, University of Louisville

## CC-208B 11:20 a.m.

**A Semiparametric Unified Approach for the Detection of Differential Gene Expression in Microarrays**—◆Jan R. De Neve, Ghent University; Olivier Thas, Ghent University; Lieven Clement, Ghent University; Jean-Pierre Ottoy, Ghent University

11:35 a.m. **Multiple Imputation for Microarray Missing Data**—◆Hui Xie, Tulane University; Leann Myers, Tulane University; Steven Smith, Pennington Biomedical Research Center

11:50 a.m. **MDQC: A New Quality Assessment Method for Microarrays**—◆Gabriela Cohen Freue, The University of British Columbia; Zsuzsanna Hollander, The James Hogg iCAPTURE Centre for Cardiovascular & Pulmonary Research; Raymond Ng, The University of British Columbia; Robert Balshaw, The University of British Columbia

12:05 p.m. **Inverse Probability of Censoring Weighting and Regularized Estimation in AFT Models**—◆Mai Zhou, University of Kentucky; Liping Huang, University of Kentucky

## 610 Default, Multivariate Risk, and Copula Models—Contributed

Business and Economic Statistics Section

Chair(s): Zhaogang Song, Cornell University

- 10:35 a.m. **Building Default Models for Subprime Mortgages: Assessing the Risk in a Rapidly Changing Environment**—◆Vladimir Ladyzhets, Babson Capital Management LLC
- 10:50 a.m. **The Time of Recovery and Ruin Probabilities in Risk Model**—◆Min Deng, Maryville University of St. Louis
- 11:05 a.m. **Contagion, Confusion, and the Panic of 2008**—◆David J. Hamrick, Boston University
- 11:20 a.m. **Modeling Currency Exchange Rate Dependency Between Taiwan and Japan**—◆Yi-Kuan Jong, St. John's University
- 11:35 a.m. **Tracking Problems, Hedge Fund Replication, and Alternative Beta**—◆Guillaume Weisang, Bentley University; Thierry Roncalli, University of Evry
- 11:50 a.m. **Border Region Municipal Water Consumption Forecast Accuracy**—◆Angel L. Molina, Jr., The University of Texas at El Paso; Thomas M. Fullerton, Jr., The University of Texas at El Paso
- 12:05 p.m. **Multivariate Mixture Transition Distribution Model for Financial Transaction Data**—◆Musen Wen, University of California, Riverside; Keh-Shin Lii, University of California, Riverside

## CC-148

611 CC-205

## ■ Bayesian Modeling with Applications to Climate, Air Pollution, the Environment, and Flu Dynamics—Contributed

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

Chair(s): Sudipto Banerjee, The University of Minnesota

- 10:35 a.m.    **Using 2D Wavelets to Blend Grid- and Point-Based Air Quality Model Output with Ambient Monitor Observations: Resolving the Intra-Urban Air Pollution Field**—◆James L. Crooks, U.S. Environmental Protection Agency; Vlad Isakov, U.S. Environmental Protection Agency
- 10:50 a.m.    **Bayesian Modeling of Wind Fields Using Surface Data Collected Over Land**—◆Margaret Short, University of Alaska Fairbanks; Javier Fochesatto, Geophysical Institute Atmospheric Science Group
- 11:05 a.m.    **Data Augmentation Methods for Bayesian Modeling of Spatially Dependent Categorical Data**—◆Candace Berrett, The Ohio State University; Catherine Calder, The Ohio State University
- 11:20 a.m.    **The Variational Bayes Method for an Inverse Problem with Application to the Palaeoclimate Reconstruction**—◆Richa Vatsa, Trinity College Dublin
- 11:35 a.m.    **Estimation of a Population Size Through Capture-Mark-Recapture Method: A Comparison of Various Point and Interval Estimators**—◆Xing Yang, University of Louisiana-Lafayette
- 11:50 a.m.    **Bayesian Sensitivity Analysis**—◆Yeonok Lee, The University of Rochester; Hulin Wu, University of Rochester
- 12:05 p.m.    **Assessing and Accounting for Large-Scale Climate Projection Uncertainty in Regional Climate-Change Impact Studies**—◆Gardar Johannesson, Lawrence Livermore National Laboratory