

TUESDAY, AUGUST 9

Tours

1:00 p.m.–4:00 p.m. **MCC**-Main Entrance, 2nd Avenue
TR10 - St. Paul's Notorious Past

Committee/Business Meetings & Other Activities

5:15 a.m.–7:00 a.m. Off Property-Location TBD
Gertrude Cox Scholarship Race

7:00 a.m.–8:30 a.m. **H**-Board Room 2
SPAIG Committee Meeting (closed)
Chair(s): Ronald Fecso, National Science Foundation

7:00 a.m.–8:30 a.m. **H**-Director's Row 1
Committee on Privacy and Confidentiality
Chair(s): Alvan O. Zarate, National Center for Health Statistics

7:00 a.m.–8:30 a.m. **H**-Board Room 3
Scientific and Public Affairs Advisory Committee (closed)
Chair(s): David Marker, Westat

7:00 a.m.–8:30 a.m. **H**-Director's Row 2
Business and Economics Statistics Section Executive Committee Meeting (closed)
Chair(s): Tom Shively, The University of Texas at Austin

7:00 a.m.–6:00 p.m. **MCC**-204 A
Speaker Work Room

7:00 a.m.–6:00 p.m. **MCC**-204 B
Speaker Work Room

7:00 a.m.–11:00 p.m. **MCC**-Level 1, Registration Lobby
Cyber Café and Message Center

7:30 a.m.–8:30 a.m. **H**-Director's Row 3
The ASA/University of Connecticut Project on Filming of Distinguished Statisticians (closed)
Organizer(s): Nitish Mukhopadhyay, University of Connecticut

7:30 a.m.–8:30 a.m. **H**-Nicollet
Technometrics Editorial Board Meeting (closed)
Chair(s): Randy Sitter, Simon Fraser University

7:30 a.m.–9:00 a.m. **H**-Carver
Section on Defense and National Security Meeting
Chair(s): Nancy L. Spruill, U.S. Office of the Secretary of Defense

7:30 a.m.–10:00 a.m. **H**-Rochester
Council of Chapters Business Meeting and Breakfast (closed)
Chair(s): Tom Capizzi, Merck Research Laboratories

7:30 a.m.–10:30 a.m. **H**-Redwing Room
Section on Physical and Engineering Sciences Executive Committee Meeting (closed)
Chair(s): Joanne Wendelberger, Los Alamos National Laboratory

7:30 a.m.–10:30 a.m. **H**-Director's Row 4
Section on Quality and Productivity Tactical Planning Meeting (closed)
Chair(s): Christina Mastrangelo, University of Washington

7:30 a.m.–11:30 a.m. **H**-Conrad A
Biopharmaceutical Section Executive Committee Meeting (closed)
Chair(s): Leonard Oppenheimer, Eisai Medical Research

7:30 a.m.–4:30 p.m. **MCC**-Level 1, Registration Lobby
JSM Main Registration
The ASA Communities Booth
Special Assistance and Press Desk

8:00 a.m.–9:30 a.m. **MCC**-207 B
Section on Risk Analysis Executive Committee (closed)
Chair(s): David Banks, Duke University

8:00 a.m.–12:00 p.m. **H**-Conrad B
Committee of Presidents of Statistical Societies (COPSS) Committee Meeting (closed)
Organizer(s): Linda J. Young, University of Florida

8:00 a.m.–6:00 p.m. **MCC**-Exhibit Hall C
Career Placement Service

8:00 a.m.–6:00 p.m. **MCC**-Exhibit Hall C
Exhibitor Lounge

9:00 a.m.–5:00 p.m. **MCC**-Level 1, Registration Lobby
The ASA Marketplace

10:00 a.m.–6:00 p.m. **MCC**-Level 1, Registration Lobby
Minneapolis Restaurant Reservations Desk

9:00 a.m.–6:00 p.m. **MCC**-Exhibit Hall C
EXPO 2005

Tuesday

GENERAL PROGRAM SCHEDULE

☆ Themed Session ● Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

9:00 a.m.–6:00 p.m. MCC-Exhibit Hall C
The ASA Membership Booth #700

10:30 a.m.–3:30 p.m. H-Director's Row 3
Council of Chapters Meeting with Vice Chairs (closed)

Chair(s): Tom Capizzi, Merck Research Laboratories

12:00 p.m.–1:30 p.m. H-Director's Row 1
JCGS Management Committee (closed)

Chair(s): Dianne Cook, Iowa State University

12:00 p.m.–2:00 p.m. H-Director's Row 2
CHANCE Editors Meeting

Chair(s): Michael Lavine, Duke University

12:00 p.m.–2:00 p.m. H-Board Room 3
Interface Foundation of North America (closed)

Organizer(s): Tim C. Hesterberg, Insightful Corp.

12:30 p.m.–1:30 p.m. MCC-102 A
IMS Business Meeting

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

12:30 p.m.–2:00 p.m. MCC-207 B
The ASA/SRCOS Statistical Summer Research Committee

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

12:30 p.m.–2:00 p.m. H-Board Room 2
The American Statistician Editorial Board Meeting (closed)

Chair(s): James Albert, Bowling Green State University

12:30 p.m.–2:00 p.m. H-Director's Row 4
Deming Lectureship Committee Speaker Luncheon (closed)

Chair(s): Randall K. Spoeri, Cerner Corporation

12:30 p.m.–2:00 p.m. MCC-207 A
Committee on Gay and Lesbian Concerns Business Meeting

Chair(s): Barry Johnson, U.S. Internal Revenue Service

12:30 p.m.–2:00 p.m. H-Rochester
JASA Editorial Board Meeting (closed)

Chair(s): Mark S. Kaiser, Iowa State University

12:30 p.m.–4:30 p.m. MCC-L100 J
ENAR RAB/RECOM Luncheon (closed—by invitation only)

Organizer(s): Kathy Hoskins, ENAR

1:30 p.m.–2:30 p.m. MCC-Ballroom A
The ASA Presidential Address and Awards Session Rehearsal

2:30 p.m.–3:30 p.m. H-Director's Row 1
Council of Chapters Traveling Course

Chair(s): Delray Schultz, Millersville University

2:30 p.m.–4:00 p.m. MCC-207 A
The ASA Finance Committee Meeting (closed)

Chair(s): Sastry G. Pantula, North Carolina State University

3:30 p.m.–5:00 p.m. H-Board Room 3
JBES Editorial Board Meeting (closed)

Chair(s): Torben G. Andersen, Northwestern University

4:00 p.m.–6:00 p.m. H-Rochester
Council of Chapters Workshop and Reception (closed)

Chair(s): Ronald L. Wasserstein, Washburn University

4:00 p.m.–6:00 p.m. MCC-L100 I
Biometrics Editorial Board (closed)

Organizer(s): Ann Hanhart, The University of Texas at Arlington

5:00 p.m.–6:00 p.m. MCC-102 C
JSM 2007 Program Committee Orientation Meeting

Chair(s): Allan J. Rossman, California Polytechnic State University

5:00 p.m.–7:00 p.m. H-Redwing Room
North Carolina State University Reception for Alumni and Friends

Organizer(s): Tom Gerig, North Carolina State University

5:00 p.m.–7:30 p.m. H-Board Room 2
Annual Meeting and Group Discussion of Statistical Issues in Veterinary Vaccines

Organizer(s): Brian Fergen, U.S. Department of Agriculture

5:15 p.m.–6:45 p.m. HY-Mirage Room
IMS Student and New Member Reception

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

5:30 p.m.–6:30 p.m. MCC-L100 F
Business and Economic Statistics Section Business Meeting

Chair(s): Tom Shively, The University of Texas at Austin

5:30 p.m.–7:00 p.m. MCC-102 B
Section on Bayesian Statistical Science Business Meeting and Mixer

Chair(s): Malay Ghosh, University of Florida

Organizer(s): Susan M. Paddock, RAND Corporation

5:30 p.m.–7:00 p.m. MCC-102 F
Section on Government Statistics Business Meeting
Chair(s): Chester Bowie, Market Strategies, Inc.

5:30 p.m.–7:00 p.m. MCC-102 E
Section on Nonparametric Statistics Business Meeting
Chair(s): Jeff Hart, Texas A&M University

5:30 p.m.–7:30 p.m. MCC-102 D
Biopharmaceutical Section Business Meeting
Chair(s): Leonard Oppenheimer, Eisai Medical Research

5:30 p.m.–7:30 p.m. MCC-103 A
ENAR Business Meeting (open to all ENAR members)
Organizer(s): Kathy Hoskins, ENAR

5:30 p.m.–7:30 p.m. H-Carver
University of Michigan Biostatistics and Statistics Departments Joint Alumni Reception (closed)
Organizer(s): Amanda Ring, University of Michigan


5:30 p.m.–7:30 p.m. MCC-L100 B
Joint Section on Physical and Engineering Sciences and Section on Quality and Productivity Business Meeting and Mixer
Chair(s): Joanne Wendelberger, Los Alamos National Laboratory; Christina Mastrangelo, University of Washington

6:00 p.m.–8:00 p.m. MCC-207 B
Committee on Minorities in Statistics Reception
Chair(s): Nagambal Shah, Spelman College

6:30 p.m.–7:30 p.m. MCC-Ballroom B
The ASA New Fellows Reception (closed—by invitation only)

6:30 p.m.–8:30 p.m. MCC-L100 D
Joint Business and Economic Statistics Section Marketing Section Mixer
Chair(s): Tom Shively, The University of Texas at Austin; Thomas W. Miller

9:30 p.m.–12:00 a.m. MCC-Ballroom B
JSM Informal Dance Party



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Tuesday

Continuing Education (Fee Events)

CE_21C MCC-L100 I

8:00 a.m.–12:00 p.m.
Statistical Data Mining
 The ASA

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

CE_22C MCC-L100 F

8:00 a.m.–4:00 p.m.
Applied Recurrent Events Data Analysis
 The ASA, Section on Physical and Engineering Sciences

Instructor(s): Wayne Nelson, Wayne Nelson Stat Consulting

CE_23C MCC-L100 G

8:00 a.m.–4:00 p.m.
Bayesian Inference
 The ASA, Section on Bayesian Statistical Science

Instructor(s): Bruno Sansó, University of California, Santa Cruz

CE_24C MCC-L100 A

8:15 a.m.–4:15 p.m.
Monte Carlo Methods in Bayesian Modeling with Applications to Bioinformatics
 The ASA, Section on Bayesian Statistical Science

Instructor(s): Jun S. Liu, Harvard University

Looking for Someone?

Search our list of registered attendees at
www.amstat.org/meetings/jsm/2005.

CE_25C MCC-L100 C

8:15 a.m.–4:15 p.m.
Categorical Data Analysis
 The ASA, Biometrics Section

Instructor(s): Charles S. Davis, Elan Pharmaceuticals

CE_26C MCC-L100 E

8:15 a.m.–4:15 p.m.
Semiparametric Regression
 The ASA, Section on Statistics and the Environment

Instructor(s): David Ruppert, Cornell University; Ciprian Crainiceanu, Johns Hopkins University

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

203 **MCC-200 ABC**

Introductory Overview Lecture on Data Confidentiality

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

Organizer(s): Jerome Reiter, Duke University

Chair(s): Jerome Reiter, Duke University

8:35 a.m. Data Confidentiality Issues from a Federal Agency Perspective—◆ Laura Zayatz, U.S. Census Bureau

9:25 a.m. Introduction to Statistical Disclosure Limitation or ‘How to Release Useful Data Without Violating Promises of Confidentiality’—◆ Stephen Fienberg, Carnegie Mellon University

10:15 a.m. Floor Discussion

Invited Sessions 8:30 a.m.–10:20 a.m.

204 **MCC-211 B**

● **Interactions in Hierarchical Models—Invited**
 IMS

Organizer(s): Andrew Gelman, Columbia University

Chair(s): Tian Zheng, Columbia University

8:35 a.m. Smoothing ANOVA Interactions by Conditioning on Degrees of Freedom—Yue Cui, University of Minnesota; ◆ James Hodges, University of Minnesota

9:00 a.m. A Nonlinear Hierarchical Model for Estimating Prevalence Rates with Small Samples—◆ Xiao-Li Meng, Harvard University; Margarita Alegria, Cambridge Health

Alliance; Chih-nan Chen, Cambridge Health Alliance;
Jingchen Liu, Harvard University

9:25 a.m. **Partial Pooling of Interactions**—◆ Andrew Gelman, Columbia University; Samantha R. Cook, Columbia University; Shouhao Zhao, Columbia University

9:50 a.m. Disc: Peter Hoff, University of Washington

10:15 a.m. Floor Discussion

205 **MCC-208 C** **Qualitative Restrictions in Nonparametric Estimation—Invited**

IMS, Section on Nonparametric Statistics

Organizer(s): Jon Wellner, University of Washington

Chair(s): Jon Wellner, University of Washington

8:35 a.m. **Nonparametric Estimation of a K-monotone Density: Asymptotic Distribution Theory**—◆ Fadoua Balabadaoui, Institut fuer Mathematische Stochastik

9:05 a.m. **Another Shape Constraint and Multiscale Methods for Density Estimation**—◆ Lutz Duembgen, University of Bern

9:35 a.m. **Oracle Estimators in Asymptotic Theory**—
◆ Piet Groeneboom, Delft University of Technology

10:05 a.m. Floor Discussion

206 **MCC-103 D** **☆ Patterns and Scans for Biomedical Applications—Invited**

SSC, Section on Nonparametric Statistics, Section on Health Policy Statistics

Organizer(s): Wendy Lou, University of Toronto

Chair(s): Wendy Lou, University of Toronto

8:35 a.m. **Maximum Scan Score-type Statistics**—◆ Joseph Glaz, University of Connecticut; Zhenkui Zhang, University of Connecticut

9:00 a.m. **Waiting Times for Structured Motifs in Random Sequences**—◆ Valeri Stefanov, The University of Western Australia; Stephane Robin, Institut National Agronomique; Sophie Schbath, INRA

9:25 a.m. **Distribution of the Length of the Longest Common Subsequence of Two Multi-state Biological Sequences**—
◆ James C. Fu, University of Manitoba; Wendy Lou, University of Toronto

9:50 a.m. **Bivariate Markov Chain Embeddable Variables of Polynomial Type and Applications**—◆ Markos Koutras, University of Piraeus; D. L. Antzoulakos, University of Piraeus; S. Bersimis, University of Piraeus

10:15 a.m. Floor Discussion

207 **MCC-200 DE**

● **JBES Invited Session—Invited**

Journal of Business and Economic Statistics (JBES)

Organizer(s): Torben G. Andersen, Northwestern University

Chair(s): Torben G. Andersen, Northwestern University

8:35 a.m. **Realized Variance and Market Microstructure Noise**—
◆ Peter R. Hansen, Stanford University; Asger Lunde, Aarhus School of Business

10:05 a.m. Floor Discussion

208 **MCC-211 C**

● **The Federal Committee on Statistical Methodology (FCSM): Responding to the Needs of the Federal Statistical Community, 1975 to Present—Invited**

Section on Government Statistics, Social Statistics Section

Organizer(s): Robert E. Fay, U.S. Census Bureau

Chair(s): Robert E. Fay, U.S. Census Bureau

8:35 a.m. **The Federal Committee on Statistical Methodology: Past Accomplishments, Present Activities, and Future Directions**—◆ Katherine Wallman, U.S. Office of Management and Budget; Brian A. Harris-Kojetin, Office of Management and Budget

9:00 a.m. **The Role of FCSM in the Larger Context of the Decentralized Federal Statistical System**—
Hermann Habermann, U.S. Census Bureau; ◆ Rich Allen, U.S. Department of Agriculture

9:25 a.m. **FCSM at 30 Years: the Perspective from the Committee on National Statistics**—◆ Constance Citro, National Academy of Sciences

9:50 a.m. Disc: Robert Groves, University of Michigan

10:10 a.m. Floor Discussion

209 **MCC-103 E**

● ☆ **Data and the Digital Arts—Invited**

Section on Statistical Graphics

Organizer(s): Mark H. Hansen, University of California, Los Angeles

Chair(s): Dianne Cook, Iowa State University

8:35 a.m. **Visual Techniques for Statistics, Statistical Techniques for Visualization**—◆ W. Bradford Paley, Digital Image Design, Inc.

9:05 a.m. **Computational Information Design**—◆ Ben Fry, MIT

9:35 a.m. **Visual Explorations of Datastreams: beyond Point and Click**—◆ Martin Wattenberg, IBM T. J. Watson Research Center

10:05 a.m. Floor Discussion

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210

MCC-200 G

☆ Statistical Issues and Methodologies for the New Biomolecular Technology Age—Invited Biopharmaceutical Section, WNAR

Organizer(s): Amit Bhattacharyya, GlaxoSmithKline

Chair(s): Raymond L. Lam, Centacor

- 8:35 a.m.** Dimensionality Reduction and Bias in the Estimation of Misclassification Rates—◆ Doris Damian, BG Medicine, Inc.; Amir Handzel, BG Medicine, Inc.; Raji Balasubramanian, BG Medicine, Inc.
- 8:55 a.m.** Statistical Design and Analysis in Systems Biology—◆ Lei Zhu, GlaxoSmithKline; Raymond L. Lam, Centacor; Amit Bhattacharyya, GlaxoSmithKline; Kwan R. Lee, GlaxoSmithKline
- 9:15 a.m.** Statistical Mining of Biomarkers: Applications in the Preclinical and Clinical Environment—◆ Peter Grass, Novartis Pharmaceuticals
- 9:35 a.m.** Phenotype Characterization Using Systems Biology—◆ Matej Oresic, VTT Biotechnology
- 9:55 a.m.** Joint Optimization of Continuous and Discrete Parameters and an Application to Biological Classification Without Selection Bias—◆ James A. Garrett, Becton Dickinson
- 10:15 a.m.** Floor Discussion

211

MCC-208 D

☆ Applications of Mixture Models—Invited

IMS, Section on Bayesian Statistical Science, Section on Statistical Graphics

Organizer(s): Robert Kohn, University of New South Wales

Chair(s): Robert Kohn, University of New South Wales

- 8:35 a.m.** A New Class of Conjugate Priors for Decomposable Graphical Gaussian Models—◆ Helene M. Massam, York University; Gerald Letac, Universite Paul Sabatier
- 9:00 a.m.** Methods for Constructing Priors for Bayesian Covariance Matrix Estimation—◆ Christopher K. Carter, CSIRO
- 9:25 a.m.** Variable Selection and Model Averaging in Heteroscedastic and Overdispersed Generalized Linear Models—◆ Remy Cottet, University of New South Wales; Robert Kohn, University of New South Wales; David Nott, University of New South Wales
- 9:50 a.m.** Spatially Adaptive Nonparametric Binary Regression—◆ Sally A. Wood, Australian Graduate School of Management; Robert Kohn, University of New South Wales; Martin Tanner, Northwestern University; Wenxin Jiang, Northwestern University
- 10:15 a.m.** Floor Discussion

212

MCC-103 A

Service Learning in Undergraduate and Graduate Statistics Education—Invited Section on Statistical Education

Organizer(s): Thomas H. Short, Indiana University of Pennsylvania

Chair(s): Thomas H. Short, Indiana University of Pennsylvania

- 8:35 a.m.** Service Learning through a Student-run Consulting Program—Nilupa S. Gunaratna, Purdue University; ◆ Craig A. Johnson, Brigham Young University, Idaho; John R. Stevens, Purdue University
- 9:00 a.m.** Community Service Learning in Statistics: Course Design and Assessment—◆ Debra L. Hydorn, University of Mary Washington
- 9:25 a.m.** Service Learning with Undergraduates—◆ Brian Jersky, Sonoma State University
- 9:50 a.m.** Disc: K. B. Boomer, The Pennsylvania State University
- 10:15 a.m.** Floor Discussion

213

MCC-200 J

● Topics in the Analysis of Longitudinal Data—Invited WNAR, Section on Nonparametric Statistics, Social Statistics Section, Section on Survey Research Methods, Section on Statistics in Epidemiology, Biopharmaceutical Section, Biometrics Section

Organizer(s): Michael Daniels, University of Florida

Chair(s): Jason Roy, University of Rochester

- 8:35 a.m.** Marginalized Models for Multivariate Longitudinal Binary Data—◆ Michael Daniels, University of Florida
- 9:05 a.m.** Informative Priors, Sensitivity Analysis, and the Role of Bayesian Inference for Handling Dropout—◆ Joseph Hogan, Brown University; Joo Yeon Lee, Brown University
- 9:35 a.m.** Semiparametric Regression for Longitudinal Data Using Mixed Likelihood—◆ Daowen Zhang, North Carolina State University
- 10:05 a.m.** Floor Discussion

214

MCC-200 F

● Recent Advances in Causal Inference—Invited Biometrics Section, ENAR, Section on Health Policy Statistics, Section on Statistics in Epidemiology

Organizer(s): Mark van der Laan, University of California, Berkeley

Chair(s): Mark van der Laan, University of California, Berkeley

- 8:35 a.m.** History-adjusted Marginal Structural Models for the Estimation of Causal Effect Modification by Time-dependent Covariates—◆ Maya L. Petersen, University of California, Berkeley; Mark van der Laan, University of California, Berkeley

9:05 a.m. Estimation of Treatment Effects in Randomized Trials with Noncompliance and a Binary Outcome—

◆ Nicholas Jewell, University of California, Berkeley

9:35 a.m. Experiments and Dynamic Treatment Regimes—

◆ Susan Murphy, University of Michigan; Derek Bingham, Simon Fraser University; Linda Collins, The Pennsylvania State University

10:05 a.m. Floor Discussion

215 **MCC-103 C**

● ☆ **SAMSI Session on Latent Variables in Science and Statistics—Invited**

Statistical and Applied Mathematical Sciences Institute

Organizer(s): James Berger, Duke University

Chair(s): James Berger, Duke University

8:50 a.m. Latent Variables in the Social Sciences: a Multidisciplinary Program of SAMSI—◆ Kenneth Bollen, SAMSI/The The University of North Carolina at Chapel Hill

9:15 a.m. Multiple Scales and Hidden Variables in Immunological Modeling—◆ Thomas B. Kepler, Duke University

9:40 a.m. A General Framework for Adaptive Observations in Geophysical Prediction—◆ Shree P. Khare, Statistical and Applied Mathematical Sciences Institute; Chris Jones, The The University of North Carolina at Chapel Hill

10:05 a.m. Floor Discussion

216 **MCC-102 F**

● ☆ **Recent Developments in Bayesian Survival Analysis—Invited**

Section on Bayesian Statistical Science, Biopharmaceutical Section

Organizer(s): Joseph G. Ibrahim, The The University of North Carolina at Chapel Hill

Chair(s): Dipak Dey, University of Connecticut

9:35 a.m. Issues of Robustness and Model Flexibility in Bayesian Survival Analysis—◆ Paul Gustafson, University of British Columbia

9:00 a.m. Theory and Inference for the Cox Model with Missing Covariates—◆ Joseph G. Ibrahim, University of North Carolina at Chapel Hill; Ming-Hui Chen, University of Connecticut; Qi-Man Shao, University of Oregon

9:25 a.m. Disc: Steven N. MacEachern, The Ohio State University

9:50 a.m. Floor Discussion

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

217 **MCC-205 C**

Statistical Methods for HIV/AIDS Surveillance and Research Data—Topic Contributed

Section on Statistics in Epidemiology, WNAR

Organizer(s): Timothy Green, U.S. Centers for Disease Control and Prevention

Chair(s): Lillian S. Lin, U.S. Centers for Disease Control and Prevention

8:35 a.m. Uncertainties Associated with Incidence Estimates of HIV/AIDS Diagnoses Adjusted for Reporting Delay and Risk Redistribution—◆ Ruiguang Song, U.S. Centers for Disease Control and Prevention; H. Irene Hall, U.S. Centers for Disease Control and Prevention; Robert Frey, U.S. Centers for Disease Control and Prevention

8:55 a.m. Handling Missing Data in HIV Research—◆ Ramses Sadek, U.S. Centers for Disease Control and Prevention; Roman Gvetadze, Northrop Grumman

9:15 a.m. Using Occupancy Models To Estimate the Number of Duplicate Cases in a Surveillance System Without Unique Identifiers—◆ Timothy Green, U.S. Centers for Disease Control and Prevention; Ruiguang Song, U.S. Centers for Disease Control and Prevention; Matthew McKenna, U.S. Centers for Disease Control and Prevention; M. Kathleen Glynn, U.S. Centers for Disease Control and Prevention

9:35 a.m. Evaluating Racial Disparities in the Clinical Course of HIV Infection as Time-to-event Data Using Standardized Kaplan-Meier Estimation—◆ Felicia Hardnett, U.S. Centers for Disease Control and Prevention; John Karon, Emergint Corporation; Lorena Espinoza, U.S. Centers for Disease Control and Prevention

9:55 a.m. New Methods for Back-calculating the Number of HIV Infections in the United States—◆ Phillip Rhodes, U.S. Centers for Disease Control and Prevention; M. Kathleen Glynn, U.S. Centers for Disease Control and Prevention

10:15 a.m. Floor Discussion

218 **MCC-201 AB**

● ☆ **Innovative Designs and Analysis in Clinical Trials—Topic Contributed**

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

Organizer(s): Yi Cheng, Indiana University, South Bend

Chair(s): Heejung Bang, Cornell University

8:30 a.m. Innovative Designs and Analysis of Clinical Trials—◆ Yu Shen, The University of Texas M. D. Anderson Cancer Center

GENERAL PROGRAM SCHEDULE

☆ Themed Session * Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

8:55 a.m. The Importance of Assessing Discordance Probabilities of Interim Analysis Procedures for Clinical Trials—
◆ Ming Tan, University of Maryland; Xiaoping Xiong, St. Jude Children's Research Hospital

9:15 a.m. Adjusted Estimates for Time-to-event Endpoints—
◆ Ted Gooley, Fred Hutchinson Cancer Research Center

9:35 a.m. Optimal Bayesian Randomized Designs for Clinical Trials—◆ Yi Cheng, Indiana University, South Bend; Donald A. Berry, The University of Texas M. D. Anderson Cancer Center

9:55 a.m. When Is Statistics Not the Answer: Allowing for Flexibility in Phase II Clinical Trial Design—◆ Daniel Sargent, Mayo Clinic; Susan Geyer, Mayo Clinic

10:15 a.m. Floor Discussion

219 **MCC-102 A**

Response Surfaces and Related Issues—Topic Contributed

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

Organizer(s): Sudhir C. Gupta, Northern Illinois University

Chair(s): André I. Khuri, University of Florida

8:35 a.m. Quantile Dispersion Graphs for Comparing Designs for Multivariate Generalized Linear Models—
◆ Siuli Mukhopadhyay, University of Florida; André I. Khuri, University of Florida

8:55 a.m. Space-filling Mixture Designs for Highly Constrained Mixture Experiments—◆ John Borkowski, Montana State University

9:15 a.m. Efficient Control of Experiments: Models and Algorithms—
◆ Anatoly Naumov, Novosibirsk State Technical University

9:35 a.m. Design Assessment for Split-plot Designs Incorporating Cost—◆ Christine Anderson-Cook, Los Alamos National Laboratory; Li Liang, Virginia Polytechnic Institute and State University; Timothy J. Robinson, University of Wyoming

9:55 a.m. Disc: Sudhir C. Gupta, Northern Illinois University

10:15 a.m. Floor Discussion

220 **MCC-211 A**

* Ongoing Enhancements of Estimation and Analytical Strategies To Support Health Policy Research—Topic Contributed

Section on Health Policy Statistics, WNAR

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

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

8:35 a.m. Using the Medical Expenditure Panel Survey To Estimate Injuries and Associated Health Care Expenses in the United States—◆ Steven Machlin, Agency for Healthcare Research and Quality

8:55 a.m. Investigation of the Capacity for State-level Estimates in the Medical Expenditure Panel Survey—◆ John Sommers, Agency for Healthcare Research and Quality; Steven Machlin, Agency for Healthcare Research and Quality

9:15 a.m. Evaluation of Panel In-time Effects on Utilization Estimates—◆ Janet Greenblatt, Agency for Healthcare Research and Quality; Lap-Ming Wun, Agency for Healthcare Research and Quality

9:35 a.m. Examination of Alternative Nonresponse Adjustments: an Application to Expenditure Data in the Household Component of the Medical Expenditure Panel Survey (MEPS-HC)—◆ David Kashihara, Agency for Healthcare Research and Quality; John Sommers, Agency for Healthcare Research and Quality

9:55 a.m. Predicting Medical Expenditures Using the SF-12 and Prior Expenditures—◆ Joel Cohen, Agency for Healthcare Research and Quality; John Fleishman, Agency for Healthcare Research and Quality

10:15 a.m. Floor Discussion

221 **MCC-209 AB**

* Nonparametric Function Estimation—Topic Contributed

IMS, Section on Bayesian Statistical Science

Organizer(s): Moulinath Banerjee, University of Michigan

Chair(s): Jayanta Pal, University of Michigan

8:35 a.m. A Bayesian Approach to Shape-restricted Inference—
◆ Mary Meyer, University of Georgia

8:55 a.m. Testing under a General Convex Cone Alternative for Correlated Data—◆ Ramani S. Pilla, Case Western Reserve University

9:15 a.m. Two-sided Brownian Motion with Quadratic Drift and Its Least Concave Majorant—◆ Christopher Carolan, East Carolina University

9:35 a.m. Inference for Conditionally Parametric Response Models—◆ Moulinath Banerjee, University of Michigan

9:55 a.m. Disc: Nick Hengartner, Los Alamos National Laboratory

10:15 a.m. Floor Discussion

222 MCC-200 H

● **Noninferiority: Paving the Way to the Future—Topic Contributed**

Biopharmaceutical Section, WNAR

Organizer(s): Sofia Paul, Eli Lilly and Company

Chair(s): Scott M. Berry, Berry Consultants LLC

- 8:35 a.m.** Intent-to-treat Analyses of Noninferiority Studies—
◆ Brian Wiens, Amgen Inc.; William Zhao, Fujisawa Healthcare, Inc.
- 8:55 a.m.** Issues To Consider When Constructing a Noninferiority Analysis—◆ Mark Rothmann, U.S. Food and Drug Administration
- 9:15 a.m.** Arbitrary Noninferiority Margins for Active-controlled Trials—◆ Patrick Peterson, Eli Lilly and Company
- 9:35 a.m.** Measuring Risk-benefit as Primary Endpoint To Assess Two Noninferior Drugs in Cancer Patients—◆ Sofia Paul, Eli Lilly and Company
- 9:55 a.m.** Disc: Clet Niyikiza, GlaxoSmithKline
- 10:15 a.m.** Floor Discussion

223 MCC-202 AB

Imputation and Sensitivity Analysis for Missing Data—Topic Contributed

Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Hui Xie, Boston University

Chair(s): Yajun Mei, Fred Hutchinson Cancer Research Center

- 8:35 a.m.** Approximation to Locally Semiparametric Efficient Scores in Missing Data Problems through Likelihood Robustification—◆ Hua Yun Chen, University of Illinois, Chicago
- 8:50 a.m.** Dependence of Local Sensitivity to Nonignorability on the Assumed Dropout Mechanism—◆ Hui Xie, Boston University; Daniel Heitjan, University of Pennsylvania
- 9:15 a.m.** Use of Multiple Imputation and Other Techniques To Assess Impact of Censoring by Loss to Followup in Clinical Trials—◆ Barry Davis, The University of Texas Health Science Center at Houston
- 9:35 a.m.** Multiple Imputation and Semiparametric Estimators for the Regression Coefficients in the Linear Transformation Competing Risks Model with Missing Cause of Failure—◆ Guozhi Gao, North Carolina State University; Anastasios A. Tsiatis, North Carolina State University
- 9:55 a.m.** Imputation for Nonmonotone, Nonignorable Missing Values—◆ Lin Wang, University of Wisconsin, Madison; Mari Palta, University of Wisconsin, Madison; Jun Shao, University of Wisconsin, Madison
- 10:15 a.m.** Floor Discussion

224 MCC-213 AB

● **Developing, Implementing, and Using Transportation Surveys—Topic Contributed**

Section on Survey Research Methods

Organizer(s): Julie Trepanier, Statistics Canada

Chair(s): Julie Trepanier, Statistics Canada

- 8:35 a.m.** Developing a Sustainable and Flexible Long-distance Travel Survey—◆ Lee Giesbrecht, Bureau of Transportation Statistics; Jonaki Bose, Bureau of Transportation Statistics
- 8:55 a.m.** Incorporating Past Methodological Lessons into the 2007 Commodity Flow Survey—◆ Joy Sharp, Bureau of Transportation Statistics; Jock R. Black, U.S. Census Bureau
- 9:15 a.m.** Editing and Imputation Strategy for a Fuel Consumption Supplement to the Canadian Vehicle Survey—
◆ Sebastien Landry, Statistics Canada
- 9:35 a.m.** The Estimation Methodology of the Redesigned Canadian Vehicle Survey—◆ Martin Beaulieu, Statistics Canada
- 9:55 a.m.** Measuring the Risk of Road Crashes—◆ Aline Chouinard, Transport Canada; James Kelley, Transport Canada
- 10:15 a.m.** Floor Discussion

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

225 MCC-205 B

Survivor Analysis—Contributed

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

Chair(s): Jay Mandrekar, Mayo Clinic

- 8:35 a.m.** Stochastic Characterization of Compliance Indices—
◆ Junfeng Sun, The Ohio State University; Haikady Nagaraja, The Ohio State University; Nancy R. Reynolds, The Ohio State University
- 8:50 a.m.** Bayesian Cure Rate Models: a Unified Approach—
◆ Guosheng Yin, The University of Texas M. D. Anderson Cancer Center; Joseph G. Ibrahim, The The University of North Carolina at Chapel Hill
- 9:05 a.m.** Bayesian Survival Analysis Based on Imperfect Diagnostic Tests—◆ Peng Zhang, Harvard University; Stephen W. Lagakos, Harvard University
- 9:20 a.m.** Bayesian Analysis of Recurrent Event Data with Informative Censoring—◆ Nibedita Bandyopadhyay, GlaxoSmithKline; Ananda Sen, University of Michigan
- 9:35 a.m.** Threshold Regression Models and Applications in Environmental Research—◆ Mei-Ling T. Lee, Harvard University; George A. Whitmore, McGill University

Tuesday

GENERAL PROGRAM SCHEDULE

☆ Themed Session * Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

9:50 a.m. A New Approach to Testing for Sufficient Followup in Cure-rate Analysis—Lev Klebanov, Charls University;
◆ Andrei Yakovlev, University of Rochester

10:05 a.m. Smooth Inference for Survival Functions with Arbitrarily Censored Data—◆ Kirsten Doehler, North Carolina State University; Marie Davidian, North Carolina State University

226

MCC-205 A

* ☆ Classification in Microarray Analysis—Contributed Biometrics Section, WNAR

Chair(s): George C. Tseng, University of Pittsburgh

8:35 a.m. CLASSIX: a New Classification Method Based on a Separation Index with Applications in Genomics—
◆ Weiliang Qiu, Harvard Medical School; Mei-Ling T. Lee, Harvard University

8:50 a.m. Gene Discovery and Pattern Recognition for Microarray Time-course Experiments Using Regression Models—
◆ Hua Liu, University of Kentucky; Aaron S. Borders, University of Kentucky; Thomas V. Getchell, University of Kentucky; Sergey S. Tarima, University of Kentucky; Marilyn L. Getchell, University of Kentucky; Arnold J. Stromberg, University of Kentucky

9:05 a.m. Clustering Posterior Distributions: Application to Somatic Embryogenesis in Maize—◆ Tanzy Love, Iowa State University; Alicia Carriquiry, Iowa State University

9:20 a.m. Eigenanalysis-based Method for Gene Subset Selection and Cancer Classification Using Microarray Data—
◆ Simin Hu, Case Western Reserve University; J. Sunil Rao, Case Western Reserve University

9:35 a.m. Genome Sequence Analysis Using Mixture Trees—
◆ Shu-Chuan Chen, Arizona State University; Bruce G. Lindsay, The Pennsylvania State University

9:50 a.m. Searching Solution Space for SELDI-TOF Cancer Classifiers—◆ Eric Siegel, University of Arkansas for Medical Sciences

10:05 a.m. Prediction Error Estimation: a Comparison of Resampling Methods—◆ Ruth Pfeiffer, National Cancer Institute; Annette Molinaro, NCI/Yale University; Richard Simon, National Institutes of Health

227

MCC-102 E

* ☆ Data Augmentation, EM, and Bayesian Methods with Missing Data—Contributed

Section on Bayesian Statistical Science, Section on Statistics in Epidemiology, Biopharmaceutical Section

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

8:35 a.m. Flexible and Efficient Data Augmentation Schemes—
◆ Taeyoung Park, Harvard University

8:50 a.m. A Bayesian Model for Clustered Longitudinal Ordinal Data Subject to Nonignorable Missing Data Mechanism—◆ Niko Kaciroti, University of Michigan; Trivellore Raghunathan, University of Michigan

9:05 a.m. A Flexible Bayesian Generalized Linear Model for Dichotomous Response Data with an Application to Text Categorization—◆ David Madigan, Rutgers, The State University of New Jersey; Susana Eyeramendy, Oxford University

9:20 a.m. Alternative Strategies for Variable Selection in Logistic Regression Models with Missing Covariates—
◆ Gang Liu, University of California, Los Angeles; Xiaowei Yang, BayesSoft, Inc.; Thomas R. Belin, University of California, Los Angeles

9:35 a.m. Modeling Bivariate Nonlinear Tar Processes in the Presence of Missing Data—◆ Fabio Nieto, Universidad Nacional de Colombia

9:50 a.m. Floor Discussion

228

MCC-211 D

* Poverty and Income—Contributed

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

Chair(s): Leonard Gaines, Empire State Development

8:35 a.m. Can the Survey of Income and Program Participation Be Used for State-level Analysis Even Though It Is Not Designed To Be State-representative?—◆ Arthur Jones, Jr., U.S. Census Bureau; Michael Davern, University of Minnesota; Gestur Davidson, University of Minnesota

8:50 a.m. Using Medicaid Participant Data in the Estimation of County Poverty Levels—◆ David S. Powers, U.S. Census Bureau

9:05 a.m. Evaluation of School District Poverty Estimates: Predictive Models Using IRS Income Tax Data—
◆ Jerry Maples, U.S. Census Bureau

9:20 a.m. Assessment of Resources and Strategies for Obtaining Basic Living Necessities by Individuals Near the Poverty Guideline—◆ JoAnn Kuchak, ORC Macro International, Inc.; George Fitzelle, U.S. Department of Veterans Affairs; Andrey Vinokurov, ORC Macro International, Inc.

9:35 a.m. Dominance in Income Distribution in Terms of Location and Dispersion—◆ Subir Ghosh, University of California, Riverside

9:50 a.m. Ecological Correlates of Family Income Nonresponse: an Analysis of the National Health Interview Survey (NHIS)—◆ John Pleis, National Center for Health Statistics; James Dahlhamer, National Center for Health Statistics

10:05 a.m. Floor Discussion

229 **MCC-103 F** Nonparametric Regression and Density Estimation—Contributed

Section on Nonparametric Statistics

Chair(s): Somesh Chattopadhyay, Florida State University

- 8:35 a.m.** Nonparametric Regression Subject to a Monotonicity Constraint—◆ Matthew Schipper, University of Michigan; Jeremy Taylor, University of Michigan; Xihong Lin, Harvard University
- 8:50 a.m.** Nonparametric Regression with Heteroscedastic Long Memory Errors—◆ Hongwen Guo, Michigan State University
- 9:05 a.m.** Minimum Distance Errors in Variables Regression Model Fitting—◆ Weixing Song, Michigan State University
- 9:20 a.m.** Nonparametric Confidence Sets for Densities—◆ Woncheol Jang, Duke University
- 9:35 a.m.** Nonparametric Estimation of Levy Densities Based on Continuous and Discrete Data—◆ Jose E. Figueroa-Lopez, Purdue University; Christian Houdre, Georgia Institute of Technology
- 9:50 a.m.** Method of Local Moments for Parametric Likelihood Inference—◆ Masahiko Sagae, Gifu University; Atsuyuki Kogure, Keio University
- 10:05 a.m.** Pattern Recognition Using Nonparametric Kernel Density Estimation Techniques—◆ Abhishek Lall, Sam Houston State University; Cecil Hallum, Sam Houston State University

230 **MCC-200 I** Analysis of Binary Data—Contributed Biopharmaceutical Section, WNAR

Chair(s): Steven Watts, Eli Lilly and Company

- 8:35 a.m.** The Estimation of Sensitivity and Specificity of Clustered Binary Data: as Applied to Contrast-enhanced Multidetector Row Spiral Computed Tomography Coronary Angiography—◆ William McCarthy, Maryland Medical Research Institute; Douglas Thompson, Maryland Medical Research Institute; Bruce Barton, Maryland Medical Research Institute; Julie Miller, Johns Hopkins Hospital; Joao Lima, Johns Hopkins Hospital
- 8:50 a.m.** Three Approaches to Modeling Binary Outcomes in Multicenter Clinical Trials with Clustering Due to Clinical Sites—◆ Douglas Thompson, Maryland Medical Research Institute; William McCarthy, Maryland Medical Research Institute; Bruce Barton, Maryland Medical Research Institute
- 9:05 a.m.** Use of Inverse Binomial Sampling in Exact Test of Relative Risk for Rare Events in Clinical Trials—◆ Xinwei D. Jia, Forest Research Institute; Dar Shong Hwang, B.R.S.I.

- 9:20 a.m.** Multivariate Regression in Mixed Data Setting—Daniel C. Bonzo, Serono, Inc.; ◆ Welfredo R. Patungan, University of the Philippines Diliman
- 9:35 a.m.** A Simple Method for Constructing Binomial Confidence Intervals with Near-nominal Coverage by Adding a Single, Imaginary Failure or Success—◆ Craig Borkowf, Centers for Disease Control and Prevention
- 9:50 a.m.** A Multivariate Extension of McNemar's Test—◆ Bernhard Klingenberg, Williams College; Alan Agresti, University of Florida
- 10:05 p.m.** Floor Discussion

231 **MCC-102 D** Econometric Time-series Models—Contributed Business and Economics Statistics Section

Chair(s): Yanqin Fan, Vanderbilt University

- 8:35 a.m.** Optimality of GLS Estimates of Misspecified Regression Mean Functions of RegARIMA Time-series Models—◆ David Findley, U.S. Census Bureau
- 8:50 a.m.** Short- and Long-run Causality Measures—◆ Abderrahim Taamouti, University of Montréal; Jean-Marie Dufour, University of Montréal
- 9:05 a.m.** Business Cycle Asymmetries in Univariate Macroeconomic Forecasting—◆ Jose R. Cancelo, Universidade da Coruna
- 9:20 a.m.** Simplified Order Selection and Efficient Linear Estimation for VARMA Models—◆ Tarek Jouini, University of Montréal
- 9:35 a.m.** Time Reversibility of Stationary, Regular, Finite-state Markov Chains—◆ William McCausland, University of Montréal
- 9:50 a.m.** Random Coefficient Transfer Function Model—◆ Hyunyoung Choi, University of Illinois, Urbana-Champaign; Jeff Douglas, University of Illinois, Urbana-Champaign; Bonnie Ray, IBM
- 10:05 a.m.** Using Quantile Regression for Prediction Purposes—◆ Subhash C. Narula, Virginia Commonwealth University; John F. Wellington, Indiana University-Purdue University, Fort Wayne

232 **MCC-208 B** Classical Inference—Contributed General Methodology, IMS

Chair(s): Wensheng Guo, University of Pennsylvania

- 8:35 a.m.** Extreme Values of Skew-symmetric Distributions—◆ Sheng-Mao Chang, North Carolina State University; Marc G. Genton, Texas A&M University

GENERAL PROGRAM SCHEDULE

☆ Themed Session * Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

- 8:50 a.m.** Simple Estimators of the Three-parameter, Skew-normal Distribution—◆ Jose Almer T. Sanqui, Appalachian State University; Arjun K. Gupta, Bowling Green State University; Truc T. Nguyen, Bowling Green State University
- 9:05 a.m.** Fisher Information in Concomitants of Bivariate FGM Distribution—◆ Mohammad Ahsanullah, Rider University; Sana Buhamra, Kuwait University
- 9:20 a.m.** Minimax Asymptotic Mean-squared-error of M-estimators of Scale—◆ Daniela Szatmari-Voicu, University of Calgary
- 9:35 a.m.** On the Difference between Two Distribution Functions—◆ Charles Dunn, Miami University of Ohio
- 9:50 a.m.** L²-based Homogeneity Tests for Mixtures with Structural Parameters—◆ Hongying Dai, University of Kentucky; Richard Charnigo, University of Kentucky
- 10:05 a.m.** Likelihood Inference under the General Response Transformation Model with Heteroscedastic Errors—◆ Chih-Rung Chen, National Chiao-Tung University

233 **MCC-208 A** Categorical Data Analysis—Contributed General Methodology, Section on Statistics in Epidemiology, Biometrics Section

Chair(s): Igor Mandel, Media Planning Group

- 8:35 a.m.** Sequential Identification in Multinomial Models—◆ Hokwon A. Cho, University of Nevada, Las Vegas
- 8:50 a.m.** Dirichlet-multinomial Regression—◆ Paulo Guimaraes, Medical University of South Carolina; Richard Lindrooth, Medical University of South Carolina
- 9:05 a.m.** Combining Averages and Single Measurements in a Lognormal Model—Nagraj Neerchal, University of Maryland Baltimore County; ◆ Bhramori Banerjee, Educational Testing Service
- 9:20 a.m.** Profile Confidence Intervals for Contingency Table Parameters—◆ Joseph B. Lang, The University of Iowa
- 9:35 a.m.** Combining Loglinear Models—◆ Lihua Chen, Iowa State University; Yuhong Yang, University of Minnesota
- 9:50 a.m.** Parameter Estimation in Poisson Regression via Modified Maximum Likelihood Method—◆ Evrim Oral, Middle East Technical University
- 10:05 a.m.** Floor Discussion

234 **MCC-102 B** * Current Research in Multivariate Quality Control—Contributed

Section on Quality and Productivity

Chair(s): Philip R. Scinto, The Lubrizol Corporation

- 8:35 a.m.** Multivariate Process Control for Improving Detection and Cause Identification—◆ Amit Mitra, Auburn University
- 8:50 a.m.** Statistical Monitoring of Dose-response Quality Profiles from High-throughput Screening—◆ James Williams, GE Company; Jeffrey B. Birch, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University; Nancy Ferry, DuPont Crop Protection
- 9:05 a.m.** High Breakdown Estimation Methods for Phase I Multivariate Control Charts—◆ Willis Jensen, Virginia Polytechnic Institute and State University; Jeffrey B. Birch, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University
- 9:20 a.m.** A Self-starting, Multivariate, Exponentially-weighted Moving Average Chart—◆ Edgard M. Maboudou-Tchao, University of Minnesota; Douglas M. Hawkins, University of Minnesota
- 9:35 a.m.** A Multivariate Change Point Model for Statistical Process Control—◆ Kokou Zamba, The University of Iowa

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9:50 a.m. Comparison of Multivariate Control Charts for Process Dispersion—◆ Jose A. Vargas, National University of Colombia

10:05 a.m. Statistical Process Control Using Multivariate Exponentially Weighted Moving Average and MATLAB®-to-Excel® Software Interface—
◆ Jerry Lewis, Wyeth; Alagappan Annamalai, Wyeth

235 **MCC-103 B** **General Topics in Statistics Education—Contributed** Section on Statistical Education

Chair(s): Jimmy Doi, California Polytechnic State University

8:35 a.m. Writing To Learn in Elementary Statistics—◆ Ananda A. Jayawardhana, Pittsburg State University; Cynthia Woodburn, Pittsburg State University

8:50 a.m. Critical Values: Connecting Ethics, Statistics, and Social Justice To Lift Our World—◆ Lawrence M. Lesser, The University of Texas at El Paso

9:05 a.m. Designing a Statistical Literacy Textbook—◆ Milo Schield, Augsburg College

9:20 a.m. Analytic Excellence—◆ Michael Round, Theory of Constraints for Education

9:35 a.m. Preparing the Undergraduate Education Major To Teach Advanced Placement Statistics—◆ Gwendolyn Applebaugh, University of Wisconsin, Eau Claire

9:50 a.m. I Got It. This Is So Cool. I Like This.—◆ Rossi Hassad, Mercy College

10:05 a.m. Statistical Modeling as an Introductory Course—
◆ Daniel Kaplan, Macalester College

236 **MCC-102 C** **Bayesian Models for Environmental Data—Contributed** Section on Statistics and the Environment, ENAR, Section on Bayesian Statistical Science

Chair(s): Brian Gray, U.S. Geological Survey

8:35 a.m. A Bayesian Pathways Analysis of Personal Exposure to Arsenic—◆ Xiaoyi Dong, The Ohio State University

8:50 a.m. Measurement Error in Spatial Modeling of Environmental Exposures—◆ Christopher Paciorek, Harvard School of Public Health; Alexandros Gryparis, Harvard School of Public Health; Brent Coull, Harvard School of Public Health

9:05 a.m. Deriving Tree Diameter Distributions Using Bayesian Model Averaging—◆ Bronson Bullock, North Carolina State University; Edward Boone, University of North Carolina, Wilmington

9:20 a.m. Calibration Model for Floodplain Modeling—◆ John Grego, University of South Carolina

9:35 a.m. Approximate Likelihood and Bayesian Methods for Combining Multiple Data Sources—◆ Darryl Cooney, North Carolina State University; Montserrat Fuentes, North Carolina State University

9:50 a.m. Floor Discussion

237 **MCC-205 D** **Genetic Association, Familial Aggregation, and Gene-environmental Studies—Contributed** Section on Statistics in Epidemiology, ENAR, WNAR, Biometrics Section

Chair(s): Andrew S. Allen, Duke University

8:35 a.m. An Alternative Approach for Haplotype-based Association Analysis Using Genotype Data from Unrelated Individuals—◆ Jinbo Chen, National Cancer Institute

8:50 a.m. Genetic Misclassification and Gene-environment Interactions in Case-control Studies—◆ Christine Spinka, University of Missouri, Columbia; Raymond J. Carroll, Texas A&M University; Nilanjan Chatterjee, National Cancer Institute

9:05 a.m. An Approach to Adjustment of the Penetrance Obtained from Case Proband Studies—◆ Ilya Novikov, Gertner Institute for Epidemiology and Health Policy Research

9:20 a.m. A Novel Case-control Design: the GEM Study Experience—◆ Amanda Hummer, Memorial Sloan-Kettering Cancer Center; Colin B. Begg, Memorial Sloan-Kettering Cancer Center; Marianne Berwick, The University of New Mexico

9:35 a.m. Evolutionary-based Grouping of Haplotypes in Association Analysis—◆ Jung-Ying Tzeng, North Carolina State University

9:50 a.m. Comprehensive Evaluation of Breast and Ovarian Cancer Risks—◆ Sining Chen, Johns Hopkins School of Medicine

10:05 a.m. Comparison of Three Statistical Methods To Estimate Genetic Ancestry and Control for Stratification in Genetic Association Studies among Admixed Populations—◆ Hui-Ju Tsai, University of California, San Francisco

238 **MCC-212 AB** ● **Variance Estimation for Surveys I—Contributed** Section on Survey Research Methods, Social Statistics Section

Chair(s): Xiaoxi Li, Iowa State University

8:35 a.m. Generalized Variance Functions for Radio-schedule Gross Rating Point Estimators—◆ Richard Griffiths, Arbitron

GENERAL PROGRAM SCHEDULE

☆ Themed Session * Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

- 8:50 a.m.** Variance Estimation and Components of Variance for the Medicare Current Beneficiary Survey—◆ Annie Y. Lo, Westat; Adam Chu, Westat
- 9:05 a.m.** Mean Square Error Analysis of Health Estimates from the Behavioral Risk Factor Surveillance System for Counties along the United States/Mexico Border Region—◆ Joe Fred Gonzalez, Jr., National Center for Health Statistics; Machell Town, National Center for Chronic Diseases Prevention and Health Promotion; Jay J. Kim, National Center for Health Statistics
- 9:20 a.m.** Analysis of Census 2000 Long Form Variances—◆ Eric L. Schindler, U.S. Census Bureau
- 9:35 a.m.** Optimal Pairing for Stratum Collapse Methods with Interviewer-level Measurement Error Shared across Strata—◆ Moon J. Cho, Bureau of Labor Statistics; John L. Eltinge, Bureau of Labor Statistics
- 9:50 a.m.** Investigation of Alternative Variance Estimators for the Quarterly Financial Report—◆ Andromache Howe, U.S. Census Bureau; Katherine J. Thompson, U.S. Census Bureau
- 10:05 a.m.** Floor Discussion

239

MCC-210 AB

* Data Quality Issues—Contributed

Section on Survey Research Methods, Social Statistics Section

Chair(s): Limin Clegg, National Cancer Institute

- 8:35 a.m.** Sufficient Quality for Official Statistics: the Swedish Approach—◆ Eva Elvers, Statistics Sweden
- 8:50 a.m.** Templates for Evaluating Survey Programs—◆ Brenda G. Cox, Battelle; Nancy Kirkendall, Energy Information Administration
- 9:05 a.m.** Statistical Methods Used To Detect Cell-level and Respondent-level Outliers in the 2002 Economic Census of the Services Sector—◆ Richard Sigman, U.S. Census Bureau
- 9:20 a.m.** Darkness Made Visible: Field Management and Nonresponse in the 2004 SCF—◆ Arthur Kennickell, Federal Reserve Board
- 9:35 a.m.** Detecting Falsified Cases in SCF 2004 Using Benford's Law—◆ Yongyi Wang, NORC at the University of Chicago; Steven Pedlow, NORC at the University of Chicago
- 9:50 a.m.** Benford's Law and Validating Interviewer Data—◆ Javier Porras, NORC at the University of Chicago
- 10:05 a.m.** Floor Discussion

Special Presentation 10:30 a.m.–12:20 p.m.

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MCC-205 A

The ASA Stat Bowl Session 1

The ASA, ENAR, WNAR, IMS, SSC

Organizer(s): Mark Payton, Oklahoma State University

Chair(s): Mark Payton, Oklahoma State University

- 10:35 a.m.** Game 1—◆ Ananya Roy, University of Florida; ◆ Landon Sego, Virginia Polytechnic Institute and State University; ◆ Satrajit Roychoudhury, New Jersey Institute of Technology; ◆ Alicia Graziosi, Temple University
- 11:00 a.m.** Game 2—◆ Siuli Mukhopadhyay, University of Florida; ◆ Dipankar Bandyopadhyay, University of Georgia; ◆ Yuping Wu, University of South Carolina; ◆ Sourav Santra, Northern Illinois University
- 11:25 a.m.** Game 3—◆ Jesse Frey, The Ohio State University; ◆ Abhyuday Mandal, Georgia Institute of Technology; ◆ Soumi Lahiri, New Jersey Institute of Technology; ◆ Susanta Tewari, University of Georgia
- 11:50 a.m.** Game 4—◆ Willis Jensen, Virginia Polytechnic Institute and State University; ◆ Tirthankar Dasgupta, Georgia Institute of Technology; ◆ Samiran Ghosh, University of Connecticut; ◆ Pang Du, Purdue University

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

241

MCC-102 D

* Recent Work in Power and Sample Size—Invited

Section on Statistical Consulting, Business and Economics Statistics Section, Section on Survey Research Methods

Organizer(s): John Castelleo, SAS Institute, Inc.

Chair(s): John Castelleo, SAS Institute, Inc.

- 10:35 a.m.** Accounting for Alignment, Uncertainty, and Bias in Choosing a Sample Size—◆ Michael R. Jirutek, Salix Pharmaceuticals, Inc.; Keith E. Muller, The University of North Carolina at Chapel Hill
- 11:00 a.m.** Using Internal Pilot Designs with Repeated Measures—◆ Christopher S. Coffey, University of Alabama at Birmingham; Keith E. Muller, The University of North Carolina at Chapel Hill
- 11:25 a.m.** Exploiting the Link between the Wilcoxon-Mann-Whitney Test and a Simple Odds Parameter—◆ Ralph O'Brien, Cleveland Clinic Foundation; John Castelleo, SAS Institute, Inc.
- 11:50 a.m.** Sample Size for Mixed Models—◆ Russell V. Lenth, The University of Iowa
- 12:15 p.m.** Floor Discussion

242

MCC-211 C

☆ **Model Building via Mixtures: Recent Developments and Future Directions—Invited**

IMS, Section on Statisticians in Defense and National Security, Business and Economics Statistics Section

Organizer(s): Ramani S. Pilla, Case Western Reserve University

Chair(s): Ramani S. Pilla, Case Western Reserve University

10:35 a.m. Perturbation Theory and Mixture Models: Application to High-energy Physics—◆ Cyrus C. Taylor, Case Western Reserve University; Catherine Loader, Case Western Reserve University; Ramani S. Pilla, Case Western Reserve University

11:05 a.m. On a Flexible Information Criterion for Order Selection in Semiparametric Mixture Models—◆ Richard Charnigo, University of Kentucky; Ramani S. Pilla, Case Western Reserve University

11:35 a.m. Local Likelihood and Mixture Modeling—◆ Catherine Loader, Case Western Reserve University; Ramani S. Pilla, Case Western Reserve University

12:05 p.m. Floor Discussion

243

MCC-200 ABC

● **Biometrics Editor Invited Session—Invited**

ENAR, WNAR, International Biometric Society, Biometrics Section

Organizer(s): Xihong Lin, Harvard University

Chair(s): Xihong Lin, Harvard University

10:35 a.m. Statistical Issues Arising in the Women's Health Initiative—◆ Ross Prentice, Fred Hutchinson Cancer Research Center

11:05 a.m. Disc: James M. Robins, Harvard University

11:25 a.m. Disc: Dave Demets, University of Wisconsin, Madison

11:35 a.m. Disc: David Freedman, University of California, Berkeley

11:45 a.m. Disc: Sander Greenland, University of California, Los Angeles

12:05 p.m. Floor Discussion

244

MCC-213 AB

Medallion Lecture 4—Invited

IMS

Organizer(s): David Madigan, Rutgers, The State University of New Jersey

Chair(s): Tilmann Gneiting, University of Washington

10:35 a.m. Inference for Deterministic Models in the Environmental Sciences—◆ Adrian E. Raftery, University of Washington

12:00 p.m. Floor Discussion

245

MCC-103 C

● **Robustness of Inferences to Bifurcation—Invited**
Business and Economics Statistics Section

Organizer(s): Esfandiar Maasoumi, Southern Methodist University

Chair(s): Esfandiar Maasoumi, Southern Methodist University

10:35 a.m. Robustness of Inferences to Singularity Bifurcations—◆ William A. Barnett, University of Kansas; Yijun He, Washington State University

11:20 a.m. A Time-frequency Analysis of the U.S. and European Business Cycles—◆ Andrew Hughes Hallett, Vanderbilt University; Christian Richter, Loughborough University

12:05 p.m. Floor Discussion

246

MCC-200 J

☆ **Statistical Methods for Cancer Research Data—Invited**

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

Organizer(s): Jeremy Taylor, University of Michigan

Chair(s): Jeremy Taylor, University of Michigan

10:35 a.m. Comparing Expression Responses in a Model System to Natural Covariation in Gene Expression—◆ Kerby Shedden, University of Michigan

11:05 a.m. Gene Expression and the Detection of Viral Contributions to Cancer—◆ Michael Newton, University of Wisconsin, Madison

11:35 a.m. Statistical Methods for Inferring Epigenetic Phenomena Using Gene-expression Data—◆ Debashis Ghosh, University of Michigan

12:05 p.m. Floor Discussion

247

MCC-200 G

● **How Sports Can Help Teach Students and the Public about Statistics—Invited**

Section on Statistics in Sports, Section on Statistical Education

Organizer(s): Jerome Reiter, Duke University

Chair(s): Shane Jensen, University of Pennsylvania

10:35 a.m. An Honors Seminar on Statistics and Sports—◆ James Albert, Bowling Green State University

11:05 a.m. Baseball's Highest Honor: Teaching Statistical Thinking Using the Baseball Hall of Fame—◆ Steve C. Wang, Swarthmore College

11:35 a.m. Muscle Memory: Statistical Reasoning through Sports—◆ Scott M. Berry, Berry Consultants, LLC

12:05 p.m. Floor Discussion

GENERAL PROGRAM SCHEDULE

☆ Themed Session ● Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

248

MCC-200 DE

● ☆ **Dimensions of Health Care Quality—Invited**
Section on Health Policy Statistics, WNAR

Organizer(s): Bonnie Ghosh-Dastidar, RAND Statistics Group

Chair(s): Bonnie Ghosh-Dastidar, RAND Statistics Group

10:35 a.m. Dissatisfied Beneficiaries in a Satisfied World: Problem-oriented Reporting in Medicare CAHPS—◆ Marc Elliott, RAND Corporation

11:00 a.m. Quality Assessment Using Flexible Prior Distributions and Triple-goal Estimates in Hierarchical Models—
 ◆ Susan M. Paddock, RAND Corporation; Greg Ridgeway, RAND Corporation; Rongheng Lin, Johns Hopkins University; Thomas A. Louis, Johns Hopkins University

11:25 a.m. Measuring the Process-outcome Link in Health Services Research—◆ John Adams, RAND Corporation; Katherine Kahn, RAND Corporation; Diana Tisnado, University of California, Los Angeles; Honghu Liu, University of California, Los Angeles; Wen-Pin Chen, University of California, Los Angeles; Ashlee Hu, University of California, Los Angeles; Ron D. Hays, University of California, Los Angeles; Carol M. Mangione, University of California, Los Angeles; Cheryl L. Damberg, RAND Corporation

11:50 a.m. Disc: Dan McCaffrey, RAND Corporation

12:10 p.m. Floor Discussion

249

MCC-211 B

Discrete Choice and Conjoint Experiments—Invited
Section on Physical and Engineering Sciences, Section on Statistics and Marketing

Organizer(s): Angela Dean, The Ohio State University

Chair(s): Daniel T. Voss, Wright State University


10:35 a.m. The Design of Stated Choice Experiments—◆ Warren F. Kuhfeld, SAS Institute, Inc.; Randall D. Tobias, SAS Institute, Inc.

11:00 a.m. Efficient Designs for Conjoint Analysis and Discrete Choice Experiments—◆ Rainer Schwabe, Otto von Guericke University

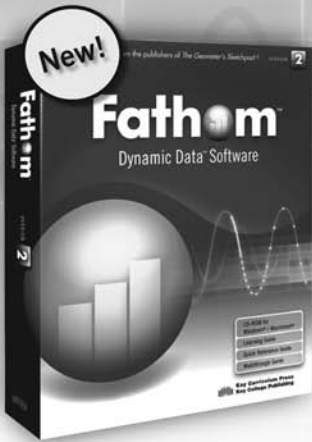
11:25 a.m. An Integrated Model of Choice and Response Time with Applications to Conjoint Analysis—Greg M. Allenby, The Ohio State University; ◆ Thomas Otter, The Ohio State University

11:50 a.m. Disc: Stephen Jones, The Boeing Company


12:15 p.m. Floor Discussion


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250 **MCC-103 F**

● ☆ **Topics in Automotive Risk Analysis—Invited**
Section on Risk Analysis, Section on Government Statistics

Organizer(s): Duane Steffey, Exponent, Inc.

Chair(s): David Banks, Duke University

- 10:35 a.m.** Assessing Speed as a Factor in Individual Road Accidents: Bayesian Accident Reconstruction and Case-control Analysis—◆ Gary A. Davis, University of Minnesota
- 11:00 a.m.** Developing Exposure Measures To Evaluate Vehicle Accident Risk—◆ Michael P. Cohen, Bureau of Transportation Statistics; Lee Giesbrecht, Bureau of Transportation Statistics; Jonaki Bose, Bureau of Transportation Statistics
- 11:25 a.m.** Bayesian Multivariate Spatial Models for Roadway Traffic Crash Mapping—◆ Joon Jin Song, University of Massachusetts; Malay Ghosh, University of Florida; Shaw-Pin Miaou, Texas Transportation Institute; Bani Mallick, Texas A&M University
- 11:50 a.m.** Vehicle Rollover Risk Analysis: Metrics and Methods—◆ Duane Steffey, Exponent, Inc.; Alan Donelson, Consultant; Helene Grossman, Exponent, Inc.; Ke Zhao, Exponent, Inc.
- 12:15 p.m.** Floor Discussion

251 **MCC-102 C**

● ☆ **Stratification on Post-treatment Variables in Causal Inference—Invited**

General Methodology, Section on Health Policy Statistics, WNAR, Biometrics Section

Organizer(s): Dylan Small, The University of Pennsylvania

Chair(s): Dylan Small, The University of Pennsylvania

- 10:35 a.m.** Causal Effects in Fetal Toxicology—◆ Michael R. Elliott, University of Pennsylvania
- 11:00 a.m.** Designs in Partially Controlled Studies: Messages from a Review and a New Direction—Fan Li, Johns Hopkins University; ◆ Constantine Frangakis, Johns Hopkins University
- 11:25 a.m.** Defining and Estimating Intervention Effects for Groups Who Will Develop an Auxiliary Outcome—◆ Marshall M. Joffe, University of Pennsylvania
- 11:50 a.m.** Sensitivity Analysis Comparing Outcomes Measured Only in a Subset Selected Post-randomization with Application to HIV Vaccine Trials—◆ Peter Gilbert, Fred Hutchinson Cancer Research Center; Bryan Shepherd, University of Washington; Yannis Jemai, Harvard School of Public Health; Andrea Rotnitzky, Harvard School of Public Health
- 12:15 p.m.** Floor Discussion

252 **MCC-200 F**

● ☆ **Semiparametric Latent Variable Methods with Biomedical Applications—Invited**

Biometrics Section, Section on Bayesian Statistical Science, ENAR, Section on Statistics in Epidemiology, WNAR

Organizer(s): David Dunson, National Institute of Environmental Health Sciences

Chair(s): Bo Cai, National Institute of Environmental Health Sciences

- 10:35 a.m.** Bayesian Nonparametric Regression Analysis when Covariates Are Subject-specific Parameters in a Random-effects Model for Longitudinal Measurements—◆ Bani Mallick, Texas A&M University
- 11:00 a.m.** Clustering Based on Dirichlet Mixtures of Attribute Subsets—◆ Peter Hoff, University of Washington
- 11:25 a.m.** Joint Modeling of Accelerated Failure Time and Longitudinal Data—◆ Jane-Ling Wang, University of California, Davis; Fushing Hsieh, University of California, Davis; Yi-Kuan Tseng, University of California, Davis
- 11:50 a.m.** Bayesian Latent Variable Density Regression with Applications in Molecular Epidemiology—◆ David Dunson, National Institute of Environmental Health Sciences
- 12:15 p.m.** Floor Discussion

Invited Panels 10:30 a.m.–12:20 p.m.

253 **MCC-208 A**

● ☆ **Education Research Meets the Gold Standard: Statistics, Education, and Research Methods after ‘No Child Left Behind’—Invited**

Section on Survey Research Methods, Social Statistics Section

Organizer(s): Mack C. Shelley, II, Iowa State University

Chair(s): Donsig Jang, Mathematica Policy Research, Inc.

- Panelists:** ◆ Mack C. Shelley, II, Iowa State University
 ◆ Larry V. Hedges, University of Chicago
 ◆ Brian M. Hand, Iowa State University

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

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MCC-205 D

● **Cross National Comparison of Classifications of Race and Ethnicity—Invited**

Social Statistics Section, Section on Survey Research Methods

Organizer(s): Mary Chamie, United Nations

Chair(s): Mary Chamie, United Nations

- Panelists:** ◆ Charles Louis Kincannon, U.S. Census Bureau
 ◆ Douglas Norris, Statistics Canada
 ◆ Tukufu Zuberi, University of Pennsylvania
 ◆ Ann Morning, New York University
 ◆ Dallas Welch, Statistics New Zealand

12:10 p.m. Floor Discussion

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

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MCC-201 AB

Advances in Mixed Model Selection—Topic Contributed
 Biometrics Section, WNAR

Organizer(s): Matthew J. Gurka, University of Virginia

Chair(s): Matthew J. Gurka, University of Virginia

10:35 a.m. Selecting the Best Linear Mixed Model: the State of the Art for Longitudinal Data—◆ Lloyd J. Edwards, The University of North Carolina at Chapel Hill; Keith E. Muller, The The University of North Carolina at Chapel Hill; Matthew J. Gurka, University of Virginia; Paul W. Stewart, The University of North Carolina at Chapel Hill

10:55 a.m. Goodness-of-fit in Generalized Linear and Nonlinear Mixed-effects Models—◆ Edward Vonesh, Baxter Healthcare Corporation

11:15 a.m. Healthy Akaike Information Criterion—◆ Eugene Demidenko, Dartmouth University

11:35 a.m. The Effect of Misspecified Baseline Characteristics on Inference for Longitudinal Trends in Linear Mixed Models—◆ Geert Verbeke, Katholieke Universiteit Leuven; Steffen Fieuws, Katholieke Universiteit Leuven

11:55 a.m. Formal and Informal Mixed Model Selection When Data Are Incomplete—◆ Geert Molenberghs, Limburgs Universitair Centrum

12:15 p.m. Floor Discussion

256

MCC-102 A

☆ **Student Paper Award Winners—Topic Contributed**

Section on Statistical Computing, Section on Bayesian Statistical Science, Section on Statistical Graphics

Organizer(s): Jose Pinheiro, Novartis Pharmaceuticals

Chair(s): Jose Pinheiro, Novartis Pharmaceuticals

10:35 a.m. Estimation of Antenna Sensitivities for Parallel MRI—◆ Mingyu Cao, Carnegie Mellon University; Victor A. Stenger, University of Pittsburgh; William F. Eddy, Carnegie Mellon University

10:55 a.m. Singular Value Decomposition and Its Visualization—◆ Lingsong Zhang, The University of North Carolina at Chapel Hill; James Marron, The University of North Carolina at Chapel Hill; Haipeng Shen, The University of North Carolina at Chapel Hill; Zhengyuan Zhu, The University of North Carolina at Chapel Hill

11:15 a.m. Fully Bayesian Computing—◆ Jouni Kerman, Columbia University; Andrew Gelman, Columbia University

11:35 a.m. Adaptive Exploration of Computer Experiment Parameter Spaces—◆ Robert B. Gramacy, University of California, Santa Cruz; Herbert Lee, University of California, Santa Cruz; William G. Macready, NASA Ames Research Center

11:55 a.m. Disc: Fei Chen, Fair Isaac Corporation

12:10 p.m. Floor Discussion

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MCC-200 I

● ☆ **Statistical Issues in Medical Devices Studies—Topic Contributed**

Biopharmaceutical Section, WNAR

Organizer(s): Roseann White, Guidant Corporation; Gregory Campbell, U.S. Food and Drug Administration

Chair(s): Charles Rowland, Celera Diagnostics

10:35 a.m. The Design of the VA/NINDS Randomized Clinical Trial of Deep Brain Stimulation for Treatment of Parkinson's Disease—◆ Domenic Reda, U.S. Department of Veterans Affairs; Kwan Hur, U.S. Department of Veterans Affairs; Kenneth Follett, University of Nebraska Medical Center; Frances Weaver, VA Hospital; Matthew Stern, VA Medical Center; Crystal Harris, VA Medical Center

10:55 a.m. Normal Approximation to Binomial Distribution for Sample Size and Power Calculation in Equivalence Trials—◆ Bipasa Biswas, U.S. Food and Drug Administration

11:15 a.m. Comparison of Two Randomized Experimental Designs—◆ Kyunghye Song, U.S. Food and Drug Administration; Kyung Lee, U.S. Food and Drug Administration

11:35 a.m. Disc: Philip Lavin, Averion, Inc.

11:55 a.m. Floor Discussion

258 **MCC-103 A**

● ☆ **Bayesian Sample Size and Test—Topic Contributed**
Section on Bayesian Statistical Science, Biopharmaceutical Section

Organizer(s): *Cyr Emile M'Lan, University of Connecticut*

Chair(s): *Feng Liang, Duke University*

10:35 a.m. Bayesian Sample Size Determination for Case-control Studies—◆ *Cyr Emile M'Lan, University of Connecticut*

10:55 a.m. Bayesian Sample Size Computations in Longitudinal Models—◆ *Robert Weiss, University of California, Los Angeles; Wang Yan, Amylin Pharmaceuticals*

11:15 a.m. A Simulation-based Approach to Bayesian Sample Size Determination: Examples and Issues—◆ *Fei Wang, Boston University*

11:35 a.m. Testing Equality of Two Functions Using BARS—◆ *Sam Behseta, California State University, Bakersfield; Robert E. Kass, Carnegie Mellon University*

11:55 a.m. Designing Studies Involving Nongold Standard Diagnostic Tests—◆ *Nandini Dendukuri, McGill University; Elham Rahme, McGill University; Patrick Belisle, McGill University; Lawrence Joseph, McGill University*

12:15 p.m. Floor Discussion

259 **MCC-102 E**

● ☆ **Bayesian Student Competition Papers (Biological Applications)—Topic Contributed**

Section on Bayesian Statistical Science, WNAR, Biometrics Section

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

Chair(s): *Hal Stern, University of California, Irvine*

10:35 a.m. Detecting Patterns of Natural Selection in DNA Sequences Using Bayesian Generalized Linear Models—◆ *Daniel Merl, University of California, Santa Cruz; Raquel Prado, University of California, Santa Cruz*

10:55 a.m. Exploratory Bayesian Model Selection for High-order SNP-phenotype Associations—◆ *Jing Zhao, Merck & Co., Inc.; Andrea S. Foulkes, University of Massachusetts; Edward I. George, University of Pennsylvania; Muredach Reilly, University of Pennsylvania; Daniel J. Rader, University of Pennsylvania*

11:15 a.m. Ranking USRDS Provider-specific SMRs from 1998–2001—◆ *Rongheng Lin, Johns Hopkins University; Thomas A. Louis, Johns Hopkins University; Susan M. Paddock, RAND Corporation; Greg Ridgeway, RAND Corporation*

11:35 a.m. Modeling Spatially Correlated Data for Individuals with Multiple Cancers—◆ *Ulysses Diva, University of Connecticut; Sudipto Banerjee, University of Minnesota; Dipak Dey, University of Connecticut*

11:55 a.m. Metropolis Algorithms for Finding Ecological/Environmental Relationships—◆ *David Farrar, Virginia Polytechnic Institute and State University*

12:15 p.m. Floor Discussion

260 **MCC-208 C**

The Continual Maintenance of the U.S. Census Bureau's Address List—Topic Contributed

Section on Government Statistics, Social Statistics Section

Organizer(s): *Maryann Chapin, U.S. Census Bureau*

Chair(s): *David L. Hubble, U.S. Census Bureau*

10:35 a.m. Evaluating Net Coverage on the Census Bureau's Master Address File Using Independent Housing Unit Estimates—◆ *Christopher Johns, U.S. Census Bureau*

10:55 a.m. Deciphering the DSF: Which Addresses from the Delivery Sequence File Should Be Included in the Sampling Frames for Demographic Surveys?—◆ *Clifford L. Loudermilk, U.S. Census Bureau; Timothy Lynn Kennel, U.S. Census Bureau*

11:15 a.m. Updating the Master Address File: Analysis of Adding Addresses via the Community Address Updating System—◆ *Jared Dean, U.S. Census Bureau*

11:35 a.m. Comparing the U.S. Census Bureau's Master Address File (MAF) to the Survey of Income and Program Participation Area Listings—◆ *Timothy Lynn Kennel, U.S. Census Bureau; Marjorie M. Corlett, U.S. Census Bureau*

11:55 a.m. Quality and Coverage of Listings for Area Sampling—◆ *Jeffrey M. Pearson, U.S. Census Bureau*

12:15 p.m. Floor Discussion

261 **MCC-202 AB**

● ☆ **Recent Development in Sufficient Dimension Reduction—Topic Contributed**

Biometrics Section, WNAR

Organizer(s): *Xiangrong Yin, University of Georgia*

Chair(s): *Lexin Li, University of California, Davis*

10:35 a.m. Hybrid Methods of Inverse Regression-based Algorithms—◆ *Lixing Zhu, The University of Hong Kong*

10:50 a.m. Shrinkage in Sufficient Dimension Reduction—◆ *Liqiang Ni, University of Central Florida; R. D. Cook, University of Minnesota; Chih-Ling Tsai, University of California, Davis*

11:15 a.m. K-means Inverse Regression—◆ *Messan Setodji, RAND Corporation*

11:35 a.m. Transformation Methods for Dimension Reduction—◆ *Shaoli Wang, Yale University; Bing Li, The Pennsylvania State University*

GENERAL PROGRAM SCHEDULE

☆ Themed Session ● Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

11:55 a.m. **Mixed Factors Analysis with the Application to Clustering of DNA Microarray Experiments—**
◆ Ryo Yoshida, Institute of Statistical Mathematics; Tomoyuki Higuchi, Institute of Statistical Mathematics; Seiya Imoto, University of Tokyo

12:05 p.m. Floor Discussion

262 **MCC-208 D** ● **Disclosure Techniques: Thirty Years to Today—Topic Contributed**

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

Organizer(s): Steve Cohen, Bureau of Labor Statistics

Chair(s): Arnold Reznak, U.S. Census Bureau

10:35 a.m. **An Update on Statistical Disclosure Avoidance Methodologies for Tabular and Microdata Files—**
◆ Jacob Bournazian, Energy Information Administration

10:55 a.m. **A Comparative Assessment of Methods for Protecting Confidentiality—**◆ David Wilson, RTI International

11:15 a.m. **Preserving Confidentiality While Sharing Vertically Partitioned Data—**◆ Christine Kohnen, Duke University; Jerome Reiter, Duke University

11:35 a.m. **Modeling and Quality of Masked Microdata—**◆ William Winkler, U.S. Census Bureau

11:55 a.m. **Procedures To Reduce the Risk of Disclosure in the Microdata Files from a Health Survey—**◆ Meena Khare, National Center for Health Statistics; Michael Battaglia, Abt Associates, Inc.

12:15 p.m. Floor Discussion

263 **MCC-208 B** ● ☆ **Statistical Methodological Developments in Natural Resources Surveys—Topic Contributed**

Section on Survey Research Methods, Section on Statistics and the Environment

Organizer(s): Michael D. Larsen, Iowa State University

Chair(s): Jennifer A. Hoeting, Colorado State University

10:35 a.m. **Estimating Trend in Oregon Coastal Coho Salmon Populations Using a Multipanel Sampling Design—**
◆ Don Stevens, Jr., Oregon State University; William Gaeuman, Oregon State University

10:55 a.m. **County-level Estimates of Cover and Crop Management Factor for the National Resources Inventory—**◆ Pushpal Mukhopadhyay, Iowa State University; Tapabrata Maiti, Iowa State University; Wayne A. Fuller, Iowa State University

11:15 a.m. **Estimation for Longitudinal Surveys with Repeated Panels of Observations—**◆ Jason C. Legg, Iowa State

University; Wayne A. Fuller, Iowa State University; Sarah Nusser, Iowa State University

11:35 a.m. **Estimating the Number of Bald Eagle Breeding Pairs in Maine Using Dual Frames and Double Observers—**
◆ Mark Otto, U.S. Fish and Wildlife Service; John R. Sauer, U.S. Geological Survey; Charlie Todd, Maine Department of Fisheries & Wildlife

11:55 a.m. **Challenges to Resolving Statistical Issues for an Upper Mississippi River Ecological Monitoring Program—**
◆ Brian Gray, U.S. Geological Survey

12:15 p.m. Floor Discussion

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

264 **MCC-103 D** **Nuts and Bolts of Classroom Assessment—Topic Contributed**

Section on Statistical Education

Organizer(s): Joy Jordan, Lawrence University

Chair(s): Joy Jordan, Lawrence University

Panelists: ◆ E. Jacquelin Dietz, Meredith College
◆ Robert Gould, University of California, Los Angeles
◆ Brad Hartlaub, Kenyon College
◆ Allan J. Rossman, California Polytechnic State University

12:15 p.m. Floor Discussion

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

265 **MCC-212 AB** **Modeling, Inference, and Monte Carlo Methods—Contributed**

IMS, Section on Bayesian Statistical Science

Chair(s): Patricia Carter, Naval Surface Warfare Center, Dahlgren Division

10:35 a.m. **Filtering with a Marked Point Process Observation: Applications to the Econometrics of Ultra-high-frequency Data—**◆ Yong Zeng, University of Missouri, Kansas City

10:50 a.m. **Inference for Very Heavy-tailed Distributions Using Trimmed L-moments—**◆ J. R. M. Hosking, IBM

11:05 a.m. **Monte Carlo Methods for Maximizing Intractable Likelihood Functions—**◆ Ronald Neath, University of Minnesota; Galin Jones, University of Minnesota

- 11:20 a.m.** New Perfect Sampling Algorithms with Applications to Bayesian Computations, Engineering, and Finance—
◆ Jose Blanchet, Harvard University; Peter W. Glynn, Stanford University; Xiao-Li Meng, Harvard University
- 11:35 a.m.** Hierarchical Bayesian Analysis of Genetic Diversity in Geographically Structured Populations—◆ Seongho Song, University of Connecticut; Dipak Dey, University of Connecticut; Kent E. Holsinger, University of Connecticut
- 11:50 a.m.** Online Learning of Dynamic Graphical Models via Particle Filters—◆ Makram Talih, Hunter College, CUNY
- 12:05 p.m.** Floor Discussion

266 MCC-200 H

● PK, Bayesian, and Metaanalysis—Contributed

Biopharmaceutical Section, Section on Bayesian Statistical Science, WNAR

Chair(s): Robert A. Smith, Bristol-Myers Squibb Company

- 10:35 a.m.** Statistical Evaluation of Two-compartment Mathematical Models for Prediction of Parasite Clearance in Cerebral Malaria—◆ Wayne Chen, Minnesota State University Moorhead; Christine McLaren, University of California, Irvine; Wen-Pin Chen, Chao Family Comprehensive Cancer Center; Sornchai Looareesuwan, Mahidol University; Gary M. Brittenham, Columbia University
- 10:50 a.m.** Comparison of Models for Average Bioequivalence in Replicated Crossover Designs—◆ Susan Willavize, Pfizer, Inc.; Elizabeth A. Morgenthien, The Quincunx Group
- 11:05 a.m.** Bayesian Inference for Nonlinear Models Involving ODEs—◆ Lovely Goyal, North Carolina State University; Sujit K. Ghosh, North Carolina State University
- 11:20 a.m.** Use of Prior Distributions for Bayesian Evaluation of Bridging Studies—◆ Chinfu Hsiao, National Health Research Institutes; Jen-Pei Liu, National Taiwan University; Yu-Yi Hsu, National Health Research Institutes
- 11:35 a.m.** A Range Test for Bioequivalence under Heteroscedasticity—◆ Shun-Yi Chen, Tamkang University
- 11:50 a.m.** A Bayesian Pharmacokinetic Metaanalysis for Published Sample Mean Data: a Ketoconazole-Midazolam Example in Drug-drug Interaction Research—◆ Lang Li, Indiana University; Menggang Yu, Indiana University; Aroonrut Luksiri, Indiana University; Stephen D. Hall, Indiana University
- 12:05 p.m.** New Advances in Metaanalysis—◆ Ehsanes A. K. Saleh, Carleton University; Khatab Hassanein, University of Kansas Medical Center; Ruth Hassanein, University of Kansas Medical Center; H. M. Kim, University of Alberta

267 MCC-103 B

Financial Time-series Models—Contributed Business and Economics Statistics Section

Chair(s): Lawrence Marsh, University of Notre Dame

- 10:35 a.m.** Semiparametric Estimation of a Multivariate Distribution Using Copulas When Each Variable Satisfies a Regression Model—◆ Mervyn Silvapulle, Monash University; Gunky Kim, Monash University; Paramsothy Silvapulle, Monash University
- 10:50 a.m.** Nonparametric Estimation of Volatility Models with Serially Dependent Innovations—◆ Michael Levine, Purdue University; Christian M. Dahl, Purdue University
- 11:05 a.m.** Gaussian Approximations of Option Prices in Stochastic Volatility Models—◆ Yichao Wu, The The University of North Carolina at Chapel Hill; Chuanshu Ji, The The University of North Carolina at Chapel Hill
- 11:20 a.m.** The Dynamics of the London Gold Fix Volatility: an APARCH Analysis—◆ Stephen Pollard, California State University, Los Angeles; Giorgio Canarella, California State University, Los Angeles
- 11:35 a.m.** Option Pricing and Hedging for Stock Prices with Discrete Jumps and Stochastic Intensity Rate—
◆ Rituparna Sen, University of California, Davis
- 11:50 a.m.** Modeling the Dynamic Dependence Structure in Multivariate Financial Time Series—◆ Mihaela Serban, Carnegie Mellon University; John Lehoczky, Carnegie Mellon University; Anthony E. Brockwell, Carnegie Mellon University; Sanjay Srivastava, Carnegie Mellon University
- 12:05 p.m.** Floor Discussion

268 MCC-211 D

Regression I—Contributed Section on Nonparametric Statistics

Chair(s): Ionut Florescu, Stevens Institute of Technology

- 10:35 a.m.** Optimal Sufficient Dimension Reduction of Predictors and Responses for the Multivariate Conditional Mean—◆ Jae Keun Yoo, University of Minnesota
- 10:50 a.m.** A Test for the Linear Single-index Model—
K. B. Kulasekera, Clemson University; ◆ Wei Lin, Clemson University
- 11:05 a.m.** A New Method for Partial Sufficient Dimension Reduction by Using Intraslice Information—◆ Xuerong Wen, University of Minnesota
- 11:20 a.m.** Generalization of Cook's Distance to Nonlinear and Nonparametric Regressions—◆ Yongwu Shao, University of Minnesota

11:35 a.m. Testing for Nonlinearity in Censored Median Regression Model When the Alternative Is Smooth—◆ Lan Wang, University of Minnesota

11:50 a.m. Dimension Estimation and Variable Selection via Sufficient Dimension Reduction—◆ Douglas Drake, University of Minnesota

12:05 p.m. Tutorial on Regression Splines—◆ Jill McCracken, Booz Allen Hamilton; Pier Bobys, Booz Allen Hamilton; Yasmin Said, George Mason University; Carlos Alzola

269 **MCC-209 AB**

● **Part I: Sample Allocation; Part II, NCS Redesign—Contributed**

Section on Survey Research Methods

Chair(s): Yahia Ahmed, U.S. Internal Revenue Service

10:35 a.m. Results of the Variance Component Analysis of Sample Allocation by Age in the National Survey of Drug Use and Health—◆ Susan Hunter, RTI International; Katherine Bowman, RTI International; James Chromy, RTI International

10:50 a.m. Alternative Sample Allocations for the U.S. Current Employment Statistics Survey—◆ Gregory Erkens, Bureau of Labor Statistics; Larry L. Huff, Bureau of Labor Statistics; Julie B. Gershunskaya, Bureau of Labor Statistics

11:05 a.m. Composite Stratum Variance Estimation for Agriculture Area Frame Sample Allocation—◆ Raj Chhikara, University of Houston, Clear Lake; Charles R. Perry, National Agricultural Statistics Service; Floyd M. Spears, Harding University

11:20 a.m. Efficient Sampling Design and Estimation in Audit Data (II)—◆ Yan Liu, Ernst & Young LLP; Mary Batchler, Ernst & Young LLP; Fritz J. Scheuren, The University of Chicago

11:35 a.m. Phase-in of the Redesign of the National Compensation Survey Area Sample—◆ Jason Tehonica, Bureau of Labor Statistics; Lawrence R. Ernst, Bureau of Labor Statistics; Chester H. Ponikowski, Bureau of Labor Statistics

11:50 a.m. Update on the Redesign of the National Compensation Survey—◆ Yoel Izsak, Bureau of Labor Statistics; Lawrence R. Ernst, Bureau of Labor Statistics; Erin McNulty, Bureau of Labor Statistics; Steven P. Paben, Bureau of Labor Statistics; Chester H. Ponikowski, Bureau of Labor Statistics; Glenn Springer, Bureau of Labor Statistics; Jason Tehonica, Bureau of Labor Statistics

12:05 p.m. Reducing Sample Sizes in the National Compensation Survey in Response to Budget Cuts—◆ Christopher J. Gucciardo, Bureau of Labor Statistics; Lawrence R. Ernst, Bureau of Labor Statistics; Gwyn R. Ferguson, Bureau of Labor Statistics; Yoel Izsak, Bureau of Labor Statistics; Erin McNulty, Bureau of Labor Statistics

270 **MCC-102 B**

Nonparametrics/Robust Methods—Contributed

General Methodology, Section on Nonparametric Statistics

Chair(s): Jing Cheng, University of Pennsylvania

10:35 a.m. Reweighting the Lasso—◆ Peter Radchenko, The University of Chicago

10:50 a.m. Lasso, MR-Lasso, and RA-Lasso—◆ Chih-Ling Tsai, University of California, Davis

11:05 a.m. Nonparametric Regression Using Kernel Estimating Equations for Correlated Failure Time Data—◆ Zhangsheng Yu, University of Michigan; Xihong Lin, Harvard University

11:20 a.m. ANOVA Boosting—◆ Yongdai Kim, Seoul National University; Jinseog Kim, Seoul National University

11:35 a.m. Resampling Spatial Processes Using Marks—◆ Ji Meng Loh, Columbia University

11:50 a.m. A Self-building System for Ranked Set Sampling—◆ Tao Yu, University of Cincinnati; Ran He, University of Cincinnati; Marepalli Rao, University of Cincinnati

12:05 p.m. Assessing Isotropy for Spatial Point Patterns—◆ Michael Sherman, Texas A&M University

271 **MCC-102 F**

● ☆ **Recent Development in Bayesian Model Checking, Comparison, and Selection—Contributed**

Section on Bayesian Statistical Science

Chair(s): Lan Huang, National Cancer Institute

10:35 a.m. IRT Model-checking Strategies from a Bayesian Perspective—◆ Sherwin Toribio, Bowling Green State University; James Albert, Bowling Green State University

10:50 a.m. Accuracy Comparison of State Estimation and Parameter Identification by Particle and Ensemble Kalman Filters for Nonlinear Observation System—◆ Kazuyuki Nakamura, The Institute of Statistical Mathematics; Tomoyuki Higuchi, Institute of Statistical Mathematics

11:05 a.m. A Partition Model for Bayesian Multiple Comparisons—◆ Jie Yang, The University of Chicago; Peter McCullagh, The University of Chicago

11:20 a.m. Estimation and Model Choice in Nonparametric Additive Regression—◆ Ivan Jeliazkov, University of California, Irvine; Siddhartha Chib, Washington University in St. Louis

11:35 a.m. A Bayesian Inference of Key Comparisons with Unstable Traveling Standards: with Applications to CCM.M-K1—◆ Hung-Kung Liu, National Institute of Standards and Technology; Zeina Jabbour, National Institute of Standards and Technology

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- 11:50 a.m.** Bayesian Variable Selection for the Analysis of High-dimensional Censored Data—◆ Najjun Sha, The University of Texas at El Paso; Mahlet G. Tadesse, University of Pennsylvania; Marina Vannucci, Texas A&M University

12:05 p.m. Floor Discussion

272

MCC-103 E

● **Issues and Methods of Program and Course Development in Teaching Statistics for the Health Sciences—Contributed**

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

Chair(s): Patrick G. Arbogast, Vanderbilt University

- 10:35 a.m.** Using an Empirical Problem-solving Framework as a Basis for a Research Methods Short Course Curriculum—◆ Rhonda Rosychuk, University of Alberta
- 10:50 a.m.** Using Item Response Theory and an Anchor Item Test Design To Develop Local Test Score Norms and Content Evaluations for an Introductory Biostatistics Course—◆ Gerald Arnold, American College of Physicians
- 11:05 a.m.** Experience of Using Stata Software in Teaching an Introductory Biostatistics Course for MSc Nutrition Students from 2002–2004—◆ Novie Younger, University of the West Indies; Ian Hambleton, NIMR/AMREF/LSHTM Collaborative Projects; Kadene Clarke, University of the West Indies; Christine Powell, University of the West Indies
- 11:20 a.m.** Integration of Advanced Statistical Topics into the Graduate Dental Curriculum—◆ Deborah V. Dawson, The University of Iowa
- 11:35 a.m.** Transdisciplinary Approaches to the Teaching of 'Applied' Statistics: 'Similar Strokes for Different Folks'—◆ Mark C. Fulcomer, Richard Stockton College of New Jersey; Jennifer Lyke, Richard Stockton College of New Jersey; Merydawilda Colon, Richard Stockton College of New Jersey; Marcia M. Sass, UMDNJ School of Public Health; S. David Kriska, Restat Systems, Inc.
- 11:50 a.m.** Teaching the Teacher: an Active-learning Exercise To Train Biostatistics Teaching Assistants—◆ Felicity Boyd Enders, Mayo Clinic; Marie Diener-West, Johns Hopkins University
- 12:05 p.m.** Floor Discussion

273

MCC-205 C

● **Statistical Methodology Applied to the Study of Neighborhoods, Migration, and Immigration—Contributed**

Social Statistics Section, Section on Survey Research Methods

Chair(s): Daniel Beckler, National Agricultural Statistics Service

- 10:35 a.m.** Experimental Analysis of Neighborhood Effects on Youth—◆ Jeffrey Kling, Princeton University; Jeffrey Liebman, Harvard University
- 10:50 a.m.** Measurement Error of Group-level Means in Multilevel Modeling: Estimation and Study Design—◆ Jouni Kuha, London School of Economics
- 11:05 a.m.** Movers, Stayers, and Lifers: a Structural Equation Analysis of the Likelihood of Spending the Rest of Your Life in Your Current Home Community—Mack C. Shelley, II, Iowa State University; Sue Crull, Iowa State University; Christine Cook, Iowa State University; ◆ Qi Jiang, Iowa State University; Seongyeon Auh, Iowa State University
- 11:20 a.m.** The Migration Component in a Population Projections Model—◆ Charles D. Palit, University of Wisconsin, Madison; David Egan-Robertson, Wisconsin Department of Administration; Balkrishna Kale, University of Wisconsin, Madison; Paul Voss, University of Wisconsin, Madison
- 11:35 a.m.** Difficulties and Solutions for Surveying Refugees: Bosnian Refugees in St. Louis—◆ Hisako Matsuo, St. Louis University; Terry Tomazic, St. Louis University; Kevin McIntyre, St. Louis University
- 11:50 a.m.** Floor Discussion

274

MCC-210 AB

● **Nonresponse Bias—Contributed**

Section on Survey Research Methods, Social Statistics Section

Chair(s): Inho Park, Westat

- 10:35 a.m.** Identifying and Reducing Nonresponse Bias throughout the Survey Process—◆ Thomas R. Krenzke, Westat; Leyla Mohadjer, Westat; Wendy Van De Kerckhove, Westat
- 10:50 a.m.** Nonresponse Bias in Surveys of Low-income Households—◆ Karen Masken, U.S. Internal Revenue Service; Kerry Levin, Westat; Cynthia Helba, Westat
- 11:05 a.m.** Bayesian Adjustments for Nonignorable Nonresponse in an Incomplete Two-way Categorical Table—◆ Boseung Choi, Korea University; YouSung Park, Korea University
- 11:20 a.m.** An Analysis of Nonresponse Bias in the World Trade Center Health Registry—◆ Joe Murphy, RTI International; Robert Brackbill, New York City Department of Health and Mental Hygiene; James H. Sapp, II, Agency

for Toxic Substances and Disease Registry; Lisa Thalji, RTI International; Paul Pulliam, RTI International

11:35 a.m. Enhancement of the Nonresponse Undercoverage Adjustment Factors for New Home Sales—◆ Bonnie Kegan, U.S. Census Bureau

11:50 a.m. Spreading the Gain: How an Abbreviated Nonresponse Follows Up Can Improve Overall Survey Accuracy—
◆ Vincent Iannacchione, RTI International; Jill Dever, Joint Program in Survey Methodology; Elizabeth Federman, RTI International; Lori Ebert, RTI International; Avinash C. Singh, Statistics Canada

12:05 p.m. Floor Discussion

275 **MCC-205 B** **Model Building, Model Assessment, and Propensity Score-based Methods—Contributed**

Section on Statistics in Epidemiology, ENAR, Biometrics Section

Chair(s): Zheng Zhang, Emory University

10:35 a.m. Hybrid Matching in Observational Studies: Combining Simple Matching with Propensity Score-based Matching Methods—◆ Daniel Parks, GlaxoSmithKline; Kwan R. Lee, GlaxoSmithKline; Bong Kim, Newmann College

10:50 a.m. Raking as a Form of Propensity Scoring—◆ David R. Judkins, Westat

11:05 a.m. Simplifying Measurement of Cardiovascular Risk in Urban Jamaica: the Role of Multivariate Methods—
◆ Tamika Royal, University of the West Indies; Novie Younger, University of the West Indies; Terrence Forrester, University of the West Indies; Richard Cooper, Loyola University Medical Center; Rainford Wilks, University of the West Indies

11:20 a.m. Navigating around a Large Statistical Blindspot: Inferring Clinical Outcomes for Undersampled Populations of Orthodontics Cases from Results Sampled from Different Populations—Christopher Overton, Align Technology; ◆ Xiaorong Chen, Align Technology

11:35 a.m. Properties of R-square Statistics for Logistic Regression—◆ Bo Hu, University of Wisconsin, Madison; Mari Palta, University of Wisconsin, Madison; Jun Shao, University of Wisconsin, Madison

11:50 a.m. A Comparison of Two Models with Full Bayesian Framework for Early Detection of Prostate Cancer—
◆ Wonsuk Yoo, New Jersey Institute of Technology; Elizabeth Slate, Medical University of South Carolina

12:05 p.m. Floor Discussion

276 **MCC-211 A** **Topics in Quality and Productivity—Contributed Section on Quality and Productivity, Section on Physical and Engineering Sciences**

Chair(s): Sharad Prabhu, SAS Institute, Inc.

10:35 a.m. Using Automation To Improve the Quality of the Nonresponse Followup Operation in the United States Decennial Census—◆ Broderick Oliver, U.S. Census Bureau

10:50 a.m. Belief Functions Applied to System Reliability—◆ Wai F. Chiu, Los Alamos National Laboratory; Arthur P. Dempster, Harvard University

11:05 a.m. Semiparametric Models with Estimating Equations for Accelerated Life Test Data—J. C. Lu, Georgia Institute of Technology; ◆ Ni Wang, Georgia Institute of Technology; Paul Kvam, Georgia Institute of Technology; Dion Chen, UCB Pharma, Inc.; Shu Chuan Lin, Georgia Institute of Technology

11:20 a.m. A Simulation Study To Test the Accuracy of Using Maximum Likelihood Predictive Density in Quality Control Assuming the Power Rule Model and the Exponential Distribution—◆ Adam Pintar, Iowa State University; Ananda A. Jayawardhana, Pittsburg State University

11:35 a.m. Analysis of Designs with a Strip-plot Structure—
◆ Carla A. Vivacqua, Universidade Federal do Rio Grande do Norte; Soren Bisgaard, University of Massachusetts; Harold J. Steudel, University of Wisconsin, Madison

11:50 a.m. Floor Discussion

Regular Contributed Posters 10:30 a.m.–12:20 p.m.

277 **MCC-Level Two Lobby B** **Contributed Poster Session 4—Contributed**

IMS, General Methodology, Section on Bayesian Statistical Science, Biometrics Section, Biopharmaceutical Section, Section on Statistical Computing, Section on Statistical Consulting, Section on Nonparametric Statistics, Section on Quality and Productivity

Organizer(s): Ying Kuen Cheung, Columbia University

Chair(s): Ying Kuen Cheung, Columbia University

Bayesian Statistics, Hierarchical Models

01 Analysis of DNA Repair Studies through Bayesian Hierarchical Models for Mixtures—◆ Abel Rodriguez, Duke University; Dunson David, National Institute of Environmental Health Sciences

02 Discrete Time Unobserved Components Models—◆ Miguel Alamo, Bayes Inference, S. A.; Miguel Arranz, Bayes Inference, S. A.

Biometrics, Biostatistics, Epidemiology

- 03** The Probability of Type I Error When Maximizing Multipoint Lod Scores over Model Parameters: a Simulation Study—◆ Chao Xing, Case Western Reserve University; Robert C. Elston, Case Western Reserve University
- 04** Behavior of Agreement Measures in the Presence of Zeroes in Cells and Biased Marginal Distributions—◆ Shankar Viswanathan, The The University of North Carolina at Chapel Hill; Shrikant Bangdiwala, The The University of North Carolina at Chapel Hill
- 05** Inter and Intralaboratory Reproducibility of In Vitro Toxicological Assays—◆ Christina Bromley, BioStat Solutions, Inc.; Nicola Richardson-Harman, BioStat Solutions, Inc.; Brigitte Beer, Southern Research Institute; James Cummins, Southern Research Institute; Carol Lackman-Smith, Southern Research Institute; Ron Bromley, BioStat Solutions, Inc.; Patricia Reichelderfer, National Institutes of Health

Cognitive Science, Linguistics, Artificial Intelligence

- 06** Semisupervised Machine Learning Technique—◆ Morteza Marzjarani, Saginaw Valley State University

Computational Statistics and Numerical Methods

- 07** Interval Estimation of a Finite Mixture Model: Modeling a Distribution of P-values—◆ Qinfang Xiang, University of Missouri, Rolla; Gary Gadbury, University of Missouri, Rolla; Jode Edwards, Iowa State University

General

- 08** Density Power Divergence—◆ Ian Harris, Southern Methodist University

Genetics, Bioinformatics, Computational Biology

- 09** Multiple Imputation Method for SNP Typing Data in Linkage Disequilibrium Mapping of Polygenic Traits—◆ Yasunori Sato, Tokyo University of Science; Hidekazu Ando, Tokyo University of Science; Akihiro Hirakawa, Tokyo University of Science; Hideki Suganami, Tokyo University of Science; Chikuma Hamada, Tokyo University of Science; Isao Yoshimura, Tokyo University of Science; Teruhiko Yoshida, National Cancer Center Research Institute; Kimio Yoshimura, National Cancer Center Research Institute
- 10** Comparative Heterogeneity by Comparative Correlations—◆ Amanda Blackford, Johns Hopkins University; Jeanne Kowalski, Johns Hopkins University; Jyoti Mehrotra, Johns Hopkins University; Marianna Zahurak, Johns Hopkins University; Saraswati Sukumar, Johns Hopkins University
- 11** Accelerating the EM Algorithm for Haplotype Reconstruction from Population Genotype Data—◆ Hormuzd Katki, National Cancer Institute; Ravi Varadhan, Johns Hopkins University; Christophe Roland, Université des Sciences et Technologies de Lille; Bingshu E. Chen, National Institutes of Health; Philip S. Rosenberg, National Cancer Institute
- 12** The Analysis of Oligonucleotide Microarray Data at the Raw Image Level—◆ Jeff Palmer, Carnegie Mellon University

- 13** Holding the Specified False Discovery Rate in Differential Expression Testing Using the Local Pooled Error Method—Michael O'Connell, Insightful Corp.; ◆ Stephen Kaluzny, Insightful Corp.
- 14** Hierarchical Bayesian Analysis for Temporal Microarray Gene Expression Data—◆ Xueya Cai, University at Buffalo; Yulan Liang, University at Buffalo; Yue Li, University of Rochester
- 15** Modeling Correlated Structures in Sequence Motif Problems—◆ Qing Zhou, Harvard University; Wing Hung Wong, Stanford University

Linear Models, GLMs, Parametric Methods

- 16** Generalized Confidence Intervals for Variance Components in Mixed Linear Models—◆ Brent Burch, Northern Arizona University
- 17** The General Definition and Utility of Correlation Coefficients—◆ Rudy Gideon, University of Montana
- 18** Building Variance Models for Regression with Heteroscedasticity—◆ Fasil Nebebe, Concordia University; Tak K. Mak, Concordia University
- 19** Comparison between the Lasso and the Parametric Stepwise Selection Methods in the Context of Linear Regression—◆ Won Sun Chen, Clinical Research Center, Ministry of Health Malaysia; Jeremy Nadolski, Benedictine University

Semiparametric, Nonparametric Methods

- 20** Multiple Comparisons of Medians Using Permutation Tests—◆ Scott J. Richter, University of North Carolina, Greensboro; Melinda McCann, Oklahoma State University
- 21** Sieve Maximum Likelihood in Survival Analysis—◆ Yonggang Zhao, i3 Statprobe; Xiaotong Shen, University of Minnesota; Dennis Pearl, The Ohio State University
- 22** Classification Based on Data Depth—◆ Asuman Turkmen, Auburn University; Sai V. Nudurupati, Auburn University; Asheber Abebe, Auburn University; Nedret Billor, Auburn University

Speaker Luncheon 12:30 p.m.–1:50 p.m.

278 **MCC-206 AB** Economic Outlook Speaker Luncheon (fee event)— Luncheons

Business and Economics Statistics Section

Organizer(s): Margaret Land, Texas A&M University

- TL00** Rising Gas Consumption, Rising Temperatures: U.S. Global Warming Policy in the Age of the Sport Utility Vehicle—◆ Sarah E. West, Macalester College

Roundtable Luncheons 12:30 p.m.–1:50 p.m.

279 **MCC-Ballroom B** Biopharmaceutical Section Roundtable Luncheons (fee event)—Luncheons

Organizer(s): B. Christine Clark, ICON Clinical Research

- TL01** Longitudinal Data Analysis: Some Practical Recommendations—◆ Devan Mehrotra, Merck Research Laboratories
- TL02** Operational Aspects of Data Monitoring Committees: Industry Perspective—◆ Kannan Natarajan, Bristol-Myers Squibb Company
- TL03** Reliability: Intraclass Correlation between and within Readers in Clinical Trials—◆ Girish Aras, Amgen Inc.
- TL04** Significant Sequence Effect in a Crossover Design—◆ Anna Nevius, U.S. Food and Drug Administration
- TL05** Screening or Diagnostic Imaging Devices: Statistical Assessment of Effectiveness—◆ Harry Bushar, U.S. Food and Drug Administration
- TL06** Careers in Statistics—◆ Katherine Monti, Rho, Inc.
- TL07** Proof of Concept in Exploratory Development—◆ Alfred Balch, Novartis Pharmaceuticals

280 **MCC-Ballroom B** Section on Bayesian Statistical Science Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Steven N. MacEachern, The Ohio State University

- TL08** Bayesian Statistics and Marketing—◆ Greg M. Allenby, The Ohio State University

281 **MCC-Ballroom B** Section on Government Statistics Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Michael P. Cohen, Bureau of Transportation Statistics

- TL09** Statistical Issues Arising in Transportation—◆ Promod Chandhok, Bureau of Transportation Statistics

282 **MCC-Ballroom B** Section on Health Policy Statistics Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Chris Schmid, Tufts New England Medical Center

- TL10** Secondary Data Analysis: Major Health-related Datasets and How To Use Them—◆ Sarah E. Boslaugh, Washington University School of Medicine
- TL11** Statistics as Used in Physician Membership Associations—◆ Ronald Tolleson, American Academy of Family Physicians

- TL12** Longitudinal Data: Basic Concepts—◆ Joseph Cappelleri, Pfizer, Inc.

- TL13** Integrated Survey Designs: Improving Efficiency—◆ Marc Berk, NORC at the University of Chicago; Steven B. Cohen, Agency for Healthcare Research and Quality

283 **MCC-Ballroom B** Section on Physical and Engineering Sciences Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Thomas Loughin, Kansas State University

- TL14** The Role of Statistical Science in Understanding Climate Change—◆ Douglas Nychka, National Center for Atmospheric Research

284 **MCC-Ballroom B** Section on Quality and Productivity Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Martha Gardner, GE Global Research

- TL15** Coming to Terms with DOE Models—◆ Rob Kelly, Minitab Inc.

285 **MCC-Ballroom B** Section on Statistical Graphics Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Juergen Symanzik, Utah State University

- TL16** Data Visualization in GGobi—◆ Deborah Swayne, AT&T Labs-Research

286 **MCC-Ballroom B** Section on Statistics and the Environment Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Estelle Russek-Cohen, U.S. Food and Drug Administration

- TL17** International Studies in Environmental Health—◆ Estelle Russek-Cohen, U.S. Food and Drug Administration
- TL18** Setting Environmental Standards—◆ Peter Guttorp, University of Washington

287 **MCC-Ballroom B** Section on Survey Research Methods Roundtable Luncheons (fee event)—Luncheons

Organizer(s): David R. Judkins, Westat

- TL19** Bridging the Gap: Moving to the 1997 Standards for Collecting Data on Race and Ethnicity—◆ Jennifer Madans, National Center for Health Statistics
- TL20** Survey Methods in Biostatistics—◆ Julia Bienias, Rush University Medical Center
- TL21** The Second International Conference on Telephone Survey Methodology—◆ Clyde Tucker, Bureau of Labor Statistics

288 **MCC-Ballroom B** Social Statistics Section Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Juanita Tamayo Lott, U.S. Census Bureau

- TL22** A Multigenerational Conversation among Statisticians—
◆ Gladys Reynolds, U.S. Centers for Disease Control and Prevention

289 **MCC-Ballroom B** Section on Teaching of Statistics in the Health Sciences Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Janet Tooze, Wake Forest University School of Medicine

- TL23** Integrating Statistical Software into Health Sciences Graduate Courses—◆ Jodi Lapidus, Oregon Health & Science University

290 **MCC-Ballroom B** ☆ Section on Statistics in Defense and National Security Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Wendy Martinez, Office of Naval Research

- TL24** Issues in Syndromic Surveillance for Homeland Security—
◆ Ronald Fricker, Naval Postgraduate School

291 **MCC-Ballroom B** Section on Statistical Education Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Paul J. Roback, St. Olaf College

- TL25** Research on the Effect of Technology on Statistical Learning—◆ Monnie McGee, Southern Methodist University
- TL26** K-12 Statistics Is a Key to Career and Life Decisions—
◆ Arnold Goodman, UCI Center for Statistical Consulting
- TL27** The Second Course in Statistics—◆ Laura Chihara, Carleton College

292 **MCC-Ballroom B** Section on Risk Analysis Roundtable Luncheon (fee event)—Luncheons

Section on Risk Analysis

Organizer(s): Ingo Ruczinski, Johns Hopkins University

- TL28** Risk Assessment for Natural Disasters—◆ Sarah Michalak, Los Alamos National Laboratory

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

293 **MCC-205 A** The ASA Stat Bowl Session 2

The ASA, ENAR, WNAR, IMS, SSC

Organizer(s): Mark Payton, Oklahoma State University

Chair(s): Mark Payton, Oklahoma State University

Invited Sessions 2:00 p.m.–3:50 p.m.

294 **MCC-103 F** * Building Historical Social Science Infrastructure: the Data Integration Projects of the Minnesota Population Center—Invited

Census Advisory Committee, Business and Economics Statistics Section, Section on Government Statistics, Social Statistics Section

Organizer(s): Michael Davern, University of Minnesota

Chair(s): John Czajka, Mathematica Policy Research, Inc.

- 2:05 p.m.** Challenges of Census Data Harmonization: the Integrated Public Use Microdata Series—◆ Matthew Sobek, University of Minnesota
- 2:30 p.m.** Minnesota Population Center Data Integration Projects—
◆ Steven Ruggles, University of Minnesota
- 2:55 p.m.** Creating New Historical Census Samples from Manuscript Records—◆ Ronald Goeken, University of Minnesota
- 3:20 p.m.** Bridging the Gaps: Dealing with Major Survey Changes in Dataset Harmonization—◆ Michael Davern, University of Minnesota; Miriam King, University of Minnesota
- 3:45 p.m.** Floor Discussion

295 **MCC-200 F** * Recent Advances in Bayesian Reliability—Invited

Section on Quality and Productivity, SPAIG Committee, Section on Bayesian Statistical Science, Section on Physical and Engineering Sciences

Organizer(s): Ramon V. Leon, University of Tennessee

- 2:05 p.m.** Bayesian Modeling of Accelerated Life Tests with Random Effects—◆ Ramon V. Leon, University of Tennessee; Avery J. Ashby, BlueCross BlueShield; Jayanth Thyagarajan, Comscore Networks, Inc.; Jun Ding, University of Tennessee

2:30 p.m. Bayesian Reliability Analysis for Complex Systems—
◆ Alyson Wilson, Los Alamos National Laboratory;
Gregory Wilson, Los Alamos National Laboratory; Laura
McNamara, Sandia National Laboratories

2:55 p.m. A Hierarchical Model for the Reliability of an Antiaircraft
Missile System Based on Lifetime Data—◆ C. Shane
Reese, Brigham Young University

3:20 p.m. Disc: David Mease, University of California, Berkeley

3:40 p.m. Floor Discussion

296 **MCC-103 E**

☆ ☆ Women in Statistics: Working To Improve Human Well-being—Invited

Committee on Women in Statistics, Business and
Economics Statistics Section, Social Statistics
Section, The Caucus for Women in Statistics

Organizer(s): Elizabeth Margosches, U.S. Environmental Protection
Agency

Chair(s): Amita K. Manatunga, Emory University

2:05 p.m. Delivering Societal Benefits: the Advanced
Technology Program—◆ Stephanie Shipp, National
Institute of Standards and Technology; Jeanne Powell, National
Institute of Standards and Technology

2:30 p.m. Semiparametric Regression for High-dimensional Data
with Applications in Microarrays: Least Square Kernel
Machines and Linear Mixed Models—◆ Xihong Lin,
Harvard University; Dawei Liu, University of Michigan; Debashis
Ghosh, University of Michigan

2:55 p.m. The Changing Role of Statistics in Medical Research:
Experiences from the Past and Directions for the
Future—◆ Judith D. Goldberg, New York University School
of Medicine

3:20 p.m. Methods for Validation Sets for Outcomes in Changing
Temporal Conditions—◆ M. Elizabeth Halloran, Emory
University

3:45 p.m. Floor Discussion

297 **MCC-205 D**

Seymour Geisser Memorial Session—Invited Memorial, WNAR, Section on Bayesian Statistical Science, Biometrics Section

Organizer(s): Wes Johnson, University of California, Davis

Chair(s): Wes Johnson, University of California, Davis

2:05 p.m. The Life and Times of Seymour Geisser: a Subjective
Interpretation—◆ Ronald Christensen, The University of
New Mexico

2:30 p.m. The Limits of Prediction: Ontological Uncertainty and
Action—◆ David A. Lane, University of Modena and Reggio
Emilia

2:55 p.m. Some Recent Perspectives on a Classical Prediction
Problem—◆ Morris L. Eaton, University of Minnesota

3:20 p.m. Seymour Geisser: a Multivariate Statistician (1929–
2004)—◆ S. James Press, University of California, Riverside

3:45 p.m. Floor Discussion

298 **MCC-201 AB**

Issues in Semisupervised Learning—Invited IMS

Organizer(s): Ji Zhu, University of Michigan

Chair(s): Ji Zhu, University of Michigan

2:05 p.m. Unlabeled Data in Statistical Language Processing—
◆ David D. Lewis, David D. Lewis Consulting & Ornarose, Inc.

2:35 p.m. Learning Functional Structures from Multiple Tasks and
Unlabeled Data—◆ Tong Zhang, IBM; Rie Ando, IBM

3:05 p.m. Inferring Label Sampling Mechanisms and Automatic
Bayes Carpentry Using Unlabeled Data—◆ Hui Zou,
Stanford University; Saharon Rosset, IBM; Ji Zhu, University of
Michigan; Trevor Hastie, Stanford University

3:35 p.m. Floor Discussion

299 **MCC-200 G**

Nonparametric Approaches to Learning in Computer Vision and Image Understanding—Invited

Section on Nonparametric Statistics, Section on
Statistical Graphics

Organizer(s): Eric Chicken, Florida State University

Chair(s): Anuj Srivastava, Florida State University

2:05 p.m. Algorithms for Nonparametric Inference on Shape
Manifolds—◆ Victor Patrangenaru, Texas Tech University;
Ananda Bandulasiri, Texas Tech University

2:30 p.m. Small Sample pmf Estimation and an Application to
Language Modeling—◆ Bruno M. Jedynek, Johns
Hopkins University

2:55 p.m. Lookup Table Decision Trees for Real-time Pattern
Recognition—◆ Xiuwen Liu, Florida State University

3:20 p.m. Nonparametric and Information Theoretic Approaches
for Sensor Resource Management—◆ John W. Fisher,
Massachusetts Institute of Technology; Jason L. Williams,
Massachusetts Institute of Technology; Alan S. Wilsky,
Massachusetts Institute of Technology

3:45 p.m. Floor Discussion

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300 **MCC-208 B**

Sampling Issues in Risk Factor Studies—Invited

Section on Statistics in Epidemiology, Section on Survey Research Methods, WNAR

Organizer(s): Jaya Satagopan, Memorial Sloan-Kettering Cancer Center

Chair(s): Jaya Satagopan, Memorial Sloan-Kettering Cancer Center

- 2:05 p.m.** Quantitative Trait Mapping Study Design from an Information Perspective—◆ Saunak Sen, University of California, San Francisco; Jaya Satagopan, Memorial Sloan-Kettering Cancer Center; Gary Churchill, The Jackson Laboratory
- 2:30 p.m.** ‘Strata-matched Case Control Study’ or Just a ‘Stratified Analysis’: the Confusion of Naming—◆ Madhu Mazumdar, Weill Medical College of Cornell University
- 2:55 p.m.** Sampling Issues in Human Quantitative Trait Locus Mapping—◆ Eleanor Feingold, University of Pittsburgh
- 3:20 p.m.** Case-control Studies When Case Participants and Control Participants Have Different Numbers of Exposure Measurements—◆ Glen A. Satten, U.S. Centers for Disease Control and Prevention; Dana Flanders, Emory University
- 3:45 p.m.** Floor Discussion

301 **MCC-205 C**

Nearest Neighbor Estimation Techniques for Environmental Applications—Invited

Section on Statistics and the Environment, WNAR

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

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

- 2:05 p.m.** Predictive Mapping of Forest Composition and Structure with Direct Gradient Analysis and Nearest-neighbor Imputation for Regional Policy Analysis and Ecological Research—◆ Janet L. Ohmann, USDA Forest Service
- 2:35 p.m.** Exact Bagging k-NN Predictors of Continuous Variables—◆ David Patterson, University of Montana; Brian Steele, University of Montana
- 3:05 p.m.** Use of Canonical Regression in Most Similar Neighbor Inference Evaluated by Partitioning Imputation Error—◆ Nicholas L. Crookston, Rocky Mountain Research Station; ◆ Albert R. Stage, Rocky Mountain Research Station
- 3:35 p.m.** Floor Discussion

302 **MCC-102 D**

Geographic Information Systems and Survey Research—Invited

Section on Survey Research Methods, Social Statistics Section, Section on Statistical Graphics

Organizer(s): Edward M. English, NORC at the University of Chicago

Chair(s): Andrea G. Johnson, U.S. Census Bureau

- 2:05 p.m.** TIGER: a Resource for Survey Research—◆ Robert A. LaMacchia, U.S. Census Bureau
- 2:30 p.m.** Computer-assisted Methods for Collecting Geographic Data Using Photographic Backdrops—◆ Sarah Nusser, Iowa State University
- 2:55 p.m.** Using GIS To Improve Field Interviewing Efficiency: Enhanced Interviewer Selection and Sample Allocation—◆ Edward M. English, NORC at the University of Chicago; Steven Pedlow, NORC at the University of Chicago
- 3:20 p.m.** Disc: David Blough, University of Wisconsin, Madison
- 3:40 p.m.** Floor Discussion

303 **MCC-205 B**

The Generalized Method of Moments, Estimating Functions, and Empirical Likelihoods—Invited

IMS, Section on Nonparametric Statistics, ENAR, Business and Economics Statistics Section, Biometrics Section

Organizer(s): Annie Qu, Oregon State University

Chair(s): Runze Li, The Pennsylvania State University

- 2:05 p.m.** GMM and Estimating Functions in Longitudinal Data—◆ Annie Qu, Oregon State University
- 2:35 p.m.** Estimating Equations for Marginal Regression Analysis of Longitudinal Data with Time-dependent Covariates—◆ Dylan Small, The University of Pennsylvania; Tze L. Lai, Stanford University
- 3:05 p.m.** Many Weak Moment Asymptotics for Generalized Empirical Likelihood Estimators—◆ Whitney Newey, Massachusetts Institute of Technology
- 3:35 p.m.** Floor Discussion

Tuesday

GENERAL PROGRAM SCHEDULE

☆ Themed Session ● Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

304

MCC-102 A

● ☆ **Statistical Computation and Knowledge Distilling in Genomic Research—Invited**

Section on Statistical Computing, WNAR, Biometrics Section

Organizer(s): Ker-Chau Li, University of California, Los Angeles

Chair(s): Ker-Chau Li, University of California, Los Angeles

2:05 p.m. Equi-energy Sampling: Exploiting Energy-temperature Duality in Monte Carlo—◆ Wing Hung Wong, Stanford University; Samuel Kou, Harvard University; Qing Zhou, Harvard University

2:35 p.m. Statistical Problems in Protein Interaction Networks—◆ Fengzhu Sun, University of Southern California; Ting Chen, University of Southern California

3:05 p.m. An Online Integrated System for Genome-wide Coexpression Study by Liquid Association—◆ Shinsheng Yuan, University of California, Los Angeles

3:35 p.m. Floor Discussion

305

MCC-200 ABC

● **Assessing Information in Clinical Trials To Enable Better Development Decisions—Invited**

Biopharmaceutical Section, WNAR

Organizer(s): Brenda L. Gaydos, Eli Lilly and Company

Chair(s): Stacy R. Lindborg, Eli Lilly and Company

2:05 p.m. Defining, Evaluating, and Integrating Clinical Success Factors—◆ Brenda L. Gaydos, Eli Lilly and Company

2:30 p.m. Utilizing Decision Science to Optimize Clinical Development Plans—◆ David J. Swank, Bristol-Myers Squibb Company

2:55 p.m. Probability in Decisionmaking and Bayesian Inference—◆ John Seaman, Baylor University; Stacy R. Lindborg, Eli Lilly and Company

3:20 p.m. Disc: Frank C. Shen, Bristol-Myers Squibb Company

3:40 p.m. Floor Discussion

306

MCC-212 AB

☆ **National Systems for Biosurveillance—Invited**

Section on Statisticians in Defense and National Security

Organizer(s): Colin Goodall, AT&T Labs-Research

Chair(s): Colin Goodall, AT&T Labs-Research

2:05 p.m. BioSense and the Statistical Challenges of National Biosurveillance—◆ Henry Rolka, U.S. Centers for Disease Control and Prevention

2:30 p.m. National Biosurveillance with Electronic Lab Data—◆ Eileen Koski, Quest Diagnostics, Inc.; Colin Goodall, AT&T Labs-Research

2:55 p.m. Statistical Management Strategies for Monitoring Multiple Complex Data Sources in ESSENCE Biosurveillance Systems—◆ Howard Burkom, Johns Hopkins University

3:20 p.m. Disc: David Madigan, Rutgers, The State University of New Jersey

3:40 p.m. Floor Discussion

307

MCC-200 J

● ☆ **Technometrics Invited Paper Session—Invited**

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

Organizer(s): Randy Sitter, Simon Fraser University

Chair(s): Randy Sitter, Simon Fraser University

2:05 p.m. Some Simple Data Analytic Tools for Understanding Random Field Regression Models—◆ David M. Steinberg, Tel Aviv University; Dizza Bursztyn, Ashkelon College

2:55 p.m. Computer Experiments Using Penalized Likelihood in Gaussian Kriging Models—◆ Agus Sudjianto, Bank of America; Runze Li, The Pennsylvania State University

3:45 p.m. Floor Discussion

308

MCC-200 DE

☆ **Survival Analysis in Genetics and Genomics—Invited**

ENAR, Section on Nonparametric Statistics, Biopharmaceutical Section, WNAR, Biometrics Section

Organizer(s): Anastasios A. Tsiatis, North Carolina State University

Chair(s): Anastasios A. Tsiatis, North Carolina State University

2:30 p.m. Semiparametric Estimation of Marginal Hazard Functions from Case-control Family Studies—◆ Li Hsu, Fred Hutchinson Cancer Research Center

2:35 p.m. Case-control and Case-only Designs with Genotype and Family History Data: Estimating Relative Risk, Cumulative Genotype-specific Risk, and Familial Aggregation—Nilanjan Chatterjee, National Cancer Institute; Zeynep Kalaylioglu, Information Management Services, Inc.; Joanna H. Shih, National Cancer Institute; ◆ Mitchell H. Gail, National Cancer Institute

2:55 p.m. Efficient Semiparametric Estimation of Haplotype-disease Associations in Cohort Studies—◆ Danyu Lin, The The University of North Carolina at Chapel Hill; Donglin Zeng, The The University of North Carolina at Chapel Hill

3:20 p.m. Disc: David Glidden, University of California, San Francisco

3:40 p.m. Floor Discussion

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

309 **MCC-208 C**
Analyzing Quality-of-life Data in Clinical Trials—Topic Contributed

Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Andrea B. Troxel, University of Pennsylvania

Chair(s): Daniel Sargent, Mayo Clinic

- 2:05 p.m. Parametric Frailty Models for Quality-of-life in Oncology—◆ Andrea B. Troxel, University of Pennsylvania
- 2:25 p.m. A Comparison of EuroQoL and SF-36 Utilities in End-stage Heart Failure Patients—◆ Huijing Li, Merck & Co., Inc.; Daniel Heitjan, University of Pennsylvania
- 2:45 p.m. Assessing Clinical Significance for Quality-of-life Measures—◆ Jeff Sloan, Mayo Clinic
- 3:05 p.m. Analyses of Short- and Long-term Treatment Effects on Longitudinal Quality of Life—◆ Donna Ankerst, Sylvia Lawry Centre for Multiple Sclerosis Research; Caroline Jiang, The Queen's Medical Center
- 3:25 p.m. Disc: Wayne Weng, Novo Nordisk, Inc.
- 3:45 p.m. Floor Discussion

310 **MCC-208 D**
Verification and Missclassification in Statistics: Applications in Medicine, Meteorology, and Other Fields—Topic Contributed

Biometrics Section, WNAR

Organizer(s): Matt Pocernich, National Center for Atmospheric Research

Chair(s): Matt Pocernich, National Center for Atmospheric Research

- 2:05 p.m. Skill Curves and ROC Curves for Diagnoses, or Why Skill Curves Are More Fun—◆ William Briggs, Cornell University; Russell Zaretzki, University of Tennessee; David Ruppert, Cornell University
- 2:25 p.m. Goodness-of-fit of Longitudinal Growth Charts—◆ Ying Wei, Columbia University
- 2:45 p.m. Diagnostic Evaluation of Spatial Weather Forecasts Using an Object-based Approach—◆ Barbara Brown, National Center for Atmospheric Research; Randy Bullock, National Center for Atmospheric Research; Christopher Davis, National Center for Atmospheric Research; Eric Gilleland, National Center for Atmospheric Research
- 3:05 p.m. Item Reduction in Screening Scales: a Nonparametric Approach—◆ Xinhua Liu, Columbia University; Zhezheng Jin, Columbia University

3:25 p.m. Disc: Harold Brooks, National Oceanic and Atmospheric Administration

3:45 p.m. Floor Discussion

311 **MCC-103 B**
Quality Issues with Disclosure Techniques: Limitations on Protection, Limitations on Data Utility—Topic Contributed

Section on Government Statistics, Social Statistics Section

Organizer(s): Steve Cohen, Bureau of Labor Statistics

Chair(s): Barry Johnson, U.S. Internal Revenue Service

- 2:05 p.m. Statistical Disclosure Control of Sensitive Tabular Data by Complementary Cell Suppression: Myth and Reality—◆ Ramesh A. Dandekar, Energy Information Administration
- 2:25 p.m. Comparing Ways of Using 'Protection Flow' To Protect Magnitude Data Tables from Disclosures—◆ Paul B. Massell, U.S. Census Bureau
- 2:45 p.m. Do Disclosure Controls To Protect Confidentiality Degrade the Quality of the Data? Data from the 2002 Trends in Mathematics and Science Study—◆ Steven Kaufman, National Center for Education Statistics; Marilyn Seastrom, National Center for Education Statistics; Shep Roey, Westat
- 3:05 p.m. Assessing Disclosure Risk for the California Health Interview Survey Public Use Files: Practical Considerations and Current Methods—◆ M. Leeann Habte, University of California, Los Angeles; Jenny Chia, University of California, Los Angeles; Hongjian Yu, University of California, Los Angeles; Brandon Traudt, University of California, Los Angeles
- 3:25 p.m. Disc: J. Neil Russell, Bureau of Transportation Statistics
- 3:45 p.m. Floor Discussion

312 **MCC-211 C**
Bayesian Hierarchical Modeling in Biostatistics—Topic Contributed

Section on Bayesian Statistical Science, Section on Statistics in Epidemiology, Biopharmaceutical Section, WNAR, Biometrics Section

Organizer(s): Catherine Crespi, University of California, Los Angeles

Chair(s): Daniel Gillen, University of California, Irvine

- 2:05 p.m. Hierarchical Density Regression Using the Grid Mixture Model with Spatial Smoothing—◆ Tyson Rogers, University of Minnesota; Robert Weiss, University of California, Los Angeles

Tuesday

GENERAL PROGRAM SCHEDULE

☆ Themed Session ● Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

2:25 p.m. Outlier Detection in Spatially Correlated Longitudinal Data with Application to Glaucoma Progression Identification—◆ Luohua Jiang, University of California, Los Angeles; Gang Li, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles

2:45 p.m. Periodontal Disease: a Two-way Random Effects Analysis—◆ Lei Qian, University of California, Los Angeles; Vladimir Spolsky, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles

3:05 p.m. A Bayesian Model Selection Approach for Clustering Treatment Groups—◆ Susan Alber, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles

3:25 p.m. Bayesian Spatial Hierarchical Modeling for Asthmatic Patients and Nonasthmatic Adults—◆ Hyun Kim, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles; Jonathan Goldin, University of California, Los Angeles

3:45 p.m. Floor Discussion

313 **MCC-211 D** ● ☆ **Bayesian Student Competition Papers (Methods)— Topic Contributed**

Section on Bayesian Statistical Science

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

Chair(s): Steven N. MacEachern, The Ohio State University

2:05 p.m. Variable Selection in Clustering via Dirichlet Process Mixture Models—◆ Sinae Kim, Texas A&M University; Mahlet G. Tadesse, University of Pennsylvania; Marina Vannucci, Texas A&M University

2:25 p.m. Functional Clustering by Bayesian Wavelet Methods—Bani Mallick, Texas A&M University; ◆ Shubhankar Ray, Texas A&M University

2:45 p.m. Bayesian Regression in Longitudinal Studies with Outcome-dependent Followup—◆ Duchwan Ryu, Texas A&M University; Debajyoti Sinha, Medical University of South Carolina; Bani Mallick, Texas A&M University

3:05 p.m. Bayesian Applications on Budget Impact Analysis in Economic Evaluations—◆ Shu Han, Rice University; Ya-Chen Tina Shih, The University of Texas M. D. Anderson Cancer Center

3:25 p.m. Regularized Optimization: a Bayesian Perspective—◆ Bin Li, The Ohio State University; Prem Goel, The Ohio State University

3:45 p.m. Floor Discussion

314 **MCC-210 AB** ☆ **Bayesian Shrinkage and Prediction—Topic Contributed**

Section on Bayesian Statistical Science, Section on Statistics in Epidemiology

Organizer(s): Feng Liang, Duke University

Chair(s): Woncheol Jang, Duke University

2:05 p.m. Minimax Predictive Priors—◆ Feng Liang, Duke University

2:25 p.m. High-dimensional Predictive Densities—◆ Xinyi Xu, University of Pennsylvania

2:45 p.m. Comparison of Bayesian and Bootstrap Prediction Techniques—◆ Snigdhasu Chatterjee, University of Minnesota

3:05 p.m. Shrinkage Estimation of Multivariate Normal Mean under Hellinger Loss—◆ Victor Mergel, University of Florida; Malay Ghosh, University of Florida

3:25 p.m. A Double-shrinkage Estimator and Its Implementation—◆ Dabao Zhang, University of Rochester

3:45 p.m. Floor Discussion

315 **MCC-200 I** ● ☆ **Statistical Approaches for Benefit Risk Analysis— Topic Contributed**

Biopharmaceutical Section, WNAR

Organizer(s): Yili Pritchett, Eli Lilly and Company

Chair(s): Kannan Natarajan, Bristol-Myers Squibb Company

2:05 p.m. Benefit to Risk: Why, What, and How?—◆ Christy Chuang-Stein, Pfizer, Inc.

2:25 p.m. The Application of Global Benefit-risk Score in Clinical Trial Design and Some Statistical Considerations of the Method—◆ Yili Pritchett, Eli Lilly and Company; Roy Tamura, Eli Lilly and Company

2:45 p.m. Global Benefit-risk Measure as a Tool for Drug Assessment—◆ Richard Entsuah, Wyeth



3:05 p.m. INB and WTP in the Benefit-risk Analysis of RCTs—

◆ Andrew Willan, Research Institute, Sick Kids

3:25 p.m. Disc: Rodney Sparapani, Medical College of Wisconsin

3:45 p.m. Floor Discussion

316

MCC-211 A

● ☆ Test Power and Sample Size Determination for Microarray Studies—Topic Contributed

ENAR, WNAR, Biometrics Section

Organizer(s): Wenjiang Fu, Michigan State University

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

2:05 p.m. How Many Samples Are Needed To Build a Classifier? A General Sequential Approach—◆ Wenjiang Fu, Michigan State University; Edward Dougherty, Texas A&M University; Bani Mallick, Texas A&M University; Raymond J. Carroll, Texas A&M University

2:25 p.m. Using Clustering To Enhance Hypothesis Testing—

◆ David Dahl, Texas A&M University; Michael Newton, University of Wisconsin, Madison

2:45 p.m. Microarray Experimental Design: Power and Sample Size Considerations—◆ James J. Yang, Henry Ford Health Sciences Center

3:05 p.m. Sample Size Determination in High-dimensional Biology and the PowerAtlas—◆ Grier Page, University of Alabama at Birmingham

3:25 p.m. Disc: T. Mark Beasley, University of Alabama at Birmingham

3:45 p.m. Floor Discussion

317

MCC-103 C

● ☆ Statistical Issues in Driving Studies—Topic Contributed

General Methodology, Social Statistics Section

Organizer(s): Jeffrey Dawson, The University of Iowa

Chair(s): Jeffrey Dawson, The University of Iowa

2:05 p.m. Epidemiologic Issues in Driving Research—
◆ Gerald McGwin, University of Alabama at Birmingham

2:25 p.m. Sensitivity and Specificity of Setting Triggers To Evaluate Continuously-collected Data—◆ Jeremy Sudweeks, Virginia Polytechnic Institute and State University

2:45 p.m. Accounting for the Covariate Effects in Driving Simulator Studies—Linda N. Boyle, The University of Iowa; ◆ Birsan Donmez, The University of Iowa; David M. Neyens, The University of Iowa; John D. Lee, The University of Iowa

3:05 p.m. Defining and Assessing Endpoints in Driving Simulator Tasks—◆ Qian Shi, The University of Iowa; Laura Stierman, Northwestern University; Jeffrey Dawson, The University of Iowa; Matthew Rizzo, The University of Iowa

3:25 p.m. Research Challenges in Automotive Demand Sensing—◆ Lynn Truss, General Motors R&D; Peiling Wu, General Motors R&D

3:45 p.m. Floor Discussion

318

MCC-102 E

● ☆ Collecting Data from Health Care Establishments in the Post HIPAA Era: Some CDC-RTI Experiences—Topic Contributed

Section on Survey Research Methods, Section on Statistics in Epidemiology

Organizer(s): Paul Levy, RTI International; Elizabeth Zell, U.S. Centers for Disease Control and Prevention

Chair(s): Elizabeth Zell, U.S. Centers for Disease Control and Prevention

2:05 p.m. Post-HIPAA Medical Charts Review To Assess Perinatal Testing Rates—◆ John Loft, RTI International; Stephanie Sansom, U.S. Centers for Disease Control and Prevention; Elizabeth Zell, U.S. Centers for Disease Control and Prevention; Paul Levy, RTI International

2:25 p.m. Surveys of Workers Possibly Exposed to Anthrax and Obtaining Medical Records from Their Health Care Providers before and after the Revised HIPAA Regulations—◆ Brian Burke, RTI International; Thomas Clark, U.S. Centers for Disease Control and Prevention; Brian Evans, RTI International; Sonal Pathak, U.S. Centers for Disease Control and Prevention; Elizabeth Zell, U.S. Centers for Disease Control and Prevention

2:45 p.m. Data Acquisition Issues in a Survey of Health Care Professionals in Hospitals and Local Health Departments Invited To Participate in the U.S. Smallpox Immunization Program—◆ Brian Evans, RTI International; Paul Levy, RTI International; Brian Burke, RTI International; Pascale Worthy, U.S. Centers for Disease Control and Prevention; Ben Schwartz, U.S. Centers for Disease Control and Prevention; Linda Quick, U.S. Centers for Disease Control and Prevention

3:15 p.m. Assessing the Accuracy of Parent Recall of the Hepatitis A Immunization Status of Their Children: Data Collection Issues in a Telephone Survey Combined with Provider Record Check—◆ Lisa Carley-Baxter, RTI International; Paul Levy, RTI International; Anthony Fiore, U.S. Centers for Disease Control and Prevention; Susan Twiddy, RTI International

3:25 p.m. Disc: Amy Ferketich, The Ohio State University

3:45 p.m. Floor Discussion

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

319 MCC-208 A Implementing the GAISE Guidelines in College Statistics Courses—Topic Contributed

Section on Statistical Education

Organizer(s): Joan Garfield, University of Minnesota

Chair(s): Joan Garfield, University of Minnesota

- Panelists:** ◆ Andrew Zieffler, University of Minnesota
 ◆ Sharon Lane-Getaz, University of Minnesota
 ◆ Michelle Everson, University of Minnesota
 ◆ Ann Ooms, University of Minnesota
 ◆ Robin Lock, St. Lawrence University

3:45 p.m. Floor Discussion

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

320 MCC-211 B * ☆ Nonlinear Normal and Linear Nonnormal Longitudinal Models—Contributed

Biometrics Section, WNAR

Chair(s): Qiu Yu, North Carolina State University

- 2:05 p.m.** A Random Longitudinal Spline Model of the Effects of Partial Reinforcement on Rats—◆ Wenhua Hu, University of California, Los Angeles
- 2:20 p.m.** Marginalized Transition Models for Longitudinal Categorical Data—◆ Keunbaik Lee, University of Florida; Michael Daniels, University of Florida
- 2:35 p.m.** Modeling of Runaway Trajectories of Adolescents Using Zero-inflated Count Data—◆ Hayrettin Okut, University of Yuzuncu Yil; Terry E. Duncan, Oregon Research Institute; Susan W. Duncan, Oregon Research Institute
- 2:50 p.m.** Assessing Carryover Effects from Multiple Crossover Trials—◆ Mary Putt, University of Pennsylvania
- 3:05 p.m.** GEE Diagnostics for Binomial and Count Response Models—◆ Yuxiao Tang, Rush University Medical Center; Julia Bienias, Rush University Medical Center; Carlos F. Mendes de Leon, Rush University Medical Center; Denis A. Evans, Rush University Medical Center
- 3:20 p.m.** Comparison of Wang-Carey Estimation Versus Quasi-least Squares—◆ Wenguang Sun, University of Pennsylvania; Justine Shults, University of Pennsylvania
- 3:35 p.m.** Nonparametric Quasi-likelihood in Longitudinal Data Analysis—◆ Xiaoping Jiang, U.S. Food and Drug Administration

321 MCC-102 F

* Sample Design Issues—Contributed Section on Survey Research Methods

Chair(s): Brenda G. Cox, Battelle

- 2:05 p.m.** Bayesian Methods for Estimating Sample Size in Surveys with Multiple Levels of Screening, Eligibility, and Nonresponse—◆ Kristen Olson, University of Michigan; Trivellore Raghunathan, University of Michigan
- 2:20 p.m.** On Reuse of Clusters from Master Sample in Repeated Studies—◆ Stanislav Kolenikov, The University of North Carolina at Chapel Hill; Gustavo Angeles, The University of North Carolina at Chapel Hill
- 2:35 p.m.** Model-based Sampling Selection under an Anisotropic Population—◆ Chang-Tai Chao, National Cheng Kung University; Feng-Min Lin, National Cheng Kung University
- 2:50 p.m.** An Empirical Comparison of Efficiency between Optimization and Nonoptimization Probability Sampling of Two Units from a Stratum—◆ Sun-Woong Kim, Dongguk University; Steven G. Heeringa, University of Michigan; Peter S. Solenberger, University of Michigan
- 3:05 p.m.** Efficiency of Multiple Response Adaptive Estimators—◆ Paul Mosquin, RTI International
- 3:20 p.m.** Resampling—◆ Hong Xu, The Pennsylvania State University
- 3:35 p.m.** Floor Discussion

322 MCC-202 AB Estimation—Contributed Section on Nonparametric Statistics

Chair(s): Nels Grevstad, Metropolitan State College of Denver

- 2:05 p.m.** Multivariate Quantile Estimation with Convex Hull Peeling for Streaming Data—◆ Hyunsook Lee, The Pennsylvania State University; G. Jogesh Babu, The Pennsylvania State University
- 2:20 p.m.** Estimation of Shape-restricted Functions: Shape Modification via Constrained Uniform Approximation—◆ Johan Lim, Texas A&M University
- 2:35 p.m.** Nonparametric Survival Analysis on Time-dependent Covariate Effect—◆ Koji Fujiwara, North Dakota State University; Chunfeng Huang, North Dakota State University
- 2:50 p.m.** Confidence Balls for Nonparametric Function Estimation in Measurement Error Problems—◆ Julie McIntyre, Carnegie Mellon University
- 3:05 p.m.** A Hodges-Lehmann Estimator of Preferred Direction for Circular Data—◆ B. Sango Otieno, Grand Valley State University; Christine Anderson-Cook, Los Alamos National Laboratory

3:20 p.m. On Nelson-Aalen's Type Estimation in the Partial Koziol-Green Model—◆ Haimeng Zhang, Concordia College; Marepalli Rao, University of Cincinnati

3:35 p.m. Floor Discussion

323

MCC-200 H

Missing Data Issues—Contributed

Biopharmaceutical Section, WNAR

Chair(s): Ivan S.F. Chan, Merck Research Laboratories

2:05 p.m. A Comparison of Imputation Methods for Missing Data on Clinical Laboratory Assessments—◆ Kapildeb Sen, Bristol-Myers Squibb Company; Chen-Sheng Lin, Bristol-Myers Squibb Company; Kannan Natarajan, Bristol-Myers Squibb Company

2:20 p.m. Including Adverse Event Data in Multiple Imputation of Efficacy Outcomes—◆ Shuyi Shen, Eli Lilly and Company; Craig Mallinckrodt, Eli Lilly and Company; Xue Xin, Eli Lilly and Company; Hua Deng, Eli Lilly and Company; Ilya Lipkovich, Eli Lilly and Company; Geert Molenberghs, Limburgs Universitair Centrum

2:35 p.m. Does Imputation Help Your Power?—◆ John Johnson, Rho, Inc.

2:50 p.m. Missing Data in Longitudinal Controlled Clinical Trial: a Power Comparison for Intent-to-treat Analysis—◆ Hrishikesh Chakraborty, RTI International; Hong Gu, Dalhousie University

3:05 p.m. A Bias Correction in Testing Treatment Efficacy under Informative Drop-out in Clinical Trials—◆ Fanhui Kong, U.S. Food and Drug Administration; Yeh-Fong Chen, U.S. Food and Drug Administration; Kun Jin, U.S. Food and Drug Administration

3:20 p.m. Missing Data in Safety Evaluation: Analyses and Issues—◆ Satish Misra, U.S. Food and Drug Administration

3:35 p.m. Floor Discussion

324

MCC-213 AB

Financial Markets—Contributed

Business and Economics Statistics Section

Chair(s): Mervyn Silvapulle, Monash University

2:05 p.m. Detecting a Shift in Location in a Random Sequence: a Review and Applications—◆ Prem Talwar, University of Alberta

2:20 p.m. Fractal Analysis of Nonstationary Signals in Financial Markets—◆ Malhar Kale, Sam Houston State University; Ferry Butar Butar, Sam Houston State University

2:35 p.m. War Impact on Microstructure of U.S. Stock Market—◆ Lei Zhang, Syracuse University; Raja Velu, Syracuse University; Amber Anand, Syracuse University

2:50 p.m. Asymmetric Nonlinear Shrinkage Estimation in Optimal Portfolio Selection—◆ Andrew Siegel, University of Washington

3:05 p.m. Population Segmentation for Portfolio Strategies—◆ Timothy Lee, Credit Logistics

3:20 p.m. Floor Discussion

325

MCC-102 B

Monte Carlo Methods—Contributed

Section on Statistical Computing, Section on Bayesian Statistical Science

Chair(s): Sandra Hall, University of Kansas Medical Center

2:05 p.m. The Impact of Parameters Values and Sample Sizes on $P(Y < X)$: a Simulation Study, Part I—◆ Mohammed Shayib, Prairie View A&M University

2:20 p.m. A Method for Simulating Multivariate Nonnormal Distributions from the Generalized Lambda Distribution—◆ Todd C. Headrick, Southern Illinois University, Carbondale; Abdel Mugdadi, Southern Illinois University, Carbondale

2:35 p.m. An Approximation to Posterior Densities for Sample-based Inference—◆ Murali Haran, The Pennsylvania State University

2:50 p.m. Updating Autocovariance Estimates—◆ Patrick Gaffney, Imclone Systems

3:05 p.m. A Computationally Quick Bootstrap Procedure for Semiparametric Models—◆ John R. Dixon, Florida State University

3:20 p.m. Finding Important Covariates with Survival Forests—◆ Van Parsons, National Center for Health Statistics; Thu Hoang, Université René Descartes

3:35 p.m. Floor Discussion

326

MCC-102 C

Exploring, Clustering, and Presenting—Contributed

Section on Statistical Graphics

Chair(s): Simon Urbanek, AT&T Labs-Research

2:05 p.m. Exploring Data Structures Using Probability Plots, Animation, and Ternary Plots—Fred Spiring, University of Manitoba; ◆ Bartholomew Leung, Hong Kong Polytechnic University

2:20 p.m. Hexagon Binning and Smoothing for Visualizing Densities and Point Sets—◆ Nicholas Lewin-Koh, Eli Lilly and Company; Martin Maechler, Eidgenössische Technische Hochschule Zürich

2:35 p.m. Hexagonal Layouts for Interactive Views of Clustering—◆ Ru Sun, Ernst & Young LLP

GENERAL PROGRAM SCHEDULE

☆ Themed Session ● Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

2:50 p.m. Cluster Detection and Visualization via Tomographic Methods—◆ Al Ozonoff, Boston University; Marcello Pagano, Harvard School of Public Health; Laura Forsberg, Harvard School of Public Health; Caroline Jeffery, Harvard School of Public Health

3:05 p.m. A Visualization System To Monitor Rater Reliability in Large-scale Computer- and Paper-based Systems—◆ Chris Chiu, Law School Admission Council

3:20 p.m. Improving Some Published Graphs—◆ Charles H. Goldsmith, McMaster University

3:35 p.m. Floor Discussion

327 **MCC-103 D**

● **Measuring Customer Preferences—Contributed** Section on Statistics and Marketing, Section on Physical and Engineering Sciences

Chair(s): Bruce Hardie, London Business School

2:05 p.m. Designing Conjoint Choice Experiments Using Confounded Factorial Designs—Chin Khian Yong, University of Nebraska; ◆ Kent Eskridge, University of Nebraska

2:20 p.m. Application of the Poisson Race Model to Conjoint Analysis in Marketing—◆ Shiling Ruan, The Ohio State University; Steven N. MacEachern, The Ohio State University; Angela Dean, The Ohio State University

2:35 p.m. Ordinal Regressions in Price Sensitivity Modeling—◆ Stan Lipovetsky, GfK Custom Research, Inc.; Michael Conklin, GfK Custom Research, Inc.

2:50 p.m. How Good Is My Top-of-mind Awareness Number?—◆ Michael Conklin, GfK Custom Research, Inc.; Stan Lipovetsky, GfK Custom Research, Inc.

3:05 p.m. A Two-stage, Distribution-free Method To Compare Relative Predictors of the Order of Brand Recall—◆ Nobuyuki Fukawa, University of Georgia; Sunil Erevelles, The University of North Carolina at Chapel Hill

3:20 p.m. Cumulative and Unfolding IRT Models and Consumer Attitude-behavior Consistency—◆ Lynd Bacon, Sighthound Solutions, Inc.; Peter J. Lenk, University of Michigan

3:35 p.m. Floor Discussion

328 **MCC-209 AB**

Methodological Developments for Linkage Analysis—Contributed

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

Chair(s): Rajan Patel, Emory University

2:05 p.m. A Confident Set Procedure for the Localization of a Disease Gene with General Pedigree Data—◆ Shuyan Wan, The Ohio State University; Shili Lin, The Ohio State University

2:20 p.m. Multipoint Confidence Set Inference Procedures and Applications—◆ Charalampos Papachristou, The Ohio State University; Shili Lin, The Ohio State University

2:35 p.m. A Bayesian Approach for Incorporating Variable Rates of Heterogeneity in Linkage Analysis—◆ Swati Biswas, The University of Texas M. D. Anderson Cancer Center; Shili Lin, The Ohio State University

2:50 p.m. Exploring Positional Candidate Genes: Linkage Conditional on SNP Genotypes—◆ Yi-Chen Wu, University of Minnesota; Na Li, University of Minnesota

3:05 p.m. Parametric Linkage Analysis and Maximum Likelihood Principle—◆ Qimei He, Pacific Health Research Institute

3:20 p.m. Linkage Mapping of Multicenter Data Using Metaanalysis—◆ Weihua Guan, University of Michigan; Michael Boehnke, University of Michigan

3:35 p.m. Floor Discussion

329 **MCC-103 A**

● **Response Rates: Calculation and Response Improvement—Contributed**

Section on Survey Research Methods, Social Statistics Section

Chair(s): Virginia Lesser, Oregon State University

2:05 p.m. Comments on Weighted and Unweighted Response Rates—◆ Frank Potter, Mathematica Policy Research, Inc.

2:20 p.m. Survival Analysis Estimation of an Eligibility Rate of Samples Whose Eligibility Statuses Are Unknown: a Study of the Variance—◆ Hiroaki Minato, NORC at the University of Chicago

2:35 p.m. Respondents' Reasons for Participation in Telephone Surveys: 10-year Trends and Implications for Survey Design—◆ Nadra Garas, American University; Johnny Blair, Abt Associates, Inc.

2:50 p.m. The Value of the Increasing Effort To Maintain High Response Rates in Telephone Surveys—◆ Barbara L. Carlson, Mathematica Policy Research, Inc.; Richard Strouse, Mathematica Policy Research, Inc.

- 3:05 p.m.** Results from Recent Experiments on Improving Response Rates—◆ Ronald Fecso, National Science Foundation
- 3:20 p.m.** Efficacy of Prenotification Letters in Improving Response Rates in the Telephone Point-of-purchase Survey—◆ Cassandra Yocum, Bureau of Labor Statistics
- 3:35 p.m.** Longitudinal Attrition in an RDD Survey of Adolescents—◆ Thanh Le, Westat; Charles Carusi, Westat; Susan Swain, Westat

Regular Contributed Posters 2:00 p.m.–3:50 p.m.

330 MCC-Level Two Lobby B Contributed Poster Session 5—Contributed Social Statistics Section, General Methodology, Biopharmaceutical Section, Section on Bayesian Statistical Science, Section on Quality and Productivity, Section on Physical and Engineering Sciences, Section on Statistical Computing, Business and Economics Statistics Section

Organizer(s): Ying Kuen Cheung, Columbia University

Chair(s): Ying Kuen Cheung, Columbia University

Biometrics, Biostatistics, Epidemiology

- 01** Implementation and Performance of Exact Methods in Six Statistical Software Packages—◆ Robert Oster, University of Alabama at Birmingham; Joseph Hillbe, Arizona State University

Computational Statistics and Numerical Methods

- 02** A Simple, More General Boxplot Method for Identifying Outliers—◆ Neil Schwertman, California State University, Chico; Margaret A. Owens, California State University, Chico; Robiah Adnan, University of Technology, Malaysia

- 03** A Functional Language for Statistical Analysis—◆ Babubhai Shah, SAFAL Institute, Inc.

- 04** Java Applets for Data Mining Tools—Morteza Marzjarani, Saginaw Valley State University; ◆ Adam Marculewicz, Saginaw Valley State University

- 05** A Generalized Conjugate Gradient Accelerator for the EM Algorithm—◆ Mervyn G. Marasinghe, Iowa State University; Julio C. Alonso, Universidad Icesi

Engineering and Physical Sciences, Chemometrics

- 06** A Predictive Model for Tensile Strength of Alloy 7075-T6 after Retrogression and Re-aging—◆ Gerald Shaughnessy, University of Dayton

Environmetrics, Ecology, Agriculture, Wildlife Management

- 07** A Method for Analyzing Unreplicated Agricultural Experiments—◆ Jamis Perrett, University of Northern Colorado



JSM INFORMAL
DANCE PARTY

featuring *THE SPACE HEATERS*
with special guests **IMSI** and
the **ASA All-Stars!**

August 9, 9:30 p.m.–Midnight
Minneapolis Convention Center
Ballroom B

Tuesday

GENERAL PROGRAM SCHEDULE

☆ Themed Session ● Applied Session ◆ Presenter **MCC**-Minneapolis Convention Center **H**-Hilton Minneapolis **HY**-Hyatt Regency Minneapolis

Experimental Design

- 08** 2⁽⁴⁻¹⁾ **Factorials for the Rest of Us**—◆ Albert J. Starshak, Dunwoody College of Technology
- 09** **Honeycomb Designs and Analysis Software**—◆ Andy Maumouustakos, University of Arkansas; Kevin Thompson, University of Arkansas; Vasilias Fasoula, University of Georgia; D. P. Batzios, Cotton and Industrial Plants Institute; Dimitris Roupakias, Aristotle University of Thessaloniki

QC, Operation Research, Risk Assessment

- 10** **Optimization of Trivalent FluMist® Product Blending**—◆ Harry Yang, MedImmune, Inc.; Ryan Yamagata, MedImmune Vaccines, Inc.; Iksung Cho, MedImmune, Inc.
- 11** **Large Common-cause Variation in Multivariate SPC**—◆ John Young, McNeese State University; Robert L. Mason, Southwest Research Institute; Youn-Min Chou, The University of Texas at San Antonio
- 12** **Robust Control Charts Based on Absolute Deviations from the Mean and Median**—◆ Canan Bilen-Green, North Dakota State University; Raghavendra D. Adharapurapu, North Dakota State University

Reliability and Survival Modeling

- 13** **Fitting Parametric Families of Quantile Functions to the Sample Quantile Function**—Dean Fearn, California State University, Hayward; ◆ Elliott Nebenzahl, California State University, Hayward
- 14** **Modeling of Hybrid Systems**—◆ William Griffith, University of Kentucky

Simulation and Monte Carlo Methods

- 15** **Application of Monte Carlo Simulation Methods in Quality-control Areas**—◆ Ryan Yamagata, MedImmune Vaccines, Inc.; Harry Yang, MedImmune, Inc.; Andrew Chen, MedImmune, Inc.; Iksung Cho, MedImmune, Inc.
- 16** **Minimum Sample Size Requirements for Two-way MANOVA**—◆ Daniel Mundfrom, University of Northern Colorado; John Young, III, University of Northern Colorado
- 17** **Likelihoods from Summary Statistics: Recent Divergence between Species**—◆ Scotland Leman, Duke University
- 18** **Accelerated Simulation with Finitized Power Series Distributions**—◆ Martin Levy, University of Cincinnati; Saeed Golnabi; James J. Cochran, Louisiana Tech University
- 19** **Robustness in Metaanalysis: an Empirical Comparison of Point and Interval Estimates of Standardized Mean Differences and Cliff's Delta**—Jeffrey Kromrey, University of South Florida; ◆ Kristine Hogarty, University of South Florida; John Ferron, University of South Florida; Constance Hines, University of South Florida; Melinda Hess, University of South Florida

Actuarial Mathematics and Insurance

- 20** **Modeling Heavy-tailed Distributions**—◆ Annapurna Ravi, Sam Houston State University; Ferry Butar Butar, Sam Houston State University

Invited Sessions 4:00 p.m.–5:50 p.m.

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Wald I—Invited

IMS

Organizer(s): David Madigan, Rutgers, The State University of New Jersey

Chair(s): Steven Lalley, The University of Chicago

- 4:05 p.m.** **Large Deviations in Different Contexts**—◆ S.R. Srinivasa Varadhan, New York University

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

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Deming Lecture—Invited

The ASA, ENAR, WNAR, IMS, SSC, Deming Lectureship Committee, Section on Physical and Engineering Sciences, Biometrics Section

Organizer(s): Randall K. Spoeri, Cerner Corporation

Chair(s): Randall K. Spoeri, Cerner Corporation

- 4:05 p.m.** **Statistics, Quality, and Organizational Excellence**—◆ A. Blanton Godfrey, North Carolina State University

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

Invited Sessions 8:00 p.m.–9:30 p.m.

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ASA Presidential Address and Awards—Invited

The ASA

Organizer(s): Fritz J. Scheuren, The University of Chicago

Chair(s): Bradley Efron, Stanford University

- 8:00 p.m.** **Presentation of Awards**—◆ Bradley Efron, Stanford University

- 8:30 p.m.** **Presidential Address—Statistics: a Rights Discipline**—◆ Fritz J. Scheuren, The University of Chicago

- 9:00 p.m.** **Presentation of Founders Awards and New ASA Fellows**—◆ Bradley Efron, Stanford University

American Statistical Association

Presidential Address & Awards Session



Fritz J. Scheuren, ASA President

Tuesday, August 9, 2005, 8:00 p.m.

Minneapolis Convention Center
Ballroom A

Is your associate, professor, student, colleague, friend, or organization being recognized at the Joint Statistical Meetings in Minneapolis?



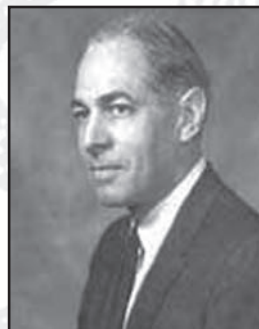
Samuel S. Wilks
Memorial Award



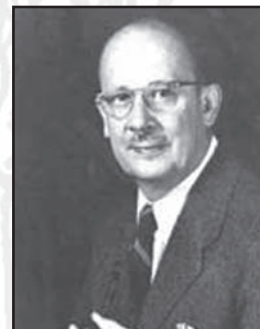
Edward C. Bryant
Scholarship



Gertrude M. Cox
Scholarship



Gottfried E. Noether
Awards



W.J. Youden Award in
Lab Testing

- ★ **Statistics in Chemistry Award**
- ★ **ASA Fellows**
- ★ **Founders Award**
- ★ **Outstanding Statistical Application Award**
- ★ **Statistical Partnerships Among Academe, Industry, and Government (SPAIG) Award**

Plan to attend the ASA Presidential Address and Awards Session for the recognition of the ASA's most distinguished members.



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