MontréalCanada
JSM2013

DESCRIPTIONS

Session Tag Descriptions

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

THEME ●
JSM theme sessions are directly relevant to the 2013 JSM theme, "Celebrating the International Year of Statistics." Theme sessions are designed to expand the frontiers of statistical thought, emphasize new directions, and promote interdisciplinary collaboration.

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

FRIDAY, AUGUST 2

Committee/Business Meetings & Other Activities

7:00 a.m.–3:00 p.m. W-Ramezay
ASA Board of Directors Meeting (Closed)
Chair(s): Marie Davidian, North Carolina State University

Late-Breaking Session

Sunday, August 4, 2:00 p.m. – 3:50 p.m.
CC-710a
Session 1 – A Tribute to George Box

SATURDAY, AUGUST 3

Committee/Business Meetings & Other Activities

7:00 a.m.–3:00 p.m. W-Ramezay
ASA Board of Directors Meeting (Closed)
Chair(s): Marie Davidian, North Carolina State University

7:30 a.m.–6:00 p.m. CC-200 Viger Hall
ASA Membership/Help Desk/Press Desk

7:30 a.m.–6:00 p.m. CC-200 Viger Hall
JSM Main Registration

7:30 a.m.–6:00 p.m. CC-200 Viger Hall
Cyber Center, Sponsored by IBM

7:30 a.m.–10:00 a.m. W- Fortifications Foyer
JSM Registration (satellite location)

8:00 a.m.–5:00 p.m. CC-220bc
Exhibitor Move In and Lounge

9:00 a.m.–5:00 p.m. CC-220d
Career Placement Service
(job posting and resume submission only)

11:30 a.m.–12:30 p.m. I-Saint-Pierre
Association of Clinical Translational Statisticians (Lunch)
Organizer(s): Brad Pollock, The University of Texas at San Antonio

12:30 p.m.–5:30 p.m. I-Saint-Jacques
Association of Clinical Translational Statisticians
(Saturday Scientific Meeting)
Organizer(s): Brad Pollock, The University of Texas at San Antonio

3:00 p.m.–4:30 p.m. CC-524c
Career Planning Panel
Chair(s): Robert Starbuck, Career Success Factors Workgroup

SATURDAY, AUGUST 3

Continuing Education (Fee Events)

CE_01C
Foundations and Recent Advances in Longitudinal and Incomplete Data and in Joint Modeling
8:30 a.m.–5:00 p.m. W-Fortifications
ASA
Instructor(s): Geert Molenberghs, Universiteit Hasselt & Katholieke Universiteit Leuven; Geert Verbeke, I-BioStat, Hasselt University; Dimitris Rizopoulos, Erasmus MC

CE_02C
Design and Analysis of Noninferiority Trials
8:30 a.m.–5:00 p.m. W-Ville-Marie
ASA, Biopharmaceutical Section
Instructor(s): Brian Wiens, Alcon Laboratories

CE_03C
Classification and Regression Trees
8:30 a.m.–5:00 p.m. W-Palais
ASA
Instructor(s): Wei-Yin Loh, University of Wisconsin

CE_04C
Bayesian Model Specification: Toward a Theory of Applied Statistics
8:30 a.m.–5:00 p.m. W-St. Antoine
ASA, Section on Bayesian Statistical Science
Instructor(s): David Draper, University of California at Santa Cruz

CE_05C
Introduction to Analysis of Extremes: Univariate and Multivariate Cases
8:30 a.m.–5:00 p.m. W-Saint-Helene
ASA, Section on Statistics and the Environment
Instructor(s): Dan Cooley, Colorado State University

CE_06C
Advanced Topics in Survey Sampling
8:30 a.m.–5:00 p.m. W-McGill
ASA, Korean International Statistical Society
Instructor(s): Jae-Kwang Kim, Iowa State University; Wayne Fuller, Iowa State University

SUNDAY, AUGUST 4

Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. W-Youville
Committee on Women in Statistics Business Meeting
Chair(s): Dalene K. Stangl, Duke University

7:30 a.m.–10:00 a.m. I-Maisonneuve
Joint Committee on Publications/Editors Meeting
Chair(s): Leonard A. Stefanski, North Carolina State University

7:30 a.m.–1:00 p.m. W- Fortifications Foyer
JSM Registration (satellite location)

7:30 a.m.–8:30 p.m. CC-200 Viger Hall
ASA Membership/Help Desk/Press Desk

7:30 a.m.–8:30 p.m. CC-200 Viger Hall
JSM Main Registration

7:30 a.m.–10:30 p.m. CC-200 Viger Hall
Cyber Center, Sponsored by IBM

8:00 a.m.–11:00 a.m. CC-220bc
Exhibitor Move In

8:00 a.m.–11:00 a.m. W-Papineau
Council of Sections Governing Board Meeting (Closed)
Chair(s): Katherine Halvorsen, Smith College

8:30 a.m.–1:30 p.m. I-Saint-Gabriel
Seventh Annual Workshop for Chairs of Programs in Statistics and Biostatistics (Closed)
Chair(s): Kathy Ensor, Rice University

9:00 a.m.–10:30 a.m. W-Youville
Caucus for Women in Statistics Executive Committee Meeting
Organizer(s): Susmita Datta, University of Louisville

● Themed Session ■ Applied Session ✦ Presenter CC-Palais des congrès de Montréal W-Le Westin Montréal I-Hotel InterContinental Montréal

9:00 a.m.–11:30 a.m. CC-517d
COPSS Junior Researcher Panel
Organizer(s): Jane Pendergast, University of Iowa

9:00 a.m.–12:00 p.m. I-Saint-Jacques
Association of Clinical Translational Statisticians (Sunday Scientific Session)
Organizer(s): Brad Pollock, The University of Texas at San Antonio

9:00 a.m.–5:00 p.m. I-Le Cave
NISS/ASA Writing Workshop for Junior Researchers (Closed)
Chair(s): Keith Crank

9:00 a.m.–7:00 p.m. CC-513c
Speaker Management Room

10:00 a.m.–11:00 a.m. I-Saint-Laurent
Rutgers University Bringing Statistics to the Black Community
Organizer(s): Immanuel Williams, Graduate Student

10:30 a.m.–12:30 p.m. CC-515b
JSM Presentation Skills Workshop (Open to JSM Speakers)
Chair(s): Brian Wiens, Alcon Laboratories

11:00 a.m.–12:30 p.m. I-Saint-Paul
Accreditation Committee Meeting
Chair(s): Theresa Utlaut, Intel Corporation

11:30 a.m.–1:00 p.m. I-Saint-Alexandre
Statistica Sinica Editorial Board Meeting
Organizer(s): Jeng-Min Chiou, Academia Sinica

11:30 a.m.–1:00 p.m. I-Maisonneuve
Journal of Statistics Education Editorial Board Meeting
Chair(s): Michelle G. Everson, University of Minnesota

11:30 a.m.–2:30 p.m. I-Saint-Jean-Baptiste
Membership Retention and Recruitment Business Meeting
Chair(s): Laine Thomas, ASA Committee Chair

12:00 p.m.–1:00 p.m. I-Saint-Pierre
Association of Clinical Translational Statisticians (Sunday Lunch)
Organizer(s): Brad Pollock, The University of Texas at San Antonio

12:00 p.m.–2:00 p.m. W-Papineau
Leadership Support Council Business Meeting
Chair(s): Nat Schenker, President-Elect, American Statistical Association

12:30 p.m.–1:45 p.m. CC-522a
Revised Guidelines for Undergraduate Statistics Programs (Closed)
Chair(s): Nicholas J. Horton, Smith College

12:30 p.m.–2:00 p.m. I-Saint-Francois Xavier
Electronic Journal of Statistics Editorial Board Meeting
Organizer(s): Elyse Gustafson, IMS Executive Director

12:30 p.m.–2:00 p.m. CC-517d
JSM First-Time Attendee Orientation and Reception

1:00 p.m.–5:00 p.m. I-Saint-Helene
IMS Executive Committee Meeting
Organizer(s): Elyse Gustafson, IMS Executive Director

1:00 p.m.–6:00 p.m. CC-220d
Career Placement Service (full placement service open)

1:00 p.m.–6:00 p.m. CC-220bc
ASA Marketplace

1:00 p.m.–6:00 p.m. CC-220bc
EXPO 2013

1:00 p.m.–6:00 p.m.
American Statistical Association Booth #201

2:00 p.m.–4:00 p.m. I-Saint-Laurent
Council of Sections Business Meeting
Chair(s): Katherine Halvorsen, Smith College

4:00 p.m.–5:30 p.m. CC-522a
Awards Council Meeting (Closed)
Chair(s): Robert Rodriguez, SAS Institute

4:00 p.m.–5:30 p.m. CC-448
Education Council Meeting (Closed)
Chair(s): Mary Mulry, Federal Employee

4:00 p.m.–5:30 p.m. CC-449
Membership Council Meeting (Closed)
Chair(s): James Rosenberger, Penn State University

4:00 p.m.–5:30 p.m. CC-521c
Professional Issues and Visibility Council Meeting
Chair(s): David Morganstein, Westat

4:00 p.m.–6:00 p.m. W-Youville
Section for Statistical Programmers and Analysts Executive Meeting
Chair(s): Jyoti Rayamajhi, Eli Lilly and Company

4:30 p.m.–6:00 p.m. I-Les Huitres
Committee on Scientific Freedom and Human Rights Business Meeting
Chair(s): Joseph B. Kadane, Carnegie Mellon University

4:30 p.m.–8:30 p.m. W-Bonsecours
ENAR Executive Committee Meeting
Organizer(s): Dan Heitjan, ENAR; DuBois Bowman, ENAR

5:00 p.m.–6:30 p.m. I-Saint-Jean-Baptiste
Korean International Statistical Society Board Meeting
Organizer(s): Dongseok Choi, Oregon Health & Science University

5:00 p.m.–6:30 p.m. I-Saint-Louis
Help Us Help You
Chair(s): Karla Ballman, Mayo Clinic

5:30 p.m.–8:00 p.m. I-Saint-Jacques
NISS/SAMSI Affiliates Meeting
Organizer(s): Alan F. Karr, National Institute of Statistical Sciences

6:00 p.m.–7:30 p.m. W-Papineau
Quality and Productivity Executive Committee Planning Meeting
Chair(s): Theresa Utlaut, Intel Corporation

6:00 p.m.–7:30 p.m. I-Saint-Pierre
University of Minnesota Alumni and Friends Reception
Organizer(s): Sally Olander, University of Minnesota

6:00 p.m.–7:30 p.m. I-Saint-Francois Xavier
Cancer Center Biostatistics Directors Annual Meeting
Organizer(s): Terry Hyslop, Thomas Jefferson University

6:00 p.m.–7:30 p.m. I-Saint-Alexandre
Project Euclid Publishers and Friends Appreciation Reception
Organizer(s): Mira Waller, Project Euclid

6:00 p.m.–8:00 p.m. I-Saint-Gabriel
Purdue University Alumni and Friends Reception
Organizer(s): Julie Paolillo, Director of Development for Purdue Statistics

6:00 p.m.–8:30 p.m. I-Le Cave
ICSA Board Meeting
Organizer(s): Shuyen Ho, GlaxoSmithKline

6:30 p.m.–8:30 p.m. W-Fortifications
JMP Reception for Friends and Users
Organizer(s): Katie Taylor, SAS Institute, JMP Division

6:30 p.m.–8:30 p.m. I-Maisonneuve
Google Annual Faculty Reception
Organizer(s): Nilma Rubin, Google

7:30 p.m.–8:30 p.m. CC-518
ASA Awards Celebration and Editor Appreciation
Chair(s): Robert Rodriguez, SAS Institute

8:30 p.m.–10:30 p.m. CC-517cd
JSM Opening Mixer

Continuing Education (Fee Events)

CE_01C
Foundations and Recent Advances in Longitudinal and Incomplete Data and in Joint Modeling
8:30 a.m.–5:00 p.m. W-Fortifications
ASA
Instructor(s): Geert Molenberghs, Universiteit Hasselt & Katholieke Universiteit Leuven; Geert Verbeke, I-BioStat, Hasselt University; Dimitris Rizopoulos, Erasmus MC

CE_07C
Statistical Computing for Big Data
8:30 a.m.–5:00 p.m. W-Ville-Marie
ASA, Section on Statistical Learning and Data Mining
Instructor(s): Liang Zhang, LinkedIn; Deepak Agarwal, LinkedIn

CE_08C
Practical Bayesian Computation
8:30 a.m.–5:00 p.m. W-Palais
ASA, Section for Statistical Programmers and Analysts
Instructor(s): Fang Chen, SAS Institute

CE_09C
Recent Advances in Bayesian Adaptive Clinical Trial Design
8:30 a.m.–5:00 p.m. W-St. Antoine
ASA, Section on Bayesian Statistical Science
Instructor(s): Peter Thall, The University of Texas MD Anderson Cancer Center; Brian Hobbs, The University of Texas MD Anderson Cancer Center

CE_10C
Applied Multiple Imputation in R
8:30 a.m.–5:00 p.m. W-Beaver Hall
ASA
Instructor(s): Stef van Buuren, Netherlands Organization for Applied Scientific Research

CE_11C
Statistical Evaluation of Prognostic Biomarkers
8:30 a.m.–5:00 p.m. W-Ramezay
Biometrics Section, ASA
Instructor(s): Patrick Heagerty, University of Washington; Paramita Saha-Chaudhuri, Duke University

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

1 CC-710a

Late-Breaking Session: A Tribute to George Box—Other

ASA, ENAR, WNAR, IMS, SSC, International Chinese Statistical Association, International Indian Statistical Association, Korean International Statistical Society, International Society for Bayesian Analysis (ISBA)

Organizer(s): Bovas Abraham, University of Waterloo; David Steinberg, Tel Aviv University

Chair(s): Bovas Abraham, University of Waterloo

2:10 p.m. **George Box at Raleigh and at Princeton—** ✦J. Stuart Hunter, Princeton University

2:25 p.m. **George Box and Bayesian Statistics—** ✦George C. Tiao, The University of Chicago

2:40 p.m. **George Box and Design of Experiments: Statistics and Discovery—**✦David Steinberg, Tel Aviv University

2:55 p.m. **George Box's Contributions to Time Series Analysis and Forecasting—**✦Greta M. Ljung, AIR Worldwide

3:10 p.m. **George Box, Quality, and Improving Almost Anything—**✦Conrad A. Fung, Independent Consultant

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

Invited Sessions 2:00 p.m.–3:50 p.m.

2 CC-511c

Biometrics Showcase Session—Invited

ENAR, Scientific and Public Affairs Advisory Committee

Organizer(s): Marie Davidian, North Carolina State University

Chair(s): Marie Davidian, North Carolina State University

2:05 p.m. **Bayesian Effect Estimation Accounting for Adjustment Uncertainty—**✦Giovanni Parmigiani, Dana-Farber Cancer Institute; Francesca Dominici, Harvard School of Public Health; Chi Wang, University of Kentucky

2:35 p.m. **Analyses That Inform Policy Decisions Are, De Facto, Causal—**✦Roee Gutman, Brown University; Donald B. Rubin, Harvard University

3:05 p.m. **Detecting Disease Outbreaks Using Local Spatiotemporal Methods—**✦Yingqi Zhao, University of Wisconsin-Madison; Donglin Zeng, The University of North Carolina; Amy Herring, The University of North Carolina at Chapel Hill Amy Ising, The University of North Carolina at Chapel Hill; Anna Waller, The University of North Carolina at Chapel Hill; David Richardson, The University of North Carolina; Michael R. Kosorok, The University of North Carolina at Chapel Hill

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

3 CC-520b

Stochastic Aspects of Topology—Invited

IMS, International Indian Statistical Association

Organizer(s): Sayan Mukherjee, Duke University

Chair(s): Sayan Mukherjee, Duke University

2:05 p.m. **Persistence Test and Maltose-Binding Protein Complex—**✦Giseon Heo, University of Alberta; Violeta Kovacev-Nikolic, University of Alberta; Peter Bubenik, Cleveland State University; Dragan Nikolic, University of Alberta

2:35 p.m. **On the Persistent Homology of Time-Delay Embeddings—**✦Jose Andres Perea, Duke University; John Harer, Duke University

3:05 p.m. **The Topology of Noise—**✦Omer Bobrowski, Duke University

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

4 CC-520c

■ New Methodologies in Statistical Inverse Problems and Their Applications to Biomedical Sciences—Invited

IMS, Biometrics Section

Organizer(s): Marianna Pensky, University of Central Florida

Chair(s): Jiayang Sun, Case Western Reserve University

2:05 p.m. **Multiscale Methods for Shape Constraints in Deconvolution: Confidence Statements for Qualitative Features—**✦Axel E. Munk, University of Goettingen; Johannes Anselm Schmidt-Hieber, ENSAE, Paris; Lutz Dümbgen, Institute of Mathematical Statistics and Actuarial Science, University of Bern

2:30 p.m. **Spatially Inhomogeneous Linear Inverse Problems with Possible Singularities—**✦Marianna Pensky, University of Central Florida

2:55 p.m. **Inverse Problems with Missing Data—** ✦Sam Efromovich, The University of Texas at Dallas

3:20 p.m. **Bayesian Semiparametric Density Deconvolution in the Presence of Conditionally Heteroscedastic Measurement Errors**—Raymond J. Carroll, Texas A&M University; Abhra Sarkar, Texas A&M University; Bani Mallick, Texas A&M University; ✦John Staudenmayer, University of Massachusetts; Debdeep Pati, Florida State University

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

5 CC-710b

■ ● Emerging Statistical Methods for Big Data—Invited

Biometrics Section, Statistical Learning and Data Mining Section, Section on Statistics in Epidemiology, Scientific and Public Affairs Advisory Committee

Organizer(s): Ping Ma, University of Illinois at Urbana-Champaign
Chair(s): Ping Ma, University of Illinois at Urbana-Champaign

2:05 p.m. **An Integrated Approach to Identify Clinically Relevant Long Non-Coding RNAs (lncRNAs) in Cancer**—✦Xiaole Shirley Liu, Dana-Farber and Harvard University

2:30 p.m. **Modeling Repeatedly Observed Functional Data**—✦Hans-Georg G. Müller, University of California at Davis; Kehui Chen, University of Pittsburgh

2:55 p.m. **Tensor Dimension Reduction for Chemical Sensing**—✦Wenxuan Zhong, University of Illinois at Urbana-Champaign

3:20 p.m. **Leveraging as a Paradigm for Statistically Informed Large-Scale Computation**—✦Michael W. Mahoney, Stanford University

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

6 CC-520e

■ ● Spatial Statistics for Big Environmental Data Sets—Invited

Section on Statistics and the Environment, Statistical Learning and Data Mining Section, Section on Statistics in Epidemiology

Organizer(s): Matthias Katzfuss, Universität Heidelberg
Chair(s): Ying Sun, The University of Chicago

2:05 p.m. **Low-Rank Spatial Models for Big Global Data Sets**—✦Matthias Katzfuss, Universität Heidelberg

2:30 p.m. **Computational Methods for Large Spatial Temporal Data Sets**—✦Huiyan Sang, Texas A&M University; Bohai Zhang, Texas A&M University; Jianhua Z. Huang, Texas A&M University

2:55 p.m. **Estimation and Prediction in Spatial Models with Block Composite Likelihoods**—✦Ryan J. Parker, North Carolina State University; Jo Eidsvik, Norwegian University of Science and Technology; Ben Shaby, University of California at Berkeley; Brian J. Reich, North Carolina State University; Matthew Wheeler, University of California at Santa Barbara; Jarad Niemi, Iowa State University

3:20 p.m. **Spatial Matérn Fields Driven by Non-Gaussian Noise**—✦David Bolin, Lund University

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

7 CC-516b

■ The Undercount of Young Children in Official Statistics—Invited

Social Statistics Section, Scientific and Public Affairs Advisory Committee

Organizer(s): William P. O'Hare, National Science Foundation/American Statistical Association/U.S. Census Bureau
Chair(s): Deborah H. Griffin, U.S. Census Bureau

2:05 p.m. **Data on the Undercount of Young Children in the U.S. Decennial Census**—✦William P. O'Hare, National Science Foundation/American Statistical Association/U.S. Census Bureau

2:25 p.m. **Improving the Coverage of Children in the 2010 U.S. Census**—✦Daniel Weinberg, U.S. Census Bureau

2:45 p.m. **Looking Ahead: Early Thinking on 2020 Census Plans to Reduce Differential Undercoverage of Young Children**—✦Frank Anthony Vitrano, U.S. Census Bureau

3:05 p.m. **Differential Coverage Error for Young Children in the Canadian Census**—✦David Dolson, Statistics Canada

3:25 p.m. Disc: Howard R. Hogan, U.S. Census Bureau

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

8 CC-514b

■ ● Data Integration: Combining Multiple Data Sources to Gain Statistical Efficiency—Invited

Section on Statistics in Epidemiology, International Chinese Statistical Association, SSC, Statistical Learning and Data Mining Section, Biometrics Section, Section for Statistical Programmers and Analysts

Organizer(s): Jeanine Houwing-Duistermaat, Leiden University Medical Center
Chair(s): Jeanine Houwing-Duistermaat, Leiden University Medical Center

2:05 p.m. **Analyzing Age-Specific Genetic Effects on Human Extreme Age Survival in Cohort-Based Longitudinal Studies**—✦Qihua Tan, Universiry of Southern Denmark

2:30 p.m. **Challenges in Estimation of Genetic Effects from Multiple Cases Family Studies**—✦Roula Tsonaka, Leiden University Medical Center; Jeanine Houwing-Duistermaat, Leiden University Medical Center

2:55 p.m. **Using Family Members to Augment Genetic Case-Control Studies of a Life-Threatening Disease**—✦Jinbo Chen, University of Pennsylvania School of Medicine; Lu Chen, University of Pennsylvania; Clarice R. Weinberg, National Institute of Environmental Health

3:20 p.m. **Statistical Methods for Integrative Genomics**—✦Joseph Beyene, McMaster University

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

9 CC-511f

■ ● When Politics and Official Economic Statistics Collide: Argentina, China, Greece—Invited

Business and Economic Statistics Section, Scientific and Public Affairs Advisory Committee, Statistics Without Borders

Organizer(s): Joseph B. Kadane, Carnegie Mellon University

Chair(s): Ed Gracely, Drexel University

2:05 p.m. **The Simplest Solution: Assume Chinese Data Are Misleading**—✦Derek Michael Scissors, The Heritage Foundation

2:30 p.m. **Online and Official Price Indexes: Measuring Argentina's Inflation**—✦Alberto F. Cavallo, Massachusetts Institute of Technology

2:55 p.m. **When Politics and Official Economic Statistics Collide: Greece**—✦Andreas Georgiou, Hellenic Statistical Authority

3:20 p.m. Disc: Joseph B. Kadane, Carnegie Mellon University

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

10 CC-510b

■ ● Innovations in Propensity Score Methods for Addressing New Causal Questions in Observational Studies—Invited

Committee on Women in Statistics, Mental Health Statistics Section, International Chinese Statistical Association, Section on Statistics in Epidemiology

Organizer(s): Booil Jo, Stanford University

Chair(s): Jennifer Hill, New York University

2:05 p.m. **Understanding Causal Effects in Observational Studies with Instrumental Propensity Score**—✦Jing Cheng, University of California at San Francisco; Winston Lin, University of California at Berkeley

2:25 p.m. **Marginal Mean Weighting Through Stratification for Identifying Subpopulation-Specific Optimal Treatment Sequences**—✦Guanglei Hong, The University of Chicago

2:45 p.m. **Competing Versions of Ignorability Assumptions in Causal Mediation Analysis**—✦Booil Jo, Stanford University; Elizabeth Stuart, Johns Hopkins Bloomberg School of Public Health

3:05 p.m. Disc: Michael Elliott, University of Michigan

3:25 p.m. Disc: Elizabeth Stuart, Johns Hopkins Bloomberg School of Public Health

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

11 CC-510c

■ ● Session in Honor of 70th Birthday of Stephen E. Fienberg and His Nearly 50 Years of Statistical Practice—Invited

CHANCE, Statistics Without Borders

Organizer(s): Aleksandra Slavkovic, Penn State University; Elena Erosheva, University of Washington; Alicia Carriquiry, Iowa State University

Chair(s): Elena Erosheva, University of Washington

2:05 p.m. **Steve's Contributions to Categorical Data Analysis and Beyond**—Alessandro Rinaldo, Carnegie Mellon University; ✦Edo Airoldi, Harvard University

2:25 p.m. **Steve's Contributions to Sample Surveys, Censuses, and Federal Statistics**—✦Judith M. Tanur, Stony Brook University

2:45 p.m. **Steve the Matchmaker: Marriage of Statistics and Computer Sciences in the World of Data Privacy**—✦Aleksandra Slavkovic, Penn State University

3:05 p.m. **Steve the Bayesian**—✦Edward George, The Wharton School

3:25 p.m. Disc: Stephen M. Stigler, The University of Chicago

3:35 p.m. Disc: Jim Berger, Duke University

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

12 CC-510d

International Efforts in Statistical Capacity Building: How You Can Help—Invited

International Statistical Institute, International Indian Statistical Association, Scientific and Public Affairs Advisory Committee, Statistics Without Borders

Organizer(s): Vijay Nair, University of Michigan

Chair(s): Vijay Nair, University of Michigan

2:05 p.m. **Capacity-Building in the Era of Big Data**—✦Sastry G. Pantula, National Science Foundation

2:35 p.m. **Challenges in Statistical Capacity-Building: Some First Experience in Africa**—✦Jozef Lodewijk Teugels, Katholieke Universiteit Leuven

3:05 p.m. **Acting Locally: A Perspective for Statistics Training in South Asia**—✦Anil P. Gore, Cytel Statistical Software and Services Pvt. Ltd.

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

Need to Check Your Email? Visit the Cyber Center

There are terminals with Internet access available for your emailing needs, as well as three printers. The Cyber Center is available with support from IBM. There will be no internal message center this year, so make sure to take advantage of this Internet option.

Hours:

Saturday
7:30 a.m. — 6:00 p.m.

Sunday
7:30 a.m. — 10:30 p.m.

Monday — Tuesday
7:00 a.m. — 10:00 p.m.

Wednesday
7:00 a.m. — 6:00 p.m.

Located in the Palais des congrès de Montréal.

Sponsored by
IBM

13 CC-516c

Seeing in and Beyond R—Invited

General Methodology, Statistical Learning and Data Mining Section, Section on Statistical Graphics, Section on Statistical Computing, Statistics Without Borders

Organizer(s): Thomas Lumley, University of Auckland
Chair(s): Marlena Maziarz, University of Washington

2:05 p.m. **Analyzing Large Data with R and MonetDB**—✦Thomas Lumley, The University of Auckland

2:30 p.m. **Seeing Through Grid Graphics**—✦Paul Murrell, The University of Auckland

2:55 p.m. **BigVis: Visualizing Large Data in R**—✦Hadley Wickham, RStudio

3:20 p.m. Disc: Dianne H. Cook, Iowa State University

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

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

14 CC-524a

● Computer Models in Environmental Research—Topic-Contributed

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

Organizer(s): Pritam Ranjan, Acadia University
Chair(s): Pritam Ranjan, Acadia University

2:05 p.m. **Uncertainty, Spatial Statistics, and Climate Model Ensembles**—✦Stephan Sain, National Center for Atmospheric Research

2:25 p.m. **Prediction and Computer Model Calibration with Multiple Simulators**—✦Joslin Goh, Simon Fraser University

2:45 p.m. **Estimating Parameters in Biological Ocean Models Using an Emulator Approach**—✦Michael Dowd, Dalhousie University

3:05 p.m. **Quantifying Uncertainty in CO2 Emissions with a Restricted Number of Remote Sensors: A Comparison of Model Calibration and Kalman Filtering Techniques**—✦Matthew Pratola; Jon Reisner, Los Alamos National Laboratory; M.K. Dubey, Los Alamos National Laboratory; Dave Higdon, Los Alamos National Laboratory

3:25 p.m. Disc: William Welch, University of British Columbia

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

15 CC-522bc

■ Shape-Constrained Inference—Topic-Contributed

Section on Nonparametric Statistics, International Chinese Statistical Association, Statistical Learning and Data Mining Section, International Indian Statistical Association, Korean International Statistical Society

Organizer(s): Woncheol Jang, Seoul National Unviersity
Chair(s): Woncheol Jang, Seoul National Unviersity

2:05 p.m. **The Grenander Estimator Under Model Misspecification**—✦Hanna Jankowski, York University; Jon Wellner, University of Washington

2:25 p.m. **On Bayesian Inference for Regression with Constraints**—✦Taeryon Choi, Korea University; Sooyeon Lee, Korea University

2:45 p.m. **Fast Computation for Inference About Shape Restrictions**—✦Guenther Walther, Stanford University

3:05 p.m. **Convex Regression for Dependent Data**—✦Dragi Anevski, Lund University

3:25 p.m. **Global Minimax Bounds for Estimating Log-Concave Densities**—✦Arlene K.H. Kim, University of Cambridge; Richard Samworth, University of Cambridge

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

16 CC-511b

■ Censoring Issues in Survival Analysis—Topic-Contributed

Biopharmaceutical Section, International Chinese Statistical Association, Biometrics Section

Organizer(s): Grace Liu, Jansen Research & Development

Chair(s): Annpey Pong, Merck Research Laboratories

2:05 p.m. **Semiparametric Estimation of Treatment Effect with Time-Lagged Response in the Presence of Informative Censoring**—✦Xiaomin Lu, University of Florida; Anastasios (Butch) Tsiatis, North Carolina State University

2:25 p.m. **Model Correction for Informative Censoring**—✦Steven Sun, Johnson & Johnson; Sudhakar Rao, Janssen Research & Development

2:45 p.m. **Adjusting for Discordance Rates**—✦Vijay Chauhan, Alpha Stats Inc; Grace Liu, Jansen Research & Development; Sudhakar Rao, Janssen Research & Development

3:05 p.m. **Correlations of Patient-Reported Outcomes with PSA and Survival Endpoints in Prostate Cancer Trials**—✦Xuemei Li, Janssen Research & Development

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

17 CC-511a

■ Clinical Trials: Recent Advances in Evidence-Based Designs and Challenges—Topic-Contributed

Biopharmaceutical Section, Mental Health Statistics Section, Biometrics Section

Organizer(s): Bin Zhang, Millennium Pharmaceuticals, Inc. and Boston University

Chair(s): Jing Xu, Millennium Pharmaceuticals, Inc.

2:05 p.m. **Enrichment Design of Clinical Trials Using Group-Based Trajectory Method**—✦Bin Zhang, Millennium Pharmaceuticals, Inc. and Boston University

2:25 p.m. **Smart Design for Comparing Adaptive Interventions**—✦Min Qian, Columbia University; Inbal Nahum-Shani, University of Michigan; Daniel Almirall, University of Michigan; Susan Murphy, University of Michigan

2:45 p.m. **Longitudinal Modeling of Dynamic Treatment Regimes in the Analysis of Sequentially Randomized Trials**—✦Xi Lu, University of Michigan; Daniel Almirall, University of Michigan

3:05 p.m. **Bayesian Approach for Evaluating Regional Treatment Effect in a Multiregional Global Trial**—✦Jianchang Lin, Millennium: The Takeda Oncology Company; Guohui Liu, Millennium: The Takeda Oncology Company

3:25 p.m. **Role of Exploratory Biomarker and Exposure-Response Analyses in Evidence-Based Designs**—✦Li Chen, Amgen, Inc.

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

18 CC-520a

■ New Robust Methods in Biostatistics—Topic-Contributed

Section on Statistical Computing, Statistical Learning and Data Mining Section, WNAR

Organizer(s): Inna Chervoneva, Thomas Jefferson University

Chair(s): George Luta, Georgetown University

2:05 p.m. **Robust Model Selection via Weighted Cross-Validation**—✦Marianthi Markatou, State University of New York Buffalo; Claudio Agostinelli, Ca'Foscari University

2:25 p.m. **Robust Estimation of Distributional Mixed-Effects Model with Application to Tendon Fibrilogenesis Data**—✦Tingting Zhan, Thomas Jefferson University; Inna Chervoneva, Thomas Jefferson University; Boris Iglewicz, Temple University

2:45 p.m. **Integrative Analysis of Disparate Contaminated Data Sets**—✦Junrui Di, Georgetown University; Valeriy Korostyshevskiy, Georgetown University

3:05 p.m. **Joint Estimation of Multiple High-Dimensional Precision Matrices with an Application in Genomics Data**—✦Jichun Xie, Temple University; Weidong Liu, Shanghai Jiao Tong University; Hongzhe Li, University of Pennsylvania; Tony Cai, University of Pennsylvania

3:25 p.m. **Generalized S-Estimators for Linear Mixed-Effects Models**—✦Inna Chervoneva, Thomas Jefferson University; Mark Vishnyakov, Thomas Jefferson University

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

19 CC-511d

■ ● Statistical Consulting in Mass Spectrometry-Based Proteomics: New Strategies and Methods—Topic-Contributed

Section on Statistical Consulting, WNAR

Organizer(s): Laura Bond, Biomolecular Research Center
Chair(s): Laura Bond, Biomolecular Research Center

2:05 p.m. **LC-MRM-MS Data Analysis Strategy—** ✦Ming Li, VICC-Cancer Biostatistics Division

2:25 p.m. **Inferring Protein-Level Abundance from Peptide Peak Intensity Data to Facilitate Biological Interpretation—**✦Bobbie-Jo Webb-Robertson, Pacific Northwest National Laboratory

2:45 p.m. **Statistical Inference of Protein Identification Using Tandem Mass Spectrometry Data—**✦Susmita Datta, University of Louisville

3:05 p.m. **Multivariate Survival Approaches to Detect Differential Expressions in LC-MS/MS Proteomics Data—**✦Carmen Tekwe, Texas A&M Health Science Center; Raymond J. Carroll, Texas A&M University; Alan R. Dabney, Texas A&M University

3:25 p.m. **Prediction of Clinical Outcome Using Proteomic Mass Spectrometry Data—**✦Bart Mertens, Leiden University Medical Centre

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

20 CC-516d

■ Attrition in Mental Health Studies, an Eternal Problem with Multiple Implications: Some Recent Issues and Solutions—Topic-Contributed

Mental Health Statistics Section, Health Policy Statistics Section, Scientific and Public Affairs Advisory Committee

Organizer(s): Samiran Ghosh, Wayne State University School of Medicine
Chair(s): Samiran Ghosh, Wayne State University School of Medicine

2:05 p.m. **A Hidden Markov Model for Nonignorable Nonmonotone Missing Longitudinal Data for Medical Studies of Quality of Life—**✦Andrea Troxel, University of Pennsylvania School of Medicine; Kaijun Liao, University of Pennsylvania School of Medicine

2:25 p.m. **Handling Attrition in Intensive Longitudinal Mental Heath Studies: Challenges and Solutions—**✦Hui Xie

2:45 p.m. **Analysis of Longitudinal Data with Attrition and Mortality—**✦Ofer Harel, University of Connecticut

3:05 p.m. **Alternative Methods for Bayesian Variable Selection in Binomial Regression Models with Missing Covariates—**✦Xiaowei Yang, CUNY-Hunter College; Gang Liu, Google; Thomas R. Belin, University of California at Los Angeles

3:25 p.m. Disc: Roderick J. Little, University of Michigan

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

21 CC-521ab

■ Bayesian Modeling, Inference, and Applications: In Honor of 60th Birthday of Dipak K. Dey—Topic-Contributed

Section on Bayesian Statistical Science, International Society for Bayesian Analysis (ISBA), International Indian Statistical Association, Section on Statistics and the Environment, Korean International Statistical Society

Organizer(s): Xia Wang, University of Cincinnati; Seongho Song, University of Cincinnati
Chair(s): Jian Zou, Indiana University-Purdue University Indianapolis

2:05 p.m. **Hierarchical Bayesian Model for Technical Efficiency Using Stochastic Frontier Production Function—**✦Seongho Song, University of Cincinnati; Chansoo Kim, Kongju National University; Younshik Chung, Pusan National University; Myoungjin Jung, Pusan National University

2:25 p.m. **On the Poisson-Type Arrival of Order Statistics—**✦Karthik Bharath, The Ohio State University; Haikady Nagaraja, The Ohio State University

2:45 p.m. **Bayesian Inference in Censored Mixed-Effects Models Using Heavy-Tailed Distributions—**✦Victor Lachos, University of Campinas; Dipak K. Dey, University of Connecticut; Dipankar Bandyopadhyay, University of Minnesota

3:05 p.m. **Bayesian Spatial-Temporal Modeling of Atlantic Cod Abundance in the Gulf of Maine—**✦Xia Wang, University of Cincinnati; Ming-Hui Chen, University of Connecticut; Dipak K. Dey, University of Connecticut; Chiu-Yen Kou, University of Connecticut

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

22 CC-512ab

■ ● New Frontiers in Survival Analysis and Empirical Likelihood—Topic-Contributed

Biometrics Section, Section on Statistics in Epidemiology, Korean International Statistical Society

Organizer(s): Yichuan Zhao, Georgia State University
Chair(s): Xuewen Lu, University of Calgary

2:05 p.m. **Empirical Likelihood Ratio Confidence Intervals for Conditional Survival Probabilities with Right-Censored Data—**✦Tonya Riddlesworth, Tennessee Technological University; Jian-Jian Ren, University of Maryland

2:25 p.m. **Empirical Likelihood and U-Statistics in Survival Analysis—**✦Zhigang Zhang, Memorial Sloan-Kettering Cancer Center; Yichuan Zhao, Georgia State University

2:45 p.m. **Joint Inference of Baseline Hazard and Regression Coefficients in Cox-Like Models via Empirical Likelihood**—✦Mai Zhou, University of Kentucky; Song Yang, NIH/NHLBI; Mi-Ok Kim, Cincinnati Children's Hospital

3:05 p.m. **Confidence Bands for the Treatment Effect with Survival Data**—✦Song Yang, NIH/NHLBI; Ross Prentice, Fred Hutchinson Cancer Research Center

3:25 p.m. **Nonparametric Regression on Correlated Failure Time Data**—✦Zhezhen Jin, Columbia University

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

23 CC-516e

Applications and Overviews of Record Linkage—Topic-Contributed

Survey Research Methods Section, Scientific and Public Affairs Advisory Committee

Organizer(s): William Winkler, U.S. Census Bureau

Chair(s): Maria Garcia, U.S. Census Bureau

2:05 p.m. **Methods for Adjusting Statistical Analyses for Record Linkage Error**—✦William Winkler, U.S. Census Bureau

2:25 p.m. **Methods of Computing Optimal Record-Linkage Parameters**—✦William Yancey, U.S. Census Bureau

2:45 p.m. **Two-Step Imputation of Linked National Health Interview Survey and Medicare Data Files**—✦Guangyu Zhang, National Center for Health Statistics; Jennifer D. Parker, National Center for Health Statistics; Nathaniel Schenker, National Center for Health Statistics

3:05 p.m. **Layne, M.: Estimating Record Linkage Error Rates Using Administrative Records Data**—✦Mary Layne, U.S. Census Bureau; Deborah Wagner, U.S. Census Bureau; Cynthia Rothhaas, U.S. Census Bureau

3:25 p.m. **Parameter Estimation for Record Linkage**—✦Joshua Tokle, U.S. Census Bureau

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

24 CC-511e

■ ● Seasonal Adjustment at Statistical Agencies—Topic-Contributed

Business and Economic Statistics Section, Scientific and Public Affairs Advisory Committee

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

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

2:05 p.m. **Comparing Automatic Modeling Procedures for TRAMO+ and X-13ARIMA-SEATS**—✦Brian C. Monsell, U.S. Census Bureau

2:25 p.m. **Data-Driven Selection Criteria for X-13ARIMA-SEATS Seasonal Adjustment Algorithms: Conceptual Considerations and Empirical Findings Based on German Time Series**—✦Karsten Webel, Deutsche Bundesbank

2:45 p.m. **Seasonal Adjustment in Volatile Economic Situations: Statistics Canada's Experience**—Michel Ferland, Statistics Canada; Susie Fortier, Statistics Canada; Zdenek Patak, Statistics Canada; ✦Steve Matthews, Statistics Canada

3:05 p.m. **The End Point of Time Series: Reporting Informatively on Trends**—✦Richard Penny, Statistics New Zealand; John Crequer, Statistics New Zealand; Sonya McGlone, Statistics New Zealand; Giles Reid, Statistics New Zealand

3:25 p.m. **Comparing Maximum Likelihood Estimation with Generalized Prediction Problem Mean-Square Minimization Estimation on Time Series Data**—✦Kevin Tolliver, U.S. Census Bureau; Tucker S. McElroy, U.S. Census Bureau

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

25 CC-512f

■ Statistical Issues in Assessing Performance of Diagnostic Devices—Topic-Contributed

Section on Statistics in Epidemiology, Biopharmaceutical Section, ASA Special Interest Group for Medical Devices and Diagnostics

Organizer(s): Lakshmi Vishnuvajjala, FDA/CDRH Division of Biostatistics

Chair(s): Jeffrey L. Joseph, Theorem Clinical Research

2:05 p.m. **Analytical and Clinical Validation of Diagnostic Devices with Underlying High-Dimensional Input Data**—✦Zhiheng Xu, FDA; Tinghui Yu, FDA/CDRH; Meijuan Li, FDA/CDRH; Lakshmi Vishnuvajjala, FDA/CDRH Division of Biostatistics

2:25 p.m. **Noninferiority of Diagnostic Tests**—✦Lakshmi Vishnuvajjala, FDA/CDRH Division of Biostatistics

2:45 p.m. **Adjusting for Measurement Error in the Performance Evaluation of Diagnostic Medical Tests**—✦Gene Pennello, FDA

3:05 p.m. **The Effect of Precision at the Decision Point on Diagnostics Accuracy of a Biomarker Assay**—✦Jeng Mah, Beckman Coulter, Inc.

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

26 CC-513b

Recent Development of Statistical Methods in Radiological Research—Topic-Contributed

Section on Statistics in Imaging, Statistical Learning and Data Mining Section, WNAR, Korean International Statistical Society

Organizer(s): Zheng Zhang, Brown University

Chair(s): Xiaofeng Wang, Cleveland Clinic Lerner Research Institute

2:05 p.m. **An AUC-Like Index for Agreement Assessment**—✦Zheng Zhang, Brown University; Youdan Wang, Brown University; Fenghai Duan, Brown University

2:25 p.m. **Comparing Diagnostic Accuracies in a Multi-Reader, Multi-Test Design**—✦Eunhee Kim, Brown University; Donglin Zeng, The University of North Carolina; Zheng Zhang, Brown University

2:45 p.m. **Assessing Agreement with Relative Area Under the Coverage Probability Curve**—✦Huiman Barnhart, Duke University

3:05 p.m. **A Simulation Study to Evaluate Accuracy and Precision of Blinded Independent Central Reviews (BICR) on Progression-Free Survival in Cancer Clinical Trials**—✦Fenghai Duan, Brown University; Richard Walovitch, WorldCare Clinical, LLC; Vincent Girardi, WorldCare Clinical, LLC

3:25 p.m. **Quantitative Imaging Biomarker and Noise Characteristics in CT**—✦Hyun (Grace) Kim, University of California at Los Angeles; David Gjertson, University of California at Los Angeles School of Public Health; Matthew Brown, University of California at Los Angeles Computer Vision and Imaging Biomarker; Jonathan Goldin, University of California at Los Angeles Radiology

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

27 CC-524b

■ Hitting the Target in Hospital Profiling: The AHRQ Quality Indicators—Topic-Contributed

Section for Statistical Programmers and Analysts, Health Policy Statistics Section, Health Policy Statistics Section, Scientific and Public Affairs Advisory Committee

Organizer(s): Frank B Yoon, Mathematica Policy Research

Chair(s): Corwin Zigler, Harvard University

2:05 p.m. **Development of the AHRQ QIs and Current Methodological Investigations**—✦Dale Rhoda; Jeffrey J. Geppert, Battelle Memorial Institute; Christopher J. Sroka, Battelle Memorial Institute; Michele Morara, Battelle Memorial Institute; Warren J. Strauss, Battelle Memorial Institute

2:25 p.m. **Variation in Quality by Hospital Characteristics: True or False?**—✦David Jones, Mathematica Policy Research; Sam Stalley, Mathematica Policy Research; Alex Bohl, Mathematica Policy Research; Frank B. Yoon, Mathematica Policy Research; Eric Schone, Mathematica Policy Research; Joe Zickafoose, Mathematica Policy Research; Jessica Ross, Mathematica Policy Research

2:45 p.m. **The Role of Hospital Characteristics in Setting Appropriate Yardsticks for Quality Measurement**—✦Frank B. Yoon, Mathematica Policy Research; Alex Bohl, Mathematica Policy Research; David Jones, Mathematica Policy Research; Dmitriy Poznyak, Mathematica Policy Research; Jessica Ross, Mathematica Policy Research; Eric Schone, Mathematica Policy Research; Joe Zickafoose, Mathematica Policy Research; Dejene Ayele, Mathematica Policy Research

3:05 p.m. **Hospital Peer Groups, Reliability, and Stabilization: Shrinking to the Right Mean**—✦Alex Bohl, Mathematica Policy Research; David Jones, Mathematica Policy Research; Dmitriy Poznyak, Mathematica Policy Research; Jessica Ross, Mathematica Policy Research; Eric Schone, Mathematica Policy Research; Frank B. Yoon, Mathematica Policy Research; Joe Zickafoose, Mathematica Policy Research; Sam Stalley, Mathematica Policy Research

3:25 p.m. **Alternative Weighting Schemes for the AHRQ QI Composites**—✦Eric Schone, Mathematica Policy Research; Alex Bohl, Mathematica Policy Research; David Jones, Mathematica Policy Research; Dmitriy Poznyak, Mathematica Policy Research; Jessica Ross, Mathematica Policy Research; Frank B. Yoon, Mathematica Policy Research; Joe Zickafoose, Mathematica Policy Research

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

28 CC-519b

■ Statistical Research in Industrial Research Labs—Topic-Contributed

Section on Statistical Learning and Data Mining

Organizer(s): Sining Chen, Bell Labs, Alcatel-Lucent

Chair(s): Samuel Gardner, SAS Institute

2:05 p.m. **YouTube Viewing Experience Modeling**—✦Jin Cao, Bell Labs

2:25 p.m. **Randomized Experiments for Measuring Brand Effectiveness of Online Video Ads**—✦Lu Zhang, Google; Tim Hesterberg, Google; Philip Clarkson, Google; Sheng Ma, Google; Taylan Yildiz, Google

2:45 p.m. **Electricity Load Forecasting on Smart Grid**—✦Sining Chen, Bell Labs, Alcatel-Lucent

3:25 p.m. Disc: Haipeng Shen, The University of North Carolina at Chapel Hill

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

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

29 CC-510a

■ ● Statistical Practice Tailored to Protecting Children's Rights in Developing Countries—Topic-Contributed

Statistics Without Borders, Scientific and Public Affairs Advisory Committee

Organizer(s): Asaph Young Chun, U.S. Census Bureau
Chair(s): Cathy Furlong, Caucus for Women

Panelists: ✦Alison Cartwright, Statistics Without Borders
✦Minh Tran, Statistics Without Borders
✦M.B. Gil, Pyongyang Summer Institute in Survey Science and Quantitative Methodology
✦JS Jang, Pyongyang Summer Institute in Survey Science and Quantitative Methodology

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

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

30 CC-512c

Longitudinal Studies—Contributed

Biometrics Section, SSC

Chair(s): Wei Sun, The University of North Carolina at Chapel Hill

2:05 p.m. **Partial Antecorrelation Models with Independent Asymmetric Laplace Innovations**—✦Shu-Ching Chang; Dale Zimmerman, University of Iowa

2:20 p.m. **A New Modeling Approach for Quantifying Expert Opinion in the Drug Discovery Process**—Ariel Alonso, Maastricht University; ✦Elasma Milanzi, I-Biostat, Hasselt University, Belgium; Geert Molenberghs, Universiteit Hasselt & Katholieke Universiteit Leuven; Christophe Buyck, Janssen Pharmaceutica; Luc Bijnens, Janssen Pharmaceutica

2:35 p.m. **Residuals in the Growth Curve Model and Their Application in the Analysis of Longitudinal Data**—✦Jemila Hamid, McMaster University; WeiLiang Huang, McMaster University

2:50 p.m. **A Bayesian Pattern-Mixture Model for Longitudinal Data with Informative Dropouts**—✦Niko Kaciroti, University of Michigan

3:05 p.m. **Design Issues in Longitudinal Studies**—✦Christopher Morrell, Loyola University Maryland; Veena Shetty, Medstar Health Research Institute; Edward Lakatta, Laboratory of Cardiovascular Sciences, NIA

3:20 p.m. **Generalized Likelihood Ratio Test for Semiparametric Analysis of Covariance Models in Longitudinal Data**—✦Jin Tang, University of Georgia; Yehua Li, Iowa State University

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

31 CC-512g

Methodology for Early-Stage Oncology Trials—Contributed

Biopharmaceutical Section, Biometrics Section, Korean International Statistical Society

Chair(s): Chunyan Cai, The University of Texas Health Science Center at Houston

2:05 p.m. **Evaluating Probability of Success in Oncology Drug Development**—✦Di Li, Eisai, Inc.

2:20 p.m. **Bivariate Continual Reassessment Method (BCRM) Applied to Oncology Dose Escalation Study**—✦Yinghua (Grace) Zhang, GlaxoSmithKline; Jie Ding, GlaxoSmithKline

2:35 p.m. **An 'Early-Go' Design for Single-Arm, Two-Stage, Phase II Clinical Trials**—✦William E. Brady, Roswell Park Cancer Institute; Gregory Wilding, Roswell Park Cancer Institute

2:50 p.m. **Probability-Guided 3+3 Design in Phase I Dose-Escalation Study**—✦Yung-Seop Lee, Dongguk University; Jung Wook Park, Astellas Pharma Global Development, Inc.

3:05 p.m. **Enrollment and Stopping Rules for Managing Toxicity in Phase II Oncology Trials with Delayed Outcome**—✦Guochen Song, Quintiles; Anastasia Ivanova, The University of North Carolina at Chapel Hill

3:20 p.m. **Using the Facts Recommender in Oncology Dose Escalation Trials: A Comparison of Dose Escalation Decisions Suggested by the Recommender with Actual Decisions Made by Project Teams**—✦Sharon Murray, GlaxoSmithKline; Tom Parke, Tessella plc; Allison Florance, GlaxoSmithKline; Alun Bedding, GlaxoSmithKline

3:35 p.m. **Alternative Designs for Phase II Clinical Trials When Attained Sample Sizes Are Different from Planned Sample Sizes**—✦Myron Chang, University of Florida

32 CC-512h

■ Analysis of Safety Data and Rare Events—Contributed

Biopharmaceutical Section, Korean International Statistical Society

Chair(s): Mary Bartholomew, FDA Center for Veterinary Medicine

2:05 p.m. **Statistical Methods Used in Safety Evaluation for NDA Submissions**—✦Linyun Zhou, Takeda Global Research & Development

2:20 p.m. **A Single-Arm Sequental Monitoring Design for Claiming Positive or Negative Safety Signals in Patients from Multiple Baseline Risk Groups**—✦Jung Wook Park, Astellas Pharma Global Development, Inc.; Xiaosha Sherman Zhang, Astellas Pharma Global Development, Inc.; Jay Yang, Astellas Pharma Global Development Inc.; Stephen Eck, Astellas Pharma Global Development, Inc.

2:35 p.m. **A Second Source of Conservatism in Fisher's Exact Test for Rare Events**—✦Mark Von Tress, Alcon Laboratories

2:50 p.m. **Performance of Various Propensity Score Estimation Techniques for Estimating Relative Risks: A Simulation Study**—✦Jiaxiao Shi, Kaiser Permanente; Wansu Chen, Kaiser Permanente

3:05 p.m. **Large-Scale Penalized Regression for Propensity Score Estimation in Observational Health Care Data**—✦Ivan Zorych, Columbia University; Patrick Ryan, Jenssen Research & Development; David Madigan, Columbia University

3:20 p.m. **Signal Detections in Drug Safety Research**—✦Li Zhu, Amgen, Inc.; Padmaja Chiruvolu, Amgen Inc; Maggie Chen, Assent Consulting; Liying Zhang, Assent Consulting; Jinyu Yuan, Kforce; Qi Jiang, Amgen, Inc.

3:35 p.m. **A Further Look Into Meta-Analysis of Rare Event Data for Drug Safety Assessment**—✦Yujun Wu, Sanofi; Hui Quan, Sanofi; Peng-liang Zhao, Sanofi

33 CC-520d

Statistical Software, Modeling, Graphics, and Hardware—Contributed

Section on Statistical Computing, Section on Statistical Graphics, Section for Statistical Programmers and Analysts

Chair(s): Bethany Wolf, Medical University of South Carolina

2:05 p.m. **APL and Data Analysis: Still Friends After All of These Years**—✦Neil Polhemus, Statgraphics Software

2:20 p.m. **Multiple Choice from Competing Regression Models Under Multicollinearity Based on Standardized Update**—✦Yoshinori Kawasaki, The Institute of Statistical Mathematics; Masao Ueki, Faculty of Medicine, Yamagata University

2:35 p.m. **Generalized Least Angle Regression**—✦George Terrell, Virgina Tech

2:50 p.m. **Automating Data Exploration Through Interestingness and Insights**—✦Jing Shyr, IBM; Damir Spisic, IBM

3:05 p.m. **Computing and Graphing Probability Values of Pearson Distributions: A SAS/IML Macro**—✦Wei Pan, Duke University; John C. Boling, Duke University

3:20 p.m. **Creating an Executive Summary Dashboard of Statistical Results Using SAS**—✦Alan Elliott, Southern Methodist University; Linda S. Hynan, The University of Texas Southwestern Medical Center

3:35 p.m. **Collaborative Hardware Design for Real-Time Processing**—✦Sarah Michalak, Los Alamos National Laboratory; Andrew DuBois, Los Alamos National Laboratory; David DuBois, Los Alamos National Laboratory; Christine Anderson-Cook, Los Alamos National Laboratory; Stephen Poole, Oak Ridge National Laboratory

34 CC-512e

■ Statistics in Spatial and Environmental Epidemiology—Contributed

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

Chair(s): Pierre-Jérôme Bergeron, University of Ottawa

2:05 p.m. **Bayesian Spatial Hierarchical Modeling of Geographic Disparities in COPD Mortality in U.S. (2000–2007)**—✦Xingyou Zhang, Centers for Disease Control and Prevention; James B. Holt, Centers for Disease Control and Prevention; Anne Wheaton, Centers for Disease Control and Prevention; Earl Ford, Centers for Disease Control and Prevention; Janet B. Croft, Centers for Disease Control and Prevention

2:20 p.m. **Bayesian Kernel Machine Regression for Estimating the Health Effects of Air Pollution Mixtures**—✦Jennifer Bobb, Harvard School of Public Health; Brent A. Coull, Harvard School of Public Health

2:35 p.m. **Improved Temporal Smoothing for Estimating Population Health Risk**—✦Wesley Burr, Queen's University; Glen Takahara, Queen's University; Hwashin H. Shin, Health Canada, Population Studies Division

2:50 p.m. **Investigating Risk Factors Associated with the Geographical Distribution of Disease Using Aggregate and Individual-Level Data**—✦Michelle Ross, University of Washington

3:05 p.m. **Optimal Penalty Parameter Selection to Minimize the Impact of Exposure Measurement Error in 2-Stage Air Pollution Epidemiology Analyses**—✦Silas Bergen, University of Washington; Adam Szpiro, University of Washington

3:20 p.m. **Skin Cancer and the Solar Cycle: An Application of Kolmogorov-Zurbenko Filters**—✦Edward Valachovic, State University of New York at Albany; Igor Zurbenko, State University of New York at Albany

3:35 p.m. **Approaches to Calculation of Average Exposure in Analysis of Epidemiologic Cohorts**—✦Leonid Kopylev, U.S. Environmental Protection Agency

35 CC-514a

■ Statistical Analysis with Biomarkers and Genetics—Contributed

Section on Statistics in Epidemiology, SSC, International Chinese Statistical Association

Chair(s): Yen-Tsung Huang, Brown University

2:05 p.m. **A Simulation Study to Compare Modeling Methods for Analyzing Biomarker Data Subject to a Limit of Detection (LOD)**—✦Charles Rose, Centers for Disease Control and Prevention; Ryan E. Wiegand, Centers for Disease Control and Prevention

2:20 p.m. **A Comparison of Group Sequential Approach and MaxSPRT Approach in a Rapid Cycle Analysis of 13-Valent Pneumococcal Conjugate Vaccine Safety**—✦Lei Qian, Kaiser Permanente Southern California; Hung Fu Tseng, Kaiser Permanente Southern California; Steve J. Jacobsen, Southern California Permanente Medical Group; Lina Somsouk Sy, Kaiser Permanente Southern California; Eric Weintraub, Centers for Disease Control and Prevention; Jennifer Nelson, Group Health Cooperative

2:35 p.m. **Estimation of Weighted Log Partial Area Under the ROC Curve and Its Application to Micro-RNA Data**—✦Ahmed Hossain, McMaster University; Joseph Beyene, McMaster University

2:50 p.m. **Efficient Pooling Methods for Skewed Biomarker Data Subject to Regression Analysis**—✦Emily Mitchell, Emory University; Robert H. Lyles, Emory University; Michelle Danaher, Eunice Kennedy Shriver National Institute of Child Health and Development; Neil J. Perkins, Eunice Kennedy Shriver National Institute of Child Health and Development; Enrique F. Schisterman, Eunice Kennedy Shriver National Institute of Child Health and Development

3:05 p.m. **Comparison of Dependent Deattenuated Correlation Coefficients**—✦Bernard Rosner, Harvard Medical School; Wei Wang, Brigham & Women's Hospital; Eileen Hibert, Brigham & Women's Hospital

3:20 p.m. **Testing Multiple Biological Mediators Simultaneously**—✦Simina Boca, National Cancer Institute; Rashmi Sinha, National Cancer Institute; Amanda J. Cross, National Cancer Institute; Steven C. Moore, National Cancer Institute; Joshua Sampson, DCEG, National Cancer Institute

3:35 p.m. **Adjusting Odds Ratios for Misdiagnosis of Cases in Case Control Studies Using Optimal Classifiers**—✦Dat Huynh, University of California at Los Angeles; Ron Brookmeyer, University of California at Los Angeles

36 CC-525a

Assorted Topics in Mathematical Statistics II—Contributed

IMS

Chair(s): Layla Parast, RAND Corporation

2:05 p.m. **Affine Invariant Divergence with Empirical Estimability**—✦Hironori Fujisawa, The Institute of Statistical Mathematics; Takafumi Kanamori, Nagoya University

2:20 p.m. **Risk Inflation of Sequential Testing**—✦Robert Stine, University of Pennsylvania

2:35 p.m. **Polynomially Adjusted Saddlepoint Density Approximations**—✦Serge Provost, University of Western Ontario

2:50 p.m. **Joint Unified Confidence Region for the Parameters of Branching Processes with Immigration**—✦Pin Ren; Anand Vidyashankar, George Mason University

3:05 p.m. **A New Strategy for Predicting, Coding, and Gambling on Decaying Large Alphabets**—✦Xiao Yang, Yale University; Andrew Barron, Yale University

3:20 p.m. **Partition-Valued Markov Chains: The Cut-and-Paste Representation Theorem**—✦Harry Crane

3:35 p.m. **Detection of Local Signals in Genomics**—✦David Siegmund, Stanford University; Benjamin Yakir Yakir, Hebrew University of Jerusalem; Nancy Zhang, University of Pennsylvania

37 CC-515c

Small-Area Estimation: Theory and Applications—Contributed

Survey Research Methods Section, Social Statistics Section, Scientific and Public Affairs Advisory Committee

Chair(s): Stas Kolenikov, SRBI

2:05 p.m. **A Procedure for Evaluating and Comparing Small-Area Variability of Binary Outcomes**—✦Pavlina Rumcheva, National Center for Health Statistics; Donald Malec, National Center for Health Statistics; Peter Meyer, National Center for Health Statistics; Nathaniel Schenker, National Center for Health Statistics

2:20 p.m. **Small-Area Prediction of the Mean of a Binomial Random Variable**—✦Andreea Erciulescu, Iowa State University; Wayne Fuller, Iowa State University

2:35 p.m. **Validity Testing for Coverage Properties of Small-Area Models for Cell Proportions**—✦Aaron Gilary, U.S. Census Bureau; Jerry Maples, U.S. Census Bureau; Eric Victor Slud, U.S. Census Bureau

2:50 p.m. **Small-Area Estimates from the National Crime Victimization Survey**—✦Robert Fay, Westat; Mamadou Diallo, Westat; Michael Planty, Bureau of Justice Statistics

3:05 p.m. **An Empirical Artificial Population and Sampling Design for Small-Area Model Evaluation—** ✦Jerzy Wieczorek, U.S. Census Bureau; Carolina Franco, U.S. Census Bureau

3:20 p.m. **Applying Bivariate Binomial - Logit Normal Models for Small-Area Estimation—**✦Carolina Franco, U.S. Census Bureau; William R. Bell, U.S. Census Bureau

3:35 p.m. **Standard Regression Model-Based Small-Area Domain Estimation in Household Surveys—** ✦Prabhakar Ghangurde

38 CC-520f

Bayesian Regression and Modeling—Contributed

Section on Bayesian Statistical Science, Section on Statistics in Marketing

Chair(s): Serge Sverdlov, University of Washington

2:05 p.m. **Nonparametric Gaussian Process Models for Censored Longitudinal Data—**✦Sujit Ghosh, North Carolina State University; Liwei Wang, North Carolina State University

2:20 p.m. **A Bayesian Nonparametric Approach to the Analysis of fMRI Data—**✦Linlin Zhang, Rice University; Michele Guindani, The University of Texas MD Anderson Cancer Center; Marina Vannucci, Rice University

2:35 p.m. **A Powerful Bayesian Meta-Analysis Method to Integrate Multiple Gene Set Enrichment Studies—** ✦Min Chen, The University of Texas Southwestern Medical Center at Dallas; Miao Zang, PPD; Xinlei Wang, Southern Methodist University; Guanghua Xiao, The University of Texas Southwestern Medical Center

2:50 p.m. **For Better or for Worse: A Hierarchical Bayes Model for Partial Preference Rankings from Discrete Choice Experiments—**✦Anna Liza Antonio, University of California at Los Angeles; Catherine Crespi, University of California at Los Angeles; Robert E. Weiss, University of California at Los Angeles; Christopher Saigal, University of California at Los Angeles

3:05 p.m. **Bayesian Approach to Age-Adjusted Joinpoint Regression Model—**✦Ram C. Kafle, University of South Florida; Netra Khanal, University of Tampa; Chris Tsokos, University of South Florida

3:20 p.m. **Bayesian Analysis of Spatial Transformation Models with Applications in Neuroimaging Data—** ✦Michelle Miranda; Hongtu Zhu, The University of North Carolina at Chapel Hill; Joseph G. Ibrahim, The University of North Carolina

3:35 p.m. **Bayesian Regression with Errors from ESDIW Distribution—**✦Ahmad Flaih, Al-Qadisiya University; Jose Guardiola, Texas A&M University at Corpus Christi; Hassan Elsalloukh, University of Arkansas at Little Rock

39 CC-516a

Modeling and Modeling Error—Contributed

Government Statistics Section, Social Statistics Section

Chair(s): Michael Sinclair, NORC

2:05 p.m. **Two-Factor Interaction Effect Detection for the Generalized Linear Models—**✦Sier Han, IBM SPSS Predictive Analytics; Jing Shyr, IBM; Jane Chu, IBM

2:20 p.m. **The Performance of the Linear Logistic Test Model When the Q-Matrix Is Misspecified: A Simulation Study—**✦George MacDonald, University of South Florida; Jeffrey D. Kromrey, University of South Florida; Yi-Hsin Chen, University of South Florida

2:35 p.m. **A Two-Step Approach to the Study of Changes Over Time in Right-Censored and Grouped Count Data—** ✦Kenneth Land, Duke University; Qiang Fu, Duke University

2:50 p.m. **Missing Observations in Paired Comparisons: Assessing the Impact of Argumentative Threat in Written Opinions at the Supreme Court—**✦William Christensen, Brigham Young University; Lance Long, Stetson University College of Law

3:05 p.m. **A New Approach to Modeling Roll Call Data—**Abel Rodriguez, University of California at Santa Cruz; ✦Kaushik Ghosh, University of Nevada-Las Vegas

3:20 p.m. **Generalized Residuals for Item Response Theory Models with an Application to the National Assessment of Educational Progress—**✦Sandip Sinharay, CTB/McGraw-Hill; Shelby Haberman, Educational Testing Service

3:35 p.m. **Improving Small-Area Estimates of Disability: Combining the American Community Survey with the Survey of Income and Program Participation—** ✦Jerry Maples, U.S. Census Bureau; Matthew Brault, U.S. Census Bureau

40 CC-513a

■ Causal Inference in Health Policy Statistics—Contributed

Health Policy Statistics Section, International Indian Statistical Association, Section on Statistics in Epidemiology, Scientific and Public Affairs Advisory Committee

Chair(s): Ashok Chaurasia, Univeristy of Connecticut

2:05 p.m. **Two-Layer Propensity Score Weighting: Multiple Treatments, Heterogeneous Treatment Effects, and a Causality Fallback Position—**✦Amelia Haviland, Carnegie Mellon University; David Choi, Carnegie Mellon University

2:20 p.m. **Avoiding Errors: Causal Effect Estimates for the Evaluation of Quality of Care Over Many Centers—**✦Els Goetghebeur, Ghent University; Bart Van Rompaye, Ghent University ; Machteld Varewyck, Ghent University; Stijn Vansteelandt, Ghent University

2:35 p.m. **Confounding of a Public School Health Intervention in a Nonrandomized Experiment—**✦Terrence Murphy

2:50 p.m. **Boosting and Double Robust Estimation—**✦Daniela Golinelli, Bureau of Justice Statistics; Greg Ridgeway, National Institute of Justice

3:05 p.m. **Individual Mediating Effects—**✦Roshan Serasinghe, Kansas State University; Gary L. Gadbury, Kansas State University

3:20 p.m. **Is Utilization of Outpatient Health Care Services a Mediating Factor in the Relationship Between Full Adoption of the MyHealtheVet and Prior Comorbidity Burden in the VHA?—**✦Sowmya R. Rao, Bedford Veterans Administration Medical Center; Stephanie Shimada, Bedford Veterans Administration Medical Center; Hua Feng, Bedford Veterans Administration Medical Center; Amy Rosen, Center for Organization, Leadership and Management Research; Jeroan K. Allison, University of Massachusetts Medical School; Thomas Houston, Bedford Veterans Administration Medical Center

3:35 p.m. **Examining Socioeconomic Health Disparities Using the Rényi Index—**✦Makram Talih, National Center for Health Statistics

41 CC-525b

Nonparametric Modeling—Contributed

Section on Nonparametric Statistics, SSC, Korean International Statistical Society

Chair(s): Russell Shinohara, University of Pennsylvania

2:05 p.m. **How Stable Are Top Choices Over Time? An Investigation into Preferences Among Popular Baby Names in the United States—**✦Srinath Sampath, The Ohio State University; Joseph S. Verducci, The Ohio State University

2:20 p.m. **Smooth Simultaneous Confidence Bands for the Autoregressive Error Distribution Functions—**✦Jiangyan Wang, Soochow University; Rong Liu, University of Toledo; Fuxia Cheng, Illinois State University; Lijian Yang, Michigan State University

2:35 p.m. **Are These Two Variables Related?—**✦Michael Anderson, The University of Texas at San Antonio; Anuradha Roy, The University of Texas at San Antonio

2:50 p.m. **Estimation and Inference for Conditional Distribution Models with Response-Dependent Index Coefficients—**✦Ming-Yueh Huang, National Taiwan University

3:05 p.m. **Time-Varying Additive Models for Longitudinal Data—**✦Xiaoke Zhang, University of California at Davis; Byeong U. Park, Seoul National University; Jane-Ling Wang, University of California at Davis

3:20 p.m. **Semiparametrically Modified OLS and IV Estimators for Linear Cointegrating Models—**✦Yiguo Sun, University of Guelph

3:35 p.m. **Is the LSE Locally Asymptotic Minimax?—**✦Eric Cator, Radboud University Nijmegen

42 CC-514c

Evaluating Teachers and Teaching Methods—Contributed

Social Statistics Section, International Indian Statistical Association, Scientific and Public Affairs Advisory Committee, Statistics Without Borders

Chair(s): Lisa Blumerman, U.S. Census Bureau

2:05 p.m. **An Inquiry-Based Approach to Teaching Science: A Multilevel Mediation Model—**✦Luke Fostvedt, Iowa State University; Mack Shelley, Iowa State University; Brian Hand, University of Iowa; William Therrien, University of Iowa; Marcia Laugerman, University of Iowa; Dai-trang Le, Iowa State University; Christopher Gonwa-Reeves, Iowa State University

2:20 p.m. **A Longitudinal Study of the Effect of a New Approach to Teaching Science Based on Multivariate Mixed Effects Models—**✦Mack Shelley, Iowa State University; Luke Fostvedt, Iowa State University; Dai-trang Le, Iowa State University; Marcia Laugerman, University of Iowa; Brian Hand, University of Iowa; William Therrien, University of Iowa; Christopher Gonwa-Reeves, Iowa State University

2:35 p.m. **Teacher Effectiveness Index as an Aid to Determine Performing Teachers for Promoting Excellence in Education—**✦Avi Singh, NORC at the University of Chicago; Eric C. Hedberg, NORC at the University of Chicago; Tom B. Hoffer, NORC at the University of Chicago; Arend M. Kuyper, Northwestern University

2:50 p.m. **A Case for Testing the Missing Data Mechanism: Can We Identify Teacher Cheating?—**✦Johnny Lin, University of California at Los Angeles; Peter M. Bentler, University of California at Los Angeles

3:05 p.m. **An Appraisal of Appropriate Analytical Approaches for Data on Evaluation of Quality in Higher Education and Related Policy Implications—**✦Sada Nand Dwivedi, All India Institute of Medical Sciences

3:20 p.m. **Survey Research Challenges for an International Multi-Country Education Survey—**✦Karol Krotki, RTI International

3:35 p.m. **Matching for Balance, Pairing for Heterogeneity in an Observational Study of the Effectiveness of for-Profit and Not-for-Profit High Schools in Chile—**✦Jose Zubizarreta, The Wharton School; Ricardo Paredes, Departamento de Ingenieria Industrial y Sistemas, Pontificia Universidad Catolica de Chile; Paul Rosenbaum, The Wharton School

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Palais des congrès de Montréal, Room CC-518

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43 CC-515a

Various Topics in Statistics Education—Contributed

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

Chair(s): Zenaida Mateo, University of Manitoba

2:05 p.m. **Academic Fraud: The Case of Diederik Stapel**—✦Ruud Koning, University of Groningen

2:20 p.m. **Asking the Right Questions: Some Help for Referees**—✦Marijtje van Duijn, University of Groningen; Don van Ravenzwaaij, University of New South Wales

2:35 p.m. **Preventing Fraud: Education in Research Practice**—✦Wendy Post, University of Groningen

2:50 p.m. **The Wilcoxon-Mann-Whitney Procedure: What Does It Really Test?**—✦George Divine, Henry Ford Health System; Anna Baron, University of Colorado-Denver; Elizabeth Juarez-Colunga, University of Colorado-Denver; Harry James Norton, Carolines

3:05 p.m. **Statistical Whistleblower: Am I Brave Enough? Am I Dumb Enough?**—✦Laurence D. Robinson, Ohio Northern University

3:20 p.m. **EnvStats: An R Package for Environmental Statistics**—✦Steven Millard, Probability, Statistics & Information

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

44 CC-519a

Topics on Dimension Reduction—Contributed

Section on Statistical Learning and Data Mining, SSC, International Chinese Statistical Association

Chair(s): Vince Vu, The Ohio State University

2:05 p.m. **Cluster Pruning: Finding a Better Cluster Representative Object by Dimension Reduction**—✦Amy Wagaman, Amherst College

2:20 p.m. **Robustness in Dimensionality Reduction**—✦Jiaxi Liang; Christopher Small, University of Waterloo; Shoja'eddin Chenouri, University of Waterloo

2:35 p.m. **On Efficient Dimension Reduction with Respect to a Statistical Functional of Interest**—✦Wei Luo, Penn State University; Bing Li, Penn State University; Xiangrong Yin, University of Georgia

2:50 p.m. **Tensor Sliced Inverse Regression and Its Asymptotics**—✦Shanshan Ding, University of Minnesota; Dennis Cook, University of Minnesota

3:05 p.m. **Dimension Reduction for Sparse Functional Data**—✦Edwin Kam Fai Lei, University of Toronto; Fang Yao, University of Toronto; Yichao Wu, North Carolina State University

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

45 CC-518

High-Dimensional Statistical Learning—Contributed

Section on Statistical Learning and Data Mining, Section on Statistical Computing

Chair(s): Guanhua Chen, The University of North Carolina at Chapel Hill

2:05 p.m. **Rank Theory: Shrinkage and Selection**—✦A. K. Md. Ehsanes Saleh, Carleton University; Radim Navratil, Charles University

2:20 p.m. **Large Covariance Estimation by Thresholding Principal Orthogonal Complements**—✦Martina Mincheva, Princeton University; Jianqing Fan, Princeton University; Yuan Liao, University of Maryland

2:35 p.m. **High-Dimensional Factor Analysis with Sparse Procrustean Rotation for Gene Discovery and Genetic Risk Assessment**—✦Randy Carter, University at Buffalo; Netsanet Imam, Virginia Bioinformatics Institute

2:50 p.m. **Factor Analysis Regression for Predictive Modeling with High-Dimensional Data**—✦Netsanet Imam, Virginia Bioinformatics Institute; Randy Carter, University at Buffalo

3:05 p.m. **Optimal Feature Selection by Higher Criticism in High-Dimensional Spectral Clustering**—✦Wanjie Wang; Jiashun Jin, Carnegie Mellon University

3:20 p.m. **High-Dimensional Forecasting for Web Data**—✦Souvik Ghosh, LinkedIn; Deepak Agarwal, LinkedIn

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

46 CC-512d

Reproducibility and Statistical Computation—Contributed

Biometrics Section, SSC, Section on Statistical Computing

Chair(s): Timothy Green, Centers for Disease Control and Prevention

2:05 p.m. **Reproducibility of the Statistical Literature: Is Fooling Our Deans Enough?**—✦Scott Emerson, University of Washington

2:20 p.m. **A Model-Based Approach for Modeling Agreement in Ordered Classification Scales**—✦Kerrie Nelson, Boston University; Don Edwards, University of South Carolina

2:35 p.m. **Subset Analyses of Prostate Data Examining Weight Gain and Recurrence**—✦Irene Helenowski, Northwestern University; Jennifer A. Doll, University of Wisconsin-Milwaukee; Timothy M. Kuzel, Northwestern University; Borko Jovanovic, Northwestern University-Feinberg School of Medicine; Alfred Rademaker, Northwestern University; Michael J. Gurley, Northwestern University

2:50 p.m. **Predicting Polyhedral Shapes for Bacterial Micro-Compartments**—✦Sukantadev Bag, Duke University; Kingshuk Roy Choudhury, Duke University; Mingzhi Liang, University College Cork; Michael Prentice, University College Cork

3:05 p.m. **Quality Assessment of Label-Free Multiple Reaction Monitoring Experiment**—✦Lisa Chung; Christopher Colangelo, Yale University; Hongyu Zhao, Yale University

3:20 p.m. **A Novel Statistical Method for Transference of Pediatric Reference Intervals Using Hospital-Based Data**—✦Caitlin Daly, McMaster University; Jemila Hamid, McMaster University; Vijay Grey, McMaster University; Xiaofeng Liu, McMaster University; Angela Rutledge, McMaster University; Kristin Hauff, McMaster University

3:35 p.m. **Inference for the Broken-Stick Model: A Computationally Faster Approach**—✦Ritabrata Das; Moulinath Banerjee, University of Michigan; Bin Nan, University of Michigan

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

47 CC-710a

Introductory Overview Lecture: Celebrating the History of Statistics—Other

ASA, SSC, ENAR, WNAR, IMS, International Chinese Statistical Association, International Indian Statistical Association, Korean International Statistical Society, International Society for Bayesian Analysis (ISBA)

Organizer(s): Ananda Sen, University of Michigan

Chair(s): Ananda Sen, University of Michigan

4:05 p.m. **A Time Travel with 40 Statistics Departments: Stories You Want to Hear (or Forget)**—Alan Agresti, University of Florida; ✦Xiao-Li Meng, Harvard University

4:55 p.m. **How Statistics Saved the Human Race**—✦Stephen M. Stigler, The University of Chicago

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

Invited Sessions 4:00 p.m.–5:50 p.m.

48 CC-511e

Recent Advances in Statistical Learning—Invited

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

Organizer(s): Wenxuan Zhong, University of Illinois at Urbana-Champaign

Chair(s): Wenxuan Zhong, University of Illinois at Urbana-Champaign

4:05 p.m. **Ensemble Learning for Big Data**—✦Hugh A. Chipman, Acadia University; Robert E. McCulloch, The University of Chicago Booth School of Business; Matthew Pratola, Simon Fraser University; Dave Higdon, Los Alamos National Laboratory; James Gattiker, Los Alamos National Laboratory; Steven L. Scott, Google

4:30 p.m. **Computational Strategies in Regression of Big Data**—✦Ping Ma, University of Illinois at Urbana-Champaign

4:55 p.m. **On an Additive Semi-Graphoid Model for Statistical Networks with Application to Pathway Analysis**—✦Bing Li, The Pennsylvania State University; Hyonho Chun, Purdue University; Hongyu Zhao, Yale University

5:20 p.m. **Sparse Mixture of Experts Learning: Algorithms and Properties**—✦Yu Zhu, Purdue University; Han Wu, Purdue University

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

49 CC-510c

■ Bayesian Inference from Realistic Network Data—Invited

Section on Bayesian Statistical Science, International Society for Bayesian Analysis (ISBA), SSC, International Chinese Statistical Association, Statistical Learning and Data Mining Section

Organizer(s): Krista J. Gile, University of Massachusetts, Amherst

Chair(s): Krista J. Gile, University of Massachusetts, Amherst

4:05 p.m. **A Network-Based Analysis of the 1861 Hagelloch Measles Data**—Chris Groendyke, Robert Morris University; David Welch, University of Auckland; ✦David Hunter, Penn State University

4:30 p.m. **Likelihoods for Fixed-Rank Nomination Networks**—✦Peter David Hoff, University of Washington

4:55 p.m. **Joint Modeling of Multiple Network Views**—✦Thomas Brendan Murphy, University College Dubln; Isabella Gollini, National University of Ireland Maynooth

5:20 p.m. **Some Open Challenges in the Analysis of Network Data**—✦Stephen E. Fienberg, Carnegie Mellon University

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

50 CC-511b

New Techniques for Big High-Dimensional Data—Invited

Section on Statistics in Epidemiology, International Chinese Statistical Association, Statistical Learning and Data Mining Section, Biometrics Section, Section for Statistical Programmers and Analysts, Scientific and Public Affairs Advisory Committee

Organizer(s): Yichao Wu, North Carolina State University

Chair(s): Yichao Wu, North Carolina State University

4:05 p.m. **Joint Estimation of Multiple Dependent Gaussian Graphical Models**—Yuying Xie, The University of North Carolina at Chapel Hill; ✦Yufeng Liu, The University of North Carolina; William Valdar, The University of North Carolina at Chapel Hill

4:30 p.m. **High-Dimensional Multiple Testing in a Two-Stage Adaptive Design Setting**—✦Sanat K. Sarkar, Temple University

4:55 p.m. **Two-Dimensional Solution Surface for Weighted Support Vector Machines**—✦Hao Helen Zhang, University of Arizona; Seung Jun Shin, North Carolina State University; Yichao Wu, North Carolina State University

5:20 p.m. **Inference and Optimalities in Estimation of Gaussian Graphical Model**—✦Harrison Zhou, Yale University

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

51 CC-519b

■ Strategies for Large-Scale Numerical and Statistical Computing—Invited

Section on Statistical Computing, International Chinese Statistical Association, Statistical Learning and Data Mining Section

Organizer(s): Michael J. Kane, Yale University

Chair(s): Michael J. Kane, Yale University

4:05 p.m. **Long Live (Big Data-Fied) Statistics!**—✦Norman S. Matloff, University of California at Davis

4:30 p.m. **SciDB and R**—✦Bryan W. Lewis, SciDB

4:55 p.m. **Programming with Big Data in R**—✦George Ostrouchov, Oak Ridge National Laboratory; Wei-Chen Chen, Oak Ridge National Laboratory; Drew Schmidt, University of Tennessee; Pragneshkumar Patel, University of Tennessee

5:20 p.m. **Adding Large Vector Support to R**—✦Luke Tierney, The University of Iowa

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

52 CC-510d

The Intersection of Tensor Analysis and Statistics—Invited

IMS, Statistical Learning and Data Mining Section

Organizer(s): Eric Chi, The University of California at Los Angeles; Tamara Kolda, Sandia National Laboratories

Chair(s): Forrest Crawford, Yale University

4:05 p.m. **Bayesian Approaches to Decomposing Tensors**—✦Morten Mørup, DTU Informatics

4:30 p.m. **Sparse Non-Negative Tensor Factorizations for Large Contingency Tables**—✦Anirban Bhattacharya, Duke University

4:55 p.m. **Non-Negative Tensor Factorization: Algorithms and Applications**—✦Eric Chi, University of California at Los Angeles

5:20 p.m. **Tensor Regression with Applications in Neuroimaging Data Analysis**—✦Hua Zhou, North Carolina State University; Lexin Li, North Carolina State University; Hongtu Zhu, The University of North Carolina at Chapel Hill

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

53 CC-511c

■ Regulatory Considerations on Design and Analysis of Observational Studies—Invited

Biopharmaceutical Section, Biometrics Section, Section on Statistics in Epidemiology, Scientific and Public Affairs Advisory Committee

Organizer(s): Lilly Yue, FDA

Chair(s): Donald B. Rubin, Harvard University

4:05 p.m. **FDA/CBER Biologic Product Evaluation Using Observational Studies**—✦Yun Lu, FDA

4:20 p.m. **Safety Assessment with Observational Studies: Experiences at FDA/CDER**—✦Mark Steven Levenson, FDA

4:35 p.m. **Challenges and Opportunities with Observational Studies: A CDRH's Perspective**—✦Lilly Yue, FDA

4:50 p.m. Disc: Gregory Campbell, FDA

5:05 p.m. Disc: Ralph Horwitz, GlaxoSmithKline and Yale University

5:20 p.m. Disc: Allen Heller, Bayer HealthCare Pharmaceuticals

5:35 p.m. Disc: Estelle Russek-Cohen, FDA

54 CC-520f

■ ● Privacy Preserving Record Linkage—Invited

Survey Research Methods Section, Health Policy Statistics Section, Scientific and Public Affairs Advisory Committee

Organizer(s): Stefan Bender, IAB (Institute for Employment Research)
Chair(s): Stefan Bender, IAB (Institute for Employment Research)

4:05 p.m. **Overview and Taxonomy of Technique for Privacy-Preserving Record Linkage**—✦Peter Christen, The Australian National University

4:30 p.m. **Privacy-Preserving Record Linkage and Privacy-Preserving Blocking with Cryptographic Keys**—✦Rainer Schnell, University of Duisburg-Essen

4:55 p.m. **Encrypted Versus Plain: Comparison of Record Linkages Using Privacy Preserving Probabilistic Record Linkage (P3RL): Results from a Simulation Study**—Adrian Spoerri, University of Bern; Kurt Schmidlin, University of Bern; ✦Marcel Zwahlen, University of Bern; Kerri Clough-Gorr, Institute of Social and Preventive Medicine, University of Bern

5:20 p.m. Disc: Alan F. Karr, National Institute of Statistical Sciences

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

55 CC-516c

■ Teaching Ethics in Statistics and Biostatistics: What Works, What Doesn't Work, and Lessons Learned—Invited

Committee on Professional Ethics, Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences, Korean International Statistical Society

Organizer(s): Shelley Hurwitz, Harvard Medical School/Brigham & Women's Hospital
Chair(s): Shelley Hurwitz, Harvard Medical School/Brigham & Women's Hospital

4:05 p.m. **Integrating Ethics with the Teaching of Introductory Statistics: Rationale and Resources**—✦Lawrence M. Lesser, The University of Texas at El Paso

4:25 p.m. **The Ethical Practice of Statistics for the Perplexed: A Graduate and Undergraduate Course in the Social and Behavioral Sciences**—✦Lawrence James Hubert, University of Illinois

4:45 p.m. **Professional Ethics to FDA Statisticians: Fundamentals and Branching Out to Other Professional Settings**—✦Jeongsook (Jessica) Kim, FDA/CBER

5:05 p.m. **Development of a Course for Graduate Students on the Ethics In Biostatistical Practice**—✦Howard Cabral, Boston University School of Public Health

5:25 p.m. Disc: Margie Nemeth, Statistical Consultants Plus (SC+)

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

56 CC-511a

■ Statistical Inference for Networks—Invited

WNAR, Statistical Learning and Data Mining Section, Biometrics Section, Section on Statistics in Epidemiology, Korean International Statistical Society

Organizer(s): Liza Levina, University of Michigan
Chair(s): Arash Amini, University of Michigan

4:05 p.m. **Statistical Detection of Network-Level Outliers**—✦Jennifer Neville, Purdue University

4:30 p.m. **Studying the Context-Specificity of Network Structure**—✦Karl Rohe, University of Wisconsin-Madison; Juhee Cho, University of Wisconsin-Madison; Sushmita Roy, University of Wisconsin-Madison

4:55 p.m. **Fast Community Detection by Pseudo-Likelihood**—✦Liza Levina, University of Michigan

5:20 p.m. Disc: Peter Bickel, University of California at Berkeley

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

57 CC-710b

Medallion Lecture I—Invited

IMS

Organizer(s): David B. Dunson, Duke University
Chair(s): Robert L. Wolpert, Duke University

4:05 p.m. **Linearly Reinforced Random Walk**—✦Gady Kozma, Weizmann Institute of Science

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

Invited Panels 4:00 p.m.–5:50 p.m.

58 CC-510a

■ Recent Activity in Big Data: Curriculum Development and Funding Opportunities—Invited

National Institute of Health/National Cancer Institute, International Indian Statistical Association, Section on Teaching of Statistics in the Health Sciences, Section on Statistics in Epidemiology

Organizer(s): Michelle Christine Dunn, National Cancer Institute
Chair(s): Constantine Gatsonis, Brown University

Panelists: ✦Nandini Kannan, National Science Foundation
✦Michael Rappa, North Carolina State University
✦Bill Howe, University of Washington
✦Michelle Christine Dunn, National Cancer Institute

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

59 CC-516b

Memorial Session: George Casella—Invited

ASA

Organizer(s): Edward George, The Wharton School
Chair(s): Edward George, The Wharton School

Panelists: ✦Martin T. Wells, Cornell University
✦William E. Strawderman, Rutgers University
✦Roger L. Berger, Arizona State University
✦Jim Berger, Duke University

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

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

60 CC-524b

■ Subgroup Identification for Patients with Enhanced Treatment Response—Topic-Contributed

Section on Statistical Learning and Data Mining, International Chinese Statistical Association, Biometrics Section, Section on Statistics in Epidemiology

Organizer(s): Richard C. Zink, JMP Life Sciences, SAS Institute
Chair(s): Richard C. Zink, JMP Life Sciences, SAS Institute

4:05 p.m. **Recent Development in Biomarker and Subgroup Identification for Tailored Therapeutics**—✦Russell Wolfinger, SAS Institute; Richard C. Zink, JMP Life Sciences, SAS Institute

4:25 p.m. **Recursive Partitioning Method to Identify Predictive Biomarkers in Clinical Trials**—✦Chakib Battioui, Eli Lilly and Company; Lei Shen, Eli Lilly and Company; Stephen J. Ruberg, Eli Lilly and Company

4:45 p.m. **A Regression Tree Approach to Subgroup Identification for Censored Data**—✦Wei-Yin Loh, University of Wisconsin; Michael Man, Eli Lilly and Company; Xu He, Chinese Academy of Sciences

5:05 p.m. **Subgroup Identification in Randomized Clinical Trial Data Using Random Forests and Regression Trees**—✦Jared Foster, University of Michigan; Jeremy Taylor, University of Michigan; Bin Nan, University of Michigan

5:25 p.m. **Evaluating Decision Tree Splitting Criteria for Differential Treatment Effect**—✦Padraic Neville, SAS Institute

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

61 CC-510b

■ ● Recent Developments in Bayesian Nonparametric Methods—Topic-Contributed

Section on Bayesian Statistical Science, International Society for Bayesian Analysis (ISBA), International Chinese Statistical Association, Statistical Learning and Data Mining Section

Organizer(s): John W. Paisley, University of California at Berkeley
Chair(s): John W. Paisley, University of California at Berkeley

4:05 p.m. **Robust Inference with Nonparametric Bayesian Models**—✦Steven MacEachern, The Ohio State University

4:25 p.m. **Parallel Markov Chain Monte Carlo for Nonparametric Mixture Models**—✦Sinead Williamson, Carnegie Mellon University

4:45 p.m. **Nonparametric Priors for Exchangeable Graphs and Arrays**—✦Peter Orbanz, Columbia University

5:05 p.m. **Multivariate Bayesian Convex Regression**—✦Lauren Hannah, Columbia University; David B. Dunson, Duke University

5:25 p.m. **Posteriors and Conjugacy for General Nonparametric Bayesian Priors**—✦Tamara Broderick; Michael I. Jordan, University of California at Berkeley

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

62 CC-519a

■ Statistical Modeling and Systems Science in the Study of Childhood Obesity—Topic-Contributed

Health Policy Statistics Section, Scientific and Public Affairs Advisory Committee

Organizer(s): Patricia L. Mabry, National Institutes of Health
Chair(s): Jon Kettenring, Drew University - RISE

4:05 p.m. **Novel Statistical Modeling Advances for Obesity Research**—✦Edward H. Ip, Wake Forest University School of Medicine; Kiros Berhane, University of Southern California

4:25 p.m. **Estimating Dynamic Health Systems Models from Cross-Sectional Data**—✦Hazhir Rahmandad

4:45 p.m. **Agent-Based Modeling and Statistical Approaches for Obesity and Public Health**—✦Ross Hammond, The Brookings Institution

5:05 p.m. Disc: Patricia L. Mabry, National Institutes of Health

5:25 p.m. Disc: Joseph Lee Rodgers, Vanderbilt University

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

63 CC-512f

■ ● Modern Pooled Testing Methods—Topic-Contributed

Biometrics Section, Statistical Learning and Data Mining Section

Organizer(s): Christopher R. Bilder, University of Nebraska-Lincoln
Chair(s): Christopher R. Bilder, University of Nebraska-Lincoln

4:05 p.m. **Group Testing for Multiple Infections with Application to the Infertility Prevention Project**—✦Joshua Tebbs, University of South Carolina; Christopher S. McMahan, Clemson University; Christopher R. Bilder, University of Nebraska-Lincoln

4:25 p.m. **Dorfman Testing with Correlated Responses**—✦Elena Bordonali; Michael G. Hudgens, The University of North Carolina at Chapel Hill; Bahjat Qaqish, The University of North Carolina at Chapel Hill

4:45 p.m. **Optimal Retesting Configurations for Hierarchical Group Testing**—✦Michael Black, University of Nebraska Lincoln; Christopher R. Bilder, University of Nebraska-Lincoln; Joshua Tebbs, University of South Carolina

5:05 p.m. **Bayesian Regression Models for Group Testing Data**—✦Christopher S. McMahan, Clemson University; Joshua Tebbs, University of South Carolina; Timothy Hanson, University of South Carolina; Christopher R. Bilder, University of Nebraska-Lincoln

5:25 p.m. **A Semi-Local Likelihood Regression Method for Group Testing Data**—Dewei Wang, Clemson University; ✦Haiming Zhou, University of South Carolina; Karunarathna B. Kulasekera, University of Louisville

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

64 CC-512g

Recent Development of the Induced Smoothing Method—Topic-Contributed

Biometrics Section, Statistical Learning and Data Mining Section, Korean International Statistical Society

Organizer(s): Sangwook Kang, University of Connecticut
Chair(s): Sy Han Chiou, University of Connecticut

4:05 p.m. **Rank Regression for Accelerated Failure Time Model with Clustered and Censored Data**—✦Liya Fu, Xi'an Jiaotong University; You-Gan Wang, The University of Queensland

4:25 p.m. **Induced Smoothing for the Semiparametric Accelerated Failure Time Model with Clustered Data: Marginal Methods and Frailty Models**—✦Lynn Johnson, Cornell University

4:45 p.m. **Semiparametric Accelerated Failure Time Modeling for Clustered Failure Times from Stratified Sampling**—✦Sangwook Kang, University of Connecticut; Sy Han Chiou, University of Connecticut; Jun Yan, University of Connecticut

5:05 p.m. **Induced Smoothing for Rank-Based Accelerated Failure Time Models with General Weight Functions**—✦Jun Yan, University of Connecticut; Sy Han Chiou, University of Connecticut; Sangwook Kang, University of Connecticut

5:25 p.m. **Induced Smoothing for the Semiparametric-Accelerated Hazards Model**—✦Jiajia Zhang, University of South Carolina, Arnold School of Public Health

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

65 CC-516d

■ Advances in Statistics for Brain Imaging—Topic-Contributed

SSC, Section on Statistics in Imaging, Mental Health Statistics Section, Statistical Learning and Data Mining Section

Organizer(s): Farouk S. Nathoo, University of Victoria; Timothy Johnson, University of Michigan
Chair(s): Charmaine Dean, University of Western Ontario

4:05 p.m. **A Spatial GLMM and the Estimation of Spatially Varying Coefficients with Application to Multiple Sclerosis MRI Data**—✦Timothy Johnson, University of Michigan; Thomas Nichols, University of Warwick; Tian Ge, University of Warwick

4:25 p.m. **Functional Data Analysis for fMRI**—✦Martin Lindquist, Johns Hopkins Bloomberg School of Public Health

4:45 p.m. **Variational Bayes Spatial Analysis of Combined MEG, EEG, and fMRI Data**—✦Farouk S. Nathoo, University of Victoria; Arif Babul, Physics and Astronomy, University of Victoria; Alexander Moiseev, Down Syndrome Research Foundation; Naznin Virji-Babul, Physical Therapy, British Columbia; Faisal Beg, Engineering Science, Simon Fraser

5:05 p.m. **Determining Multimodal Biomarkers for Neurodegenerative Diseases**—✦DuBois Bowman, Emory University; Wenqiong Xue, Emory University

5:25 p.m. **Linking Brain Networks to Behavior with Subsampled Prediction and Stability Metrics**—✦Stephen Strother, Rortman Research Institute, Baycrest

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

66 CC-520e

■ Innovative Statistical Methods of Macro-Review of Economic or Establishment Data—Topic-Contributed

Survey Research Methods Section, Scientific and Public Affairs Advisory Committee

Organizer(s): Katherine Jenny Thompson, U.S. Census Bureau

Chair(s): Katherine Jenny Thompson, U.S. Census Bureau

4:05 p.m. **Revisions Revisited: Data-Driven Approaches for Detection in Quarterly Financial Report Macro-Level Data**—✦Gregory Cepluch, U.S. Census Bureau; Melissa McDaniel, U.S. Census Bureau; Laura Bechtel, U.S. Census Bureau

4:25 p.m. **Dynamic Multivariate Selective Editing in the Integrated Business Statistics Program**—✦Fraser William Mills, Statistics Canada; Serge Godbout, Statistics Canada; Claude Turmelle, Statistics Canada

4:45 p.m. **Applicability of the Outlier Review Tool to Manufacturing, Mining, and Construction Sectors of the Economic Census**—✦Nicole Czaplicki, U.S. Census Bureau; Katherine Jenny Thompson, U.S. Census Bureau

5:05 p.m. **Setting Thresholds for Selective Edit: A Methodological Approach Using Process History from Establishment Surveys**—✦Joseph Kosler, USDA NASS RDD

5:25 p.m. Disc: Richard Sigman, Westat

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

67 CC-512e

■ ● Enhanced Design, Analysis, Modeling, and Interpretation of QT Studies—Topic-Contributed

Biopharmaceutical Section, Biometrics Section

Organizer(s): Donna Kowalski, Astellas Pharma Global Development, Inc.

Chair(s): Donna Kowalski, Astellas Pharma Global Development, Inc.

4:05 p.m. **Can Pooled SAD/MAD Studies Give Early Indication of Possible QTc Signal?**—✦Kimberly Crimin, Novartis

4:25 p.m. **Sensitivity Analyses for PK-QTc Modeling: Nonlinearity and Hysteresis**—✦Matthew Hutmacher, Ann Arbor Pharmocometrics Group

4:45 p.m. **Notably More Powerful Analyses of Thorough QT Crossover Trials**—✦Devan Mehrotra, Merck; Li Fan, Merck Research Laboratories; Xiaodong Li, Bristol Myers Squibb

5:05 p.m. **Baseline Adjustment in Thorough QT Studies**—✦Kaifeng Lu, Forest Laboratories

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

68 CC-521ab

■ The Interplay Between Consulting and Teaching—Topic-Contributed

Section on Teaching of Statistics in the Health Sciences, SSC, Section on Statistical Education, Statistics Without Borders

Organizer(s): Ann M. Brearley, University of Minnesota

Chair(s): Ann M. Brearley, University of Minnesota

4:05 p.m. **Confessing Our Sins: How Research Informs Teaching**—✦Deborah Dawson, University of Iowa

4:25 p.m. **Wins, Losses, and Lessons as an Early-Career Statistician Collaborating and Teaching in University, Research Institute, and Medical School Settings**—✦Christopher Franck, Virginia Tech

4:45 p.m. **Some Key Assumptions You Need to Avoid in Collaborating with Medical Researchers**—✦Eleanor Pullenayegum, McMaster University; Lehana Thabane, St Joseph's Healthcare Hamilton

5:05 p.m. **The Power of Pictures for Understanding Power**—✦Eileen King, Cincinnati Children's Hospital Medical Center

5:25 p.m. **Establishing Partnerships with University Faculty Development Groups to Increase Statistical Training and General Consulting in the Academic Health Setting**—✦Jason Brinkley, East Carolina University

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

69 CC-512ab

■ Statistical Analysis Methods with Application to Comparative Effectiveness Research—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, Health Policy Statistics Section, Section for Statistical Programmers and Analysts, Section on Statistics in Epidemiology, Scientific and Public Affairs Advisory Committee

Organizer(s): Isaac Nuamah, Janssen Research and Development

Chair(s): Rosanne Lane, Janssen Research & Development

4:05 p.m. **Statistical Assessment of Comparative Efficacy in Adolescent Psychiatry Clinical Trials**—✦Isaac Nuamah, Janssen Research & Development

4:25 p.m. **Use of Patient-Reported Outcomes in Comparative Effectiveness Research**—✦Joseph C. Cappelleri, Pfizer Inc.; Demissie Alemayehu, Pfizer Inc.

4:45 p.m. **The Use of Propensity Score Methods with Survival or Time-to-Event Outcomes**—✦Peter Austin, ICES

5:05 p.m. **The Role of Pragmatic Trials in Comparative Effectiveness Research**—✦Lehana Thabane, St Joseph's Healthcare Hamilton; Janusz Kaczorowski, Universite de Montréal; Lisa Dolovich, McMaster University; Larry Chambers, University of Ottawa; On behalf of the CHAP Investigators, McMaster University

5:25 p.m. Disc: Matthew D. Rotelli, Eli Lilly and Company

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

70 CC-520c

■ Robust Inference in Social Science with Wrong but Useful Models—Topic-Contributed

Social Statistics Section, Survey Research Methods Section, Section on Statistics in Marketing, Scientific and Public Affairs Advisory Committee

Organizer(s): David Ross Judkins, Abt Associates

Chair(s): Vivian Zhuang, Creighton University School of Medicine

4:05 p.m. **When Is It Safe to Use the Wrong Model in Randomized Social Experiments? And Why Would You Want to?**—✦David Ross Judkins, Abt Associates; Kristin Porter, MDRC

4:25 p.m. **Shrinkage for Improved Inference in Factorial Experiments**—✦Cyrus Samii, Politics Department, New York University; Joel Middleton, Steinhardt School, New York University; Peter M. Aronow, Yale University

4:45 p.m. **Valid Post-Selection Inference**—✦Kai Zhang, The University of North Carolina at Chapel Hill; Richard Berk, University of Pennsylvania; Larry Brown, University of Pennsylvania; Andreas Buja, University of Pennsylvania; Linda Zhao, University of Pennsylvania

5:05 p.m. **Uses and Limitations of GEEs and GLMs for Social Network Data**—✦Elizabeth Ogburn, Harvard University

5:25 p.m. **A Model-Averaging Approach to Improve the Efficiency of Teacher Value-Added Estimates**—✦Bing Han, RAND Corporation; Daniel F. McCaffrey, ETS; J.R. Lockwood, ETS

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

71 CC-516a

■ Mismeasurement of Time-to-Event Outcomes: Issues and Methods of Analysis—Topic-Contributed

ENAR, Biometrics Section

Organizer(s): Pamela A Shaw, Biostatistics Research Branch, NIAID, NIH

Chair(s): Philip Hougaard, Lundbeck

4:05 p.m. **Attenuation of Treatment Effect Due to Measurement Variability in Assessment of Progression-Free Survival**—✦Shengyan Hong; Nicola Schmitt, AstraZeneca; Andrew Stone, AstraZeneca; Jonathan Denne, Eli Lilly and Company

4:25 p.m. **Methods of Analysis for Failure Time Data That Adjust for Errors in Survival Outcomes Revealed by Audits**—✦Pamela A Shaw, Biostatistics Research Branch, NIAID, National Institutes of Health; Bryan E Shepherd, Vanderbilt University

4:45 p.m. **Study Design Issues and Analysis of Error-Prone Time-to-Event Data Using Progression-Free Survival as an Example**—✦Sally Hunsberger, NCI; Paul Albert, Eunice Kennedy Shriver National Institute of Child Health and Human Development; Lori Dodd, National Institutes of Health

5:05 p.m. **Measurement Error in the Timing of Events: Effect on Survival Analyses in Randomized Clinical Trials**—✦Lori Dodd, National Institutes of Health

5:25 p.m. Disc: Paul Albert, Eunice Kennedy Shriver National Institute of Child Health and Human Development

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

72 CC-512c

■ Developing Statistical Methods in Setting Environmental Exposure Limits—Topic-Contributed

Section on Statistics and the Environment, Section on Statistics in Epidemiology, Scientific and Public Affairs Advisory Committee, Korean International Statistical Society

Organizer(s): Jing Zhang, Miami University

Chair(s): Bin Zhang, Cincinnati Children's Hospital

4:05 p.m. **Bayesian Model Averaging in Benchmark Dose Analysis**—✦Cuixian Chen, The University of North Carolina at Wilmington; Susan Simmons, The University of North Carolina at Wilmington; Xiaosong Li, The University of North Carolina at Wilmington; Yishi Wang, The University of North Carolina at Wilmington; Walter Piegorsch, University of Arizona; Qijun Fang, University of Arizona

4:25 p.m. **Estimating Potency in Multiple Endpoints in Aquatic Toxicity Testing**—✦Jing Zhang, Miami University; A. John Bailer, Miami University; James T. Oris, Miami University

4:45 p.m. **Benchmark Dose Calculation for Ordinal Responses Using Categorical Regression**—✦James Chen, National Center for Toxicological Research, FDA; Chu-Chih Chen, National Health Research Institutes

5:05 p.m. **Model Uncertainty and Model Averaging in Risk Assessment**—✦Hojin Moon, California State University at Long Beach; Steven Kim, University of California at Irvine; James Chen, National Center for Toxicological Research, FDA; Ralph Kodell, University of Arkansas for Medical Sciences

5:25 p.m. **An Empirical Approach to Sufficient Similarity: A Whole Mixture Strategy for Setting Exposure Limits for Chemical Mixtures**—✦Chris Gennings, Viginia Commonwealth University; Scott Marshall, BioStat Solutions, Inc; LeAnna Stork, Monsanto Company

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

73 CC-525a

New Statistical Methodologies for Sampling and Inference with Big Data—Topic-Contributed

Section on Statistical Learning and Data Mining, International Chinese Statistical Association, Biometrics Section, Section on Statistics in Epidemiology, Scientific and Public Affairs Advisory Committee

Organizer(s): Ali Shojaie, University of Washington

Chair(s): Tyler H. McCormick, University of Washington

4:05 p.m. **The Structural Virality of Online Diffusion—** ✦Jake Hofman, Yahoo! Research

4:25 p.m. **Sparse Laplacian Shrinkage for Inverse Covariance Estimation in Heterogeneous Sample—**✦Takumi Saegusa, University of Washington; Ali Shojaie, University of Washington

4:45 p.m. **On Consistency of Community Detection in Networks—**✦Yunpeng Zhao, George Mason University; Liza Levina, University of Michigan; Ji Zhu, University of Michigan

5:05 p.m. **High-Dimensional Vector Autoregression (VAR)—** ✦Sumanta Basu, University of Michigan

5:25 p.m. **Balancing Covariates via Propensity Score Weighting—**✦Fan Li, Duke University; Alan Zaslavsky, Harvard University; Kari Lock Morgan, Duke University

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

74 CC-520a

■ The 2013 CPS ASEC Field Test—Topic-Contributed

Government Statistics Section, Social Statistics Section, Health Policy Statistics Section, Scientific and Public Affairs Advisory Committee

Organizer(s): Edward Welniak, U.S. Census Bureau

Chair(s): Edward Welniak, U.S. Census Bureau

4:05 p.m. **An Evaluation of Retirement Income in the CPS ASEC Using IRS Form 1099-R Microdata—** ✦Charles Bee, U.S. Census Bureau

4:25 p.m. **Health Insurance Measurement in the Current Population Survey: Test Results and Next Steps for a Redesign—**✦Joanne Pascale, U.S. Census Bureau; Michel Boudreaux, State Health Access Data Assistance Center; Amy Steinweg, U.S. Census Bureau

4:45 p.m. **Measuring Transitions, Spells of Uninsurance, and Churning Using the Redesigned CPS—**✦Brett Fried, University of Minnesota, SHADAC; Joanne Pascale, U.S. Census Bureau; Michel Boudreaux, State Health Access Data Assistance Center

5:05 p.m. **CPS ASEC Income Redesign Field Test—** ✦Jessica Semega, U.S. Census Bureau

5:25 p.m. **Health Insurance in the Current Population Survey: Now and Later?—**✦Carla Medalia, U.S. Census Bureau

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

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

75 CC-524a

● Teaching Online on a Budget—Topic-Contributed

Section on Statistical Education, Section on Teaching of Statistics in the Health Sciences, Statistics Without Borders

Organizer(s): Michelle G. Everson, University of Minnesota

Chair(s): Michelle G. Everson, University of Minnesota

Panelists: ✦Pat Humphrey, Georgia Southern University
✦Dick Jardine, Keene State College
✦Dave Rausch, West Texas A&M University
✦Sue Schou, Idaho State University
✦Gunnar Stefansson, University of Iceland

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

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

76 CC-512h

Hypothesis Testing and Biomarker Evaluation—Contributed

Biometrics Section

Chair(s): Chad He, Fred Hutchinson Cancer Research Center

4:05 p.m. **Estimate of Search Method Coherence by Using Repeated Probes on Tiled Microarrays—** ✦Sigrún Helga Lund, University of Iceland; Gunnar Stefansson, University of Iceland; Thorunn Rafnar, Decode; Daniel Gudbjartsson, Decode

4:20 p.m. **Study Design and Statistical Methodology in Biomarker Evaluation—**✦Qian Li, National Institutes of Health, NCCAM

4:35 p.m. **Gene Filtering for Time Course Gene Expression Data Using the Growth Curve Model—**✦Sayantee Jana, McMaster University; Narayanaswamy Balakrishnan, McMaster University; Dietrich von Rosen, Swedish University of Agricultural Sciences; Jemila Hamid, McMaster University

4:50 p.m. **Testing Pathway-Dose Interaction in Clinical Studies—**✦Jia Kang, Merck

5:05 p.m. **SigTree: An Automated Meta-Analytic Approach to Find Significantly Responsive Branches in a Phylogenetic Tree—**✦John Stevens, Utah State University; Todd R. Jones, Cornell University; Michael Lefevre, Utah State University

5:20 p.m. **A Powerful Method for Genetic Pathway Analysis—** ✦Qi Yan, The University of Alabama at Birmingham; Nianjun Liu, The University of Alabama at Birmingham

5:35 p.m. **Mixed Modeling of Meta-Analysis P-Values (MixMAP) with Applications to Genome-Wide Association Studies of Low-Density Lipoprotein Cholesterol and Insulin Resistance—**✦Gregory Matthews, University of Massachusetts; Andrea S. Foulkes, University of Massachusetts; Muredach Reilly, University of Pennsylvania School of Medicine

77 CC-513b

Survival Analysis—Contributed

Biometrics Section, SSC

Chair(s): Gajanan Bhat, Lantheus Medical Imaging, Inc.

4:05 p.m. **Chi-Squared Goodness-of-Fit Test Based on Random Cells Boundaries with Recurrent Events—**✦Withanage De Mel, Missouri University of Science and Technology; Akim Adekpedjou, Missouri University of Science and Technology; Gideon K.D. Zamba, University of Iowa

4:20 p.m. **Hosmer-Lemeshow Goodness-of-Fit Test: Translations to the Cox Proportional Hazards Model—**✦Danielle Guffey, University of Washington; Susanne May, University of Washington; David W. Hosmer, University of Massachusetts, Amherst

4:35 p.m. **Developing Test Statistics to Identify Over- or Under-Dispersion in Parametric Lifetime Models—** ✦Md. Rajibul Mian, University of Windsor; Sudhir Paul, University of Windsor

4:50 p.m. **Issues of Misspecified Measurement Error Models for Survival Data with Covariate Measurement Error—**✦Ying Yan, University of Waterloo; Grace Y. Yi, University of Waterloo

5:05 p.m. **Birnbaum-Saunders Frailty Model—**✦Lin Fang, McMaster University; Narayanaswamy Balakrishnan, McMaster University

5:20 p.m. **Validation and Use of a Parametric Model for Forecasting Implant Survivorship Beyond Observed Data in Total Knee Arthroplasty—**✦Katie Miller, Biomet Orthopedics

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

78 CC-515a

■ Experimental Design and Analysis—Contributed

Section on Physical and Engineering Sciences, SSC

Chair(s): Jiabin Zhao, Cisco Systems

4:05 p.m. **Search Algorithm and Selection of Optimal Choice for Focused Preference of Multiple Objectives—** ✦Christine Anderson-Cook, Los Alamos National Laboratory; Lu Lu, Los Alamos National Laboratory; Dennis Kon-Jin Lin, Penn State University

4:20 p.m. **Optimal Design of a Two-Block Experiment Using Contrasts of a Four-Level Categorical Factor—** ✦Greg Piepel, Pacific Northwest National Laboratory; Joe Westsik, Jr., Pacific Northwest National Laboratory; Alex Cozzi, Savannah River National Laboratory; Dave Swanberg, Washington River Protection Solutions

4:35 p.m. **Joint Model Selection for Location and Dispersion Effects in Unreplicated Factorial Experiments—** ✦Thomas Loughin, Simon Fraser University; Andrew Henrey, Simon Fraser University

4:50 p.m. **Identification and Estimation of Location and Dispersion Effects in Screening Experiments—** ✦Kwame Kankam, Statistics Department, Penn State University; Jim Rosenberger, Penn State University

5:05 p.m. **Estimating a Generalized Binary Model for Mixture Experiments—**✦Liam Brown, University of Manchester; Alexander Donev, University of Manchester

5:20 p.m. **QN Allocation: Balancing the Number of Replicates vs. the Number of Treatments in a Designed Simulation Experiment—**✦Allan Mense, Raytheon Company; Terril N. Hurst, Raytheon Missile Systems; Jarom Ballantyne, Raytheon Missile Systems

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

79 CC-514c

Applications of Risk Analysis—Contributed

Section on Risk Analysis, Section on Statistical Graphics, Korean International Statistical Society

Chair(s): Edsel A. Pena, University of South Carolina

4:05 p.m. **A Compartment Model for Estimating Blood Donation Loss from Changes in the Inter-Donation Interval and Hemoglobin Requirements—**✦Arianna Simonetti, FDA/CBER; Anne Fernando, Norfolk State University; Richard Forshee, FDA/CBER

4:20 p.m. **Default Risk Analysis of the Taiwan Industrial: A Survival Analysis Approach—**✦Yi-kuan Jong, St. John's University

4:35 p.m. **Quantifying Risks of Extremes—**✦Ugur Alparslan, American University

4:50 p.m. **A Diversity Index for Model Selection in the Estimation of Benchmark and Infectious Doses via Frequentist Model Averaging—**✦Steven Kim, University of California at Irvine; Ralph Kodell, University of Arkansas for Medical Sciences; Hojin Moon, California State University at Long Beach

5:05 p.m. **Gradient Extrapolated Stochastic Kriging—** ✦Michael Fu, ; Huashuai Qu, University of Maryland

5:20 p.m. **A Statistical Diagnosis of Customer Risk-Ratings in Anti-Money Laundering Surveillance—**✦Bhojnarine R. Rambharat, U.S. Treasury (OCC); Andrew J. Tschirhart, U.S. Treasury (OCC)

5:35 p.m. **Quantile Regression in Improving the Visualization and Estimation of the Relationship Between Risk Factors and Outcome Measures**—✦Wanying Li; Michael D. Lock, Crescendo Bioscience, Inc.; Douglas Haney, Crescendo Bioscience, Inc.

80 CC-513a

■ Biomarkers and Personalized Medicine—Contributed

Biopharmaceutical Section, Mental Health Statistics Section, International Chinese Statistical Association, Biometrics Section

Chair(s): Emilea Norris, PPDI Inc

4:05 p.m. **On Model Building for Combining Genomics and Clinical Covariates Information**—✦Samir Lababidi, FDA

4:20 p.m. **Statistical Methods to Build a Prognostic Model of Residual Risk for Major Cardiovascular Events in Coronary Patients**—✦Rana Fayyad, Pfizer Inc.; Ingar Holme, Center of Preventive Medicine, Oslo University Hospital, Ullevål; Sarah Young, Pfizer Inc.; Chuan-Chuan Wun, Pfizer Inc.

4:35 p.m. **Bi-Level Groupwise Multiple Features Selection Method for Identifying Novel Biomarkers in Pharmacogenetic Studies**—✦Ting-Huei Chen, The University of North Carolina at Chapel Hill; Wei Sun, The University of North Carolina at Chapel Hill

4:50 p.m. **Variable Selection by Combinatorial Optimization, with Application to Pharmacogenomics**—✦Joseph Levy, Teva Pharmaceuticals Industries; Amir Tchelet, Teva Pharmaceutical Industries

5:05 p.m. **Statistical Methods and General Principles of Exploratory Biomarker Analysis: Pathway to Personalized Medicine**—✦Rui Tang, Amgen, Inc.; Mike Hale, Amgen, Inc.; Jing Huang, Amgen; Li Chen, Amgen, Inc.

5:20 p.m. **Sample-Size Determination to Assess Diagnostic Accuracy Based on Area Under Receiver Operating Characteristic Curve Analysis**—✦Ya-Hui Hsu, AbbVie

81 CC-511d

■ Geologic, Atmospheric, and Weather-Related Events—Contributed

Section on Statistics and the Environment, Scientific and Public Affairs Advisory Committee

Chair(s): Phil Yates, Saint Michael's College

4:05 p.m. **Discrete Rainfall Predictability Using the El Niño/Southern Oscillation Interaction**—✦Luis Cid-Serrano, University of Bio Bio; Sandra Ramirez-Buelvas, P. Universidad Javeriana de Cali; Eric Alfaro, Universidad de Costa Rica; Sergio Contreras, University of Bio Bio

4:20 p.m. **Hurricane Forecasting Using a Multivariate Spatial Functional Linear Model**—✦Christopher Krut, North Carolina State University; Montserrat Fuentes, North Carolina State University; Brian J. Reich, North Carolina State University

4:35 p.m. **Structured Sparse Methodology for Early Tsunami Warning Systems**—✦Daniel Percival, Google; Donald Percival, University of Washington

4:50 p.m. **Incorporating Geostrophic Wind Information for Improved Space-Time Short-Term Wind Speed Forecasting**—✦Xinxin Zhu, Texas A&M University; Marc G. Genton, KAUST; Kenneth Bowman, Texas A&M University

5:05 p.m. **Spatial-Temporal Interpolation of Non-Methane Hydrocarbons Levels in Kuwait**—✦Shafiqah Alawadhi, Kuwait University; Fahima Alawadhi, Kuwait University

5:20 p.m. **Process Modeling for Soil Moisture Using Sensor Network Data**—✦Souparno Ghosh, Texas Tech University; David M. Bell, University of Wyoming; Alan E. Gelfand, Duke University; James S. Clark, Duke University; Paul Flikkema, Northern Arizona University

5:35 p.m. **Spatial Process Gradients and Their Use in Sensitivity Analysis for Environmental Processes**—✦Maria Terres, Duke University; Alan E. Gelfand, Duke University

82 CC-522bc

Monte Carlo Methods: Models and Tests—Contributed

Section on Statistical Computing

Chair(s): Elena G. Rantou (Randou), George Mason University

4:05 p.m. **A Wald's-Type Goodness-of-Fit Test for Binormality**—✦Yevgeniy Voinov, KIMEP University

4:20 p.m. **Generation of Correlated Data for Given Marginal Distributions and Correlation Coefficient**—✦Jim Xiang, Janssen Pharmaceutical

4:35 p.m. **Handling Realistic Assumptions in Hypothesis Testing of 3D Co-Localization of Genomic Elements**—✦Tonje Lien; Jonas Paulsen, Oslo University Hospital, Section for Medical Informatics, The Norwegian Radium Hospital; Geir Kjetil Sandve, University of Oslo; Lars Holden, Norwegian Computing Center; Ørnulf Borgan, University of Oslo; Ingrid Glad, University of Oslo; Eivind Hovig, Oslo University Hospital, Institute for Cancer Research, Department of Tumor Biology

4:50 p.m. **A Characterization of the Power Method Transformation Through the Method of Percentiles**—✦Jennifer Koran, Southern Illinois University-Carbondale; Todd C. Headrick, Southern Illinois University Carbondale; Tzu Chun Kuo, Southern Illinois University-Carbondale

5:05 p.m. **Power Analysis of a Left-Truncated Normal Mixture Distribution with Applications in Red Blood Cell Velocities**—✦Huichao Chen, Harvard School of Public Health; Xiangjin Xu, Binghamton University

5:20 p.m. **Prediction Intervals for Generalized Linear Mixed Models**—✦Chenghsueh Yang, University of California at Riverside; Daniel Jeske, University of California

5:35 p.m. **A New Invariant and Consistent Chi-Squared Type Goodness-of-Fit Test for Multivariate Normality**—✦Vassiliy Voinov, KIMEP University; Natalie Pya, KIMEP University; Rashid Makarov, KIMEP University; Yevgeniy Voinov, KIMEP University

83 CC-514b

■ Analysis of Financial Markets: Stocks, Exchange Rates, and Monetary Policy—Contributed

Business and Economic Statistics Section, Scientific and Public Affairs Advisory Committee

Chair(s): Sinjini Mitra, California State University at Fullerton

4:05 p.m. **Stock Return Predictability with a Near-Random Walk Model: Evidence and Implications**—✦Staffan Fredricsson

4:20 p.m. **Herding Through the Tails**—✦Jose Faias, Catolica Lisbon SBE

4:35 p.m. **Estimating the Renminbi Exchange Rate Basket: A Study on Numeraire**—✦Kazuhiko Shinki, Wayne State University; Ying Tang, Wayne State University

4:50 p.m. **Panel Data Regressions and New Insights on Monetary Policy Rules**—✦Joselito Basilio, University of Illinois at Chicago

5:05 p.m. **Nigeria's Monetary Survey: 2001--2012**—Chioma Nwosu, Central Bank of Nigeria; ✦Phebian N. Bewaji, Central Bank of Nigeria

5:20 p.m. **Specification Analysis of International Treasury Yield Curve Factors**—✦Andrew Siegel, University of Washington; Fulvio Pegoraro, Banque de France; Luca Tiozzo 'Pezzoli', Banque de France

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

84 CC-514a

New Developments in Disease Prediction—Contributed

Section on Statistics in Epidemiology, Scientific and Public Affairs Advisory Committee

Chair(s): Michelle Ross, University of Washington

4:05 p.m. **Prediction of Tumor Subtypes by Mixture Modeling of Somatic Mutation Profiles**—✦Lin Hou, Yale School of Public Health; Hongyu Zhao, Yale University

4:20 p.m. **Piecewise Linear Mixed Effects Model to Track the Temporal Changes in Early Childhood Body Mass Index (BMI) Trajectories**—✦Md Jobayer Hossain, Nemours Biomedical Research A.I. DuPont Children Hospital; Samuel Gidding, A.I. DuPont Children Hospital; H. Timothy Bunnell, Nemours Biomedical Research; Sandra Hassink, A.I. DuPont Children Hospital; Timothy T. Wysocki, Nemours Biomedical Research A.I. DuPont Children Hospital

4:35 p.m. **Multistate Analysis of Interval-Censored Longitudinal Data for Examining Transitions in Performance Status Among Cancer Outpatients**—✦Rinku Sutradhar, Institute for Clinical Evaluative Sciences

4:50 p.m. **Semiparametric Mixed Model for Detection of Rapid Disease Progression**—✦Leo Li Duan, Cincinnati Children's Hospital Medical Center; John P. Clancy, Cincinnati Children's Hospital Medical Center; Rhonda D. Szczesniak, Cincinnati Children's Hospital Medical Center

5:05 p.m. **Analysis of Panel Data Under a Markov Assumption with Covariate Measurement Error**—✦Feng He, University of Waterloo; Grace Y. Yi, University of Waterloo

5:20 p.m. **Estimating Biological Age Using Ensemble-Based Prediction Models**—✦Wendy Shih; Steve Horvath, University of California at Los Angeles

5:35 p.m. **Bayesian Spatio-Temporal Disease Mapping and Projection Using Data from the National Program of Cancer Registries Lung and Bronchus Cancer 1998–2005**—✦Qiang Ling

85 CC-516e

Survival Analysis and Hypothesis Testing—Contributed

International Chinese Statistical Association, WNAR

Chair(s): Chen Hu, American College of Radiology

4:05 p.m. **Joint Analysis of Longitudinal Data and Competing Risks Survival Times in the Presence of Dependent Observational Times**—✦Tai-Fang Chen Lu, Providence University; Chyong-Mei Chen, Providence University

4:20 p.m. **A Cautionary Note on the Nonparametric Test for Equality of Survival Medians**—✦Zhongxue Chen, Indiana University Bloomington

4:35 p.m. **Exact Lasso Linear Regression**—✦Kai Wang, University of Iowa

4:50 p.m. **A Parametric Bootstrap Approach for One-Way and Two-Way ANOVA Under Unequal Variances with Unbalanced Data**—✦Guoyi Zhang, University of New Mexico

5:05 p.m. **Hypothesis Testing for Large Dimensional Covariance Matrices**—✦Yingli Qin, University of Waterloo; Weiming Li, Beijing University of Posts and Telecommunications

5:20 p.m. **Testing for Long Memory Using Penalized Splines and Adaptive Neyman Methods**—✦Linyuan Li, University of New Hampshire

5:35 p.m. **Joint Analysis of Multivariate Current Status Data with Dependent Censoring**—✦Chyong-Mei Chen, Providence University

86 CC-515c

■ International Indian Statistical Association Cpapers 1—Contributed

International Indian Statistical Association, SSC

Chair(s): Mallikarjuna Rettiganti, University of Arkansas for Medical Sciences

4:05 p.m. **Impact of Regularization on Spectral Clustering**—✦Antony Joseph, University of California at Berkeley; Bin Yu, University of California at Berkeley

4:20 p.m. **Nonparametric Multivariate Inference on Shift**—✦Yodit Seifu, Novartis; John Kolassa, Rutgers University

4:35 p.m. **Estimating the Number of Signals in Mixed Data with Stationary Colored Noise in the Absence of Reference Noise Samples**—✦Rajesh Nandy

4:50 p.m. **Inference Procedures for Bivariate Exponential Model of Gumbel in Reliability Theory**—✦Paul Savariappan, Luther College

5:05 p.m. **Study of Efficiency in a Two-Stage Design for Dose-Response Model with Ill-Specified Guess Values of Parameters**—✦Karabi Nandy

5:20 p.m. **Copula Models for Data Disclosure Limitation**—✦Mario Trottini, University of Alicante; Krish Muralidhar, University of Kentucky; Rathindra Sarathy, Oklahoma State University

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

87 CC-520d

Weighting and Estimation of Complex Survey Data—Contributed

Survey Research Methods Section

Chair(s): David Morganstein, Westat

4:05 p.m. **Estimation Methodology for Weekly Surveys of Influenza Vaccination Rates**—✦Kennon Copeland, NORC; Nicholas Davis, NORC at the University of Chicago; Lin Liu, NORC at the University of Chicago; Nadarajasundaram Ganesh, NORC at the University of Chicago; James A. Singleton, NCIRD, Centers for Disease Control and Prevention; Tammy Santibanez, NCIRD, Centers for Disease Control and Prevention

4:20 p.m. **Weighting Adjustments for Panel Nonresponse**—✦Qixuan Chen, Columbia University; Andrew Gelman, Columbia University; Melissa Tracy, Columbia University; Fran Norris, Dartmouth Medical School; Sandro Galea, Columbia University

4:35 p.m. **Bias Analysis of Average Weekly Earnings in the Current Employment Statistics Survey**—✦Diem-Tran Kratzke, Bureau of Labor Statistics

4:50 p.m. **An Investigation of Decennial Census Effects on Estimates of Substance Use and Mental Illness from the National Survey on Drug Use and Health (NSDUH)**—✦Neeraja Sathe, RTI International; Patrick Chen, RTI International; Art Hughes, Center for Behavioral Health Statistics and Quality, SAMHSA; Jonaki Bose, Center for Behavioral Health Statistics and Quality, SAMHSA; Lanting Dai, RTI International; Misty Foster, RTI International

5:05 p.m. **Subsampling the Medical Expenditure Panel Survey for High-Expenditure Cases**—✦Robert Baskin, AHRQ; Lap-Ming Wun, Agency for Healthcare Research and Quality

5:20 p.m. **NSHAP's Wave 2 Nonresponse Weight Adjustment with Some Wave 1 Nonresponses**—✦Steven Pedlow, NORC at the University of Chicago; Colm O'Muircheartaigh, NORC at the University of Chicago; Phil Schumm, The University of Chicago

5:35 p.m. **Weighting Methods for the 2010 Data Collection Cycle of the Medical Monitoring Project**—✦Lee Harding, ICF; Ronaldo Iachan, ICF International; Christopher Johnson, CDC/NCHHSTP; Tonja Kyle, ICF; Jacek Skarbinski, Centers for Disease Control and Prevention

88 CC-511f

Bayesian Methods in the Social and Environmental Sciences—Contributed

Section on Bayesian Statistical Science, Section on Statistics and the Environment, Scientific and Public Affairs Advisory Committee

Chair(s): MaryAnn Morgan-Cox, Eli Lilly and Company

4:05 p.m. **Bayesian Observation Modeling in Presence-Only Data**—✦Ioanna Manolopoulou, University College London; Richard Hahn, The University of Chicago, Booth School of Business

4:20 p.m. **Bayesian Partially Ordered Multinomial Probit Model with an Application to Course Redesign**—Michael Sonksen, The University of New Mexico; Kristin Umland, The Univeristy of New Mexico; ✦Xueqin Shelley Wang, The University of New Mexico

4:35 p.m. **A Bayesian Two-Part Latent Class Model for Longitudinal Government Expenditure Data: Assessing the Impact of Vertical Political Alliances and Political Support**—✦Felipe Nunes

4:50 p.m. **Recidivism: Prediction with Bayesian Models**—✦Gail Blattenberger, University of Utah; Richard Fowles, Department of Economics

5:05 p.m. **A Bayesian Regression Tree Approach to Identify the Effect of Nanoparticles Properties on Toxicity Profiles**—✦Cecile Low-Kam, University of California at Los Angeles; Donatello Telesca, University of California at Los Angeles; Zhaoxia Ji, University of California at Los Angeles; Haiyuan Zhang, University of California at Los Angeles; Tian Xia, University of California at Los Angeles; Jeffrey I. Zink, University of California at Los Angeles; Andre E. Nel, University of California at Los Angeles

5:20 p.m. **Nonparametric Seemingly Unrelated Regression with Gaussian Graphical Model**—✦Debkumar De, Texas A&M University

5:35 p.m. **Modeling Time-Varying Spatial Patterns of Variability in Climate Data with an Approximate Variance-Covariance Matrix**—✦Xu Tian; Hal S. Stern, University of California; Yaming Yu, University of California at Irvine; Gudrun Magnusdottir, University of California at Irvine; Yi-Hui Wang, University of California at Irvine

89 CC-520b

Data Analysis and Confidentiality—Contributed

Government Statistics Section, Social Statistics Section, Health Policy Statistics Section, Scientific and Public Affairs Advisory Committee

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

4:05 p.m. **The Challenges of Gathering and Interpreting National Data on Ambulatory Surgery Over Time**—✦Margaret Jean Hall, National Center for Health Statistics, Centers for Disease Control and Prevention

4:20 p.m. **JOLTS Reported Separations, Item Imputation, and Sample Rotation: Impact on JOLTS-CES Divergence**—✦Mark Crankshaw, Bureau of Labor Statistics

4:35 p.m. **Measuring Green Employment: Issues and Observations in Data Collection**—✦Nicholas Fett, Bureau of Labor Statistics

4:50 p.m. **Designing an Empirically Based Just Linear Income Tax System**—✦Guillermina Jasso, New York University; Bernd Wegener, Humboldt University

5:05 p.m. **Improving LP Performance in Cell Suppression Process**—✦Bei Wang, U.S. Census Bureau

5:20 p.m. **Noise Multiplication and Multiple Imputation as Alternatives to Top Coding for Statistical Disclosure Control: An Overview and Comparison**—✦Martin Klein

5:35 p.m. **Fast Calculation of Exact Contingency Table Cell Bounds Given Conditional Frequencies**—✦Byran Smucker, Miami University; Steven Wright, Miami University; Andrew Sage, Miami University

90 CC-512d

Nonparametric Testing—Contributed

Section on Nonparametric Statistics

Chair(s): Lei Huang, Johns Hopkins University

4:05 p.m. **Detection of Multiple Structural Breaks in Multivariate Time Series**—✦Philip Preuss, Ruhr-University Bochum

4:20 p.m. **On a New Distribution-Free Two-Sample Test**—✦Jamye Curry

4:35 p.m. **Inference for Locally Stationary Time Series Regression Models**—✦Yeonwoo Rho, University of Illinois at Urbana-Champaign; Xiaofeng Shao, University of Illinois at Urbana-Champaign

4:50 p.m. **Permutation Methods to Study Complex Shapes When the Sample Size Cannot Be Increased**—✦Luigi Salmaso, University of Padova; Chiara Brombin, Universty of Milan-San Raffaele

5:05 p.m. **On Small Sample Properties of Simultaneous Inference Based on Rank Statistics**—✦Hossein Mansouri, Texas Tech University

5:20 p.m. **A Nonparametric Omnibus Independence Test Based on Copula Density**—✦Gery Geenens, UNSW

5:35 p.m. **A Multivariate Two-Sample Test Using Regular Minimum-Weight Spanning Subgraphs**—✦David Ruth, U.S. Navy

91 CC-525b

■ Applications of Machine Learning and Data Mining Techniques—Contributed

Section on Statistical Learning and Data Mining

Chair(s): Gerardo Hurtado, SAS Institute

4:05 p.m. **Utilizing Data Mining to Predict Elevated Knee Loading in Athletes and Assessing Their Risk for Anterior Crucial Ligament Injury**—✦Kristin Morgan

4:20 p.m. **Pilots' Absence Prediction in an Airline Company**—✦Amir Hosein Homaie Shandizi; Bruno Agard, École Polytechnique de Montréal; Michel Gamache, École Polytechnique de Montréal; Vahid Partovi Nia, École Polytechnique Montréal

4:35 p.m. **Losing $3 Million and Being Happy: A Tale of Money, Lives, and Prediction**—✦Bruce Swihart, Johns Hopkins School of Public Health; Ciprian M. Crainiceanu, The Johns Hopkins University; Brian Caffo, The Johns Hopkins University; Rafa Irizarry, Johns Hopkins School of Public Health; Yingying Wei, Johns Hopkins School of Public Health; Jeff Goldsmith, Columbia University; Russell Shinohara, University of Pennsylvania; Gagan Sidhu, University of Alberta

4:50 p.m. **Dominance Modeling for GWAS Hit Regions with Generalized Resample Model Averaging**—✦Jeremy Sabourin, The University of North Carolina; Andrew Nobel, The University of North Carolina at Chapel Hill; William Valdar, The University of North Carolina at Chapel Hill

5:05 p.m. **Statistical Issues in Development of a Predictive Model for Survival in Chronic Lymphocytic Leukemia**—✦Minya Pu, University of California at San Diego, Moores University of California at San Diego Cancer Center; Hongying Li, University of California, San Diego Cancer Center; Lei Bao, University of California at San Diego Cancer Center; Loki Natarajan, University of California at San Diego; Laura Rassenti, University of California at San Diego Cancer Center; Thomas Kipps, University of California at San Diego Cancer Center; Karen Messer, University of California at San Diego

5:20 p.m. **Structured Brain-Wide and Genome-Wide Association Study via Multivariate Compound Lasso Using PET Images**—✦Yanming Li, University of Michigan; Bin Nan, University of Michigan; Ji Zhu, University of Michigan

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

Invited Poster Presentations 8:30 p.m.–10:30 p.m.

92 CC-517cd

Complex Data Analysis and High-Dimensional Computing: Methods and Applications—Invited

Biometrics Section, Government Statistics Section, IMS, Korean International Statistical Society, Section for Statistical Programmers and Analysts, Section on Bayesian Statistical Science, Section on Nonparametric Statistics, Section on Statistical Consulting, Section on Statistical Learning and Data Mining, Section on Statistics and the Environment, Section on Statistics in Epidemiology, Social Statistics Section

Organizer(s): Joyee Ghosh, University of Iowa; Mimi Kim, Albert Einstein College of Medicine; Nancy J. Petersen, Department of Veterans Affairs

Chair(s): David B. Dunson, Duke University

Biometrics Section

1 **Assessing Accuracy of Population Screening Using Longitudinal Marker**—✦Paramita Saha-Chaudhuri, Duke University

Section for Statistical Programmers and Analysts

2 **The Emerging Role of the Data Scientist**—✦Charles D. Kincaid, Experis Business Analytics

IMS

3 **Optimal Scaling of MCMC Algorithms**—✦Natesh S. Pillai, Harvard University

Government Statistics Section

4 **Geographic Adjustment Factors for Educational Expenditures**—✦Satkartar Kinney, NISS; Alan F. Karr, National Institute of Statistical Sciences

Section on Statistics in Epidemiology

5 **Using Family Members to Augment Genetic Case-Control Studies of a Life-Threatening Disease**—✦Lu Chen, University of Pennsylvania; Jinbo Chen, University of Pennsylvania School of Medicine; Clarice R. Weinberg, National Institute of Environmental Health

Korean International Statistical Society

6 **Analysis of Secondary Outcomes in Nested Case-Control Study Designs**—✦Ryung S. Kim, Albert Einstein College of Medicine

Section on Statistical Learning and Data Mining

7 **Nonparametric Bayes Multi-Task Multi-View Learning**—✦Angela Schoergendorfer, IBM T.J. Watson Research Center; Hongxia Yang, IBM T.J. Watson Research Center

Section on Bayesian Statistical Science

8 **Selection of Building Components Using Sequential Design via Statistical Surrogate Models**—✦Fei Liu, IBM Watson Research Center; Rui Zhang, IBM Watson Research Center; Angela Schoergendorfer, IBM T.J. Watson Research Center; Youngdoek Hwang, IBM Watson Research Center; Young Lee, IBM Watson Research Center; Jane Snowdon, IBM Watson Research Center

Section on Statistics in Epidemiology

9 **The Validity and Efficiency of the Common Effect Test for Subtype Analysis in Case-Case Studies**—✦Molin Wang, Harvard Medical School and Harvard School of Public Health; Aya Kuchiba, Harvard School of Public Health; Donna Spiegelman, Harvard School of Public Health

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Section for Statistical Programmers and Analysts

10 **Speaking Clearly About Data Scientists: A Survey and Clustering Analysis**—✦Harlan D. Harris, Data Community DC; Marck Vaisman, Data Community DC; Sean P. Murphy, Data Community DC

11 **A Little Goes a Long Way: Habits of the Efficient Project-Juggling SAS Programmer**—✦Jonathan L. Moscovici, Quintiles

Social Statistics Section

12 **Multiply Imputing Missing Values in Data Sets with Mixed Measurement Scales Using a Sequence of Generalized Linear Models**—✦Robin Mitra, University of Southampton; Min Lee, University of Southampton

Section on Bayesian Statistical Science

13 **Estimates and Standard Errors for Ratios of Normalizing Constants from Multiple Markov Chains**—✦Aixin Tan, University of Iowa

Korean International Statistical Society

14 **Variable Selection for Failure Time Data from Stratified Case-Cohort Studies: An Application to a Retrospective Dental Study**—✦Sangwook Kang, University of Connecticut

Section on Statistics and the Environment

15 **A Bayesian Nonparametric Method for Spatial Point Processes with Application to Sea Turtles' Nesting Patterns**—✦Gavino Puggioni, University of Rhode Island; Lance A. Waller, Emory University

Section on Nonparametric Statistics

16 **Data Analysis on Riemannian Symmetric Spaces**—✦Emil Cornea, The University of North Carolina at Chapel Hill; Hongtu Zhu, The University of North Carolina at Chapel Hill; Joseph G. Ibrahim, The University of North Carolina

Biometrics Section

17 **Kernel-Based Aggregation of Marker-Level Genetic Association Tests Involving Copy-Number Variation**—✦Patrick Breheny, University of Kentucky; Yinglei Li, University of Kentucky

Korean International Statistical Society

18 **Design and Analysis of Pre-Post Studies with a Binary Outcome on Partially Overlapping Units**—✦Song Zhang, The University of Texas Southwestern Medical Center; Jing Cao, Southern Methodist University; Chul Ahn, The University of Texas Southwestern Medical Center

Section on Statistical Consulting

19 **Seeking Partners for LISA 2020: Creating a Network of Statistical Collaboration Laboratories in Developing Countries**—✦Eric A. Vance, LISA-Virginia Tech