

**MONDAY, AUGUST 8**

## Tours

9:00 a.m.–12:00 p.m.   **MCC**-Main Entrance, 2nd Avenue  
**TR05 - Twin Cities Highlights**

## Committee/Business Meetings &amp; Other Activities

7:00 a.m.–8:30 a.m.   **H**-Conrad B

**Section on Teaching of Statistics in the Health Sciences Executive Committee Meeting**

*Chair(s):* Walter T. Ambrosius, Wake Forest University School of Medicine

7:00 a.m.–8:30 a.m.   **H**-Redwing Room

**Section on Government Statistics Executive Committee Meeting (closed)**

*Chair(s):* Chester Bowie, Market Strategies, Inc.

7:00 a.m.–8:30 a.m.   **H**-Director's Row 4

**Section on Health Policy Statistics Executive Committee Meeting (closed)**

*Chair(s):* Carolyn Rutter, Group Health Cooperative; Thomas McLaughlin, University of Massachusetts

7:00 a.m.–8:30 a.m.   **H**-Nicollet

**Survey Review Committee**

*Chair(s):* Polly Phipps, Bureau of Labor Statistics

7:00 a.m.–8:30 a.m.   **H**-Marquette

**ASA SIAM Series Editorial Board (closed)**

*Chair(s):* Martin Wells, Cornell University

7:00 a.m.–8:30 a.m.   **H**-Conrad A

**JABES Management Committee (closed)**

*Chair(s):* Timothy G. Gregoire, Yale University

7:00 a.m.–8:30 a.m.   **H**-Board Room 2

**Committee on Minorities in Statistics (closed)**

*Chair(s):* Nagambal Shah, Spelman College

7:00 a.m.–8:30 a.m.   **H**-Director's Row 2

**Technometrics Management Committee (closed)**

*Organizer(s):* Karen Kafadar, University of Colorado, Denver

7:00 a.m.–8:30 a.m.   **H**-Director's Row 1

**Section on Statistical Graphics Executive Committee (closed)**

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

7:00 a.m.–8:30 a.m.   **H**-Rochester

**Committee on the ASA Archives and Historical Materials**

*Chair(s):* Rich Allen, U.S. Department of Agriculture

7:00 a.m.–8:30 a.m.   **H**-Ramsey

**The ASA Task Force on Accreditation (closed)**

*Chair(s):* Mary Batcher, Ernst & Young LLP

7:00 a.m.–9:00 a.m.   **MCC**-206 AB

**Committee on Membership Retention and Recruitment (closed)**

*Chair(s):* Dayanand Naik, Old Dominion University

7:00 a.m.–9:00 a.m.   **H**-Conrad C

**Social Statistics Section Executive Committee Meeting (closed)**

*Chair(s):* Gerald Gates, U.S. Census Bureau

7:00 a.m.–10:00 a.m.   **H**-Conrad D

**Committee on Professional Ethics (closed)**

*Chair(s):* William Seltzer, Fordham University

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.–9:00 a.m.   **H**-Director's Row 3

**Committee on Nominations (closed)**

*Chair(s):* Jeremy Wu, Wu & Associates

7:30 a.m.–9:00 a.m.   **H**-LaSalle

**Carnegie Mellon Alumni and Faculty Breakfast (closed)**

*Organizer(s):* Margaret Smykla, Carnegie Mellon University

7:30 a.m.–6:00 p.m.   **MCC**-Level 1, Registration Lobby

**JSM Main Registration  
The ASA Communities Booth  
Special Assistance and Press Desk**

# GENERAL PROGRAM SCHEDULE

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

8:00 a.m.–9:00 a.m.   H-Board Room 3  
**Council of Chapters ISEF Breakfast (closed)**  
*Chair(s): John Boyer, Kansas State University*

8:00 a.m.–9:30 a.m.   H-Carver  
**Committee on Applied Statisticians (open to all ASA members)**  
*Chair(s): Mani Lakshminarayanan, Pfizer, Inc.*

8:00 a.m.–4:00 p.m.   H-Duluth  
**ASA/NCTM beyond AP Statistics**  
*Chair(s): James Matis, Texas A&M University*

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.–10:00 a.m.   H-Rochester  
**Transportation Statistics Interest Group**  
*Organizer(s): Promod Chandhok, Bureau of Transportation Statistics*

9:00 a.m.–10:30 a.m.   MCC-L100 F  
**Academic Program Representatives (closed)**  
*Chair(s): Sastry G. Pantula, North Carolina State University*

9:00 a.m.–10:30 a.m.   H-Board Room 3  
**Council of Chapters Governing Board Planning Meeting (closed)**  
*Chair(s): Tom Capizzi, Merck Research Laboratories*

9:00 a.m.–11:00 a.m.   MCC-L100 H  
**Advisory Committee on Continuing Education (closed)**  
*Chair(s): Nandini Kannan, The University of Texas at San Antonio*

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**

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

10:00 a.m.–2:00 p.m.   MCC-207 AB  
**JSM 2006 Program Committee Meeting (closed)**  
*Chair(s): Lisa M. LaVange, Inspire Pharmaceuticals, Inc.*

10:30 a.m.–11:30 a.m.   H-Director's Row 1  
**Deming Lectureship Committee Business Meeting (closed)**  
*Chair(s): Randall K. Spoeri, Cerner Corporation*

10:30 a.m.–12:00 p.m.   H-Board Room 2  
**Council of Chapters Governing Board Chapter Status Committee Meeting (closed)**  
*Chair(s): Tom Capizzi, Merck Research Laboratories; Ronald L. Wasserstein, Washburn University*

10:30 a.m.–12:00 p.m.   H-Board Room 3  
**Council of Chapters Governing Board Executive Committee Meeting (closed)**  
*Chair(s): Tom Capizzi, Merck Research Laboratories; Ronald L. Wasserstein, Washburn University*

10:30 a.m.–12:00 p.m.   H-Director's Row 3  
**Section on Statistical Education Executive Committee (closed)**  
*Chair(s): Robin Lock, St. Lawrence University*

12:00 p.m.–5:30 p.m.   H-Redwing Room  
**Council of Chapters Governing Board Meeting (closed)**  
*Chair(s): Tom Capizzi, Merck Research Laboratories*

12:30 p.m.–2:00 p.m.   H-Director's Row 2  
**Section on Bayesian Statistical Science Executive Committee Meeting (closed)**  
*Chair(s): Malay Ghosh, University of Florida*

12:30 p.m.–2:00 p.m.   H-Board Room 2  
**Statistics in Medicine Editorial Board (closed)**  
*Organizer(s): Ralph B. D'Agostino, Boston University*

12:30 p.m.–2:00 p.m.   H-Director's Row 4  
**Section on Statistical Computing Executive Committee (closed)**  
*Chair(s): Tim C. Hesterberg, Insightful Corp.*

12:30 p.m.–2:30 p.m.   HY-Lake Minnetonka  
**IMS Editors Meeting**  
*Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics*  
 12:30 p.m.–2:30 p.m.   HY-Cedar Lake  
**IMS AOS Editors Meeting**  
*Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics*

4:00 p.m.–5:00 p.m.   H-Director's Row 3  
**JASA Reviews Associate Editors Meeting (closed)**  
*Chair(s): Robert Lund, Clemson University*

4:00 p.m.–6:00 p.m.   **MCC-102 A**

## **CDC/ATSDR Statisticians Open Meeting**

*Organizer(s): Karl Sieber, National Institute of Occupational Safety and Health*

4:00 p.m.–6:00 p.m.   **H-Rochester**

## **CAUSE: Consortium for the Advancement of Undergraduate Statistics Education Meeting (closed)**

*Organizer(s): Dennis Pearl, The Ohio State University*

4:30 p.m.–6:00 p.m.   **H-Board Room 2**

## **Section on Nonparametric Statistics Executive Committee (closed)**

*Organizer(s): Jeff Hart, Texas A&M University*

5:00 p.m.–6:00 p.m.   **MCC-102 B**

## **Organizational Meeting for Possible Special Interest Group for Statisticians Working in the Medical Devices Area**

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

5:00 p.m.–6:30 p.m.   **H-Nicollet**

## **University of Iowa Statistics, Biostatistics, and Actuarial Science Departments (open only to alumni and friends)**

*Organizer(s): Terry Kirk, The University of Iowa*

5:00 p.m.–6:30 p.m.   **H-Board Room 3**

## **Journal of Quality Technology (closed)**

5:00 p.m.–6:30 p.m.   **H-Director's Row 1**

## **Section on Quality and Productivity Executive Committee Meeting (closed)**

*Chair(s): Christina Mastrangelo, University of Washington*

5:00 p.m.–7:00 p.m.   **H-Conrad D**

## **Texas A&M Statistics Department Alumni Reception (closed)**

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

5:00 p.m.–7:00 p.m.   **HY-Regency**

## **Statistical Society of Canada Reception (all are welcome)**

*Organizer(s): David Binder*

Monday

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

5:00 p.m.–7:00 p.m.   H-Salon B  
**NISS/SAMSI Reception**  
*Organizer(s): Alan F. Karr, National Institute of Statistical Sciences*

5:30 p.m.–7:00 p.m.   H-Conrad C  
**Christian Statisticians' Informal Discussion**  
*Organizer(s): Robert Mee, University of Tennessee*

5:30 p.m.–7:00 p.m.   H-Marquette  
**The University of North Carolina Department of Biostatistics and Statistics and Operations Research Alumni Reception (by invitation only)**  
*Organizer(s): Melissa Hobgood, University of North Carolina at Chapel Hill*

5:30 p.m.–7:00 p.m.   MCC-102 E  
**Section on Statistical Consulting Business Meeting**  
*Chair(s): Susan Devlin, The Artemis Group*

5:30 p.m.–7:00 p.m.   H-Imperial Suite  
**ASA/NSF Federal Statistics Research Program Reception (closed)**  
*Chair(s): Carolyn Kesner, The ASA*

5:30 p.m.–7:00 p.m.   MCC-102 D  
**Biometrics Section Annual Business Meeting**  
*Chair(s): Marie Davidian, North Carolina State University*

5:30 p.m.–7:00 p.m.   H-LaSalle  
**Social Statistics Section Business Meeting/Mixer**  
*Chair(s): Gerald Gates, U.S. Census Bureau*

5:30 p.m.–7:00 p.m.   H-Director's Row 4  
**Section on Statistics and the Environment Business Meeting/Reception**  
*Chair(s): Jean D. Opsomer, Iowa State University*

5:30 p.m.–7:00 p.m.   H-Ramsey  
**Section on Health Policy Statistics Business Meeting**  
*Chair(s): Carolyn Rutter, Group Health Cooperative; Thomas McLaughlin, University of Massachusetts*

5:30 p.m.–7:00 p.m.   MCC-L100 A  
**Section on Statistics in Sports Business Meeting**  
*Chair(s): Scott M. Berry, Berry Consultants LLC*

5:30 p.m.–7:00 p.m.   H-Carver  
**The Caucus for Women in Statistics Reception**  
*Organizer(s): Julia Bienias, Rush University Medical Center*

5:30 p.m.–7:00 p.m.   H-Director's Row 3  
**Committee of Representatives to the AAAS**  
*Chair(s): Michael P. Cohen, Bureau of Transportation Statistics*

5:30 p.m.–7:00 p.m.   MCC-206 A  
**Section on Risk Analysis Business Meeting**  
*Chair(s): David Banks, Duke University*

5:30 p.m.–7:00 p.m.   H-Director's Row 2  
**Section on Teaching Statistics in the Health Sciences Business Meeting and Mixer**  
*Chair(s): Walter T. Ambrosius, Wake Forest University School of Medicine*

5:30 p.m.–7:30 p.m.   MCC-206 B  
**Section on Statistics in Epidemiology Executive Committee Meeting (closed)**  
*Organizer(s): Maya Sternberg, U.S. Centers for Disease Control and Prevention*

6:00 p.m.–7:00 p.m.   H-Conrad A  
**Student Mixer (students only, included in registration fee)**  
*Chair(s): Dayanand Naik, Old Dominion University*

6:00 p.m.–7:30 p.m.   HY-Mirage Room  
**Insightful Corporation Reception**  
*Organizer(s): Kim Kelly, Insightful Corp.*

6:00 p.m.–7:30 p.m.   MCC-102 C  
**ASA Task Force on Accreditation**  
*Chair(s): Mary Batchner, Ernst & Young LLP*

6:00 p.m.–8:00 p.m.   MCC-L100 G  
**Korean Statisticians in America Meeting**  
*Organizer(s): Sin-Ho Jung, Duke University*

6:00 p.m.–8:00 p.m.   MCC-L100 E  
**Gay and Lesbian Statisticians Caucus Meeting**  
*Organizer(s): Ralph Bradley, Bureau of Labor Statistics*

6:00 p.m.–9:00 p.m.   MCC-L100 B  
**Amgen Inc. Reception (closed—by invitation only)**  
*Organizer(s): Pam Pearson, Amgen Inc.*

6:15 p.m.–7:15 p.m.   MCC-207 AB  
**President's Invited Speaker Reception (by invitation only)**  
*Chair(s): Fritz J. Scheuren, The University of Chicago*

6:30 p.m.–7:30 p.m. H-Conrad B

**ASA Membership Committee Longtime Member Reception (by invitation only)***Chair(s): Dayanand Naik, Old Dominion University*

6:30 p.m.–8:30 p.m. H-Salon C

**John Wiley & Sons, Inc., Reception (by invitation only)***Organizer(s): Susanne Steitz, John Wiley & Sons, Inc.*

6:30 p.m.–8:30 p.m. HY-Lake Minnetonka

**University of Washington Department of Biostatistics Alumni Reception***Organizer(s): Xiao-Hua (Andrew) Zhou, University of Washington*

7:00 p.m.–9:00 p.m. H-Duluth

**Merck Research Laboratories Reception (by invitation only)***Organizer(s): Beverly Jacobsen, Merck Research Laboratories*

7:00 p.m.–10:00 p.m. H-Redwing Room

**Southern Methodist University Alumni Gathering***Organizer(s): Sheila Crain, Southern Methodist University*

7:30 p.m.–10:00 p.m. MCC-200 DE

**Joint Statistical Computing Section and Section on Statistical Graphics Business Meeting and Mixer***Chair(s): Mario Peruggia, The Ohio State University; Tim C. Hesterberg, Insightful Corp.*

9:15 p.m.–11:00 p.m. MCC-Seasons

**IMS Presidential Address Reception***Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics*

## Continuing Education (Fee Events)

CE\_13C MCC-L100 G

8:00 a.m.–4:00 p.m.

**Sample-size Analysis for Study Planning****The ASA, Section on Teaching Statistics in the Health Sciences***Instructor(s): Ralph O'Brien, Cleveland Clinic Foundation; John Castellote, SAS Institute, Inc.*

CE\_14C MCC-L100 I

8:00 a.m.–4:00 p.m.

**Analysis of Clinical Trials: Theory and Applications The ASA, Biopharmaceutical Section***Instructor(s): Christy Chuang-Stein, Pfizer, Inc.; Alexei Dmitrienko, Eli Lilly and Company; Geert Molenberghs, Limburgs Universitair Centrum*

CE\_15C MCC-L100 D

8:15 a.m.–4:15 p.m.

**Statistical Analysis and Data Display****The ASA, Section on Statistical Graphics***Instructor(s): Richard M. Heiberger, Temple University; Burt Holland, Temple University*

CE\_16C MCC-L100 A

8:15 a.m.–4:15 p.m.

**Hierarchical Modeling and Analysis for Spatial Data****The ASA, Section on Bayesian Statistical Science***Instructor(s): Bradley P. Carlin, University of Minnesota; Sudipto Banerjee, University of Minnesota; Alan E. Gelfand, Duke University*

CE\_17C MCC-L100 C

8:15 a.m.–4:15 p.m.

**Multiple Comparisons and Multiple Tests****The ASA***Instructor(s): Peter Westfall, Texas Tech University*

CE\_18C MCC-L100 E

8:15 a.m.–4:15 p.m.

**Computational Statistics: Methods for Optimization and Monte Carlo Integration****The ASA, Section on Statistics and the Environment***Instructor(s): Jennifer A. Hoeting, Colorado State University; Geof Givens, Colorado State University*

# Cyber Café

## and Message Center Hours

**Saturday, August 6–****Wednesday, August 10****7:00 a.m.–11:00 p.m.****Thursday, August 11****7:00 a.m.–10:30 a.m.**



# GENERAL PROGRAM SCHEDULE

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

CE\_19C

MCC-L100 F

1:00 p.m.–5:00 p.m.

## **Statistical Methods for Evaluating Tests and Biomarkers in Medicine**

**The ASA, Section on Statistics in Epidemiology**

*Instructor(s): Margaret S. Pepe, University of Washington*

CE\_20C

MCC-L100 J

1:00 p.m.–5:00 p.m.

## **Metaanalysis: Statistical Methods for Combining the Results of Independent Studies** **The ASA**

*Instructor(s): Ingram Olkin, Stanford University*

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Invited Sessions 8:30 a.m.–10:20 a.m.

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**MCC-211 A**

## ● **Practical Guidance for Collaborators and Their Clients—Invited**

**Section on Statistical Consulting**

*Organizer(s): Harold Dyck, California State University, San Bernardino*

*Chair(s): Harold Dyck, California State University, San Bernardino*

**8:35 a.m.** Tactical Missile Inventory and Spares Procurement—  
◆ Janet Myhre, Reed Institute for Decision Science

**9:20 a.m.** A Collaborator and Client's Guide to Solving Complex Problems with Data—◆ Arnold Goodman, UCI Center for Statistical Consulting

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

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**MCC-201 AB**

## ● **Recent Advances in Multiple Testing—Invited**

**Biometrics Section, Section on Nonparametric Statistics, ENAR, Business and Economics Statistics Section, WNAR, Biometrics Section**

*Organizer(s): Sandrine Dudoit, University of California, Berkeley*

*Chair(s): Sandrine Dudoit, University of California, Berkeley*

**8:35 a.m.** Hierarchical False Discovery Rate Controlling Procedures for the Statistical Analysis of Complex Large-scale Data—◆ Daniel Yekutieli, Tel Aviv University

**9:00 a.m.** Generally Valid Resampling-based Multiple Testing Methods—◆ Katherine S. Pollard, University of California, Santa Cruz; Sandrine Dudoit, University of California, Berkeley; Mark van der Laan, University of California, Berkeley

**9:25 a.m.** Multiple Testing Procedures for Control of Tail Probability of Proportion of False Positives—◆ Mark van der Laan, University of California, Berkeley; Sandrine Dudoit, University of

California, Berkeley; Katherine S. Pollard, University of California, Santa Cruz; Merrill Birkner, University of California, Berkeley

**9:50 a.m.** Disc: Sunduz Keles, University of Wisconsin, Madison

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

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**MCC-200 H**

## ☆ **Publishing in Statistics Education Journals: Views from the Editors—Invited**

**International Association for Statistical Education, Section on Statistical Education**

*Organizer(s): Carol J. Blumberg, Winona State University*

*Chair(s): E. Jacquelin Dietz, Meredith College*

**8:35 a.m.** The Journal *Teaching Statistics*—◆ Neville Davies, RSS Centre for Statistical Education

**8:50 a.m.** *The Journal of Statistics Education: an International Journal on the Teaching and Learning of Statistics*—  
◆ W. Robert Stephenson, Iowa State University

**9:05 a.m.** Promoting Research and Research Reporting in Statistics Education: the SERJ Experience—  
◆ Flavia Jolliffe, University of Kent; Iddo Gal, University of Haifa; Carol J. Blumberg, Winona State University

**9:20 a.m.** Disc: Gilberte Schuyten, University of Gent

**9:40 a.m.** Floor Discussion

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**MCC-102 F**

## ● **Assessment of the Uncertainties of Small-area Estimators—Invited**

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

*Organizer(s): Jane L. Meza, University of Nebraska Medical Center*

*Chair(s): Jane L. Meza, University of Nebraska Medical Center*

**8:35 a.m.** Design-consistent Domain Level Estimation in Surveys with Massive Nonresponse—◆ Daniela Cocchi, University of Bologna; Enrico Fabrizi, University of Bergamo; Carlo Trivisano, University of Bologna

**9:00 a.m.** Distribution of Sampling, Nonresponse, Reporting, and Model Errors in Small-domain Estimators from the Current Employment Statistics Program—◆ John L. Eltinge, Bureau of Labor Statistics; Julie B. Gershunskaya, Bureau of Labor Statistics; Larry L. Huff, Bureau of Labor Statistics

**9:25 a.m.** On Mean Square Prediction Error Estimation in Small-area Estimation Problems—◆ Shijie Chen, RTI International; Partha Lahiri, University of Maryland

**9:50 a.m.** Disc: J. N. K. Rao, Carleton University

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

## 79 **MCC-200 G**

### ☆ **Direct and Indirect Effects—Invited**

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

*Organizer(s): Marshall M. Joffe, University of Pennsylvania*

*Chair(s): Marshall M. Joffe, University of Pennsylvania*

- 8:35 a.m.** Direct and Indirect Effects—◆ Judea Pearl, University of California, Los Angeles
- 9:00 a.m.** Estimation of Treatment Effects Adjusted for Post-treatment Confounding—◆ Arvid Sjölander, Karolinska Institutet; Juni Palmgren, Karolinska Institutet
- 9:25 a.m.** Recent Advances in Separation of Direct and Indirect Effects—◆ James M. Robins, Harvard University
- 9:50 a.m.** Disc: Donald B. Rubin, Harvard University
- 10:10 a.m.** Floor Discussion

## 80 **MCC-103 B**

### ● **Causal Inference with Problematic Control Groups—Invited**

#### **Section on Health Policy Statistics, Business and Economics Statistics Section, WNAR**

*Organizer(s): Sue M. Marcus, Mount Sinai School of Medicine*

*Chair(s): Justine Shults, University of Pennsylvania*

- 8:35 a.m.** Matching with Multiple Control Groups and Adjusting for Differences between the Groups—◆ Elizabeth A. Stuart, Mathematica Policy Research, Inc.; Donald B. Rubin, Harvard University
- 9:00 a.m.** When a Placebo Group Is Unethical: a Propensity Score Approach—◆ Sue M. Marcus, Mount Sinai School of Medicine
- 9:25 a.m.** Quantifying Placebo Effect in Discontinuation Trials—◆ Eva Petkova, Columbia University; Thaddeus Tarpey, Wright State University
- 9:50 a.m.** Disc: Joseph L. Gastwirth, George Washington University
- 10:10 a.m.** Floor Discussion

## 81 **MCC-212 AB**

### **New Latent Space Models for Social Science—Invited**

#### **IMS, Social Statistics Section**

*Organizer(s): Adrian E. Raftery, University of Washington*

*Chair(s): Adrian E. Raftery, University of Washington*

- 8:35 a.m.** Recovering Ideological Information from Divisions of the UK House of Commons—◆ Kevin Quinn, Harvard University; Arthur Spirling, University of Rochester
- 9:05 a.m.** Mobility Rules: Latent Space Models for Career Sequences—◆ Marc A. Scott, New York University

- 9:35 a.m.** Model-based Clustering for Social Networks—◆ Mark S. Handcock, University of Washington; Adrian E. Raftery, University of Washington; Jeremy M. Tantrum, University of Washington

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

## 82 **MCC-200 ABC**

### ● **50th Anniversary of Mixture Research—Invited**

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

*Organizer(s): Gregory F. Piepel, Battelle, Pacific Northwest Division*

*Chair(s): Scott Kowalski, Minitab Inc.*

- 8:35 a.m.** An Overview of 50 Years of Mixture Experiment Research—◆ Gregory F. Piepel, Battelle, Pacific Northwest Division
- 9:00 a.m.** Our 10 Most-valued Mixture Experiment Articles—◆ John Cornell, University of Florida; G. Geoffrey Vining, Virginia Polytechnic Institute and State University
- 9:25 a.m.** Mixture Experiment Research at DuPont—Contributions and Learnings—◆ Ronald D. Snee, Tunnell Consulting
- 9:50 a.m.** Mixture-process Variable Experiments with Control and Noise Variables—Heidi Goldfarb, The Dial Corporation; ◆ Douglas Montgomery, Arizona State University
- 10:15 a.m.** Floor Discussion

## 83 **MCC-213 AB**

### **Using Japanese Lesson Study To Develop Research-based Lessons in Statistics—Invited**

#### **Section on Statistical Education**

*Organizer(s): Beth Chance, California Polytechnic State University*

*Chair(s): Beth Chance, California Polytechnic State University*

- 8:35 a.m.** Japanese Lesson Study: an Application to Upper-level Undergraduate Statistics—◆ Paul J. Roback, St. Olaf College
- 9:00 a.m.** Lesson Study as a Vehicle for Studying and Improving the Mathematical Preparation of Prospective Teachers—◆ Dawn Berk, University of Delaware
- 9:25 a.m.** The Impact of Japanese Lesson Study on Teachers of Statistics—Joan Garfield, University of Minnesota; ◆ Robert delMas, University of Minnesota; Beth Chance, California Polytechnic State University
- 9:50 a.m.** Lessons on Lesson Study—◆ Gail Burrill, Michigan State University
- 10:15 a.m.** Floor Discussion

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● ☆ **Pharmacogenomics—Invited**

**Biopharmaceutical Section, ENAR, WNAR, Biometrics Section**

*Organizer(s): Xiaohua Zhang, Merck Research Laboratories*

*Chair(s): Xiaohua Zhang, Merck Research Laboratories*

**8:35 a.m.** Haplotype Mapping in Pharmacogenetics—◆ David B. Goldstein, University College London

**9:00 a.m.** Using Linkage To Inform Positional Cloning—◆ Mary Sara McPeck, The University of Chicago

**9:25 a.m.** Likelihood-based Analysis for Mixture Models with Applications to Genetic Linkage and Association Studies—◆ Yongzhao Shao, New York University

**9:50 a.m.** Genetic Association Studies Using False Discovery Control with P-value Weighting—◆ Kathryn Roeder, Carnegie Mellon University

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

**MCC-200 DE**

**85**

● ☆ **Recent Innovations in Clinical Trial Design—Invited**

**ENAR, Biopharmaceutical Section, WNAR, Biometrics Section**

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

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

**8:35 a.m.** Designs for Dynamic Treatment Regimes—◆ Philip W. Lavori, Stanford University; Ree Dawson, Frontier Science

**9:05 a.m.** Dose-finding Based on Multiple Ordinal Toxicities in Phase I Oncology Trials—◆ Benjamin Neby Bekele, The University of Texas M. D. Anderson Cancer Center; Peter F. Thall, The University of Texas M. D. Anderson Cancer Center

**MCC-200 F**



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**9:35 a.m.** Group Sequential Clinical Trials with Multiple Primary Endpoints—◆ Michael Kosorok, University of Wisconsin, Madison; Shuangge Ma, University of Washington

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

**86**

● ☆ **Nonstationary and Nonlinear Time-series Models—Invited**

**Business and Economics Statistics Section**

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

*Chair(s): John F. Monahan, North Carolina State University*

**8:35 a.m.** Model Diagnosis for SETAR Time Series—◆ Hira L. Koul, Michigan State University; Winfried Stute, Michigan State University; Fang Li, University of Giessen

**9:00 a.m.** On Deformations Reducing Nonstationary Stochastic Processes to Stationarity—◆ Marc G. Genton, Texas A&M University

**9:25 a.m.** Two Nonlinear Models for Time Series—◆ David A. Dickey, North Carolina State University

**9:50 a.m.** Bayesian Analysis of Threshold Autoregressive Models—◆ Hamparsum Bozdogan, University of Tennessee; Yongjae Kwon, BBT; Halima Bensmail, University of Tennessee

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

**MCC-211 D**

**87**

**Statistical Models and Methods for Microarray Data—Invited**

**IMS, Section on Nonparametric Statistics, WNAR, Section on Statistical Graphics, Biometrics Section**

*Organizer(s): Cun-Hui Zhang, Rutgers, The State University of New Jersey*

*Chair(s): Cun-Hui Zhang, Rutgers, The State University of New Jersey*

**8:35 a.m.** Large-p, Small-n Asymptotics for Significance Analysis in High-throughput Screening—Michael Kosorok, University of Wisconsin, Madison; ◆ Shuangge Ma, University of Washington

**9:00 a.m.** Penalized Estimation for Sparse Gaussian Concentration Graphs with Applications to Inference of Genetic Regulatory Networks—◆ Hongzhe Li, University of California, Davis; Jiang Gui, University of California, Davis

**9:25 a.m.** A Two-way, Semilinear Model for Normalization and Analysis of Microarray Data—◆ Jian Huang, The University of Iowa; Cun-Hui Zhang, Rutgers, The State University of New Jersey

**9:50 a.m.** Disc: Jianqing Fan, Princeton University

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

**MCC-209 AB**



Invited Panels 8:30 a.m.–10:20 a.m.

## 88 **MCC-103 D**

### ☆ **National Security Issues in the Design and Analysis of Social Network Studies—Invited**

#### Section on Statisticians in Defense and National Security, Social Statistics Section

Organizer(s): Peter Hoff, University of Washington

Chair(s): Peter Hoff, University of Washington

**Panelists:** ◆ Steven K. Thompson, The Pennsylvania State University  
◆ Steven Fienberg, Carnegie Mellon University  
◆ David Banks, Duke University  
◆ Kathleen Carley, Carnegie Mellon University

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

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

## 89 **MCC-202 AB**

### **Semiparametric Transformation Models in Survival Analysis—Topic Contributed**

#### Biometrics Section, WNAR

Organizer(s): Yunling (Evelyn) Du, Albert Einstein College of Medicine

Chair(s): Yunling (Evelyn) Du, Albert Einstein College of Medicine

**8:35 a.m.** The Generalized Estimating Equations for Transformation Models—◆ Kani Chen, Hong Kong University of Science and Technology

**8:55 a.m.** Combining Markers for Predicting Event Times with Nonparametric Transformation Model—◆ Tianxi Cai, Harvard University

**9:15 a.m.** Marginal Regression of Multivariate Event Based on Linear Transformation Models—◆ Wenbin Lu, North Carolina State University

**9:35 a.m.** On the Accelerated Failure Time Model for Current Status and Interval-censored Data—◆ Lu Tian, Northwestern University; Tianxi Cai, Harvard University

**9:55 a.m.** Floor Discussion

## 90 **MCC-200 J**

### ☆ **Statistical Issues in Contraceptive Devices—Topic Contributed**

#### Biopharmaceutical Section, WNAR

Organizer(s): Rosalie Dominik, Family Health International

Chair(s): Stuart A. Gansky, University of California, San Francisco

**8:35 a.m.** A Selection Model for Survival Data with Possible Nonrandom Censoring: an Illustration of Time-to-pregnancy Sensitivity Analysis—◆ Pai-Lien Chen, Family Health International; Marlina Nasution, Family Health International

**8:55 a.m.** Design and Analysis of Noninferiority Condom Failure Studies When Control Event Rates Are Expected To Approach Zero—◆ Douglas Taylor, Family Health International

**9:15 a.m.** Indirect Age Adjustment for Pregnancy Rates in Clinical Studies of Contraceptive Devices—◆ Yihua Zhao, U.S. Food and Drug Administration; Gene Pennello, U.S. Food and Drug Administration

**9:35 a.m.** Historical Control Analysis Using Propensity Scores To Test Noninferiority of a Contraceptive Device: Do Results Agree with an RCT?—◆ Rosalie Dominik, Family Health International

**9:55 a.m.** Disc: Mark Weaver, Rho, Inc.

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

## 91 **MCC-103 F**

### ● **Optimal Experimental Design—Topic Contributed**

#### General Methodology, Biometrics Section, Biopharmaceutical Section

Organizer(s): Weng Kee Wong, University of California, Los Angeles

Chair(s): Weng Kee Wong, University of California, Los Angeles

**8:35 a.m.** Selecting Drug Combinations: Adaptive Approach—◆ Vladimir Dragalin, GlaxoSmithKline; Valerii Fedorov, GlaxoSmithKline

**8:55 a.m.** Optimal Design of Pharmacokinetic Studies Described by Stochastic Differential Equations—◆ Sergei Leonov, GlaxoSmithKline; Valerii Fedorov, GlaxoSmithKline; Vladimir Anisimov, GlaxoSmithKline

**9:15 a.m.** Some Issues of Optimality in the Design of Interrater Agreement Studies—◆ Mekibib Altaye, Cincinnati Children's Hospital Medical Center; Allan Donner, The University of Western Ontario

**9:35 a.m.** Optimality of Nested Designs with Equal and Unequal Cluster Sizes—◆ Martijn Berger, Maastricht University

**9:55 a.m.** Item Calibration in Computerized Adaptive Testing Using Minimal Information Loss—◆ Steven Buyske, Rutgers, The State University of New Jersey

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

**92**

**MCC-208 C**

● ☆ **Recent Development in Bayesian Methods with Missing Data—Topic Contributed**

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

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

Chair(s): Joseph Hogan, Brown University

**8:35 a.m.** Small Sample and Asymptotic Relationships between Multiple Imputation, Maximum Likelihood, and Fully Bayesian Methods for Missing Data in Linear Regression Models—◆ Qingxia Chen, The University of North Carolina at Chapel Hill; Joseph G. Ibrahim, The University of North Carolina at Chapel Hill

**8:55 a.m.** Bayesian Regression Models of Nonignorable Nonresponse—◆ Jai W. Choi, National Center for Health Statistics; Balgobin Nandram, Worcester Polytechnic Institute

**9:15 a.m.** Sensitivity Analysis and Informative Priors for Longitudinal Binary Data with Outcome-related Dropout—◆ Joo Yeon Lee, Brown University

**9:35 a.m.** Bayesian Analysis of the Mixed Models for Repeated Binary Response and Time-dependent Missing Covariates—◆ Lan Huang, National Cancer Institute; Ming-Hui Chen, University of Connecticut; Paul R. Neal, University of Connecticut; Gregory J. Anderson, University of Connecticut

**9:55 a.m.** Flexible Modeling of the Dependence Structure in Missing Data Problems—◆ John Boscardin, University of California, Los Angeles; Xiao Zhang, University of California, Los Angeles

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

**93**

**MCC-208 D**

● ☆ **Bayesian Spatial and Functional Modeling—Topic Contributed**

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

Organizer(s): Herbert Lee, University of California, Santa Cruz

Chair(s): Robert B. Gramacy, University of California, Santa Cruz

**8:35 a.m.** Bayesian Modeling of Multicategory Spatial Data—◆ Catherine Calder, The Ohio State University

**8:55 a.m.** A Posteriori Analysis of Climate System Properties—◆ Charles T. Curry, University of California, Santa Cruz; Bruno Sansó, University of California, Santa Cruz; Chris E. Forest, Massachusetts Institute of Technology

**9:15 a.m.** Bayesian Inference on Mixture-of-experts for Estimation of Stochastic Volatility—◆ Gabriel Huerta, The University of New Mexico

**9:35 a.m.** Default Priors for Neural Networks—◆ Herbert Lee, University of California, Santa Cruz

**9:55 a.m.** Mixtures of Self Modeling Bayesian Regression Splines—◆ Kert Viele, University of Kentucky; Mark Lancaster, University of Kentucky

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

**94**

**MCC-102 B**

**Nonparametric Statistics in Biomedical Research—Topic Contributed**

Section on Nonparametric Statistics, ENAR, Biometrics Section

Organizer(s): Cheng Cheng, St. Jude Children's Research Hospital

Chair(s): Cheng Cheng, St. Jude Children's Research Hospital

**8:35 a.m.** Generalized Linear Models with Images as Predictors—◆ Philip Reiss, Columbia University; Todd Ogden, Columbia University

**8:55 a.m.** On Averaging Power for Genetic Association and Linkage Studies—◆ Jungnam Joo, National Heart, Lung, and Blood Institute; Gang Zheng, National Heart, Lung, and Blood Institute; Santhi K. Ganesh, National Heart, Lung, and Blood Institute; Elizabeth G. Nabel, National Heart, Lung, and Blood Institute; Nancy L. Geller, National Heart, Lung, and Blood Institute

**9:15 a.m.** Sample-size Determination for the False Discovery Rate—◆ Stanley Pounds, St. Jude Children's Research Hospital; Cheng Cheng, St. Jude Children's Research Hospital

**9:35 a.m.** Detecting Gene-gene Interactions Using Multifactor Dimensionality Reduction—◆ Marylyn Ritchie, Vanderbilt University

**9:55 a.m.** Crossvalidated and Bagged Partitioning Estimators with Variable Importance—◆ Annette Molinaro, NCI/Yale University

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

**95**

**MCC-205 A**

● ☆ **Recent Statistical Contributions to Genetics and Epidemiology—Topic Contributed**

Biometrics Section, WNAR

Organizer(s): Tian Zheng, Columbia University

Chair(s): Cavan Reilly, University of Minnesota

**8:35 a.m.** Statistical Methods for Genetic Association Studies in Isolated Populations—◆ Ning Sun, Yale University

**8:55 a.m.** Mapping Quantitative Trait Loci with Time-to-event Data from a Population of Mixed Susceptibility—◆ Mengling Liu, New York University; Wenbin Lu, North Carolina State University; Yongzhao Shao, New York University

**9:15 a.m.** Nonparametric Estimation of Genotype-specific, Age-at-onset Distributions from Censored Kin-cohort Studies—◆ Yuanjia Wang, Columbia University

**9:35 a.m.** Final Outcome of an Endemic Infection—◆ Regina Dolgoarshinnykh, Columbia University

**9:55 a.m.** A Nonparametric Multipoint Screening Method for QTL Mapping—◆ Tian Zheng, Columbia University; Hui Wang, Columbia University; Shaw-Hwa Lo, Columbia University

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

## 96 **MCC-102 E**

### ● **Statistical Methods Research in the Medical Expenditure Survey—Topic Contributed Section on Survey Research Methods**

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

Chair(s): Leyla Mohadjer, Westat

**8:35 a.m.** Investigation of the Impact of Imputation on Variance Estimation in the Medical Expenditure Panel Survey—Robert M. Baskin, Agency for Healthcare Research and Quality; John Sommers, Agency for Healthcare Research and Quality; Marc W. Zodet, Agency for Healthcare Research

and Quality; ◆ Trena M. Ezzati-Rice, Agency for Healthcare Research and Quality

**8:55 a.m.** Investigation of Random-effects Models for Time-varying Variables with Missing Values in the Medical Expenditure Panel Survey—◆ Robert M. Baskin, Agency for Healthcare Research and Quality; Sourish Saha, Agency for Healthcare Research and Quality; John Fleishman, Agency for Healthcare Research and Quality

**9:15 a.m.** Full Sample Assessment of Methods for Adjusting Weights to Compensate for Dwelling Unit Nonresponse in the Medical Expenditure Panel Survey (MEPS)—Lap-Ming Wun, Agency for Healthcare Research and Quality; Trena M. Ezzati-Rice, Agency for Healthcare Research and Quality; ◆ Nuria Diaz-Tena, Mathematica Policy Research, Inc.; Janet Greenblatt, Agency for Healthcare Research and Quality

**9:35 a.m.** Using Data from the National Health Interview Survey (NHIS) To Assess the Effectiveness of Nonresponse Adjustment in the Medical Expenditure Panel Survey (MEPS)—◆ Lap-Ming Wun, Agency for Healthcare Research and Quality; Trena M. Ezzati-Rice, Agency for Healthcare Research and Quality; Ralph DiGaetano, Westat; Huseyin Goksel, Westat; Hongsheng Hao, Westat



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# GENERAL PROGRAM SCHEDULE

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

**9:55 a.m.** Confidence Intervals for Skewed Health Care Expenditure Data from the Medical Expenditure Panel Survey (MEPS)—◆ William Yu, Agency for Healthcare Research and Quality

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

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

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## 97 **MCC-205 D**

### ● **Privacy and Data Use in the New Technological Environment—Topic Contributed**

**Section on Government Statistics, Social Statistics Section, Section on Statisticians in Defense and National Security**

*Organizer(s): Wendy Alvey, U.S. Census Bureau; Irma F. Harahush, U.S. Census Bureau*

*Chair(s): Charles Louis Kincannon, U.S. Census Bureau*

**Panelists:** ◆ Wendy Alvey, U.S. Census Bureau  
◆ Vincent P. Barabba, Synthesis Alliance  
◆ Rochelle Martinez, U.S. Census Bureau  
◆ Gerald Gates, U.S. Census Bureau  
◆ Lisa Blumerman, U.S. Census Bureau

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

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

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## 98 **MCC-205 B**

### **Topics in Multiple Testing—Contributed** **Biometrics Section, WNAR**

*Chair(s): Thomas Nichols, University of Michigan*

**8:35 a.m.** Generalized Family-wise Error Rates for Threshold Step-down Multiple Testing Procedures—◆ Alexander Y. Gordon, University of Rochester

**8:50 a.m.** Hyperdependency in Multiple Dependent Analyses—  
◆ Sarah Baraniuk, The University of Texas Health Science Center at Houston; Lemuel Moye, The University of Texas Health Science Center at Houston

**9:05 a.m.** Control of Some Type I Error Rates in the Presence of General Augmentation Procedures in Multiple Testing and Some Applications—◆ Marepalli Rao, University of Cincinnati; Wenge Guo, University of Cincinnati

**9:20 a.m.** What Is Type II Error in Multiple Testing?—  
◆ Mohammed Alam, University of Cincinnati; Marepalli Rao, University of Cincinnati

**9:35 a.m.** Distributional Aspects of P-values and Their Use in Multiple Testing Situations—◆ Xiaojun Hu, University of Missouri, Rolla; Gary Gadbury, University of Missouri, Rolla

**9:50 a.m.** Simultaneous Confidence Bounds for Ratios of Linear Combinations of General Linear Model Parameters—  
◆ David Hare, University of Louisiana, Monroe; John Spurrier, University of South Carolina

**10:05 a.m.** Relating Genotype to Phenotype: Resampling-based Multiple Hypothesis Testing Using Order Statistics—  
◆ Jennifer Schumi, Harvard School of Public Health; Victor DeGruttola, Harvard School of Public Health

## 99 **MCC-208 B**

### ● ☆ **Biomedical Nonlinear Models—Contributed** **Biometrics Section, WNAR**

*Chair(s): Jeff Qin, Georgia State University*

**8:35 a.m.** Poisson-binomial Models for Aseptic Packaging of Foods—◆ Robert J. Blodgett, U.S. Food and Drug Administration

**8:50 a.m.** Modeling Predictors for Blood Transfusion in Patients with Small and Large Bowel Procedures—◆ Yen-Hong Kuo, Jersey Shore University Medical Center; John M. Davis, Jersey Shore University Medical Center

**9:05 a.m.** The Stochastic Modeling of the Sleep-wakefulness Process with the Development of a Sleep Index for Clinical Applications—◆ Marilisa Gibellato, The Ohio State University; Haikady Nagaraja, The Ohio State University

**9:20 a.m.** A Markov Model for Repeated Sexually Transmitted Infections—◆ Wanzhu Tu, Indiana University School of Medicine

**9:35 a.m.** Prediction of Survival for Patients Awaiting Liver Transplantation—◆ Chung-Chou Chang, University of Pittsburgh; Zekarias Berhane, Drexel University; Lisa Weissfeld, University of Pittsburgh

**9:50 a.m.** Spatial Statistical Analysis of Plasma Membrane Sterol Distribution—◆ Weimin Zhang, Texas A&M University; Avery L. McIntosh, Texas A&M University; Jyh-Charn Liu, Texas A&M University; Suojin Wang, Texas A&M University

**10:05 a.m.** Confidence Intervals for the Ratio of Two Proportions: a Review and Evaluation of Methods—◆ James Lymp, Child Health Institute; Ross A. Dierkhising, Mayo Clinic



## 100

### ☆ ☆ **Analysis of Time-to-event Data—Contributed** **Biopharmaceutical Section, WNAR**

*Chair(s): Patrick Peterson, Eli Lilly and Company*

- 8:35 a.m.** Estimating the Mixing Proportion in a Semiparametric Mixture Model from Censored Time-to-event Data—  
◆ Xi Zhang, Columbia University
- 8:50 a.m.** Using Kaplan-Meier Method To Predict Clinical Response Rate by Baseline Drug Resistance—  
◆ Jen-Fue Maa, Bristol-Myers Squibb Company; Daniel Seekins, Bristol-Myers Squibb Company
- 9:05 a.m.** A Censored Data Solution for Crossover Studies—  
◆ David Burt, Abbott Laboratories
- 9:20 a.m.** Analysis of Time-to-event Data with Application to HIV Clinical Trials—◆ Qiming Liao, GlaxoSmithKline
- 9:35 a.m.** On Asymptotic Normality of the Randomization-based Logrank Test—◆ Yanqiong Zhang, Merck & Co., Inc.; William Rosenberger, University of Maryland Baltimore County
- 9:50 a.m.** Efficiencies and Challenges of Two-stage Randomization Designs—◆ Jeffrey Helderbrand, Genentech, Inc.
- 10:05 a.m.** Hypothesis Testing for Current Leukemia-free Survival—◆ Leiyuan Lu, Medical College of Wisconsin; John P. Klein, Medical College of Wisconsin

## 101

### **Econometric Methods and Applications—Contributed** **Business and Economics Statistics Section**

*Chair(s): Jeffrey Racine, McMaster University*

- 8:35 a.m.** Aspects of the Exact Finite Sample Distribution of the Bootstrap—◆ Lawrence Marsh, University of Notre Dame
- 8:50 a.m.** Bayesian Model Averaging with Instrumental Variables: an Application to Aid and Growth—◆ Roberto Leon Gonzalez, University of Leicester; Daniel Montolio, Universitat de Barcelona; Paul Mosley, University of Sheffield
- 9:05 a.m.** Robust- and Misspecification-resistant Multivariate Regression Models Hybridized with Genetic Algorithms and Information Complexity—◆ Yan Liu, University of Tennessee; Hamparsum Bozdogan, University of Tennessee
- 9:20 a.m.** Numerical Approximations for Singular Stochastic Control Problems—◆ Kevin Ross, The University of North Carolina at Chapel Hill
- 9:35 a.m.** Sizes of Two Bootstrap-based Nonparametric Specification Tests for the Drift Function in Continuous Time Models—◆ Myung Suk Kim, Texas A&M University; Suojin Wang, Texas A&M University

## MCC-200 I

- 9:50 a.m.** Improved Nonparametric Inference for the Mean of a Bounded Random Variable with Application to Poverty Measures—◆ Mame Astou Diouf, University of Montreal; Jean-Marie Dufour, University of Montreal

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

## 102

### ☆ ☆ **Bayesian Modeling and Analysis of Medical and Environmental Data—Contributed**

**Section on Bayesian Statistical Science, WNAR, ENAR, Section on Statistics in Epidemiology, Biopharmaceutical Section, Section on Statistics and the Environment, Biometrics Section**

*Chair(s): Seongho Song, University of Connecticut*

- 8:35 a.m.** Bayesian Inference of Hepatotoxicity—◆ Qianqiu Li, The Ohio State University; Xiaotong Shen, University of Minnesota; Dennis Pearl, The Ohio State University
- 8:50 a.m.** Bayesian Sensitivity Analyses of Confounded Treatment Effects—◆ Xuemei Wang, The University of Texas M. D. Anderson Cancer Center; Peter F. Thall, The University of Texas M. D. Anderson Cancer Center
- 9:05 a.m.** Bayesian Hierarchical Model in Estimating Ordinal Data Nested in Categorical Data—◆ Xian Zhou, The University of Texas M. D. Anderson Cancer Center; Peter Mueller, The University of Texas M. D. Anderson Cancer Center; Benjamin Neby Bekele, The University of Texas M. D. Anderson Cancer Center
- 9:20 a.m.** Hierarchical Bayesian Approach to Location Estimation of Seismic Events—◆ William G. Hanley, Lawrence Livermore National Laboratory; Gardar Johannesson, Lawrence Livermore National Laboratory; Stephen C. Myers, Lawrence Livermore National Laboratory
- 9:35 a.m.** A Bayesian Hierarchical Modeling Approach to Glacier Dynamics—◆ Rajib Paul, The Ohio State University; Mark Berliner, The Ohio State University; Noel Cressie, The Ohio State University; Kenneth Jezek, The Ohio State University
- 9:50 a.m.** Bayesian Inference on Multiresolutional State Space Model with a Climate Data Example—◆ Yongku Kim, The Ohio State University; Mark Berliner, The Ohio State University

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

## 103

### **New Developments in Robust Estimation—Contributed** **IMS**

*Chair(s): Xiaohong Davis, Centers for Disease Control and Prevention*

- 8:35 a.m.** Confidence Intervals for Extreme-tail Probabilities of a Heavy-tailed Distribution—◆ Yongcheng Qi, University of Minnesota; Xiaoyue Niu, University of Minnesota



# GENERAL PROGRAM SCHEDULE

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

**8:50 a.m.** On the Accuracy of Bootstrapping Sample Quantiles of Strongly Mixing Sequences—◆ Shuxia Sun, Wright State University

**9:05 a.m.** Multivariate Spatial U-quantile Functions with Examples—◆ Weihua Zhou, The University of Texas Southwestern Medical Center at Dallas; Robert Serfling, The University of Texas Southwestern Medical Center at Dallas

**9:20 a.m.** Inference for Extremal Quantile Regression Models with an Application to Birth Weights—◆ Victor Chernozhukov, Massachusetts Institute of Technology

**9:35 a.m.** Multivariate L-moments—◆ Peng Xiao, The University of Texas Southwestern Medical Center at Dallas; Robert Serfling, The University of Texas Southwestern Medical Center at Dallas

**9:50 a.m.** Nonparametric Depth-based Multivariate Outlier Identifiers and Robustness Properties—◆ Xin Dang, The University of Texas Southwestern Medical Center at Dallas; Robert Serfling, The University of Texas Southwestern Medical Center at Dallas

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

## 104

### ● Weighting Issues—Contributed

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

*Chair(s): Allan McCutcheon, UNL-Gallup Research Center*

**8:35 a.m.** Calibration Weights for Estimating Longitudinal Differences in the National Longterm Care Survey—◆ Stephen Ash, U.S. Census Bureau

**8:50 a.m.** Multidimensional Control Totals for Poststratified Weights—◆ Darryl Creel, RTI International; Mansour Fahimi, RTI International

**9:05 a.m.** Comparison of Two Weighting Schemes for Sampling with Minimal Replacement—◆ Pedro J. Saavedra, ORC Macro International, Inc.

**9:20 a.m.** Trimming or Not To Account for Sampling Design—◆ Zhanyun Zhao, Mathematica Policy Research, Inc.; Frank Potter, Mathematica Policy Research, Inc.

**9:35 a.m.** More Outlier Weight Issues in REACH 2010—◆ Steven Pedlow, NORC at the University of Chicago; Yongyi Wang, NORC at the University of Chicago; Ellen Scheib, NORC at the University of Chicago; Hee-Choon Shin, NORC at the University of Chicago

**9:50 a.m.** A New Model-assisted, Chi-square Distance Function for Calibration of Design Weights—Matthew Stearns, St. Cloud State University; ◆ Sarjinder Singh, St. Cloud State University

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

## MCC-102 D

## 105

### ● Questionnaire Cognitive Issues II—Contributed

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

*Chair(s): Rachel Caspar, RTI International*

**8:35 a.m.** The Effect of Data Collection Software on the Cognitive Survey Response Process—◆ Rebecca L. Morrison, U.S. Census Bureau; Amy E. Anderson, U.S. Census Bureau

**8:50 a.m.** Cognitive Testing of New Forms for the Current Employment Statistics Survey—◆ Kathy Downey, Bureau of Labor Statistics; Karen Goldenberg, Bureau of Labor Statistics; Rick Rosen, Bureau of Labor Statistics; Tony Gomes, Bureau of Labor Statistics; Chris Manning, Bureau of Labor Statistics

**9:05 a.m.** Model-based Testing of Survey Instruments—Douglas Willson, National Analysts, Inc.; ◆ Ella Zelichonok, National Analysts, Inc.

**9:20 a.m.** A Comparison of Various Health Care Disciplines' Satisfaction with Clinical Training—◆ Stephen J. Dienstfrey, Schulman, Ronca & Bucuvalas, Inc.; Evert Milander, U.S. Department of Veterans Affairs

**9:35 a.m.** An Improved Randomized Response Model: Estimation of Mean—◆ Christopher Gjestvang, St. Cloud State University; Sarjinder Singh, St. Cloud State University

**9:50 a.m.** Floor Discussion

## 106

### Spatial Statistics and Disease Clustering—Contributed

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

*Chair(s): Eric Tassone, Emory University*

**8:35 a.m.** A Multiscale Approach to Testing Areas for Elevated Disease Risk—◆ Mary M. Louie, National Center for Health Statistics; Eric Kolaczyk, Boston University

**8:50 a.m.** The Use of Multivariate Control Charts To Detect Changes in the Spatial Patterns of Disease—◆ Michael D. Joner, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University; Marion R. Reynolds, Jr., Virginia Polytechnic Institute and State University

**9:05 a.m.** Local Likelihood Disease Clustering: Development and Evaluation—◆ Monir Hossain, University of South Carolina; Andrew Lawson, University of South Carolina

**9:20 a.m.** Disease Clustering in an Analysis of Childhood Langerhans Cell Histiocytosis—◆ Chih-Chieh Wu, The University of Texas M. D. Anderson Cancer Center

## MCC-205 C

**9:35 a.m.** Detection of Spatial Clustering Using Case-control Data in the Presence of Covariates—◆ Ronald Gangnon, University of Wisconsin, Madison

**9:50 a.m.** Longitudinal Analysis and Modeling Approach for Mammographic Percent Density and Dense Area—◆ Carol A. Janney, Mayo Clinic; Celine Vachon, Mayo Clinic; James Cerhan, Mayo Clinic; V. Shane Pankratz, Mayo Clinic; Zach Fredericksen, Mayo Clinic; Terry M. Therneau, Mayo Clinic; Thomas A. Sellers, H. Lee Moffitt Cancer Center

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

## 107 **MCC-208 A**

### ☆ Environmental Sampling, Standards, and Risk Analysis—Contributed

#### Section on Statistics and the Environment, WNAR

Chair(s): Philip Dixon, Iowa State University

**8:35 a.m.** Using Log-ratio-log Plots To Assess the Association between Chemical Species in Environmental Samples—◆ Michael Ginevan, Exponent, Inc.

**8:50 a.m.** Infection Transmission Model for Risk Assessment of Waterborne Pathogens in Drinking Water—◆ Zhenxu J. Ma, Battelle; Pam J. Rodgers, Battelle; Mark E. Kelley, Battelle; Brenda Boutin, U.S. Environmental Protection Agency

**9:05 a.m.** The Applications of Matric  $t$  Distribution in Predictive Inference for a Multivariate Linear Model—◆ B. M. Golam Kibria, Florida International University

**9:20 a.m.** A Toxicokinetic-based Survival Model for Analysis of Toxicity Data with Changing Stress—◆ Xia Xu, Iowa State University; Philip Dixon, Iowa State University

**9:35 a.m.** On Methods for Handling Biomarker Data below the Analytic Limit of Detection—◆ Stephen Looney, Louisiana State University; Joseph L. Hagan, Louisiana State University

**9:50 a.m.** A Model for Corn Pollen Dispersion—◆ Petruta Caragea, Iowa State University

**10:05 a.m.** Light Availability and Juvenile Tree Distributions in a Temperate Rain Forest: Why Do Different Species Coexist on the Same Resources?—◆ Glenn Hofmann, Household International; Chris Lusk, University of Concepcion; Robin Chazdon, University of Connecticut

## 108 **MCC-102 C**

### ● Modeling for Nonstandard Systems—Contributed Section on Statistical Computing

Chair(s): Li Qin, Fred Hutchinson Cancer Research Center

**8:35 a.m.** Agent-based Modeling of Invasive Species—◆ Weijie Cai, George Mason University; James Gentle, George Mason University; Jeffrey Morissette, NASA Goddard Space Flight Center

**8:50 a.m.** Methods for Evaluating Spatial Fire Potential Indicators—◆ Jonathan Graham, University of Montana; Patricia L. Andrews, USDA Forest Service

**9:05 a.m.** Adaptive GaSP Integration—◆ Karuri Stella, University of Waterloo; William J. Welch, University of British Columbia

**9:20 a.m.** Functional Data Analysis for the Growth Curve Model: a Closed-form EM Algorithm—◆ Victor Solo, University of Michigan

**9:35 a.m.** Floor Discussion

## 109 **MCC-103 E**

### Degradation Modeling and Crack Propagation—Contributed

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

Chair(s): Sarah Michalak, Los Alamos National Laboratory

**8:35 a.m.** On Yield Modeling in the Semiconductor Industry—◆ Kevin Anderson, Intel Corporation

**8:50 a.m.** Time Series Modeling of Daily Accumulated Degradation Due to Outdoor Weathering—◆ Victor Chan, Western Washington University; William Q. Meeker, Iowa State University

**9:05 a.m.** Estimation Error Comparisons of Failure Distribution for Accelerated Degradation Tests—◆ Shuen-Lin Jeng, Tunghai University

**9:20 a.m.** Degradation Models and Implied Lifetime Distributions—◆ Paul Kvam, Georgia Institute of Technology; Suk Joo Bae, University of Tennessee

**9:35 a.m.** Projecting Hazard Rates for Aging Aircraft—◆ Peter Hovey, University of Dayton; Alan P. Berens, University of Dayton

**9:50 a.m.** A New Compound Fading Model for Wireless Communication Systems—◆ Kaisheng Song, Florida State University

**10:05 a.m.** Advanced Statistical Methods for Assessment of Probability of Detection—◆ Yurong Wang, Iowa State University; William Q. Meeker, Iowa State University

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

## 110 **MCC-200 ABC** Introductory Overview Lecture on Multivariate Probability Density Estimation

**ASA, IMS, ENAR, WNAR, SSC, Section on Statisticians in Defense and National Security, Section on Bayesian Statistical Science, Biometrics Section**

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

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

**10:35 a.m.** Multivariate Probability Density Estimation—◆ David Scott, Rice University

**11:25 a.m.** Model-based Clustering Probability Density Estimation—◆ Adrian E. Raftery, University of Washington

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

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

## 111 **MCC-200 F** JASA Theory and Methods Invited Paper Session—Invited

**JASA, Theory and Methods**

Organizer(s): Francisco J. Samaniego, University of California, Davis

Chair(s): Francisco J. Samaniego, University of California, Davis

**10:35 a.m.** Semilinear High-dimensional Models for Normalization of Microarray Data: Theoretical Analysis and Partial Consistency—◆ Jianqing Fan, Princeton University; Heng Peng, Princeton University; Tao Huang, Yale University

**11:20 a.m.** Disc: Michael Kosorok, University of Wisconsin, Madison

**11:35 a.m.** Disc: Heping Zhang, Yale University

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

## 112 **MCC-211 D** ☆ Statistical Learning and Data Mining—Invited

**Section on Nonparametric Statistics, Business and Economics Statistics Section**

Organizer(s): Yi Lin, University of Wisconsin, Madison

Chair(s): Yi Lin, University of Wisconsin, Madison

**10:35 a.m.** Model Assessment—◆ Xiaotong Shen, University of Minnesota; Hsin-Cheng Huang, Institute of Statistical Science, Academia Sinica

**11:05 a.m.** Nonlinear Dimension Reduction—◆ Andreas Buja, University of Pennsylvania

**11:35 a.m.** Model Selection and Estimation in Regression with Grouped Variables—◆ Ming Yuan, Georgia Institute of Technology; Yi Lin, University of Wisconsin, Madison

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

## 113 **MCC-211 C** ● Sequential Monte Carlo—Invited Section on Statistical Computing, Section on Bayesian Statistical Science

Organizer(s): Susan Holmes, Stanford University

Chair(s): Samuel Kou, Harvard University

**10:35 a.m.** Sequential Monte Carlo: Past and Present—◆ Jun S. Liu, Harvard University

**11:45 a.m.** Disc: Arnaud Doucet, Cambridge University

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

## 114 **MCC-205 C** Aggregation in Nonparametric Models—Invited IMS, Section on Bayesian Statistical Science, Section on Nonparametric Statistics

Organizer(s): Florentina Bunea, Florida State University

Chair(s): Florentina Bunea, Florida State University

**10:35 a.m.** Boosting, Lasso, and Model Selection—◆ Bin Yu, University of California, Berkeley

**11:00 a.m.** Model List Selection for Prediction—◆ Bertrand Clarke, University of British Columbia

**11:25 a.m.** Aggregation for Regression Learning—◆ Marten H. Wegkamp, Florida State University; Florentina Bunea, Florida State University; Alexandre B. Tsybakov, University Paris VI

**11:50 a.m.** Some Bayesian Perspectives on Combining Models—◆ Merlise Clyde, Duke University; Edwin Iversen, Duke University; Jennifer Pittman, Duke University; Rosy Luo, Duke University

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

## 115 **MCC-200 DE** ● ☆ Improving Quality and Access to Federal Data—Memorial Session in Honor of Pat J. Doyle—Invited Memorial, Section on Government Statistics, Social Statistics Section

Organizer(s): Wendy Alvey, U.S. Census Bureau; John Czajka, Mathematica Policy Research, Inc.; Nancy A. Bates, U.S. Census Bureau

Chair(s): Constance Citro, National Academy of Sciences

**10:35 a.m.** Improving Our Ability To Estimate the Impact of Changes to the Transfer System and Measure Economic Well-being: the Legacy of Pat Doyle's Early Work—

Harold Beebout, Child and Family Services Agency; ◆ John Czajka, Mathematica Policy Research, Inc.

- 11:00 a.m.** **Striving for Data Quality: Pat Doyle's Legacy at the U.S. Census Bureau**—◆ Jeffrey Moore, U.S. Census Bureau; Chester Bowie, Government Foundation & Academic Research Market Strategies, Inc.
- 11:25 a.m.** **Potential Solutions to Meeting Data User Needs**—  
◆ Julia Lane, National Science Foundation
- 11:50 a.m.** Disc: Stephanie Shipp, National Institute of Standards and Technology
- 12:10 p.m.** Floor Discussion

## 116 **Medallion Lecture 2—Invited** IMS

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

*Chair(s): Aad van der Vaart, Vrije University*

- 10:35 a.m.** Dimensionality Reduction: Hypotheses Testing and Estimation in the Case of Composite Functions—  
◆ Oleg Lepski, Universite de Provence
- 12:00 p.m.** Floor Discussion

## 117 **Statistical Phylogenetics—Invited** WNAR, ENAR, Biometrics Section

*Organizer(s): Bret Larget, University of Wisconsin, Madison*

*Chair(s): Bret Larget, University of Wisconsin, Madison*

- 10:35 a.m.** Prospects and Pitfalls of Whole-genome Phylogeny Based on DNA Sequences—◆ Laura Salter Kubatko, The University of New Mexico; James Degnan, The University of New Mexico
- 11:00 a.m.** Detection of Extensive Recombination in Whole-genome Alignments of *E. Coli*—◆ Bob Mau, University of Wisconsin, Madison
- 11:25 a.m.** Applications of Distances between Phylogenetic Trees—◆ Susan Holmes, Stanford University
- 11:50 a.m.** Disc: Cecile Ane, University of Wisconsin, Madison
- 12:05 p.m.** Floor Discussion

## 118 **Bayesian Techniques in Functional Genomics—Invited** Section on Bayesian Statistical Science, ENAR, Biopharmaceutical Section, WNAR, Biometrics Section

*Organizer(s): Michael Newton, University of Wisconsin, Madison*

*Chair(s): Michael Newton, University of Wisconsin, Madison*

- 10:35 a.m.** Posterior Inference on the Stem Cell Population of the Human Colon through Analysis of Methylation Patterns—◆ Simon Tavaré, University of Southern California; P. Nicolas, University of Southern California; D. Shibata, University of Southern California
- 11:05 a.m.** Boltzman Weighted Ensembles of RNA Secondary Structures—◆ Charles Lawrence, Brown University
- 11:35 a.m.** Bayesian Haplotype Inference via the Dirichlet Process—◆ Eric P. Xing, Carnegie Mellon University; Roded Sharan, ICSI, Berkeley
- 12:10 p.m.** Floor Discussion

## 119 **Bayes and Empirical Bayes Approaches for Large-scale Simultaneous Hypothesis Testing—Invited** ENAR, Section on Bayesian Statistical Science, Business and Economics Statistics Section, WNAR, Biometrics Section

*Organizer(s): Laura H. Gunn, Georgia Southern University*

*Chair(s): Laura H. Gunn, Georgia Southern University*

- 10:35 a.m.** Incorporating Biological Information in Hierarchical Modeling of Many Genetic Disease Markers and Safety Data in Drug Studies—◆ Donald A. Berry, The University of Texas M. D. Anderson Cancer Center
- 11:10 a.m.** Local False-discovery Rates—◆ Bradley Efron, Stanford University
- 11:45 a.m.** Disc: Chiara Sabatti, University of California, Los Angeles
- 12:10 p.m.** Floor Discussion

## 120 **Importance of 'P-values' in the Drug Approval Process—Pros and Cons—Invited** Biopharmaceutical Section, Section on Statistical Education, WNAR

*Organizer(s): Ramachandran Suresh, Schering-Plough*

*Chair(s): Ramachandran Suresh, Schering-Plough*

- 10:35 a.m.** What Would Fisher or Neyman Say?—◆ David Salsburg, Statistical Consultant
- 11:00 a.m.** Assess the Strength of Statistical Evidence, Not the P-value—◆ Jeffrey D. Blume, Brown University
- 11:25 a.m.** Can We Do More Than P-values in Drug Evaluation?—  
◆ Lee-Jen Wei, Harvard University
- 11:50 a.m.** Disc: Robert O'Neill, U.S. Food and Drug Administration
- 12:10 p.m.** Floor Discussion



# GENERAL PROGRAM SCHEDULE

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

**121**

**MCC-200 H**

## ● Communicating Information to Students and Teachers—Invited

### Social Statistics Section

*Organizer(s): Robert H. Rutchik, U.S. Department of Energy*

*Chair(s): John Bosley, Bureau of Labor Statistics*

- 10:35 a.m.** Evolution of the EIA Energy Kid's Page—◆ Robert H. Rutchik, U.S. Department of Energy; Howard Bradsher-Fredrick, Energy Information Administration; Colleen Blessing, Energy Information Administration; Herbert Miller, Energy Information Administration; Renee Miller, Energy Information Administration
- 11:00 a.m.** Hennepin County Library: Online Services to Youth—◆ Marilyn Turner, Hennepin County Library; Margaret Canada, Hennepin County Library; Ann Melrose, Hennepin County Library
- 11:25 a.m.** The American Statistical Association Guidelines for Instruction in Statistics Education (GAISE) for Pre K-12: What Does This Mean for Students and Teachers?—◆ Christine A. Franklin, University of Georgia
- 11:50 a.m.** Disc: Richard Omanson, User Centric, Inc.
- 12:15 p.m.** Floor Discussion

## American Statistical Association MARKET PLACE

*Mugs, hats, ASA apparel,  
children's shirts, JSM shirts,  
and more!*

**LOCATED IN THE MAIN  
REGISTRATION AREA OF THE  
MINNEAPOLIS CONVENTION CENTER**

see page 21 for hours of operation

Invited Panels 10:30 a.m.–12:20 p.m.

**122**

**MCC-103 D**

## ● Statistics and the College Football Championship—Invited

### *The American Statistician*, Section on Statistics in Sports, Section on Statistical Education

*Organizer(s): James Albert, Bowling Green State University*

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

- Panelists:** ◆ Hal Stern, University of California, Irvine  
◆ David Harville, IBM Thomas J. Watson Research Center  
◆ David Mease, University of California, Berkeley  
◆ Kenneth Massey, Virginia Polytechnic Institute and State University

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

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

**123**

**MCC-200 I**

## ● ☆ Section on Health Policy Statistics Student Awards Session—Topic Contributed

### Section on Health Policy Statistics, Section on Bayesian Statistical Science, WNAR

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

*Chair(s): Therese Stukel, Institute for Clinical Evaluative Sciences*

- 10:35 a.m.** A Hierarchical, Multivariate, Two-part Model for Profiling Providers' Effects on Health Care Charges—◆ John Robinson, Johns Hopkins University; Scott Zeger, Johns Hopkins University; Christopher Forrest, Johns Hopkins University
- 10:55 a.m.** Do Antidepressants Cause Suicide in Children? A Bayesian Metaanalysis—◆ Eloise Kaizar, Carnegie Mellon University; Joel Greenhouse, Carnegie Mellon University; Howard Seltman, Carnegie Mellon University
- 11:15 a.m.** A Comparison of Estimators of Population Slope under Informative Dropout—◆ Hai (Kevin) Lin, The University of Texas M. D. Anderson Cancer Center; Elizabeth Slate, Medical University of South Carolina
- 11:35 a.m.** On the Utility of Stochastic Models of Chronic Obstructive Pulmonary Disease—◆ Rebecca Boehm, Medical University of South Carolina; Kristin Highland, Medical University of South Carolina; Kit Simpson, Medical University of South Carolina; Robert Woolson, Medical University of South Carolina



**11:55 a.m.** Optimal Bayesian Design for Patient Selection in a Clinical Trial—◆ Manuela Buzoianu, Carnegie Mellon University; Joseph B. Kadane, Carnegie Mellon University

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

## **124** **MCC-102 B** ● **Analysis of Responder Data—Topic Contributed** **Biopharmaceutical Section, WNAR**

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

*Chair(s): Thomas Kelleher, Bristol-Myers Squibb Company*

**10:35 a.m.** Responder Analysis: You Can Have It Both Ways—  
◆ Thomas Permutt, U.S. Food and Drug Administration; Joan Buenconsejo, U.S. Food and Drug Administration

**10:55 a.m.** Odds Ratios for a Continuous Outcome Variable Without Dichotomizing—◆ Barry K. Moser, Duke University; Laura Coombs, George Washington University

**11:15 a.m.** 'Responder Analysis' of Clinical-relevant Evidence of Trials—◆ Yi Tsong, U.S. Food and Drug Administration

**11:35 a.m.** Assessing Treatment Differences Using a Weighted Responder Analysis—Ling Chen, U.S. Food and Drug Administration; ◆ Qian H. Li, U.S. Food and Drug Administration

**11:55 a.m.** Disc: Ralph D'Agostino, Boston University

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

## **125** **MCC-103 A** ● **New Developments in Response Surface Methodology—Topic Contributed** **Section on Quality and Productivity, Section on Physical and Engineering Sciences**

*Organizer(s): G. Geoffrey Vining, Virginia Polytechnic Institute and State University*

*Chair(s): Christine Anderson-Cook, Los Alamos National Laboratory*

**10:35 a.m.** Exact Inference for Response Surface Designs within a Split-plot Structure—◆ Scott Kowalski, Minitab Inc.; G. Geoffrey Vining, Virginia Polytechnic Institute and State University

**10:55 a.m.** Partially Rotatable Split-plot Response Surface Design—◆ Li Wang, Virginia Polytechnic Institute and State University; G. Geoffrey Vining, Virginia Polytechnic Institute and State University

**11:15 a.m.** Residual Estimation for the Analysis of Dispersion Effects in Unreplicated, Two-level, Fractional Factorial Split-plot Designs—◆ Andre L. Pinho, Universidade Federal do Rio Grande do Norte; Carla A. Vivacqua, Universidade Federal do Rio Grande do Norte; Soren Bisgaard, University of Massachusetts; Harold J. Steudel, University of Wisconsin, Madison

**11:35 a.m.** Nonparametric Approaches to Response Surface Methodology—◆ Stephanie Pickle, Virginia Polytechnic Institute and State University; Jeffrey B. Birch, Virginia Polytechnic Institute and State University; Timothy J. Robinson, University of Wyoming

**11:55 a.m.** Disc: G. Geoffrey Vining, Virginia Polytechnic Institute and State University

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

## **126** **MCC-200 G** ● **Enhancements in Price Programs and Other Statistical Issues—Topic Contributed** **Section on Government Statistics**

*Organizer(s): Moon J. Cho, Bureau of Labor Statistics*

*Chair(s): Sylvia G. Leaver, Bureau of Labor Statistics*

**10:35 a.m.** The Air Travel Price Index: Take-off and Flight Path—  
◆ Steven Anderson, U.S. Department of Transportation; Janice Lent, U.S. Department of Transportation

**10:55 a.m.** Comparing Weighting Methods in the International Price Program—◆ Patrick A. Bobbitt, Bureau of Labor Statistics; Moon J. Cho, Bureau of Labor Statistics; Robert M. Eddy, Bureau of Labor Statistics

**11:15 a.m.** The Effect of Attrition on Variance and Index Estimates in the Housing Component of the Consumer Price Index—◆ William Larson, Bureau of Labor Statistics

**11:35 a.m.** Comparison between Chained CPI-U and Regular CPI-U: All-U.S. Indices at Lower Item-aggregate Levels (2000–2003)—◆ Owen Shoemaker, Bureau of Labor Statistics

**11:55 a.m.** Disc: Marshall Reinsdorf, Bureau of Economic Analysis

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

## **127** **MCC-209 AB** **Some Applications of Ranked Set Sampling—Topic Contributed** **Section on Nonparametric Statistics, Section on Survey Research Methods**

*Organizer(s): Omer Ozturk, The Ohio State University*

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

**10:35 a.m.** Nonparametric Tests for Perfect Judgment Rankings—  
◆ Omer Ozturk, The Ohio State University; Jesse Frey, The Ohio State University; Jayant V. Deshpande, University of Pune

**10:55 a.m.** Some Applications of Ranked Set Sampling—  
◆ Barry D. Nussbaum, U.S. Environmental Protection Agency; Bimal K. Sinha, University of Maryland Baltimore County

**11:15 a.m.** Judgment Poststratification for Designed Experiments—◆ Juan Du, The Ohio State University; Steven N. MacEachern, The Ohio State University

**11:35 a.m.** Confidence Intervals for Quantiles and Tolerance Intervals Based on Ordered Ranked Set Samples—  
◆ Tao Li, McMaster University; Narayanaswamy Balakrishnan, McMaster University

**11:55 a.m.** Minimum Disparity Estimation in Ranked Set Sampling—◆ Roxana Alexandridis, The Ohio State University; Omer Ozturk, The Ohio State University

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

## **128** **MCC-103 E** **Degradation Modeling, Analysis, and Test Planning—** **Topic Contributed**

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

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

*Chair(s): Janet P. Buckingham, Southwest Research Institute*

**10:35 a.m.** Accelerated Destructive Degradation Test Planning—  
◆ Luis Escobar, Louisiana State University; William Q. Meeker, Iowa State University

**10:55 a.m.** The Use of Accelerated Testing To Develop a Cumulative Damage Model To Predict Service Life of Materials Subjected to Outdoor Weathering—  
◆ William Q. Meeker, Iowa State University

**11:15 a.m.** Engineering Physics-based Degradation Models—  
◆ J. C. Lu, Georgia Institute of Technology; Shuen-Lin Jeng, Tunghai University; P. Papush, Georgia Institute of Technology

**11:35 a.m.** A Class of Degradation Models for Reliability Inference Based on Nonhomogeneous Gaussian Processes—  
◆ Xiao Wang, University of Michigan; Vijayan Nair, University of Michigan

**11:55 a.m.** Toward Unit-specific Degradation Modeling—◆ Brock Osborn, GE Global Research; Hui Fan, Rensselaer Polytechnic Institute; Thomas Willemain, Rensselaer Polytechnic Institute; Pasquale Sullo, Rensselaer Polytechnic Institute

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

## **129** **MCC-200 J** **★ Spectral-based Methods of Data Analysis—** **Topic Contributed**

**Section on Statisticians in Defense and National Security**

*Organizer(s): Jeffrey L. Solka, Naval Surface Warfare Center, Dahlgren Division*

*Chair(s): John Rigsby, Naval Surface Warfare Center, Dahlgren Division*

**10:35 a.m.** Recursive Bipartite Spectral Clustering for Document Categorization—◆ Jeffrey L. Solka, Naval Surface Warfare Center, Dahlgren Division; Ivory C. Bryant, Naval Surface

Warfare Center, Dahlgren Division; Edward J. Wegman, George Mason University

**10:55 a.m.** Deriving Meaningful Biological Structure from Spectral Embedding and Clustering—◆ Brandon Higgs, George Mason University; Jeffrey L. Solka, Naval Surface Warfare Center, Dahlgren Division; Jennifer Weller, George Mason University

**11:15 a.m.** Communication Graphs and Text Analysis of Email—  
◆ Elizabeth Leeds, Naval Surface Warfare Center, Dahlgren Division; David Marchette, Naval Surface Warfare Center, Dahlgren Division

**11:35 a.m.** Modeling and Event Identification Based on Spectral-temporal Data—◆ Monica Reising, Iowa State University; Stephen Vardeman, Iowa State University; Max Morris, Iowa State University; Shawn Higbee, Air Force Research Laboratory/SNH

**11:55 a.m.** Disc: Patricia Carter, Naval Surface Warfare Center, Dahlgren Division

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

## **130** **MCC-208 D** **★ ☆ Bayesian Methods and MCMC in Industry and Engineering—Topic Contributed**

**Section on Bayesian Statistical Science, Section on Survey Research Methods**

*Organizer(s): Patrick J. Wolfe, Harvard University; Keying Ye, Virginia Polytechnic Institute and State University*

*Chair(s): Keying Ye, Virginia Polytechnic Institute and State University*

**10:35 a.m.** A Bayesian Reliability Approach to Multiple Response Surface Optimization—◆ John Peterson, GlaxoSmithKline; Guillermo Miro-Quesada, Eli Lilly and Company; Enrique del Castillo, The Pennsylvania State University

**10:55 a.m.** The Application of Bayesian Hierarchical Models in Dual Response Surface—◆ Younan Chen, Virginia Polytechnic Institute and State University; Keying Ye, Virginia Polytechnic Institute and State University

**11:15 a.m.** Bayesian Separation of Harmonic Sources—  
◆ Manuel Davy, LAGIS/CNRS

**11:35 a.m.** Bayesian 3-D Reconstruction of Chemical Composition from 2-D Spectra—◆ Juan Soto, National Institute of Standards and Technology; Donald Malec, U.S. Census Bureau/National Institute of Standards and Technology

**11:55 a.m.** A Bayesian Approach to Imputation of Missing Data Values in Audio Time Series—◆ Patrick J. Wolfe, Harvard University

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

## 131 MCC-102 D

### ★ ☆ **Modeling for Brain Imaging Data—Topic Contributed Biometrics Section, WNAR**

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

*Chair(s): Todd Ogden, Columbia University*

- 10:35 a.m.** Modeling Spatial Correlations in Functional Neuroimaging Data—◆ F. DuBois Bowman, Emory University
- 10:55 a.m.** P-value Adaptive Thresholding Procedure—◆ Martina Pavlicova, Columbia University
- 11:15 a.m.** Far Casting Crossvalidation in Correlated Data Model Selection—◆ Patrick Carmack, The University of Texas Southwestern Medical Center at Dallas; William R. Schucany, Southern Methodist University; Richard Gunst, Southern Methodist University; Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas; Qihua Lin, Southern Methodist University
- 11:35 a.m.** Mixture Modeling for PET Neuroreceptor Studies—◆ Huiping Jiang, Columbia University; Todd Ogden, Columbia University
- 11:55 a.m.** Model Selection for Functional Magnetic Resonance Imaging—◆ Nicole Lazar, University of Georgia
- 12:15 p.m.** Floor Discussion

## 132 MCC-201 AB

### ★ **Issues in Quantifying Measurement Error—Topic Contributed**

#### Section on Survey Research Methods

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

*Chair(s): Mary Batcher, Ernst & Young LLP*

- 10:35 a.m.** Measuring Nonsampling Error in the SOI Individual Tax Return Study—◆ Jana Scali, U.S. Internal Revenue Service; Valerie Testa, U.S. Internal Revenue Service; Maureen Kahr, U.S. Internal Revenue Service; Michael Strudler, U.S. Internal Revenue Service
- 10:55 a.m.** A Model Prediction Approach to Measuring Nonsampling Error—◆ Kimberly Henry, U.S. Internal Revenue Service; Yahia Ahmed, U.S. Internal Revenue Service
- 11:15 a.m.** Corporation Super Critical Cases: How Do Imputed Returns on the Corporate File Compare to the Actual Returns?—◆ Lucy Altounian, U.S. Internal Revenue Service
- 11:35 a.m.** The Impact of the Follow-up Process on the Tax Year 2002 Foreign Tax Credit Data—◆ Melissa A. Redmiles, U.S. Internal Revenue Service; Harry Singmaster, U.S. Internal Revenue Service
- 11:55 a.m.** Disc: Steve Miller, Bureau of Labor Statistics
- 12:15 p.m.** Floor Discussion

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

## 133 MCC-205 D

### **Examining the Introductory Statistics Course for Business and Economics through It's Textbooks—Topic Contributed**

#### Section on Statistical Education

*Organizer(s): John McKenzie, Jr., Babson College*

*Chair(s): Paul Velleman, Cornell University*

- Panelists:** ◆ John McKenzie, Jr., Babson College  
◆ Jay Devore, California Polytechnic University  
◆ Keith Ord, Georgetown University  
◆ Edward Mansfield, The University of Alabama

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

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

## 134 MCC-102 E

### ★ **Nucleotides, Genes, and Chromosomes—Contributed Biometrics Section, WNAR**

*Chair(s): Swati Biswas, The University of Texas M. D. Anderson Cancer Center*

- 10:35 a.m.** A Statistical Method for Chromatographic Alignment of LC-MS Data—◆ Pei Wang, Fred Hutchinson Cancer Research Center; Marc Coram, The University of Chicago; Hua Tang, Fred Hutchinson Cancer Research Center
- 10:50 a.m.** Simultaneous Calibration and Peak-picking Algorithm for LC-ESI-FT-ICR Mass Spectrometry Data—◆ Jeanette Eckel-Passow, Mayo Clinic; Terry M. Therneau, Mayo Clinic; Ann Oberg, Mayo Clinic; David Muddiman, Mayo Clinic; Christopher Mason, Mayo Clinic
- 11:05 a.m.** Statistical Approaches To Estimate Biologic Variation of Protein Expression in Human Serum Using Two-dimensional Gel Electrophoresis—◆ Jodi Lapidus, Oregon Health & Science University; Xinfang Lu, Oregon Health & Science University; Thomas Jacob, Oregon Health & Science University; Srinivasa Nagalla, Oregon Health & Science University
- 11:20 a.m.** Space-dependence of Substitution Rates: an Application of GEE and Composite Likelihood Methods—◆ Ling Deng, Temple University/Novo Nordisk; Dirk F. Moore, University of Medicine and Dentistry of New Jersey
- 11:35 a.m.** How Many Species and How Many Rare Species?—◆ Hongmei Zhang, University of West Florida

**11:50 a.m.** Statistical Methods for the Identification of Microdeletions of Chromosome Segments—  
♦ Yan Li, The University of Chicago

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

## **135** **MCC-208 A** **Statistical Theory with Applications from Astronomy to Microarrays—Contributed** **IMS**

*Chair(s): Sudeshna Adak, GE Global Research*

**10:35 a.m.** A Union-intersection Censored Data Test for the Equality of Exponential Distribution Location Parameters—  
♦ Jeffrey Green, Ball State University; Roger Nelson, Ball State University

**10:50 a.m.** A Characterization of Multivariate Normal Distribution with Special Covariance Structure—♦ Dhanuja Kasturiranta, Bowling Green State University; Truc T. Nguyen, Bowling Green State University; Arjun K. Gupta, Bowling Green State University

**11:05 a.m.** Sequential Plans and Risk Evaluation—♦ Claudia Schmiegner, DePaul University; Michael Baron, The University of Texas Southwestern Medical Center at Dallas

**11:20 a.m.** Higher Criticism Statistic: Theory and Applications in Cosmology and Astronomy—♦ Jiashun Jin, Purdue University

**11:35 a.m.** Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis—♦ Jing Qiu, University of Missouri, Columbia

**11:50 a.m.** Data Integration Method for High-throughput Data—  
♦ Joseph Beyene, University of Toronto; Pingzhao Hu, University of Toronto, Hospital for Sick Children; Celia C. M. Greenwood, University of Toronto, Hospital for Sick Children

**12:05 p.m.** Model Selection Using the Discrimination Sample Size—♦ Jiawei Liu, Georgia State University; Bruce G. Lindsay, The Pennsylvania State University

## **136** **MCC-211 B** **\* ☆ Bayesian Methods in Biological and Ecological Studies—Contributed**

**Section on Bayesian Statistical Science, ENAR, Section on Statistical Education, Biometrics Section**

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

**10:35 a.m.** Global Bayesian Approach to Identifying Biomarkers from MALDI-MS Data—♦ Junfeng Liu, Yale University

**10:50 a.m.** Bayesian Analysis of High-throughput Data with Ordinal Outcomes To Identify Prostate Cancer Biomarkers—  
♦ Deukwoo Kwon, Texas A&M University; Mahlet G. Tadesse,

University of Pennsylvania; Najjun Sha, The University of Texas at El Paso; Marina Vannucci, Texas A&M University

**11:05 a.m.** Mixture Models, SEMOR, and BARS—♦ Mark Lancaster, University of Kentucky; Kert Viele, University of Kentucky

**11:20 a.m.** Bayesian Models and Model Selection in Closed-population, Capture-recapture Experiments—  
♦ Ross Gosky, Bucknell University; Sujit K. Ghosh, North Carolina State University

**11:35 a.m.** Assessing the Stability of Likelihood-based Models Incorporating Dynamic Biological Components—  
♦ Michael Brimacombe, New Jersey Medical School

**11:50 a.m.** Contextual Effects in Ecological Inference—♦ Ying Lu, Princeton University; Kosuke Imai, Princeton University

**12:05 p.m.** Estimating Model Complexity for Bayesian Networks—  
♦ Avraham Salzman, University of Rochester; Anthony Almudevar, University of Rochester

## **137** **MCC-213 AB** **Bootstrapping and Simulation—Contributed** **Section on Nonparametric Statistics**

*Chair(s): Ping Ma, Harvard University*

**10:35 a.m.** Estimation of Employee Turnover Based on Tenure-to-date—♦ Richard Madsen, University of Missouri, Columbia

**10:50 a.m.** Bootstrapping for Dimension Assessment in Regression—♦ Santiago Velilla, Universidad Carlos III de Madrid

**11:05 a.m.** Bootstrap Confidence Bands for Infinite Order Nonparametric Regression Estimates—♦ Timothy McMurry, DePaul University; Dimitris Politis, University of California, San Diego

**11:20 a.m.** Empirical Process Approach to Some Two-sample Problems Using Ranked Set Samples—♦ Kaushik Ghosh, George Washington University; Ram C. Tiwari, National Cancer Institute

**11:35 a.m.** Permutation Methods for Comparing Process Capabilities—♦ Alan Polansky, Northern Illinois University

**11:50 a.m.** Multi-step Forecasting with Functional Coefficient—  
♦ Jane Harvill, Mississippi State University

**12:05 p.m.** Transforming Skewed Data and the Bootstrap—  
♦ Abu Minhajuddin, The University of Texas Southwestern Medical Center at Dallas; Nasratun Nayeem, Southern Methodist University; William R. Schucany, Southern Methodist University



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**MCC-102 A**

● **QT and Randomization Issues—Contributed**  
**Biopharmaceutical Section, WNAR**

*Chair(s): Thomas Liu, Amgen Global Biostatistics*

- 10:35 a.m.** Statistical Properties of Maximal Mean Change in Evaluating QT Prolongation—◆ Genming Shi, Schering-Plough; Bo Yang, Schering-Plough; Ferdous Gheyas, Schering-Plough; Ramachandran Suresh, Schering-Plough
- 10:50 a.m.** Dynamic Modeling of Beat-to-beat QT-RR Data Using the Bootstrap—◆ Kimberly Crimin, Pfizer, Inc.
- 11:05 a.m.** How Does Stratified Randomization Affect the Balance of a Clinical Trial?—◆ Xiaohui Luo, Merck & Co., Inc.; Matilde Sanchez, Merck & Co., Inc.
- 11:20 a.m.** Effects from Treatment Confounding Factors in Randomized Controlled Clinical Trials—◆ Boll Wu, Sanofi-Aventis; Ray Zhu, Sanofi-Aventis
- 11:35 a.m.** A Note on Postrandomization Covariates Adjustment—◆ Minzhi Liu, Merck & Co., Inc.
- 11:55 a.m.** Estimating the Response Rate When Measurements Are Subject to Error—◆ Yongming Qu, Eli Lilly and Company; Pandurang M. Kulkarni, Eli Lilly and Company
- 12:05 p.m.** Impact of QT Correction Methods on the Assessment of QT Prolongation Potential of Drugs—◆ Navdeep Boparai, Schering-Plough; Genming Shi, Schering-Plough; Ferdous Gheyas, Schering-Plough

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**MCC-211 A**

**Applications in Business and Economics I—Contributed**  
**Business and Economics Statistics Section**

*Chair(s): Wanli Min, IBM*

- 10:35 a.m.** Class of Counting Distribution and the Number of Claims Distribution—◆ Min Deng, Maryville University, St. Louis
- 10:50 a.m.** Predictive Modeling in Property and Casualty Insurance: Case Study for Identifying the Worst Insurance Risks among Small Businesses—◆ Vladimir Ladyzhets, Babson Capital Management LLC; Martin Couture, St. Paul Travelers Insurance Company
- 11:05 a.m.** A Dynamic Hazard Model and Model Change Detection System for Predicting Corporate Distress—◆ Shu-Hui Yu, National Chi Nan University
- 11:20 a.m.** Competitiveness of Different Groups of Italian Enterprises Detected Using Robust Classification Methods—◆ Matilde Bini, Università degli Studi di Firenze; Bruno Bertaccini, Università degli Studi di Firenze
- 11:35 a.m.** Building Uncorrelated Models for Consumer Lending: a Practitioner's Review of Applications—◆ Alex Strounine

- 11:50 a.m.** Applying Smoothing Spine and EM Algorithm to Airline Performance Modeling—◆ Yufeng Tu, University of Maryland; Michael Ball, University of Maryland; Wolfgang Jank, University of Maryland

- 12:05 p.m.** Optimal Prediction under Linex Loss: a Monte Carlo Study—◆ Yasemin (Uu) Bardakci, American University of Beirut

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**MCC-205 A**

● **Issues in Study Design—Contributed**

**General Methodology, Biopharmaceutical Section, Section on Bayesian Statistical Science**

*Chair(s): Luen Lee, Novartis Pharmaceuticals*

- 10:35 a.m.** Locally D-optimal Designs for Logistic Models with Three and Four Parameters—◆ Gang Li, GlaxoSmithKline; Dibyen Majumdar, University of Illinois, Chicago
- 10:50 a.m.** Optimal Incomplete Designs with Three Blocks—◆ Bo Jin, Merck Research Laboratories
- 11:05 a.m.** Optimal Two-stage Designs in Phase II Trials—◆ Anindita Banerjee, North Carolina State University; Anastasios A. Tsiatis, North Carolina State University
- 11:20 a.m.** Suggested Sample-size-to-variable Ratios for Discriminant Analysis—◆ Mercedes Schneider, Ball State University; Holmes Finch, Ball State University
- 11:35 a.m.** Bayesian Construction of Improved Nonrandomized Tests for One-sided Hypotheses about Discrete Distributions—◆ Stefan Wellek, CIMH/University of Heidelberg
- 11:50 a.m.** Power Analysis for Correlations from Clustered Study Designs—◆ Xin Tu, University of Rochester
- 12:05 p.m.** Sample Sizes When Using Multiple Linear Regression for Prediction—◆ Gregory Knofczynski, Armstrong Atlantic State University

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**MCC-212 AB**

**Time Series—Contributed**

**General Methodology**

*Chair(s): Sujata Patil, The Children's Hospital of Philadelphia*

- 10:35 a.m.** A Note on Nonnegative Continuous-time Processes—◆ Henghsiu Tsai, Institute of Statistical Science, Academia Sinica; Kung-Sik Chan, The University of Iowa
- 10:50 a.m.** Detrending Categorical Time Series—◆ Monnie McGee, Southern Methodist University; Ian Harris, Southern Methodist University
- 11:05 a.m.** On the Unique Representation of Non-Gaussian Multivariate Linear Processes—◆ Lop-hing Ho, Wichita State University; Kung-Sik Chan, The University of Iowa

Monday





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# GENERAL PROGRAM SCHEDULE

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

- 11:20 a.m.** Shapes of Stationary Autocovariances—◆ Ying Zhao, University of Georgia; Robert Lund, Clemson University
- 11:35 a.m.** Moment Convergence of Nonlinear Least Squares Estimates with Applications to Time-series Forecasting—◆ Ching-Kang Ing, Institute of Statistical Science, Academia Sinica
- 11:50 a.m.** Observation-driven Models for Time Series Regression with Serial Dependence—◆ William Dunsmuir, University of New South Wales
- 12:05 p.m.** Nonlinear Renewal Theory with Stationary and Slowly Changing Perturbations—◆ Dong-Yun Kim, Illinois State University

## 142

### Design of Experiments II—Contributed

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

Chair(s): Robert Easterling, *Itinerant Professor*

- 10:35 a.m.** Building Equivalent Estimation Split-plot Designs for Response Surface Investigations—◆ Peter Parker, NASA; Scott Kowalski, Minitab Inc.; G. Geoffrey Vining, Virginia Polytechnic Institute and State University
- 10:50 a.m.** Multivariate Analysis of a Computer Experiment for Data Center Thermal Distribution—◆ Yasuo Amemiya, IBM
- 11:05 a.m.** Statistical Models for Computer Experiment Output Having Qualitative Input Variables—◆ Gang Han, The Ohio State University; Thomas J. Santner, The Ohio State University; William I. Notz, The Ohio State University
- 11:20 a.m.** A New Approach for Predicting the Mean Response in Computer Experiments with Control and Noise Variables—◆ Ofelia Marin, The Ohio State University; William I. Notz, The Ohio State University
- 11:35 a.m.** Estimation of Transmitted Errors in Computer Experiments—◆ Richard McGrath, Bowling Green State University; Arthur B. Yeh, Bowling Green State University; Yu Zheng, University of Florida
- 11:50 a.m.** Floor Discussion

## 143

### Algorithms and Software—Contributed

#### Section on Statistical Computing

Chair(s): Murali Haran, *The Pennsylvania State University*

- 10:35 a.m.** An Optimization Approach for the Parameter Estimation of the Nonlinear Mixed-effects Models—◆ Jing Wang, Louisiana State University
- 10:50 a.m.** Multiplicative Interaction Models in R—◆ Heather Turner, The University of Warwick; David Firth, The University of Warwick

## MCC-103 F

- 11:05 a.m.** Fitting Generalized Linear Mixed Effects Models to Very Large Telecommunications Datasets—◆ Ka Wong, University of California, Los Angeles; Fei Chen, Fair Isaac Corporation; Mark H. Hansen, University of California, Los Angeles
- 11:15 a.m.** Estimating Correlation Coefficient between Two Variables with Repeated Observations Using Mixed Effects Model—◆ Anuradha Roy, The University of Texas at San Antonio
- 11:35 a.m.** A Comparison of Computer Software Programs for Calculating the ICC—◆ Sandra Hall, University of Kansas Medical Center; Qingjiang Hou, University of Kansas Medical Center; Matthew S. Mayo, University of Kansas Medical Center
- 11:50 a.m.** Query System with the Integration of Statistics, Programming, Confidentiality, and Teamwork—◆ Rong Huang, University of California, Los Angeles; Hongjian Yu, University of California, Los Angeles; Jeff Luck, University of California, Los Angeles
- 12:05 p.m.** Floor Discussion

## 144

### Innovative Approaches to Longitudinal and Survival Data Analysis—Contributed

#### Section on Statistics in Epidemiology, WNAR

Chair(s): Maya Sternberg, *U.S. Centers for Disease Control and Prevention*

- 10:35 a.m.** Modeling Correlated Longitudinal Processes in Aging with Some Processes Partially Observed—◆ Qilu Yu, University of California, Davis; Laurel A. Beckett, University of California, Davis; David A. Bennett, Rush Alzheimer's Disease Center; Robert S. Wilson, Rush Alzheimer's Disease Center
- 10:50 a.m.** A Nonparametric Agreement Measure for Discrete Survival Outcomes—◆ Ying Guo, Emory University; Amita K. Manatunga, Emory University
- 11:05 a.m.** Use of the Local Knox Statistic for the Prospective Monitoring of Disease Occurrences in Space and Time—◆ J. Brooke Marshall, Virginia Polytechnic Institute and State University; Dan Spitzner, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University
- 11:20 a.m.** Case-cohort Designs and Analysis for Clustered Failure Time Data—◆ Shou-En Lu, University of Medicine and Dentistry of New Jersey; Joanna H. Shih, National Cancer Institute
- 11:35 a.m.** A Comparison of Maximum Likelihood and GEE Estimators of Marginal Pairwise Associations in a Multiple Source Setting—◆ Liam O'Brien, Colby College; Garrett M. Fitzmaurice, Harvard School of Public Health; Nicholas J. Horton, Smith College

## MCC-102 F

**11:50 a.m.** Modeling Lung Cancer Risk in Case-control Studies Using a New Dose Metric of Smoking—◆ Sally W. Thurston, University of Rochester; Geoffrey Liu, Harvard School of Public Health; David P. Miller, Harvard School of Public Health; David C. Christiani, Harvard School of Public Health

**12:05 p.m.** Score Test for Association between Longitudinal Genearray and Ordinal Event Data—◆ Natasa Rajicic, Harvard School of Public Health; Dianne Finkelstein, MGH Biostatistics; David Schoenfeld, MGH Biostatistics

## 145 **MCC-202 AB** ● **Estimation with Survey Data—Contributed** Section on Survey Research Methods, Social Statistics Section

Chair(s): Jong-Min Kim, University of Minnesota

**10:35 a.m.** Showcasing Undergraduate Students' Projects Based on Independent Sample Surveys: Design Issues and Aggregation of Survey Results—◆ Raymond Okafor, University of Lagos, Nigeria

**10:50 a.m.** Use of Estimating Equations and Quadratic Inference Functions in Complex Surveys—◆ Leigh Harrod, Oregon State University; Virginia Lesser, Oregon State University; Annie Qu, Oregon State University

**11:05 a.m.** Simulation Comparison of Variable Selection and Classification Methods—◆ Jun Liu, RTI International; Shiyong Wu, RTI International; Robert Morris, RTI International; Seungho Huh, RTI International; Jiantong Wang, RTI International; James Raymer, RTI International; Ye Hu, RTI International; Larry Michael, RTI International

**11:20 a.m.** Preliminary Testing Procedures for Regression with Survey Samples—◆ Yu Wu, Iowa State University; Wayne A. Fuller, Iowa State University

**11:35 a.m.** A Comparison of Test Statistics for Complex Survey Data when the Degrees of Freedom Is Small—◆ Lester Curtin, U.S. Centers for Disease Control and Prevention; Barry Graubard, National Cancer Institute

**11:50 a.m.** Regression Estimator with Estimated Population Quantities and Its Use in Two-phase Sampling—◆ Mingue Park, University of Nebraska

**12:05 p.m.** The Consequences of Nonrandom Sampling for Confidence Intervals—◆ Michael Mosier, Washburn University

## 146 **MCC-205 B** ● **Item Imputation—Contributed** Section on Survey Research Methods, Social Statistics Section

Chair(s): Liza M. Nirelli, Iowa State University

**10:35 a.m.** Item Imputation Made Easy—◆ Andrea R. Piesse, Westat; David R. Judkins, Westat; Zizhong Fan, Westat

**10:50 a.m.** Mass Imputation—◆ Karol Krotki, RTI International; Darryl Creel, RTI International

**11:05 a.m.** Evaluation of Imputation Methods for Complex Measures—◆ Jan Goebel, DIW Berlin

**11:20 a.m.** Evaluation of PCA/CHAID for the Creation of Imputation Classes—◆ Marcus Berzofsky, RTI International; June Cong, RTI International; Roy Whitmore, RTI International

**11:35 a.m.** Multiple Imputation under Multivariate gh Family of Distributions—◆ Yulei He, University of Michigan; Raghunathan E. Trivellore, University of Michigan

**11:50 a.m.** The Fragile Families and Child Well-being Study: Multiple Imputations for the Missing Fathers—◆ Soma Roy, The Ohio State University; Elizabeth A. Stasny, The Ohio State University

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

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

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## 147 **MCC-Level Two Lobby B** **Contributed Poster Session 2—Contributed** General Methodology, Section on Statistical Education, Section on Statistics in Sports, Section on Teaching Statistics in the Health Sciences, Section on Health Policy Statistics, Section on Survey Research Methods, Section on Statistics in Epidemiology, Social Statistics Section

Organizer(s): Ying Kuen Cheung, Columbia University

Chair(s): Ying Kuen Cheung, Columbia University

### General

**01** Applying Pareto's Law to Statistics: a General Investigation—◆ Patrick Bartshe, Arizona State University

**02** Demonstration of Multivariate Analysis Techniques Using Dentistry Application Information and Their National Board Scores—◆ Derek Blankenship, University of Oklahoma Health Sciences Center; Barbara Neas, University of Oklahoma Health Sciences Center

## Health Policy, Public Health

- 03** Arkansas Act 1220 Evaluation: Multistage Stratified Surveys with PPS Sampling—◆ C. Heath Gauss, University of Arkansas for Medical Sciences; Zoran Bursac, University of Arkansas for Medical Sciences; Martha Phillips, University of Arkansas for Medical Sciences; LeaVonne Pulley, University of Arkansas for Medical Sciences; Delia West, University of Arkansas for Medical Sciences; James Raczynski, University of Arkansas for Medical Sciences

- 04** Evaluation of Smoothing Methods for Estimating Mortality Dynamics over Age and Time with Application to U.S. Mortality—◆ Kirill Andreev, Queen's University

- 05** Integration of Computed Patient Anatomic and Case Data with Clinical Insight: an Ontology for 'Case Type,' Combining Computed Statistics with Clinician-provided Text, and Diagnoses—Christopher Overton, Align Technology; ◆ Michael Zakharevich, Align Technology

## Sampling and Survey Methodology

- 06** The Construction of Confidence Intervals for Extreme Percentiles—◆ Margaret Carroll, National Center for Health Statistics

- 07** Sampling Excluding Units in Species Diversity Study—◆ Kyoungah See, Miami University; A. John Bailer, Miami University; Tom Crist, Miami University

- 08** An Empirical Comparison of Multivariate Sample Allocation Methods—Kimberly Henry, U.S. Internal Revenue Service; ◆ Yahia Ahmed, U.S. Internal Revenue Service

- 09** Use of a Web-based Sample Replacement Software Application for Data Collectors in the Field—◆ Andrey Vinokurov, ORC Macro International, Inc.; Daniel Geller, ORC Macro International, Inc.; Pedro J. Saavedra, ORC Macro International, Inc.; Tamara Martin, U.S. Department of State

- 10** Mode Effects in a Safety and Health Survey of Health Care Workers: Findings from a Pilot Test at a Regional Medical Center—◆ Karl Sieber, National Institute of Occupational Safety and Health; James M. Boiano, National Institute of Occupational Safety and Health; Gregory M. Piacitelli, National Institute of Occupational Safety and Health; James D. Catalano, Battelle Centers for Public Health Research and Evaluation; Nicholas J. Heyer, Battelle Centers for Public Health Research and Evaluation; Payn Betsy, Battelle Centers for Public Health Research and Evaluation

## Social and Behavioral Science

- 11** Estimating and Testing Parameters in the Presence of Measurement Error: a Comparison of Approaches—◆ Todd Bodner, Portland State University

- 12** A Measurement of Missouri School Board Member Training—◆ Angela Walmsley, St. Louis University; Carol Lupardus, St. Louis Community College

- 13** Clinical Ethics Consultation—◆ Terry Tomazic, St. Louis University; Emily Anderson, St. Louis University; Valerie Badro, St. Louis University; Barry Katz, St. Louis University

- 14** Transitioning the Equal Employment Opportunity (EEO) File from the Decennial Census to the American Community Survey (ACS)—◆ Katharine Earle, U.S. Census Bureau

- 15** A Multivariate Statistical Analysis of Crime Rate in U.S. Cities—◆ Ralph Gedeon, University of Florida; Kendall Williams, Howard University

## Sports, Art, Entertainment

- 16** The Effects of Elevation on Slugging Percentage in Major League Baseball—◆ Jay Schaffer, University of Northern Colorado; Erik Heiny, University of Northern Colorado

## Teaching, Training, Consulting

- 17** Rapid-feedback Quizzing and Methods of Implementation: a Case Study in Classroom Research—◆ Dexter C. Whittinghill, Rowan University; John Chen, Rowan University; Jennifer Kadlowec, Rowan University

- 18** Assessment of Introductory Statistics and Statistics Programs—◆ Julia Norton, California State University, East Bay; Jean C. Ellis, California State University, East Bay; Jaimyoung Kwon, California State University, East Bay

- 19** Using Standard Statistical Software Packages To Make Statistical Inferences about a Linear Combination of Regression Parameters—◆ J. Burdeane Orris, Butler University; Bruce Bowerman, Miami University of Ohio

- 20** Educating the States: a Multivariate Statistical Analysis of Education—◆ Sara Blight, University of Arizona; Nick Imholte, Xavier University

- 21** A Biostatistics Workbook for Medical Students—◆ L. Jane Goldsmith, University of Louisville; Elizabeth S. Goldsmith

- 22** The Statistics Concept Inventory: a Tool for Measuring Learning in Introductory Statistics—◆ Kirk Allen, University of Oklahoma; Andrea Stone, University of Oklahoma; Maria Cohenour, University of Oklahoma; Teri Reed Rhoads, University of Oklahoma; Teri J. Murphy, University of Oklahoma; Robert Terry, University of Oklahoma

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Speaker Luncheon 12:30 p.m.–1:50 p.m.

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## 148 **MCC-206 AB** Statistics in Sports Section Speaker Luncheon (fee event)—Luncheons

### Section on Statistics in Sports

Organizer(s): James J. Cochran, Louisiana Tech University

- ML00** Baseball's Best Batters: a Comparison of Models—◆ Michael J. Schell, The University of North Carolina at Chapel Hill



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

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

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

- ML01** Issues in the Use and Interpretation of Subgroup Analyses in Clinical Trials—◆ Cristiana Gassmann-Mayer, Johnson & Johnson
- ML02** Data Mining Clinical Trial Data: Dredging or Innovative Exploration?—◆ Mani Lakshminarayanan, Pfizer, Inc.; Jose Alvir, Pfizer, Inc.
- ML03** Sample Size Reestimation and Other Innovative Adaptive Designs in Clinical Trials—◆ Jeff Maca, Novartis Pharmaceuticals
- ML04** Data-intensive Strategies in Drug Discovery: Opportunities for Statisticians—◆ Keith Soper, Merck & Co., Inc.
- ML05** Statistical Issues Related to Development of Prevention Drugs—◆ James T. Symanowski, Eli Lilly and Company
- ML06** Last-observation-carried-forward: Primary, Secondary, or Unnecessary Analysis?—◆ Bruce Binkowitz, Merck Research Laboratories
- ML07** Metaanalyses: Past, Present, and Future—◆ Charles Anello, U.S. Food and Drug Administration

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

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

- ML08** Does the ASA Need Standards for Disclosure of Conflict of Interest in Statistical Talks and Articles?—◆ Giovanni Parmigiani, Johns Hopkins University

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

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

- ML09** Measuring Processes in Statistical Agencies—◆ John M. Bushery, U.S. Census Bureau

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

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

- ML10** Patient Centeredness and Women and Men of Diverse Background—◆ Harvey A. Schwartz, Agency for Healthcare Research and Quality

- ML11** Clinical Risk Adjustment of Patient Outcomes When Sample Size Is Small—◆ James Cubellis, Hoag Memorial Hospital Presbyterian; Martin Kleinbart, Hoag Memorial Hospital Presbyterian

- ML12** Perspectives on the Collection, Analysis, and Implications of Statistical Data on Race/Ethnicity—◆ Mark C. Fulcomer, Richard Stockton College of New Jersey; S. David Kriska, Restat Systems, Inc.; Marcia M. Sass, UMDNJ School of Public Health

- ML13** Analysis of Cost Effectiveness Data—◆ John G. Jiang, Cephalon, Inc.

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

Organizer(s): Thomas Loughin, Kansas State University

- ML14** Statistics in Internetland—◆ James Marron, The University of North Carolina at Chapel Hill

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

Organizer(s): Martha Gardner, GE Global Research

- ML15** Successful Strategies for Screening DOEs—◆ Shari Kraber, Stat-Ease, Inc.
- ML16** Statistics in Nanotechnology—◆ J. C. Lu, Georgia Institute of Technology

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

Organizer(s): Juergen Symanzik, Utah State University

- ML17** Statistical Visualization for Trees and Forests—◆ Michael Minnotte, Utah State University

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

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

- ML18** Statistics for Research in the Polar and Boreal Regions of the Globe—◆ Timothy G. Gregoire, Yale University

## 157 **MCC-Ballroom B** **Section on Statistics in Epidemiology Roundtable Luncheon (fee event)—Luncheons**

Organizer(s): Lisa Sullivan, Boston University

- ML19** Hypothesis Versus Data-driven Modeling—◆ Paola Sebastiani, Boston University

## 158 **MCC-Ballroom B**

### Section on Survey Research Methods Roundtable Luncheons (fee event)—Luncheons

Organizer(s): David R. Judkins, Westat

- ML20** The American Community Survey (ACS) Challenges for Replacing the Census Long Form—◆ Rajenda P. Singh, U.S. Census Bureau
- ML21** Sample Design Challenges in International Surveys—◆ Sheila A. Krawchuk, Westat

## 159 **MCC-Ballroom B**

### Social Statistics Section Roundtable Luncheon (fee event)—Luncheons

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

- ML22** Frontline View of Data Collection Operations—◆ Kathleen Ludgate, U.S. Census Bureau

## 160 **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

- ML23** Assessment of Medical Students and Postgraduate Physicians in Biostatistics Courses—◆ Reena Deutsch, University of California, San Diego

## 161 **MCC-Ballroom B**

### Section on Statistical Education Roundtable Luncheons (fee event)—Luncheons

- ML24** The Statistical Preparation of Preservice Teachers—◆ John Gabrosek, Grand Valley State University
- ML25** Inquiry-based Learning in the Introductory Statistics Classroom—◆ Deborah Rumsey, The Ohio State University
- ML26** 'How-squared' to Implement Writing Assignments in a Statistics Classroom—◆ Amy Phelps, Duquesne University

## 162 **MCC-Ballroom B**

### Section on Risk Analysis Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Ingo Ruczinski, Johns Hopkins University

- ML27** Genetic Epidemiology and Disease Risk—◆ M. Daniele Fallin, Johns Hopkins University

## 163 **MCC-Ballroom B**

### Section on Statistical Consulting Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Todd G. Nick, Cincinnati Children's Hospital Medical Center

- ML28** Working with Clients and Researchers: Communication Is the Key—◆ Thomas Loughin, Kansas State University

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

## 164 **MCC-200 ABC**

### Late Breaking Session 1: Bias in Exit Polls

#### The ASA, ENAR, IMS, SSC, WNAR

Organizer(s): Clyde Tucker, Bureau of Labor Statistics

Chair(s): Clyde Tucker, Bureau of Labor Statistics

- 2:05 p.m.** Exit Poll Bias in the 2004 U.S. General Election—◆ Warren Mitofsky, Mitofsky International
- 2:25 p.m.** Ohio Election Analysis—◆ Mary Batchner, Ernst & Young LLP
- 2:45 p.m.** Exit Polls in the Ukraine—◆ Anna Andreenkova, CESSI, Ltd.
- 3:05 p.m.** Investigating Causes of within-Precinct Error in Exit Polls: Confounds and Controversies—Elizabeth Liddle, University Nottingham; ◆ Mark Lindeman, Bard College
- 3:25 p.m.** Searching for Errors in Exit Polls: Interviewer-respondent Interactions—◆ Kathleen Frankovic, CBS News
- 3:45 p.m.** Floor Discussion

Invited Sessions 2:00 p.m.–3:50 p.m.

## 165 **MCC-200 F**

### Medallion Lecture 3—Invited

#### IMS

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

Chair(s): Jonathan Taylor, Stanford University

- 2:05 p.m.** A Quasi-Monte Carlo Metropolis Algorithm—◆ Art B. Owen, Stanford University
- 3:35 p.m.** Floor Discussion

## 166 **MCC-200 DE**

### ★ Inference and Prediction under Kullback-Leibler Loss—Invited

#### IMS, Section on Bayesian Statistical Science

Organizer(s): Edward I. George, University of Pennsylvania

Chair(s): Xinyi Xu, University of Pennsylvania

- 2:05 p.m.** Bayesian Prediction under Relative Entropy Regret—◆ Trevor J. Sweeting, University College London
- 2:35 p.m.** Asymptotic Admissibility of Parametric Density Estimators—◆ John A. Hartigan, Yale University; Mihaela Aslan, Yale University

- 3:05 p.m.** High-dimensional Predictive Estimation—◆ Edward I. George, University of Pennsylvania; Lawrence Brown, University of Pennsylvania; Feng Liang, Duke University; Xinyi Xu, University of Pennsylvania

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

## **167** **MCC-102 A** ☆ **The Pollution Blame Game: Quantifying the Impact and Composition of Pollution Sources—Invited**

### **Section on Statistics and the Environment, WNAR**

*Organizer(s): William F. Christensen, Brigham Young University*

*Chair(s): Dale Zimmerman, The University of Iowa*

- 2:05 p.m.** Iterated Confirmatory Factor Analysis for Pollution Source Apportionment—◆ William F. Christensen, Brigham Young University

- 2:30 p.m.** Assessment of Model Uncertainty in Multivariate Receptor Modeling—◆ Eun Sug Park, Texas Transportation Institute

- 2:55 p.m.** Application of Multiway Factor Analysis to Airborne Particle Composition Data—◆ Philip K. Hopke, Clarkson University; Emma P. Treplet, University of Barcelona

- 3:20 p.m.** Disc: Clifford Spiegelman, Texas A&M University/Texas Transportation Institute

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

## **168** **MCC-102 B** ● **Statistical Issues in High-throughput Chemistry—Invited**

### **Section on Physical and Engineering Sciences**

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

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

- 2:05 p.m.** How Does One Describe a Molecule to a Computer?—◆ Yvonne Martin, Abbott Laboratories

- 2:30 p.m.** A Three-block Analysis of Chemical Reaction Data—◆ S. Stanley Young, National Institute of Statistical Sciences; Kejun Liu, GlaxoSmithKline; Salvadore Profeta, Jr., University of South Carolina; Sean Ge, Sanofi-Aventis

- 2:55 p.m.** Identifying Quantitative Structure-activity Relationships Using Optimal Bit String Trees—◆ Ke Zhang, North Carolina State University; Jacqueline M. Hughes-Oliver, North Carolina State University; S. Stanley Young, National Institute of Statistical Science

- 3:20 p.m.** Disc: Douglas M. Hawkins, University of Minnesota

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

## **169** **MCC-200 G**

### **Mapping Data—Invited**

#### **IMS, WNAR, Section on Statistical Graphics**

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

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

- 2:05 p.m.** Elsewhere Mapping—◆ Janet Abrams, University of Minnesota

- 2:30 p.m.** Enabling Statistics Tools and Techniques for Embedded Networked Sensing—◆ William Kaiser, University of California, Los Angeles

- 2:55 p.m.** Mapping Social Landscapes—◆ Judith Donath, Massachusetts Institute of Technology

- 3:20 p.m.** Red State, Blue State: Data Maps in the Media—◆ Matthew Ericson, *The New York Times*

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

## **170** **MCC-212 AB**

### ● ☆ **Statistical Analysis and Modeling of Complex Traits—Invited**

#### **SSC, Section on Survey Research Methods**

*Organizer(s): Lei Sun, University of Toronto*

*Chair(s): Lei Sun, University of Toronto*

- 2:05 p.m.** Likelihood Inference of Disease Associations with a Genetic Factor and Independent Continuous Attribute from Case-control Data—◆ Ji-Hyung Shin, Simon Fraser University; Jinko Graham, Simon Fraser University; Brad McNeney, Simon Fraser University

- 2:30 p.m.** Joint Analysis of False Discovery Rate and Nondiscovery Rate—◆ Radu Craiu, University of Toronto; Lei Sun, University of Toronto

- 2:55 p.m.** Nonparametric Order-restricted Inference for Spatial and Temporal Microarray Data—◆ Xin Gao, York University

- 3:20 p.m.** Reduction of Effect Estimate Bias in Genomewide Studies by Resampling—◆ Shelley B. Bull, University of Toronto; Lei Sun, University of Toronto; Longyang Wu, Samuel Lunenfeld Research Institute

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

**171**

● **Streaming Graphics—Invited**

**Section on Statistical Graphics**

*Organizer(s): Lee Wilkinson, Northwestern University*

*Chair(s): Lee Wilkinson, Northwestern University*

**2:05 p.m.** Streaming Graphics for Real-time Network Monitoring—  
Lorraine Denby, Avaya Labs Research; ◆ James Landwehr,  
Avaya Labs Research; Akshay Adhikari, Avaya Labs Research;  
Jean Meloche, Avaya Labs Research

**2:35 p.m.** Change Detection and Visualization in Datastreams—  
◆ Stephen G. Eick, University of Illinois, Chicago; Robert  
Grossman, University of Illinois, Chicago

**3:05 p.m.** Interactive Visualization of Streaming Data—◆ Andrew  
A. Norton, SPSS Inc

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

**MCC-211 D**

**2:35 p.m.** Privacy-preserving Statistical Analyses of Distributed  
Data Using Data Perturbations—◆ Ashish P. Sanil,  
National Institute of Statistical Sciences

**3:05 p.m.** Statistical Analysis in the Presence of Matching  
Uncertainty—◆ Max-Louis Buot, Carnegie Mellon University

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

**174**

● ☆ **Sample Surveys in Unsettled Situations—Invited**

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

*Organizer(s): David Banks, Duke University*

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

**2:05 p.m.** Designing Questionnaires for Human Rights Violations  
Measurement—◆ Daniel Manrique, Pontificia Universidad  
Católica del Perú; Jana Asher, Carnegie Mellon University

**2:30 p.m.** Interview Format and Sampling Strategies in Human  
Rights Data Collection: Experiences and Results from  
East Timor and Sierra Leone—Patrick Ball, The Benetech  
Initiative; ◆ Romesh Silva, The Benetech Initiative

**2:55 p.m.** Health and Human Rights in Developing Countries: What  
Surveys Do—and Don't!—◆ Lara Wolfson, World Health  
Organization

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

**MCC-103 C**

**172**

● **Recent Advances in Nonparametric and  
Semiparametric Estimation—Invited**

**Biometrics Section, Section on Nonparametric  
Statistics, ENAR**

*Organizer(s): David Ruppert, Cornell University*

*Chair(s): Douglas Nychka, National Center for Atmospheric  
Research*

**2:05 p.m.** Hierarchical Functional Data: Semiparametric and  
Nonparametric Methods for Modeling Functional  
Dependence with Application to Colonic Crypt  
Signaling—◆ Raymond J. Carroll, Texas A&M University

**2:30 p.m.** Statistical Models for Complex Datasets—◆ Grace  
Wahba, University of Wisconsin, Madison

**2:55 p.m.** Extensions of Penalized Spline Regression for Natural  
Resource Monitoring Applications—◆ Jay Breidt,  
Colorado State University

**3:20 p.m.** Disc: Jean D. Opsomer, Iowa State University

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

**MCC-205 C**

**175**

● ☆ **Statistical Methods for Customer Base Analysis—  
Invited**

**Section on Statistics and Marketing, Section on  
Physical and Engineering Sciences, Section on Quality  
and Productivity**

*Organizer(s): Wendy Moe, University of Maryland*

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

**2:05 p.m.** Simple Models for Customer-base Analysis—  
◆ Bruce Hardie, London Business School; Peter Fader,  
University of Pennsylvania

**2:25 p.m.** RFM and CLV: Using Iso-value Curves for Customer-  
base Analysis—◆ Peter Fader, University of Pennsylvania;  
Bruce Hardie, London Business School; Ka Lok Lee, Catalina  
Marketing

**2:45 p.m.** A Hidden Markov Model of Customer Relationship  
Dynamics—◆ Oded Netzer, Columbia University; James  
Lattin, Stanford University; V. Srinivasan, Stanford University

**3:05 p.m.** A Multicategory View of Customer Relationships—  
Pradeep Chintagunta, The University of Chicago; Xiaojing  
Dong, Northwestern University; ◆ Puneet Manchanda, The  
University of Chicago

**MCC-102 E**

**173**

● **Secure Statistical Analysis of Distributed Databases—  
Invited**

**National Institute of Statistical Sciences, Section on  
Statisticians in Defense and National Security, Section  
on Government Statistics**

*Organizer(s): Alan F. Karr, National Institute of Statistical Sciences*

*Chair(s): Alan F. Karr, National Institute of Statistical Sciences*

**2:05 p.m.** Privacy Preserving Statistical Analysis for Horizontally  
Partitioned Datasets—◆ Xiaodong Lin, University of  
Cincinnati/NISS

**MCC-102 D**



**3:25 p.m.** The Impact of a New Competitive Entry on an Incumbent's Customer Base: Structural Changes versus Dynamic Effects—◆ Wendy Moe, University of Maryland; Sha Yang, New York University; Tom Shively, The University of Texas at Austin

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

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

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## **176** **MCC-211 B** **ICH-E5 Application: to Date and the Future—Topic Contributed**

### **Biopharmaceutical Section, WNAR**

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

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

**2:05 p.m.** Bridging: a Case Study with Raloxifene in a Japanese Population—◆ Steven Watts, Eli Lilly and Company

**2:25 p.m.** Some Issues in Global Drug Development: from Bridging to Multinational Trials—◆ Yoichi Ii, Pfizer Japan, Inc.

**2:45 p.m.** An Analysis for Multiple Parameter Estimation Problems—◆ Hajime Uno, Harvard School of Public Health; Masahiro Takeuchi, Kitasato University Graduate School

**3:05 p.m.** Statistical Issues and Related Discussion of Global Drug Development—◆ Yuki Ando, Pharmaceuticals and Medical Devices Agency

**3:25 p.m.** Disc: Charles Anello, U.S. Food and Drug Administration

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

## **177** **MCC-201 AB** **Business Consulting and Services Modeling—Topic Contributed**

### **Business and Economics Statistics Section, Section on Statistical Graphics**

*Organizer(s): Yasuo Amemiya, IBM*

*Chair(s): Yasuo Amemiya, IBM*

**2:05 p.m.** Statistical Models for Targeted Marketing of Services Engagements—◆ Bonnie Ray, IBM

**2:25 p.m.** Incremental Quantiles for Monitoring Business Services—◆ Scott Vander Wiel, Bell Labs, Lucent Technologies; Diane Lambert, Bell Labs, Lucent Technologies; John M. Chambers, Bell Labs, Lucent Technologies; David A. James, Bell Labs, Lucent Technologies

**2:45 p.m.** A Response Surface Method for Simulation-based Modeling and Optimization in Business Consulting—◆ Zhiguang Qian, Georgia Institute of Technology

**3:05 p.m.** A Statistical Approach to Optimal Consolidation of Computer Workload—◆ Ta-Hsin Li, IBM

**3:25 p.m.** Discovery, Visualization, and Performance Analysis of Enterprise Workflow—◆ Ping Zhang, Avaya Labs Research; Patrick H. Tendick, Avaya Labs Research

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

## **178** **MCC-202 AB** **Savage Award 2004 Winners—Topic Contributed Section on Bayesian Statistical Science**

*Organizer(s): Merlise Clyde, Duke University*

*Chair(s): Merlise Clyde, Duke University*

**2:05 p.m.** Bayesian Models for Regulatory Motif Discovery and Clustering—◆ Shane Jensen, University of Pennsylvania

**2:25 p.m.** Bayesian Inference for Matched Case-control Studies—◆ Samiran Sinha, Texas A&M University

**2:45 p.m.** Bayesian Methods in Bidding Processes—◆ Jesus Palomo, SAMSI/Duke University

**3:05 p.m.** Decision Models for Data Disclosure Limitation Problems—◆ Trottni Mario, University of Alicante

**3:25 p.m.** Stationary Models via a Bayesian Approach—◆ Ramsés H. Mena, IIMAS-UNAM

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

## **179** **MCC-205 A** **Statistical Literacy 2005—Topic Contributed Section on Statistical Education, Social Statistics Section**

*Organizer(s): Milo Schield, Augsburg College*

*Chair(s): Milo Schield, Augsburg College*

**2:05 p.m.** Epidemiology as a Context for Teaching Confounding in Elementary Statistics—◆ Chris Olsen, Cedar Rapids Community Schools

**2:25 p.m.** Toys, Tales, and a Journalist's View of Statistics—◆ Lewis Cope, *Minneapolis Star & Tribune* (Retired)

**2:45 p.m.** What Can 'CSI' Teach Us about Statistical Literacy?—◆ Jane Miller, Rutgers, The State University of New Jersey

**3:05 p.m.** Statistical Literacy Online at Capella University—◆ Marc Isaacson, Augsburg College

**3:25 p.m.** A Grammar-parsing Program for Descriptions and Comparisons of Percentages and Rates—◆ Tom Burnham, Cognitive Consulting; Milo Schield, Augsburg College

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

**180**

**MCC-102 C**

● ☆ **Quality Management in Statistical Organizations I—Topic Contributed**

**Section on Quality and Productivity, Section on Survey Research Methods, Social Statistics Section**

*Organizer(s): John M. Bushery, U.S. Census Bureau*

*Chair(s): John M. Bushery, U.S. Census Bureau*

- 2:05 p.m.**    Quality Procedures in Statistical Sampling—◆ Wendy Rotz, Ernst & Young LLP; Mary Batcher, Ernst & Young LLP
- 2:25 p.m.**    Quality and the Product Development Cycle—◆ Eugene Burns, Bureau of Transportation Statistics
- 2:45 p.m.**    Quality Audits at Statistics Sweden—◆ GunLög Eiderbrant-Nilsson, Statistics Sweden
- 3:05 p.m.**    Disc: Nancy Kirkendall, Energy Information Administration
- 3:25 p.m.**    Disc: Cynthia Z. F. Clark, Office for National Statistics
- 3:45 p.m.**    Floor Discussion

**181**

**MCC-205 B**

● ☆ **Time Series: a Bayesian Gaze at the Past, Present, and Future—Topic Contributed**

**Section on Bayesian Statistical Science**

*Organizer(s): Nalini Ravishanker, University of Connecticut*

*Chair(s): Nalini Ravishanker, University of Connecticut*

- 2:05 p.m.**    Adaptive Simulation Methods for Time-series Models—◆ Robert Kohn, University of New South Wales; Paolo Giordani, University of New South Wales
- 2:25 p.m.**    Time-varying Covariances: a Cholesky Decomposition Approach—◆ Hedibert F. Lopes, The University of Chicago; Robert McCulloch, The University of Chicago; Ruey Tsay, The University of Chicago
- 2:45 p.m.**    Bayesian Time Series Analyses of International Conflicts—◆ John Freeman, University of Minnesota
- 3:05 p.m.**    Sequential Parameter Estimation in Stochastic Volatility Models with Jumps—◆ Jonathan Stroud, University of Pennsylvania; Michael Johannes, Columbia University; Nicholas Polson, The University of Chicago
- 3:25 p.m.**    KFC: a Kalman Filtering Approach To Monitor Massive Contingency Tables—◆ Deepak Agarwal, AT&T Labs-Research; Colin Goodall, AT&T Labs-Research; William DuMouchel, Lincoln Technologies
- 3:45 p.m.**    Floor Discussion

**182**

**MCC-103 E**

**Monitoring Data Quality in a Federal Statistical Agency: NCES—Topic Contributed**

**Section on Government Statistics, Social Statistics Section**

*Organizer(s): Marilyn Seastrom, National Center for Education Statistics*

*Chair(s): Brian A. Harris-Kojetin, Office of Management and Budget*

- 2:05 p.m.**    Monitoring Data Quality in a Federal Statistical Agency: NCES—◆ Marilyn Seastrom, National Center for Education Statistics
- 2:25 p.m.**    Monitoring Data Quality at a Federal Agency—◆ Susan Lapham, Education Statistics Services Institute
- 2:45 p.m.**    Reports from NCES on the Use of Incentives in Data Collection and the Timeliness of Data Collection and Reporting—◆ Pia Peltola, Education Statistics Services Institute
- 3:05 p.m.**    Monitoring Data Quality at a Federal Agency—◆ Deven Carlson, American Institutes for Research
- 3:25 p.m.**    Quality Profiles: a Tool To Monitor the Quality of Survey Programs—◆ Sameena M. Salvucci, Mathematica Policy Research, Inc.; Nancy Clusen, Mathematica Policy Research, Inc.; Tiffany Waits, Mathematica Policy Research, Inc.; Marilyn Seastrom, National Center for Education Statistics
- 3:45 p.m.**    Floor Discussion

**183**

**MCC-205 D**

● ☆ **Statistical Advances in Human Brain Mapping—Topic Contributed**

**Biometrics Section, WNAR**

*Organizer(s): Martina Pavlicova, Columbia University*

*Chair(s): Martina Pavlicova, Columbia University*

- 2:05 p.m.**    Mining Huge-p, Small-n Data and New Image Registration Procedures—◆ Xiaofeng Wang, Case Western Reserve University; Jiayang Sun, Case Western Reserve University; Kath Bogie, The Cleveland FES Center
- 2:25 p.m.**    Magnitude and Phase Modeling for fMRI Brain Activation—◆ Daniel B. Rowe, Medical College of Wisconsin
- 2:45 p.m.**    Block Kriging in SPECT/PET Brain Images: Defining Blocks—◆ Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas; Patrick Carmack, The University of Texas Southwestern Medical Center at Dallas; Richard Gunst, Southern Methodist University; William R. Schucany, Southern Methodist University; Qihua Lin, Southern Methodist University
- 3:05 p.m.**    Making Group Inferences with Functional Magnetic Resonance Imaging Data Using Spatiotemporal Models—◆ Qihua Lin, Southern Methodist University;

Patrick Carmack, The University of Texas Southwestern Medical Center at Dallas; Richard Gunst, Southern Methodist University; William R. Schucany, Southern Methodist University; Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas

- 3:25 p.m.** Time-frequency Functional Linear Models—◆ Li Qin, Fred Hutchinson Cancer Research Center; Wensheng Guo, University of Pennsylvania; Brian Litt, University of Pennsylvania
- 3:45 a.m.** Floor Discussion

## 184 **MCC-209 AB** Multiple Analyses and Multiple Assays in Diagnostic Medicine—Topic Contributed

Section on Statistics in Epidemiology,  
Biopharmaceutical Section, WNAR

Organizer(s): Michael Lu, Edwards Lifesciences; Estelle Russek-Cohen, U.S. Food and Drug Administration

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

- 2:05 p.m.** Functional Sensitivity: Definition, Theory, and Evaluation Method—◆ Patrick Meyers, Abbott Laboratories; Suha Sari, Abbott Laboratories
- 2:25 p.m.** Multiple Assay Methods Comparison—◆ Abha Sharma, Roche
- 2:45 p.m.** Statistical Methods in Genetic Risk Assessment for Venous Thrombosis by a 25 Plex PCR Assay—  
◆ Shiahong Ran, Abbott Laboratories
- 3:05 p.m.** Microarray Gene Expression Using Resonance Light Scattering Nanoparticles—◆ Samir Lababidi, U.S. Food and Drug Administration; Daya G. Ranamukhaarachchi, U.S. Food and Drug Administration
- 3:25 p.m.** Disc: Arthur Devault, Roche Molecular Systems
- 3:45 p.m.** Floor Discussion

## 185 **MCC-103 B** Coverage Improvement Research for the Decennial Census—Topic Contributed

Section on Survey Research Methods, Social Statistics Section

Organizer(s): Danny R. Childers, U.S. Census Bureau

Chair(s): Dave Sheppard, U.S. Census Bureau

- 2:05 p.m.** Within Household Coverage Improvement in the 2004 National Census Test—◆ Kyra Linse, U.S. Census Bureau; Dave Sheppard, U.S. Census Bureau
- 2:25 p.m.** Operational Assessment of the 2004 Coverage Research Followup—Lisa Knight, U.S. Census Bureau; Jeff Behler, U.S. Census Bureau; ◆ Frank Vitrano, U.S. Census Bureau

- 2:45 p.m.** Results of Coverage Followup in the 2004 Census Test—◆ Elizabeth Krejsa, U.S. Census Bureau; Dave Sheppard, U.S. Census Bureau
- 3:05 p.m.** Design of the Census 2004 Coverage Research Followup Questionnaire—◆ Leann Karl, U.S. Census Bureau; Ashley Landreth, U.S. Census Bureau
- 3:25 p.m.** Unduplication of Persons and Housing Units in the 2004 Census Test—◆ Robin Pennington, U.S. Census Bureau
- 3:45 p.m.** Floor Discussion

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

## 186 **MCC-103 D** Designing Products for the American Community Survey—Topic Contributed

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

Organizer(s): Patricia Becker, APB Associates/SEMCC

Chair(s): Edward Spar, COPAFS

- Panelists:** ◆ Preston J. Waite, U.S. Census Bureau  
◆ Patricia Becker, APB Associates/SEMCC  
◆ Ken Hodges, Claritas  
◆ Leonard Gaines, Empire State Development  
◆ Lisa Neidert, University of Michigan

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

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

## 187 **MCC-208 B** Topics in Clustering and Heterogeneity—Contributed Biometrics Section, WNAR

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

- 2:05 p.m.** Kernel Principal Component Analysis and Dimension Reduction Using Kernel Regularization—◆ Fan Lu, University of Wisconsin, Madison; Grace Wahba, University of Wisconsin, Madison; Stephen Wright, University of Wisconsin, Madison; Sunduz Kees, University of Wisconsin, Madison
- 2:20 p.m.** Penalized and Weighted K-means—◆ George C. Tseng, University of Pittsburgh
- 2:35 p.m.** A Criterion To Find the Optimal Size in Tight Clustering—  
◆ Lung-An Li, Institute of Statistical Science, Academia Sinica; Feng-Chang Lin, University of Wisconsin, Madison; George C. Tseng, University of Pittsburgh

# GENERAL PROGRAM SCHEDULE

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

- 2:50 p.m.** Variance Estimation for GEE Estimator—◆ Shenghai Zhang, Centre for Infectious Disease Prevention and Control
- 3:05 p.m.** Stratification on Baseline Measure: the Variance Effect—◆ Misook Park, Virginia Commonwealth University; Robert E. Johnson, Virginia Commonwealth University
- 3:20 p.m.** A Cost-effective Design for Longitudinal or Cluster Studies—◆ Yajun Mei, Fred Hutchinson Cancer Research Center; Sarah Holte, Fred Hutchinson Cancer Research Center
- 3:35 p.m.** Comparing Confidence Interval Methods Based on the Horvitz-Thompson Estimator under Adaptive Cluster Sampling—◆ Timothy Perez, Monsanto; Jeffrey S. Pontius, Kansas State University

**188**

**MCC-208 A**

## **Detecting Differential Gene Expression—Contributed Biometrics Section, WNAR**

*Chair(s): Charalampos Papachristou, The Ohio State University*

- 2:05 p.m.** Statistically Designing Microarray Experiments and Analyzing Gene Expression Data—◆ Jane Chang, Bowling Green State University; Jason Hsu, The Ohio State University; Tao Wang, The Ohio State University

- 2:20 p.m.** Using Weighted Permutation Scores To Detect Differential Gene Expression with Microarray Data—◆ Xu Guo, Affymetrix, Inc.; Wei Pan, University of Minnesota
- 2:35 p.m.** A New Efficient Statistical Method for Detecting Differentially Expressed Genes—◆ Sunil Mathur, The University of Mississippi
- 2:50 p.m.** Power and Type I Error in a Global Test of Differential Genetic Expression—◆ Gary Gadbury, University of Missouri, Rolla; Wanrong Yin, University of Missouri, Rolla; V. A. Samaranayake, University of Missouri, Rolla
- 3:05 p.m.** Use of Hadamard Matrices in Identifying Differentially Expressed Genes—◆ Yu Ding, Temple University; Damaraju Raghavarao, Temple University
- 3:20 p.m.** Sample Size Calculation for Multiple Testing in Microarray Data Analysis—◆ Heejung Bang, Cornell University; Sin-Ho Jung, Duke University; S. Stanley Young, National Institute of Statistical Sciences
- 3:35 p.m.** Probabilities of Spurious Connections in Gene Networks: Application to Expression Time Series—◆ David Bickel, Pioneer Hi-Bred International

## *Longtime Member Reception*

by invitation only

**Monday, August 8, 6:30 p.m. to 7:30 p.m.**

If you joined the ASA 35 or more years ago,  
the American Statistical Association would like to thank you for  
your longtime support.

Please join us for a reception in your honor.

*Sponsored by the ASA Membership Committee.*



**189****MCC-208 D****● ☆ Survival Analysis and Risk Assessment—Contributed Biometrics Section, Biopharmaceutical Section, WNAR***Chair(s): Alex Tsodikov, University of California, Davis*

- 2:05 p.m.** Estimating and Testing Random Coefficients in a Proportional Hazard Frailty Model—◆ Shibao Feng, Georgetown University Medical Center; Robert A. Wolfe, University of Michigan
- 2:20 p.m.** Marginal Analysis of Clustered Survival Data When Cluster Size Is Informative—◆ Xiuyu Cong, Rice University; Guosheng Yin, The University of Texas M. D. Anderson Cancer Center; Yu Shen, The University of Texas M. D. Anderson Cancer Center
- 2:35 p.m.** Estimation of Center Effects in Survival Analysis—◆ Douglas E. Schaubel, University of Michigan
- 2:50 p.m.** A Self-consistent Estimator in the Competing Risk Model with One Arm Subject to Interval Censoring—◆ Xiaodong Luo, Columbia University; Wei-Yann Tsai, Columbia University; Louise Kuhn, Columbia University
- 3:05 p.m.** A Novel Approach to Testing Equality of Survival Distributions When the Group Memberships Are Censored—◆ Dipankar Bandyopadhyay, University of Georgia; Somnath Datta, University of Georgia
- 3:20 p.m.** Multiplicity-adjusted Inferences in Risk Assessment: Benchmark Analysis with Quantal Response Data—◆ Daniela Nitcheva, South Carolina Cancer Center; Walter W. Piegorsch, University of South Carolina; Webster West, University of South Carolina; Ralph Kodell, National Center for Toxicological Research
- 3:35 p.m.** Confidence Regions for Jointly Measuring Benefit and Risk—◆ Michele L. Shaffer, Pennsylvania State College of Medicine; Kristi L. Watterberg, The University of New Mexico

**190****MCC-200 I****● Coarsened, Mismeasured, or Missing Data—Contributed General Methodology, Social Statistics Section, Section on Survey Research Methods, ENAR, Section on Statistics in Epidemiology, Section on Statistical Education, Biometrics Section***Chair(s): Dawei Xie, University of Pennsylvania*

- 2:05 p.m.** Parameter Estimation in the Presence of Coarsened Data—◆ Sergey S. Tarima, University of Kentucky; Richard Kryscio, University of Kentucky; Yuriy Dmitriev, Tomsk State University
- 2:20 p.m.** Extension of Penalized Spline Propensity Prediction Method—◆ Guangyu Zhang, University of Michigan; Roderick J. Little, University of Michigan

- 2:35 p.m.** Robust Model-based Analysis of General Pattern Missing Data—◆ Hyonggin An, The University of Iowa; Roderick J. Little, University of Michigan
- 2:50 p.m.** Estimation of Missing Values Using Multivariate Normal Copula—◆ Rahul Parsa, Drake University; Alain Desgagne, Drake University
- 3:05 p.m.** Partial Linear Logistic Model with Measurement Error Using Sufficiency Scores—◆ Lian Liu, Texas A&M University
- 3:20 p.m.** Model Misspecification and Goodness-of-fit in Latent Variable and Structural Equations Models—◆ Brisa N. Sanchez, Harvard School of Public Health; Louise Ryan, Harvard University
- 3:35 p.m.** Full Matching with Propensity Scores—◆ Ben B. Hansen, University of Michigan

**191****MCC-200 J****● Statistical Applications—Contributed General Methodology***Chair(s): Minge Xie, Rutgers, The State University of New Jersey*

- 2:05 p.m.** Effect of Spatial Scale on Modeling and Predicting Mean Cavity Tree Density—◆ Stephen S. Lee, University of Idaho; Zhaofei Fan, University of Missouri, Columbia; Stephen Shifley, USDA Forest Service
- 2:20 p.m.** Statistical Methods for Evaluating Clinical Teaching—◆ Jay Mandrekar, Mayo Clinic; Thomas J. Beckman, Mayo Clinic
- 2:35 p.m.** The Role of Viral Load Measures in the Cost-effectiveness Analysis of ART—◆ Martha Lee, Georgetown University; Juwon Song, The University of Texas Health Science Center at Houston
- 2:50 p.m.** A Comparison Study of Models for the Human Sex Ratio—◆ Sibabrata Banerjee, New Jersey Institute of Technology; Wonsuk Yoo, New Jersey Institute of Technology
- 3:05 p.m.** Estimating the Effect of a Disease Outbreak: an Application of Generalized Additive Models—◆ Garrick L. Wallstrom, University of Pittsburgh; William R. Hogan, University of Pittsburgh; Michael M. Wagner, University of Pittsburgh
- 3:20 p.m.** Predicting Session Attendance at the 2005 JSM—◆ Ye Zhong, University of Pennsylvania; Michael R. Elliott, University of Pennsylvania; John Kolassa, Rutgers, The State University of New Jersey; Daniel Heitjan, University of Pennsylvania
- 3:35 p.m.** Floor Discussion

**192**

**● Issues in Clinical Trials—Contributed**  
**WNAR, Biopharmaceutical Section**

*Chair(s): Jing Zhao, Merck & Co., Inc.*

- 2:05 p.m.** The Construction of Composite Scores in Analgesia Studies—◆ David Bristol, Purdue Pharma LP; Genming Shi, Schering-Plough
- 2:20 p.m.** Analysis of Repeated Measures Analgesic Studies—◆ Guoyong Jiang, Cephalon, Inc.; Lillian Kingsbury, Cephalon, Inc.
- 2:35 p.m.** Propensity Score Comparison of Antibiotic Therapy from Inpatient Data—◆ Michael A. O'Connell, Waratah Corp.
- 2:50 p.m.** Simulation Comparison of SAS Proc Multitest Permutation Adjustment Option for the Analysis of Multiple Measurements in the Two-period Crossover Design—◆ Mark Burgert, GlaxoSmithKline
- 3:05 p.m.** Robust Estimate of Confidence Interval of Treatment Effect—◆ Kao-Tai Tsai, Aventis Pharmaceuticals
- 3:20 p.m.** Bootstrap Confidence Intervals for Probability of Better Outcome—◆ Haitao Gao, Eli Lilly and Company
- 3:35 p.m.** Issues in Mega Clinical Trials—◆ Lu Cui, Aventis Pharmaceuticals

**193**

**Classification and Genomics—Contributed**  
**Section on Nonparametric Statistics, ENAR, WNAR, Biometrics Section**

*Chair(s): Hui Xie, Boston University*

- 2:05 p.m.** Adaptive Control and Significance Threshold: Extension of False Discovery Rate Control—◆ Cheng Cheng, St. Jude Children's Research Hospital; Stanley Pounds, St. Jude Children's Research Hospital
- 2:20 p.m.** Choice of Neighbor Order in Nearest-neighbor Classification and a Comparison with Bagged Nearest-neighbor Methods—◆ Richard Samworth, Centre for Mathematical Sciences
- 2:35 p.m.** Multicategory Psi-learning—◆ Yufeng Liu, The University of North Carolina at Chapel Hill
- 2:50 p.m.** Determining the Copy Number States from Array CGH Data—◆ E. Venkatraman, Memorial Sloan-Kettering Cancer Center; Adam Olshen, Memorial Sloan-Kettering Cancer Center
- 3:05 p.m.** Stochastic Linear Hypotheses for Nonparametric Inference of High-dimensional Data—◆ Jeanne Kowalski, Johns Hopkins University

**MCC-211 A**

- 3:20 p.m.** Discrimination and Clustering Based on Nonparametric Hypothesis Testing—◆ George von Borries, Kansas State University; Haiyan Wang, Kansas State University

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

**194**

**● Multilevel Modeling—Contributed**

**Section on Health Policy Statistics, Section on Bayesian Statistical Science, Social Statistics Section, WNAR**

*Chair(s): James O'Malley, Harvard Medical School*

- 2:05 p.m.** A Hierarchical Model for Multiple Binary Process Measures—◆ Robert B. Gerzoff, U.S. Centers for Disease Control and Prevention; Theodore J. Thompson, U.S. Centers for Disease Control and Prevention
- 2:20 p.m.** A Bayesian Logistic-mixture of Normal Distributions Hierarchical Model for Hospital Mortality—◆ Peter Austin, Institute for Clinical Evaluative Sciences
- 2:35 p.m.** GEE Diagnostics for Marginal Association Models—◆ John S. Preisser, The University of North Carolina at Chapel Hill
- 2:50 p.m.** Repeated Events Survival Models: the Conditional Frailty Model—◆ Janet Box-Steffensmeier, The Ohio State University; Suzanna DeBoef, The Pennsylvania State University
- 3:05 p.m.** Modeling Onset and Recovery of Posttraumatic Stress Disorder for Longitudinal Data with Dropouts—◆ Haekyung Jeon-Slaughter, University of Oklahoma Health Sciences Center; Carol S. North, Washington University School of Medicine; Betty Pfefferbaum, University of Oklahoma Health Sciences Center
- 3:20 p.m.** Different from the Start: Profiling Minnesota Kindergarten Students in Six Kindergarten Program Types—◆ Theresa J. Gromala, University of Minnesota
- 3:35 p.m.** Floor Discussion

**MCC-102 F**

**195**

**Inference, Applied Probability, and Stochastic Models—Contributed**

**IMS, Section on Statistical Education**

*Chair(s): Michael Fugate, Los Alamos National Laboratory*

- 2:05 p.m.** A Comparison of Automated Investment Strategies—◆ Alexander White, American University; Fotios Kokkotos, American University
- 2:20 p.m.** The Lifetime of a Random Set—◆ Peter Kiessler, Clemson University
- 2:35 p.m.** Method of Gambling Teams and Waiting Times for Patterns—◆ Vladimir Pozdnyakov, University of Connecticut; Joseph Glaz, University of Connecticut; Martin Kulldorff,

**MCC-200 H**

Harvard Medical School/Harvard Pilgrim Hospital; Michael Steele, University of Pennsylvania

- 2:50 p.m.** Occupation Times for a Class of Nonstationary Markov Chains—◆ Zachariah Dietz, Tulane University; Sunder Sethuraman, Iowa State University
- 3:05 p.m.** Two Computational Algorithms with Applications in Order Statistics and Nonparametrics—◆ Jesse Frey, The Ohio State University
- 3:20 p.m.** Fiducial Generalized Confidence Intervals—◆ Jan Hannig, Colorado State University
- 3:35 p.m.** Optimal Controls for Stochastic Networks in Heavy Traffic—◆ Arka Ghosh, The University of North Carolina at Chapel Hill

## 196

## MCC-103 F

### ● Statistics in the Public Arena: Politics, the Media, and Public Policy—Contributed Social Statistics Section

Chair(s): Robert H. Rutchik, U.S. Department of Energy

- 2:05 p.m.** Could Kerry Have Won? Optimal Political Platform Design: a Special Case of the Share-of-choices Problem—◆ James J. Cochran, Louisiana Tech University; Jeffrey D. Camm, Dartmouth University; David J. Curry, University of Cincinnati; Jon Pinnell, MarketVision Research; Rajesh Radhakrishnan, Transfreight LLC
- 2:20 p.m.** Mediaphysics: Statistical Physics of Media Processes—◆ Dmitri Kuznetsov, Media Planning Group; Igor Mandel, Media Planning Group
- 2:35 p.m.** Modeling Change in Municipal Fiscal Policy Using Mayoral Expenditure Data—◆ Lori Thombs, University of Missouri, Columbia; Charles Sampson, University of Missouri, Columbia
- 2:50 p.m.** The Effect of Welfare Reform on Low-income Single Mother's Use of Income Packaging: Paid Work, Program Participation, and Network Support—◆ Katherine Walker, U.S. Census Bureau
- 3:05 p.m.** Hierarchical Models for a Time Series on Marijuana Abuse among Hospital Emergency Room Admissions—◆ Li Zhu, Texas A&M University; Dennis Gorman, Texas A&M University; Scott Horel, Texas A&M University
- 3:20 p.m.** School Accountability via Hierarchical Linear Models—◆ Stephen Ponisciak, Consortium on Chicago School Research; Anthony S. Bryk, Stanford University; Stephen Raudenbush, University of Michigan
- 3:35 p.m.** Floor Discussion

## 197

## MCC-103 A

### ● Questionnaires and Cognitive Issues I—Contributed Section on Survey Research Methods, Social Statistics Section

Chair(s): Kara Norman, Energy Information Administration

- 2:05 p.m.** Modeling Context Effects in the National Survey on Drug Use and Health (NSDUH)—◆ Kevin Wang, RTI International; Rodney Baxter, RTI International; Dicy Painter, Substance Abuse and Mental Health Services Administration
- 2:20 p.m.** An Overview of the Respondent-generated Intervals (RGI) Approach to Sample Surveys—S. James Press, University of California, Riverside; ◆ Judith Tanur, SUNY, Stony Brook
- 2:35 p.m.** Conceptual vs. Visual Midpoints of Response Scales—◆ Mirta Galesic, Joint Program in Survey Methodology; Roger Tourangeau, Joint Program in Survey Methodology; Mick Couper, University of Michigan; Fred Conrad, Institute for Social Research
- 2:50 p.m.** Negatively Worded Questions Cause Respondent Confusion—◆ Robert Colosi, U.S. Census Bureau
- 3:05 p.m.** When More Is Less: a Study on the Effects of Providing Definitions to Everyday Terms on Data Quality—◆ Ting Yan, University of Maryland
- 3:20 p.m.** Using Professionally Designed Questionnaires: Do They Collect Better Data?—◆ Kathleen Ott, National Agricultural Statistics Service; Chadd Crouse, National Agricultural Statistics Service
- 3:35 p.m.** Floor Discussion

## 198

## MCC-210 AB

### Missing Data, Imputation, and Measurement Error Adjustment—Contributed

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

Chair(s): Robert Lyles, Emory University

- 2:05 p.m.** Associations of LDL Cholesterol in the Presence of Lipid-lowering Medications: an Imputation Approach—◆ Robyn McClelland, University of Washington; Richard A. Kronmal, University of Washington
- 2:20 p.m.** Analysis of Missing Covariate Data in Individually-matched Case-control Studies—◆ Mulugeta Gebregziabher, University of Southern California; Bryan Langholz, University of Southern California
- 2:35 p.m.** To Impute or Weight: Handling Missing Data in Complex Epidemiologic Survey—◆ Hoang T. Nguyen, The University of Texas Medical Branch

- 2:50 p.m.** Utilizing Race Data in an Active Public Health Surveillance System—◆ Elizabeth Zell, U.S. Centers for Disease Control and Prevention
- 3:05 p.m.** Regression with Error in Both Variables: Adjustment via Nonlinear Transformation of Replicates—◆ Peter Holck, University of Hawaii; John Grove, University of Hawaii, Manoa
- 3:20 p.m.** Modeling Association between Menstrual Length Characteristics and Reproductive Outcomes—  
◆ Amita K. Manatunga, Emory University; Robert Lyles, Emory University; Ying Guo, Emory University; Chanley Small, Emory University; Michele Marcus, Emory University
- 3:35 p.m.** Measurement Error Correction for Nutritional Exposures with Correlated Measurement Error: Use of the Method of Triads in a Longitudinal Setting—◆ Bernard Rosner, Harvard Medical School

**199**

## Multivariate Methods—Contributed Section on Statistical Computing

*Chair(s): Jing Wang, Louisiana State University*

- 2:05 p.m.** Finding Effective Points by Basis Representation Methodology—◆ Ray-Bing Chen, National University of Kaohsiung; Weichung Wang, National University of Kaohsiung; Fuhung Tsai, National University of Kaohsiung
- 2:20 p.m.** A Fast Kernel Density Estimation Algorithm for Independent Component Analysis—◆ Aiyu Chen, Bell Labs, Lucent Technologies; Peter J. Bickel, University of California, Berkeley
- 2:35 p.m.** Extreme Multidimensional Scaling—◆ Michael W. Trosset, College of William & Mary; Patrick J. F. Groenen, Erasmus University Rotterdam
- 2:50 p.m.** Image Reconstruction: an Information-theoretic Approach—◆ Amos Golan, American University; Avinash Bhati, The Urban Institute; Bahattin Buyuksahin, World Bank
- 3:05 p.m.** Componentwise Iterative Optimization for Large Data—◆ Yachen Lin, Certegy
- 3:20 p.m.** New Approaches for Finding the Minimum Volume Ellipsoid—◆ J. Brian Gray, The University of Alabama; Eric B. Howington, Coastal Carolina University
- 3:35 p.m.** Enhanced Probability Plots for Testing for Multivariate Normality—◆ Jeff Szychowski, The University of Alabama; Michael Conerly, The University of Alabama; Bruce Barrett, The University of Alabama

**MCC-211 C**

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

**200**

## MCC-Level Two Lobby B Contributed Poster Session 3—Contributed Business and Economics Statistics Section, Biometrics Section, Biopharmaceutical Section, ENAR, Section on Statistics in Epidemiology, Section on Statistics and the Environment, General Methodology

*Organizer(s): Ying Kuen Cheung, Columbia University*

*Chair(s): Ying Kuen Cheung, Columbia University*

### Biometrics, Biostatistics, Epidemiology

- 01** Group Testing Model Estimation and Inference—  
◆ Christopher R. Bilder, University of Nebraska
- 02** Latent Class Models for Medical Studies with Replicate Observations: Alternative Latent Structures for Observer Agreement and Diagnostic Accuracy—◆ Andrew Baughman, U.S. Centers for Disease Control and Prevention; Michael Haber, Emory University; Huiman X. Barnhart, Duke University
- 03** Modeling Reporting Delays and Corrections in Cancer Registry Data—◆ Limin Clegg, National Cancer Institute; Eric Feuer, National Cancer Institute; Douglas Midthune, National Cancer Institute; Michael Fay, National Institutes of Health; Benjamin Hankey, National Cancer Institute; Brenda Edwards, National Cancer Institute
- 04** Does It Fit? Comparing Different Measures of Model Adequacy in Logistic Regression—◆ Leann Myers, Tulane University; Hui-yi Lin, Louisiana State University
- 05** Two-part Models for Longitudinal Data: Comparing GEE and Random-effects Approaches—Leann Myers, Tulane University; ◆ Yeonjoo Yi, Tulane University
- 06** Nonparametric Tests for a Common Risk Factor—◆ Fanesca Young, Columbia University
- 07** The Summary Density: a Graphical Tool for Metaanalytic Diagnostics—◆ David Svendsgaard, National Center & Caucus on Black Aged, Inc.
- 08** The Distribution of the Product of Correlated P-values and Its Application to Sequence Homology Searches—◆ Yan Xie, University of Kentucky; Richard Kryscio, University of Kentucky

### Business, Financial, and Marketing Statistics

- 09** Outliers and Time Series Data Mining—Lon-Mu Liu, University of Illinois, Chicago; ◆ William J. Lattyak, Scientific Computing Associates Corp.; John L. Harris, Progress Energy, Inc.

### Clinical Trials, Drug Discovery

- 10** A Randomization Design Software for Clinical Trial—  
◆ Chunshen Pan, Biovail Contract Research; Juan He, Biovail Contract Research; Corinne Campanella, Biovail Contract Research; Tat Chan, Biovail Corporation



- 11** Improved Methods for Establishing Noninferiority in Clinical Trials—◆ Farid Kianifard, Novartis Pharmaceuticals; Michael Chen, Novartis Pharmaceuticals; Sunil K. Dhar, New Jersey Institute of Technology
- 12** BANOVA for Repeated Measurements of Binary Data: Exact Inference for Parallel Group Design—◆ Dar Shong Hwang, B.R.S.I.; James S. Lee, Sankyo Pharma Development
- 13** Noninferiority Hypothesis with Binary Endpoints—◆ Tie-Hua Ng, U.S. Food and Drug Administration
- Environmetrics, Ecology, Agriculture, Wildlife Management**
- 14** Model-based Tests for Evaluation of Water Quality—  
◆ Zhengrong Li, Virginia Polytechnic Institute and State University; Eric P. Smith, Virginia Polytechnic Institute and State University
- 15** Nonlinear Stochastic Modeling of Aphid Population Growth—  
◆ James Matis, Texas A&M University; Thomas R. Kiffe, Texas A&M University; Tim I. Matis, New Mexico State University
- 16** Expedient Methods in Environmental Indexing—◆ Kobi Abayomi, Columbia University
- 17** On Transformations of Count Data for Tests of Interaction in Factorial and Split-plot Experiments—◆ Mark Payton, Oklahoma State University; Scott J. Richter, University of North Carolina, Greensboro

**Neuroscience, Brain Imaging**

- 18** Bedside Analysis of Cerebral Autoregulation in Very-low-birth weight Infants—◆ Keith Williams, University of Arkansas for Medical Sciences; C. Heath Gauss, University of Arkansas for Medical Sciences; Jeff Kaiser, University of Arkansas for Medical Sciences

**Spatial Statistics, Time Series, Spatio-temporal Modeling**

- 19** Compact Output for Quickly Analyzing Seasonal Adjustment Diagnostics—◆ Thomas Evans, Bureau of Labor Statistics
- 20** Space-time Models on Spheres and Their Application to Total Column Ozone Levels—◆ Mikyoung Jun, The University of Chicago; Michael Stein, The University of Chicago

Invited Sessions 4:00 p.m.–5:50 p.m.

**201 MCC-Ballroom A President's Invited Address—Invited****The ASA, ENAR, IMS, SSC, WNAR, Biometrics Section***Organizer(s): Fritz J. Scheuren, The University of Chicago**Chair(s): Fritz J. Scheuren, The University of Chicago***4:05 p.m.** A Bayes/Frequentist Roadmap—◆ Roderick J. Little, University of Michigan**5:40 p.m.** Floor Discussion


Invited Sessions 8:00 p.m.–9:15 p.m.

**202****MCC-200 ABC****IMS Presidential Address and Awards—Invited IMS***Organizer(s): Terence P. Speed, University of California, Berkeley**Chair(s): Terence P. Speed, University of California, Berkeley***8:05 p.m.** The Poisson Paradigm—◆ Louis H. Y. Chen, National University of Singapore**9:00 p.m.** Floor Discussion*American Statistical Association's***STUDENT MIXER****Monday, August 8**

6:00 p.m.–7:00 p.m.

Hilton-Conrad A Room

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