

WEDNESDAY, AUGUST 10

Tours

1:00 p.m.–4:30 p.m. MCC-Main Entrance, 2nd Avenue
TR12 - Summit Avenue Walking Tour

1:00 p.m.–5:00 p.m. MCC-Main Entrance, 2nd Avenue
TR13 - Lake Minnetonka Cruise

Committee/Business Meetings & Other Activities

7:00 a.m.–8:15 a.m. MCC-L100 G
The Caucus for Women in Statistics Roundtable Discussions/Breakfast
Organizer(s): Julia Bienias, Rush University Medical Center

7:00 a.m.–8:30 a.m. MCC-207 A
Committee on Meetings (closed)
Chair(s): Kim McGuigan, Pfizer, Inc.

7:00 a.m.–8:30 a.m. MCC-L100 J
Journal of Computational and Graphical Statistics (JCGS) Editorial Board (closed)
Chair(s): Luke Tierney, The University of Iowa

7:00 a.m.–8:30 a.m. H-Board Room 2
Committee on Career Development (closed)
Chair(s): Janice Lent, U.S. Department of Transportation

7:00 a.m.–8:30 a.m. H-Director's Row 1
The ASA/AMATYC Joint Committee Meeting
Chair(s): Brian E. Smith, McGill University

7:00 a.m.–9:00 a.m. MCC-L100 I
Friends and Alumni of Brigham Young University Open House/Breakfast
Organizer(s): Howard Christensen, Brigham Young University; Kathi Carter, Brigham Young University

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

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

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

7:30 a.m.–8:30 a.m. H-Director's Row 2
Mu Sigma Rho Executive Committee Meeting
Organizer(s): Marcia Gumpertz, North Carolina State University

7:30 a.m.–9:00 a.m. MCC-207 B
Noether Award Committee (closed)
Chair(s): Regina Liu, Rutgers, The State University of New Jersey

7:30 a.m.–9:30 a.m. H-Board Room 3
Sequential Analysis Journal's Editorial Board's Breakfast Meeting (closed)
Organizer(s): Nitish Mukhopadhyay, University of Connecticut

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

8:00 a.m.–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.–10:30 a.m. H-Director's Row 2
Council of Sections Publications and Editors (closed)
Chair(s): E. Jacquelin Dietz, Meredith College

9:00 a.m.–11:30 a.m. MCC-207 A
Committee on Outreach Education (closed)
Chair(s): Wendy Martinez, Office of Naval Research

9:00 a.m.–2:00 p.m. MCC-Exhibit Hall C
EXPO 2005

9:00 a.m.–2:00 p.m. MCC-Exhibit Hall C
ASA Membership Booth #700

9:00 a.m.–5:00 p.m. MCC-Level 1, Registration Lobby
Minneapolis Restaurant Reservations Desk

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

10:00 a.m.–11:30 a.m. H-Board Room 3
The ASA-MAA Joint Committee on Undergraduate Statistics
Chair(s): Madhuri Mulekar, University of South Alabama

GENERAL PROGRAM SCHEDULE

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

10:30 a.m.–12:00 p.m. **MCC-L100 F**
Organizational Meeting for Special Interest Group on Statistical Volunteerism

Chair(s): Jonathan L. Kurlander, JLK Consulting, Inc.

12:30 p.m.–2:00 p.m. **H-Director's Row 1**
Noether Award Committee Luncheon (closed)

Chair(s): Regina Liu, Rutgers, The State University of New Jersey

12:30 p.m.–2:30 p.m. **MCC-207 B**
ENAR 2006 Spring Meetings Planning Committee Meeting (closed—by invitation only)

Organizer(s): Kathy Hoskins, ENAR

2:00 p.m.–8:00 p.m. **MCC-Exhibit Hall C**
Exhibitor Move out

3:40 p.m.–4:00 p.m. **MCC-103 A**
Roger Herriot Award

5:00 p.m.–6:30 p.m. **MCC-207 B**
Committee on Statistics and Disability (closed)

Chair(s): Joan L. Turek, U.S. Department of Health and Human Services

5:30 p.m.–6:30 p.m. **MCC-103 A**
International Chinese Statistical Association (ICSA) Annual Members Meeting

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

5:30 p.m.–7:00 p.m. **MCC-103 B**
The Caucus for Women in Statistics Business Meeting

Organizer(s): Julia Bienias, Rush University Medical Center

5:30 p.m.–7:00 p.m. **MCC-103 C**
Section on Statistical Education Business Meeting

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

5:30 p.m.–7:00 p.m. **MCC-103 D**
Section on Survey Research Methods Business Meeting

Chair(s): Sarah Nusser, Iowa State University

5:30 p.m.–7:30 p.m. **MCC-207 A**
Section on Statistics in Epidemiology Business Committee

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

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GENERAL PROGRAM SCHEDULE

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

CE_38T

MCC-L100 E

3:00 p.m.–4:45 p.m.

How the Dynamic Manipulation Capabilities of Fathom 2 Can Improve Students' Learning Experiences in Intro Stats and Stats II Courses—Continuing Education

The ASA

Instructor(s): William F. Finzer, KCP Technologies; Robin Lock, St. Lawrence University

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

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MCC-200 ABC

Introductory Overview Lecture on Recurrent Events Data Analysis for Applications

ASA, ENAR, IMS, SSC, WNAR, Biometrics Section

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

Chair(s): Terry M. Therneau, Mayo Clinic

8:35 a.m. Graphical Analysis of Recurrent Events Data—

♦ Wayne Nelson, Wayne Nelson Stat Consulting; Jerry Lawless, University of Waterloo

9:25 a.m. Regression Analysis of Recurrent Events Data—

♦ Jerry Lawless, University of Waterloo; Wayne Nelson, Wayne Nelson Stat Consulting

10:15 a.m. Floor Discussion

Invited Sessions 8:30 a.m.–10:20 a.m.

335

MCC-200 F

* ☆ **Semiparametric Modeling in Action—Invited**

IMS, Section on Nonparametric Statistics

Organizer(s): Su-Chun Cheng, University of California, San Francisco

Chair(s): Su-Chun Cheng, University of California, San Francisco

8:35 a.m. Partially Nonlinear Models and Their Applications—

♦ Runze Li, The Pennsylvania State University; Lei Nie, University of Maryland Baltimore County

9:00 a.m. Analyzing Generalized Longitudinal Data with Latent

Gaussian Processes and Functional Principal

Components—♦ Hans-Georg Mueller, University of California, Davis; Peter Hall, Australian National University; Fang Yao, Colorado State University

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9:25 a.m. A Semiparametric Mixing Modeling Approach To Relate DNA Adduct Damage to bcl-2 Gene Expression Level—◆ Naisyin Wang, Texas A&M University; Zonghui Hu, Texas A&M University

9:50 a.m. Semiparametric Expectancy Regression—◆ Ying Q. Chen, Fred Hutchinson Cancer Research Center

10:15 a.m. Floor Discussion

336 **MCC-200 DE** **Statistics in High-frequency Data—Invited**

IMS, Business and Economics Statistics Section, Section on Statistical Graphics

Organizer(s): Brani Vidakovic, Georgia Institute of Technology

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

8:35 a.m. Wavelet Sizer Analysis of Internet Traffic—◆ James Marron, The University of North Carolina at Chapel Hill

9:00 a.m. The SLEX Methods for Discriminating and Clustering Massive Nonstationary Signals—◆ Hernando Ombao, University of Illinois, Urbana-Champaign

9:25 a.m. Is Daily Temperature Data Overkill?—◆ Robert Lund, Clemson University

9:50 a.m. Wavelet-based Methods for the Analysis of Large-scale Data—◆ Marina Vannucci, Texas A&M University

10:15 a.m. Floor Discussion

337 **MCC-200 J** **★ The Use of Complex Models for Environmental Risk Assessment—Invited**

ENAR, Section on Statistics and the Environment, WNAR

Organizer(s): Louise Ryan, Harvard University

Chair(s): Louise Ryan, Harvard University

8:35 a.m. Combining Multimodel Numerical Experiments for Climate Change—◆ Douglas Nychka, National Center for Atmospheric Research; Reinhard Furrer, National Center for Atmospheric Research

9:00 a.m. Estimating Risk Probabilities for Wildland Fires—◆ Haiganoush K. Preisler, Pacific Southwest Research Station

9:25 a.m. Estimating Space-time Trends Combining Stochastic Models and Numerical Models—◆ Montserrat Fuentes, North Carolina State University

9:50 a.m. Disc: David R. Brillinger, University of California, Berkeley

10:15 a.m. Floor Discussion

338 **MCC-103 B** **★ ☆ Measuring Child Well-being: the Pros and Cons of Composite Indices—Invited**

Social Statistics Section, Business and Economics Statistics Section

Organizer(s): Kenneth C. Land, Duke University

Chair(s): Susan Schechter, Office of Management and Budget

8:35 a.m. Constructing Summary Indices of Social Well-being: a Model for the Effect of Heterogeneous Importance Weights—◆ Michael R. Hagerty, University of California, Davis; Kenneth C. Land, Duke University

8:55 a.m. An Evidence-based Approach to the Construction of Composite Child Well-being Indices—◆ Kenneth C. Land, Duke University

9:15 a.m. Ranking States Based on Improvements in Child Well-being during the 1990s—◆ William P. O'Hare, Annie E. Casey Foundation; Vicki L. Lamb, Duke University

9:35 a.m. An Index of the Condition of Children: the Ideal and a Less-than-ideal Example—◆ Kristin A. Moore, Child Trends, Inc.

9:55 a.m. Disc: Matthew W. Stagner, The Urban Institute

10:15 a.m. Floor Discussion

339 **MCC-102 D** **★ Using Survey Information in Seasonal Time Series—Invited**

Section on Survey Research Methods, Section on Government Statistics

Organizer(s): Stuart Scott, Bureau of Labor Statistics

Chair(s): David Findley, U.S. Census Bureau

8:35 a.m. Variance Measures for X-11 Seasonal Adjustment: a Summing Up of Empirical Research—◆ Stuart Scott, Bureau of Labor Statistics; Michael Sverchkov, Bureau of Labor Statistics; Daniel Pfeiffermann, Hebrew University & University of Southampton

9:00 a.m. Investigation of Variances for Model-based Seasonal Adjustments—◆ William Bell, U.S. Census Bureau

9:25 a.m. Model-based Seasonal Adjustment of Survey Series Subject To Benchmark Constraints with a State-space Smoothing Algorithm—◆ Richard Tiller, Bureau of Labor Statistics; Daniel Pfeiffermann, Hebrew University and University of Southampton

9:50 a.m. Disc: William P. Cleveland, Federal Reserve Board

10:10 a.m. Floor Discussion

Forthcoming!



Celebrating Statistics

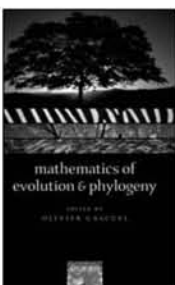
Papers in Honour of Sir David Cox on his 80th birthday

Edited by ANTHONY C. DAVISON, *Swiss Federal Institute of Technology, Lausanne*, YADOLAH DODGE, *Universite de Neuchâtel*, and NANNY WERMUTH, *Chalmers*

Originating from a meeting celebrating the 80th birthday of Sir David Cox, the eminent Oxford Scholar whose many important and penetrating contributions to modern statistics have had an extraordinary impact, this collection of papers by major statistical researchers provides an overview of current developments across a wide range of research areas.

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This book considers evolution at different scales: sequences, genes, gene families, organelles, genomes and species. The focus is on the mathematical and computational tools and concepts, which form an essential basis of evolutionary studies, indicate their limitations, and give them orientation. Aimed at graduates and researchers in phylogenetics, this book will be of interest to both mathematicians and biologists.

2005 448 pp.
0-19-856610-7 ~~£89.50~~ / \$71.60



A History of Mathematics

From Mesopotamia to Modernity
LUKE HODGKIN, *King's College, London*

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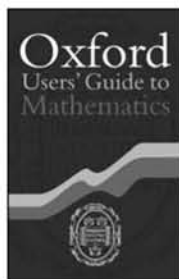
Gene Genealogies, Variation and Evolution

A Primer in Coalescent Theory

JOTUN HEIN, *University of Oxford*, MIKKEL H. SCHIERUP and CARSTEN WIUF, both at the *University of Aarhus, Denmark*

The aim of this book is provide an accessible introduction to Coalescent Theory with a view towards data analysis. This textbook, rich in examples and illustrations, is suitable for a graduate course in statistics, population, molecular, and medical genetics.

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Edited by EBERHARD ZEIDLER, *Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany*

Translated and typeset by BRUCE HUNT

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340 **MCC-208 D**

● ☆ **The Travails of a Statistical Scientist—Invited Council of Chapters**

Organizer(s): *Winston A. Richards, The Pennsylvania State University*

Chair(s): *Winston A. Richards, The Pennsylvania State University*

- 8:35 a.m.** **The Matched Crossover Design in Clinical Trials—**
◆ Vernon M. Chinchilli, Pennsylvania State College of Medicine
- 9:00 a.m.** **Methodological Issues Encountered in the Review of the TPA Trials: a Statistical and Neurological Enterprise—**
◆ W. Michael O'Fallon, Mayo Clinic; Thomas A. Louis, Johns Hopkins University; Vicki S. Hertzberg, Emory University; Teresa J. H. Christianson, Mayo Clinic; Timothy J. Ingall, Mayo Clinic; Kjell Asplund, National Board of Health and Welfare; Lewis R. Goldfrank, New York University
- 9:25 a.m.** Disc: Jeffrey Wilson, Arizona State University
- 9:50 a.m.** Disc: James L. Rosenberger, The Pennsylvania State University
- 10:15 a.m.** Floor Discussion

341 **MCC-102 A**

Massive Multiple Comparisons—Invited
IMS, Section on Physical and Engineering Sciences, Section on Bayesian Statistical Science

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

Chair(s): *Kim-Anh Do, The University of Texas M. D. Anderson Cancer Center*

- 8:35 a.m.** **Decision Theory and Genomic Experiments—**
◆ Giovanni Parmigiani, Johns Hopkins University
- 9:05 a.m.** **Bayesian and Frequentist Approaches to Multiple Testing—**◆ M. J. Bayarri, University of Valencia; James Berger, Duke University
- 9:35 a.m.** **False Discovery Rate for Infinitely Many Comparisons—**
◆ Peter Westfall, Texas Tech University
- 10:05 a.m.** Floor Discussion

342 **MCC-103 F**

● ☆ **The Importance of Income Data in Policy Analysis of Health Statistics—Invited**

Section on Health Policy Statistics, Business and Economics Statistics Section, Social Statistics Section, Section on Government Statistics, WNAR

Organizer(s): *Joan L. Turek, U.S. Department of Health and Human Services*

Chair(s): *Michael Davern, University of Minnesota*

- 8:35 a.m.** **Income and Health Estimates from Major National Surveys—**◆ Joan L. Turek, U.S. Department of Health and

Human Services; Gabrielle Denmead, Denmead Services & Consulting

- 9:00 a.m.** **Income and Disability Estimates from Major National Surveys—**◆ Michele Adler, Social Security Administration; Tom Hale, Social Security Administration
- 9:25 a.m.** **Income Measurement in the Medical Expenditure Panel Survey—**◆ Jessica Banthin, Agency for Healthcare Research and Quality; Thomas M. Selden, Agency for Healthcare Research and Quality; Didem Bernard, Agency for Healthcare Research and Quality
- 9:50 a.m.** Disc: Constance Citro, National Academy of Sciences
- 10:10 a.m.** Floor Discussion

343 **MCC-208 C**

● ☆ **Stats, Maps, Geography, and People—Invited**
Section on Statistical Graphics, Section on Statisticians in Defense and National Security, Social Statistics Section, WNAR, Biometrics Section

Organizer(s): *Graham J. Wills, SPSS Inc.*

Chair(s): *Daniel B. Carr, George Mason University*

- 8:35 a.m.** **Improving the Communication of the Geographic Patterns of Disease through Computer-based Tools—**
◆ Linda W. Pickle, National Cancer Institute
- 9:05 a.m.** **Interactive Statistical Analysis of Geographically Referenced Data—**◆ Martin Theus, University of Augsburg
- 9:35 a.m.** **Maps, Time, and Interactivity—**◆ Graham J. Wills, SPSS Inc.
- 10:05 a.m.** Floor Discussion

344 **MCC-208 B**

● ☆ **Applications of Sequential Monte Carlo Methods in Statistics—Invited**
Section on Statistical Computing, Section on Bayesian Statistical Science, Business and Economics Statistics Section

Organizer(s): *Arnaud Doucet, Cambridge University*

Chair(s): *Arnaud Doucet, Cambridge University*

- 8:35 a.m.** **Maximum Likelihood Parameter Estimation in General State-space Models Using Particle Methods—**
◆ Sumeetpal S. Singh, Cambridge University; George Poyiadjis, Cambridge University; Arnaud Doucet, Cambridge University
- 9:05 a.m.** **Particle Filter Methods for High-frequency Data—**
◆ Michael Pitt, The University of Warwick

Wednesday

GENERAL PROGRAM SCHEDULE

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

9:35 a.m. Convergence of Adaptive Importance Sampling Algorithms—◆ Jean-Michel Marin, University Paris-Sud and CEREMADE; Christian Robert, University Paris-Sud and CEREMADE

10:05 a.m. Floor Discussion

345 **MCC-200 G**

* ☆ **Proof of Concept Strategies—Aspects of Study Design and Analysis—Invited**

Biopharmaceutical Section, Section on Physical and Engineering Sciences, WNAR

Organizer(s): Michael Branson, Novartis Pharmaceuticals

Chair(s): Michael Branson, Novartis Pharmaceuticals

8:35 a.m. Decisions in a Proof of Concept Strategy: a Union between Pharmacology and Statistics—◆ Amy Racine, Novartis Pharmaceuticals AG

9:00 a.m. Adaptive Designs for Proof of Concept and Dose Finding Trials—◆ Michael Smith, Pfizer, Ltd.

9:24 a.m. Role of Mechanistically-based PK/PD Models in Drug Development: a Case Study—◆ Niclas Jonsson, Uppsala University

9:50 a.m. Disc: Donald A. Berry, The University of Texas M. D. Anderson Cancer Center

10:10 a.m. Floor Discussion

346 **MCC-102 C**

Modeling of Computer Communications Network—Invited

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

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

Chair(s): William I. Notz, The Ohio State University

8:30 a.m. Developments in Network Tomography—Earl Lawrence, University of Michigan; ◆ George Michailidis, University of Michigan; Vijayan Nair, University of Michigan

9:05 a.m. Statistical Estimation in Network Tomography—◆ Gang Liang, University of California, Irvine; Bin Yu, University of California, Berkeley

9:35 a.m. Voice over the Internet: the Statistics of Calls, Packets, and Silence Suppression—◆ William S. Cleveland, Purdue University; Hui Chen, Purdue University; Bowei Xi, Purdue University

10:05 a.m. Floor Discussion

Invited Panels 8:30 a.m.–10:20 a.m.

347 **MCC-205 D**

☆ **The Promise and Pitfalls of Data Mining—Invited**

Committee on Privacy and Confidentiality, Business and Economics Statistics Section, Social Statistics Section, Section on Government Statistics, Committee on Professional Ethics, Scientific and Public Affairs Advisory Committee

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

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

Panelists: ◆ William Seltzer, Fordham University
◆ David Hand, Imperial College
◆ Sam Hawala, U.S. Census Bureau
◆ William F. Eddy, Carnegie Mellon University

10:10 a.m. Floor Discussion

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

348 **MCC-201 AB**

Bayesian Methods in Health Sciences—Topic Contributed

Biometrics Section, Section on Bayesian Statistical Science, WNAR

Organizer(s): Carlos D. Paulino, IST, Technical University of Lisbon

Chair(s): Alicia Carriquiry, Iowa State University

8:35 a.m. Identification of Differentially Expressed Genes: Two Bayesian Approaches—◆ Lisete de Sousa, University of Lisbon; Maria A. Turkman, FCUL, DEIO; Luka Clarke, FCUL, DQB; Margarida Amaral, FCUL, DQB

8:55 a.m. Loglinear Models for Incomplete Categorical Data—◆ Paulo Soares, Instituto Superior Técnico, UTL; Carlos D. Paulino, IST, Technical University of Lisbon

9:15 a.m. New Statistical Models for Joint Action of Two Loci in Complex Binary Traits and Their Analysis by MCMC Methods—◆ Nuno Sepulveda, Instituto Gulbenkian de Ciência; Carlos D. Paulino, IST, Technical University of Lisbon; Carlos Penha-Gonçalves, Instituto Gulbenkian de Ciência

9:35 a.m. Bayesian Analysis for the Multinomial Probit Model—◆ Xiao Zhang, University of California, Los Angeles; John Boscardin, University of California, Los Angeles; Thomas R. Belin, University of California, Los Angeles

9:55 a.m. Floor Discussion

349 MCC-200 H

● ☆ Interpretation and Inference on Treatment Effects in Multiple-visit Clinical Trials with Dropouts—Topic Contributed

Biopharmaceutical Section, ENAR, WNAR, Biometrics Section

Organizer(s): Bob Zhong, Centocor, Johnson & Johnson

Chair(s): Scott Clark, Eli Lilly and Company

- 8:35 a.m.** Last Observation Analysis in ANOVA and ANCOVA—
◆ Jun Shao, University of Wisconsin, Madison; Bin Cheng, Columbia University; Bob Zhong, Eli Lilly and Company
- 8:55 a.m.** Robust Analysis of Incomplete Longitudinal Data in Clinical Trials—◆ Devan Mehrotra, Merck Research Laboratories; Robin Mogg, Merck Research Laboratories
- 9:15 a.m.** Considerations in the Use of Composite versus Component Endpoints in Clinical Trials with Dropout—
◆ Craig Mallinckrodt, Eli Lilly and Company; Christopher J. Kaiser, Eli Lilly and Company
- 9:35 a.m.** On the Treatment Effect in Clinical Trials with Dropout—
◆ Bob Zhong, Eli Lilly and Company; Jun Shao, University of Wisconsin, Madison
- 9:55 a.m.** Disc: H.M. James Hung, U.S. Food and Drug Administration
- 10:15 a.m.** Floor Discussion

350 MCC-211 B

● ☆ Bayesian Modeling for Spatial and Environmental Problems—Topic Contributed

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

Organizer(s): Mary K. Cowles, The University of Iowa

Chair(s): Mary K. Cowles, The University of Iowa

- 8:35 a.m.** Bayesian Modeling of Marked Spatial Point Patterns—
◆ Matthew Bogner, The University of Iowa
- 8:55 a.m.** Modeling the Distribution of Environmental Radon Levels in Iowa: Combining Multiple Sources of Spatially Mismatched Data—◆ Brian J. Smith, The University of Iowa
- 9:15 a.m.** Hierarchical Modeling of Animal Movement and Resource Selection Data—◆ Aaron Christ, Alaska Department of Fish and Game
- 9:35 a.m.** Bayesian Model Selection for Geostatistical Regression Data—◆ Devin S. Johnson, University of Alaska Fairbanks
- 9:55 a.m.** Spatial Stochastic Volatility—◆ Jun Yan, The University of Iowa
- 10:15 a.m.** Floor Discussion

351 MCC-211 A

● ☆ Bayesian Methods and Applications—Topic Contributed

Section on Bayesian Statistical Science

Organizer(s): Jun Lu, American University

Chair(s): Jun Lu, American University

- 8:35 a.m.** Bayesian Selection of Multivariate Stochastic Models—
◆ Shawn Ni, University of Missouri, Columbia; Dongchu Sun, University of Missouri, Columbia
- 8:55 a.m.** A Hybrid MCMC/Importance Sampling Approach to Black Box Modeling—◆ John Molitor, University of Southern California; Paul Marjoram, University of Southern California
- 9:15 a.m.** Bayesian Hierarchical Models for Fecundability—
◆ Cuirong Ren, South Dakota State University; Dongchu Sun, University of Missouri, Columbia; Paul Speckman, University of Missouri, Columbia; Chong Z. He, University of Missouri, Columbia; Shanna Swan, University of Missouri, Columbia
- 9:35 a.m.** Bayesian Prediction Limits for Atlantic Tropical Storm Occurrences—◆ Valbona Bejleri, American University; Alexander White, American University
- 9:55 a.m.** Estimation of a Multivariate Normal Covariance Matrix with Staircase Pattern Data—◆ Xiaoqian Sun, University of Missouri, Columbia; Dongchu Sun, University of Missouri, Columbia
- 10:15 a.m.** Floor Discussion

352 MCC-103 C

● ☆ Obtaining Timely Monthly Estimates of Natural Gas Production: Challenges in Estimation from a New Sample Survey—Topic Contributed

Section on Government Statistics

Organizer(s): Howard Bradsher-Fredrick, Energy Information Administration

Chair(s): Nancy Kirkendall, Energy Information Administration

- 8:35 a.m.** EIA's Natural Gas Production Estimation Predicament and Proposed Solution—◆ Kara Norman, Energy Information Administration
- 8:55 a.m.** Applicability of Sampling Methods to an Evolving Frame—◆ Inderjit Kundra, Energy Information Administration; Joseph Sedransk, Energy Information Administration
- 9:15 a.m.** Simulation of Sampling Methods to an Evolving Frame—◆ Preston McDowney, Energy Information Administration

GENERAL PROGRAM SCHEDULE

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

9:35 a.m. EIA 914 Gas Production Survey and Gas Production Estimates—◆ John H. Wood, U.S. Department of Energy

9:55 a.m. Disc: Roy Whitmore, RTI International

10:05 a.m. Floor Discussion

353 **MCC-205 A**

Interpretation of Multireader Information for Studies Relating to Human Health—Topic Contributed

Section on Statistics in Epidemiology, WNAR

Organizer(s): Alan H. Feiveson, Johnson Space Center

Chair(s): Alan H. Feiveson, Johnson Space Center

8:35 a.m. Latent Class Model for Space Decompression Sickness Diagnosis Accuracy—◆ Hsi-Guang Sung, USRA; Alan H. Feiveson, Johnson Space Center; Johnny Conkin, National Space Biomedical Research Institute

8:55 a.m. A Novel Approach To Assess Rater Agreement with Target Values for Ordinal Data—◆ Zheng Zhang, Emory University

9:15 a.m. Statistics Issues in Combining Multiple Sensors—◆ Carol Y. Lin, Emory University; Lance A. Waller, Emory University; Robert Lyles, Emory University

9:35 a.m. Using Multiply-read Cultures to Improve Biotechnology Identification—◆ Elizabeth Margosches, U.S. Environmental Protection Agency; Mark Segal, U.S. Environmental Protection Agency; P. De Vos, University of Gent; S. Dejsirilert, National Institute of Health, Thailand; P. Gillevet, George Mason University; D. Henry, University of British Columbia; M. Krichevsky, Bionomics International; J. Lalucat, University de les Illes Balears; E. Moore, Macaulay Research Institute; J. Tang, American Type Culture Collection; S. Whitehead, Children's & Women's Health Centre of B.C.; Y. Zhou, Chinese Academy of Sciences; H. Yu, Health Canada

9:55 a.m. Disc: Mari Palta, University of Wisconsin, Madison

10:15 a.m. Floor Discussion

354 **MCC-211 D**

Functional Data Analysis—Topic Contributed

Section on Nonparametric Statistics, ENAR, Biometrics Section

Organizer(s): Rima Izem, Harvard University

Chair(s): Rima Izem, Harvard University

8:35 a.m. Hypothesis Testing for Heteroscedastic Functional Data—◆ Haiyan Wang, Kansas State University; Akritas G. Michael, The Pennsylvania State University

8:55 a.m. Detecting Differentially-expressed Time Course Gene Expression Profiles—◆ Xueli Liu, University of Florida; Rongling Wu, University of Florida; George Casella, University of Florida

9:15 a.m. Object-oriented Data Analysis: Sets of Trees—◆ Haonan Wang, Colorado State University; James Marron, The University of North Carolina at Chapel Hill

9:35 a.m. A Scale-based Approach to Finding Effective Dimensionality—◆ Xiaohui Wang, University of Virginia; James Marron, The University of North Carolina at Chapel Hill

9:55 a.m. Perspectives on High-dimensional Inference in Functional Data Analysis—◆ Dan Spitzner, Virginia Polytechnic Institute and State University

10:15 a.m. Floor Discussion

355 **MCC-202 AB**

☆ ☆ General Statistical Issues of Interest for Cancer—Topic Contributed

Biometrics Section, Biometrics Editorial Board, WNAR

Organizer(s): Terry Hyslop, Thomas Jefferson University

Chair(s): Terry Hyslop, Thomas Jefferson University

8:35 a.m. Clinical Trial Designs for Marker Validation Studies—◆ Sumithra J. Mandrekar, Mayo Clinic; Daniel Sargent, Mayo Clinic

8:55 a.m. Detection of Genomic Changes and the Association with Clinical Parameters—◆ Chiang-Ching Huang, Northwestern University

9:15 a.m. Analysis of Randomized Phase II Trials—◆ Sin-Ho Jung, Duke University

9:35 a.m. Applications of Monte Carlo Metaanalyses in Ovarian Cancer Diagnosis—◆ Ying Lu, University of California, San Francisco; Mei-Hsiu Chen, University of California, San Francisco; Karen Kinkle, Institut de Radiologie

9:55 a.m. Estimating the Quality-of-life-adjusted Gap Time Distribution of Successive Events Subject to Censoring—◆ Adin-Cristian Andrei, University of Michigan; Susan Murray, University of Michigan

10:15 a.m. Floor Discussion

356 **MCC-102 E**

Improving Imputation in the Decennial Census—Topic Contributed

Section on Survey Research Methods, Social Statistics Section

Organizer(s): Sally M. Obenski, U.S. Census Bureau

Chair(s): Jason D. Machowski, U.S. Census Bureau

8:35 a.m. Improving Imputation: the Plan To Examine Count, Status, Vacancy, and Item Imputation in the Decennial Census—◆ Gary Chappell, U.S. Census Bureau; Sally M. Obenski, U.S. Census Bureau

- 8:55 a.m.** The Development of Truth Decks for the 2010 Census Count Imputation Research—◆ Todd Williams, U.S. Census Bureau
- 9:15 a.m.** Measuring Discriminatory Power of Imputation Methods in an Enumeration—◆ Yves Thibaudeau, U.S. Census Bureau; Inez Chen, U.S. Census Bureau; Robert Sands, U.S. Census Bureau
- 9:35 a.m.** Using Administrative Records for Imputation in the Decennial Census—◆ James Farber, U.S. Census Bureau; Deborah Wagner, U.S. Census Bureau
- 9:55 a.m.** Improving Census 2000 Imputation: Results and Conclusions—◆ Sally M. Obenski, U.S. Census Bureau; Gary Chappell, U.S. Census Bureau
- 10:15 a.m.** Floor Discussion

357 **MCC-212 AB**

☆ Statistical Partnerships in Academe, Industry, and Government—Topic Contributed

SPAIG Committee, Section on Statistical Education, Section on Survey Research Methods, Section on Physical and Engineering Sciences

Organizer(s): Cynthia Z.F. Clark, Office for National Statistics

Chair(s): Cynthia Z.F. Clark, Office for National Statistics

- 8:35 a.m.** ASA Board Membership Initiative: Addressing Barriers to Partnerships between Academe and Business, Industry, and Government—◆ Robert Starbuck, Wyeth
- 8:55 a.m.** Data Needs for the Intelligent Design of University/ Industry Partnerships—◆ Merrilea Mayo, The National Academies
- 9:15 a.m.** The Merck/Temple Partnership: a Mutually Successful Relationship—◆ Boris Iglewicz, Temple University; Joseph F. Heyse, Merck & Co., Inc.
- 9:35 a.m.** NCSU Graduate Industrial Trainee Program—◆ Tom Gerig, North Carolina State University
- 9:55 a.m.** Disc: Roger Tourangeau, Joint Program in Survey Methodology
- 10:15 a.m.** Floor Discussion

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

358 **MCC-102 B**

Testing Hypotheses and Goodness of Fit—Contributed

IMS, Section on Statistical Education

Chair(s): Elizabeth Leeds, Naval Surface Warfare Center, Dahlgren Division

- 8:35 a.m.** P-values as Random Variables: Its Expectation and Median—◆ Desale Habtzghi, University of Georgia

- 8:50 a.m.** The Weak Convergence of Empirical Processes from Multivariate Normal Vectors for Goodness-of-fit Tests—◆ Christopher Saunders, University of Kentucky; Constance L. Wood, University of Kentucky
- 9:05 a.m.** Using the Generalized Partitioning Principle To Control Generalized Familywise Error Rate—◆ Haiyan Xu, The Ohio State University
- 9:20 a.m.** Goodness-of-fit Tests for a Heavy-tailed Distribution—◆ Liang Peng, Georgia Institute of Technology; Alex Koning, Erasmus University Rotterdam
- 9:35 a.m.** Elementary Chis Squared—◆ George Terrell, Virginia Polytechnic Institute and State University
- 9:55 a.m.** Estimating a Distribution Less Peaked than Another—◆ Hari Mukerjee, Wichita State University
- 10:05 a.m.** Tukey's Compact Procedure of Comparing Two Means: a Simulation Study—◆ Yi-Kuan Jong, St. John and St. Mary Institute of Technology

359 **MCC-103 E**

Statistical Genetics and Machine Learning—Contributed

General Methodology, Biometrics Section

Chair(s): Joseph Beyene, University of Toronto

- 8:35 a.m.** Regularized Discriminant Analysis and Its Application in Microarrays—◆ Yaqian Guo, Stanford University; Trevor Hastie, Stanford University; Robert Tibshirani, Stanford University
- 8:50 a.m.** A Statistical Method for Analyzing SAGE Libraries—◆ Zailong Wang, The Ohio State University; Shili Lin, The Ohio State University; Magdalena Popesco, The Ohio State University; Andrej Rotter, The Ohio State University
- 9:05 a.m.** Instability of Multiple Testing Procedures in Microarray Data Analysis—◆ Yuanhui Xiao, University of Rochester; Andrei Yakovlev, University of Rochester
- 9:20 a.m.** Haplotype-based Association Studies on Multivariate Responses—◆ Dan Nicolae, The University of Chicago
- 9:35 a.m.** Evaluating the Performances of Several Approaches in the Identification of Differentially Expressed Probesets in Affymetrix GeneChip® Analysis—◆ Fenghai Duan, Yale University; Heping Zhang, Yale University
- 9:50 a.m.** Comparison of Two Ways of Handling Replicates in the Context of Distance Measure of Time Course Microarray Gene Expression Data—◆ Yu Guo, Harvard School of Public Health; Cheng Li, Harvard School of Public Health
- 10:05 a.m.** Floor Discussion



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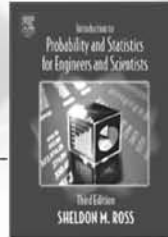


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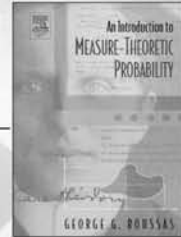
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360 MCC-210 AB

Time Series and Forecasting—Contributed

Business and Economics Statistics Section

Chair(s): Tom Fullerton, The University of Texas at El Paso

- 8:35 a.m.** Statistical Inferences on Time Series with Dependent Innovations—◆ Wanli Min, IBM
- 8:50 a.m.** Identification of Time-series Models: Application to ARMA Processes—◆ Burtchy Bernard, Telecom Paris University; Carole Toque, Telecom Paris University
- 9:05 a.m.** Economic Phases via Velocity and Acceleration of GDP—◆ Stanley L. Sclove, University of Illinois, Chicago
- 9:20 a.m.** Power Transformations and Forecasting—◆ Lon-Mu Liu, University of Illinois, Chicago; William J. Lattyak, Scientific Computing Associates Corp.; Chung Chen, Syracuse University
- 9:35 a.m.** Effects of Temporal Aggregation on Cointegration Tests—Ceylan Yozgatligil, Temple University; ◆ William W. S. Wei, Temple University
- 9:50 a.m.** Yield Analysis Approach and Problems of Return on Investment Estimation—Igor Mandel, Media Planning Group; ◆ David Hauser, Media Planning Group
- 10:05 a.m.** A Macro Risk Analysis with Applications to the Hospital Industry Sector—◆ Radu Neagu, GE Company

361 MCC-200 I

★ ☆ Drug Combination Studies and Design of Clinical Trials—Contributed

Biopharmaceutical Section, WNAR

Chair(s): Xiaohui Luo, Merck & Co., Inc.

- 8:35 a.m.** Experimental Design for Testing Synergism in Drug Combination Studies—◆ Hongbin Fang, University of Maryland; Ming Tan, University of Maryland
- 8:50 a.m.** Optimal Experimental Designs for Drug Synergism Studies—◆ Donald White, The University of Toledo; William R. Greco, Roswell Park Cancer Institute
- 9:05 a.m.** A Semiparametric Response Surface Model for Assessing Drug Interaction as Synergy, Additivity, or Antagonism—◆ Maiying Kong, The University of Texas M. D. Anderson Cancer Center; J. Jack Lee, The University of Texas M. D. Anderson Cancer Center
- 9:20 a.m.** Flexible Multistage Study Design for Single-arm, Phase II Clinical Trials—◆ Muhammad Jalaluddin, Pfizer, Inc.; Enayet Talukder, Pfizer, Inc.
- 9:35 a.m.** Statistical Consideration of Group Sequential Method—◆ Huaixiang Li, U.S. Food and Drug Administration; Yi Tsong, U.S. Food and Drug Administration
- 9:50 a.m.** Significant Design Components in General Two-stage Adaptive Procedures—◆ Tatsuki Koyama, Vanderbilt

University; Allan R. Sampson, University of Pittsburgh; Leon J. Gleser, University of Pittsburgh

- 10:05 a.m.** Designs for Phase II Window Studies—◆ Myron Chang, University of Florida; Meenakshi Devidas, University of Florida; James Anderson, University of Nebraska

362 MCC-211 C

Empirical and Maximal Likelihood—Contributed

Section on Nonparametric Statistics

Chair(s): Xiuwen Liu, Florida State University

- 8:35 a.m.** Yield Analysis and Mixed Model—Eugene Demidenko, Dartmouth University; ◆ Igor Mandel, Media Planning Group
- 8:50 a.m.** Inference for the Mean Residual Life Function—◆ Yichuan Zhao, Georgia State University
- 9:05 a.m.** Nonparametric Estimation for Competing-risk, Current-status Data: Convex Minorant Characterizations and Algorithms—◆ Marloes Maathuis, University of Washington
- 9:20 a.m.** Rank Regression Inference via Empirical Likelihood—◆ Ellen Bishop, RTI International
- 9:35 a.m.** Empirical Likelihood-based Inference Procedure for Quantile Regression—◆ Mi-Ok Kim, University of Kentucky; Mai Zhou, University of Kentucky
- 9:50 a.m.** Developing Empirical Likelihood under Long-range Dependence—◆ Daniel J. Nordman, University of Wisconsin, La Crosse; Soumendra N. Lahiri, Iowa State University
- 10:05 a.m.** Weighted Empirical Likelihood Estimates and Their Robustness Properties—◆ Nancy Glenn, University of South Carolina

363 MCC-209 AB

★ ☆ Bayesian Modeling and Inference—Contributed

Section on Bayesian Statistical Science

Chair(s): Patrick J. Wolfe, Harvard University

- 8:35 a.m.** On the Mixture of Skew Normal Distributions—◆ Jack C. Lee, National Chiao-Tung University; Tsung-I Lin, Tunghai University
- 8:50 a.m.** A Doubly Nested Hidden Markov Model for Internet Browsing Behavior—◆ Steven Scott, University of Southern California
- 9:05 a.m.** An Efficient Mixture-based Shrinkage Estimator: a Monte Carlo Analysis—◆ William Bolstad, University of Waikato
- 9:20 a.m.** Estimation of Bayesian Hierarchical Models with ARIMA Noise—◆ Miguel Arranz, Bayes Inference, S. A.
- 9:35 a.m.** Bayesian Analysis of the Computer Model Validation—◆ Fei Liu, Duke University

GENERAL PROGRAM SCHEDULE

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

- 9:50 a.m.** Bayesian Inference with Latent Variable Models—
◆ Eric Loken, The Pennsylvania State University
- 10:05 a.m.** Posterior Propriety for Hierarchical Models with Log-concave Likelihoods, Including Hierarchical Generalized Linear Models—◆ Sarah Michalak, Los Alamos National Laboratory; Carl N. Morris, Harvard University

364 **MCC-103 D** **Robust Regression Methods—Contributed** General Methodology, Section on Nonparametric Statistics

Chair(s): Jonas Ellenberg, University of Pennsylvania School of Medicine

- 8:35 a.m.** Estimating Regression Parameters in Inventory Management—◆ Samaradasa Weerahandi, Time Warner, Inc.; Martin Koschat, Time Warner, Inc.; Xiaolin Teng, Time Warner, Inc.
- 8:50 a.m.** On an Extension of Woodruff's Method for Calculating Sampling Variability for Medians—◆ Claude Girard, Statistics Canada
- 9:05 a.m.** Improved Estimation of Dissimilarities by Presmoothing Functional Data—◆ David B. Hitchcock, University of South Carolina; George Casella, University of Florida; James G. Booth, Cornell University
- 9:20 a.m.** Ridge Trace Properties under Structured Correlation Matrices—◆ Racheal Zhang, Oakland University
- 9:35 a.m.** Robustness in Structural Measurement Error Models—
◆ Xianzheng Huang, North Carolina State University; Leonard A. Stefanski, North Carolina State University; Marie Davidian, North Carolina State University

- 9:50 a.m.** Diagnostics for Machine Learning: Generalizing the Functional ANOVA—◆ Giles Hooker, McGill University
- 10:05 a.m.** Equal Leverage via Robust Regression Using a Weighted Projection Matrix—◆ Tamekia Jones, University of Alabama at Birmingham; David T. Redden, University of Alabama at Birmingham

365 **MCC-102 F** * **Mode Effects and Issues with Nontraditional Modes—Contributed** Section on Survey Research Methods, Social Statistics Section

Chair(s): Ting Yan, University of Maryland

- 8:35 a.m.** Latent Class Models for Studying Measurement-related Mode Effects in Mixed-mode Surveys—◆ Allan McCutcheon, UNL-Gallup Research Center
- 8:50 a.m.** Comparison of Telephone versus Face-to-face Response in the U.S. Consumer Expenditures Survey—
◆ David McGrath, BAE Systems
- 9:05 a.m.** Effectiveness of Address-based Sampling Frame Alternative to RDD: BRFSS Mail Survey Experiment Results—◆ Michael W. Link, U.S. Centers for Disease Control and Prevention; Michael Battaglia, Abt Associates, Inc.; Martin R. Frankel, Abt Associates, Inc.; Pamela Giambo, Abt Associates, Inc.; Ali H. Mokdad, U.S. Centers for Disease Control and Prevention
- 9:20 a.m.** An Evaluation of Respondent Selection Methods for Household Mail Surveys—◆ Michael Battaglia, Abt Associates, Inc.; Michael W. Link, U.S. Centers for Disease Control and Prevention; Martin R. Frankel, Abt Associates, Inc.; Pamela Giambo, Abt Associates, Inc.; Ali H. Mokdad, U.S. Centers for Disease Control and Prevention
- 9:35 a.m.** Combining Information from Multiple Modes To Evaluate and Reduce Nonresponse Bias—◆ Mick Couper, University of Michigan; Andy Peytchev, University of Michigan; Roderick J. Little, University of Michigan; Victor Strecher, University of Michigan; Kendra Rothert, Kaiser Permanente
- 9:50 a.m.** Assessing Panel Bias in the Knowledge Networks Panel—◆ Vicki Pineau, Knowledge Networks, Inc.
- 10:05 a.m.** Floor Discussion

366 **MCC-205 B** **Modeling Incidence Rates and Epidemics—Contributed** Section on Statistics in Epidemiology, WNAR

Chair(s): Michael Haber, Emory University

- 8:35 a.m.** Trends and Risk Factors in British Female Breast Cancer—◆ Patrick Carroll, PAPRI

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9:00 a.m.—2:00 p.m.
MMC—Exhibit Hall C

8:50 a.m. BMI, Alcohol Consumption, and Risk of Prostate Cancer?—◆ Negasi Beyene, National Center for Health Statistics

9:05 a.m. A Comparison of Methods for the Surveillance of Congenital Malformations—◆ Landon Sego, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University

9:20 a.m. Epidemiologic Comparison of Disease Incidence among Populations: the Person-years Approach—
◆ V. Shane Pankratz, Mayo Clinic; Robert Vierkant, Mayo Clinic; Shaun Maloney, Mayo Clinic; Lynn Hartmann, Mayo Clinic

9:35 a.m. Age-based Methods To Explore Time-related Variables in Occupational Epidemiologic Studies—◆ Janice Watkins, Oak Ridge Associated Universities

9:50 a.m. Modeling a Computer Virus Epidemic—◆ Lawrence Lessner, SUNY/NYS Department of Health; Sanjay Gioel, University at Albany, SUNY

10:05 a.m. Floor Discussion

367 **MCC-103 A**

★ Record Linkage, Disclosure Risk, and Confidentiality—Contributed

Section on Survey Research Methods, Section on Government Statistics, Social Statistics Section, Section on Statisticians in Defense and National Security

Chair(s): Mary Moien, National Center for Health Statistics

8:35 a.m. Advances in Record Linkage Theory—◆ Michael D. Larsen, Iowa State University

8:50 a.m. Disclosure Limitation of MCOD and NHIS-NDI Linked Files—◆ Wenxing Zha, National Center for Health Statistics; Paul D. Williams, National Center for Health Statistics; Jay J. Kim, National Center for Health Statistics

9:05 a.m. Multiple and Stochastic Swapping of Keys for Statistical Disclosure Control in Microdata—◆ Fang Liu, Merck Research Laboratories

9:20 a.m. A New Multiple-bootstrap-datasets Presentation Method for Confidentiality Protection—◆ Yan Li, National Center for Health Statistics; Paul D. Williams, National Center for Health Statistics

9:35 a.m. Effects of Released Marginals and Conditionals in Multiway Tables on Disclosure Limitation—◆ Aleksandra Slavkovic, The Pennsylvania State University

9:50 a.m. Disclosure Risks in Releasing Output Based on Regression Residuals—◆ Arnold Reznak, U.S. Census Bureau; T. Lynn Riggs, U.S. Census Bureau

10:05 a.m. The National Center for Health Statistics Research Data Center—◆ Kenneth Harris, National Center for Health Statistics

368 **MCC-213 AB**

★ Assessing the Performance of Marketing Models and Measures—Contributed

Section on Statistics and Marketing, Section on Bayesian Statistical Science

Chair(s): Lynd Bacon, Sighthound Solutions, Inc.

8:35 a.m. A Bayesian Approach to Linkage Research—◆ Shon Magnan, GfK Custom Research, Inc.; Michael Conklin, GfK Custom Research, Inc.

8:50 a.m. Evaluating Data Collection Method Effects via Demographic Matching—◆ Robert Mezera, GfK Custom Research, Inc.; Shon Magnan, GfK Custom Research, Inc.

9:05 a.m. Bayesian Efficiency Components Analysis: Applications in Marketing—◆ Sanjog Misra, University of Rochester

9:20 a.m. Performance Comparison of State Space and RBF-based Models for Daily Sales of Small Restaurants—◆ Rui Yamaguchi, Kyushu University; Tomoyuki Higuchi, Institute of Statistical Mathematics

9:35 a.m. Increased Model Acceptance through Improved Reporting—◆ Audrey Lyke, Advance Magazine Group

9:50 a.m. Alternative Assessment Criteria for Gauging Performance of Database Response Models—
◆ Sam Koslowsky, Harte-Hanks, Inc.

10:05 a.m. Floor Discussion

369 **MCC-205 C**

Ideas and Examples for Teaching Concepts in Statistics Classroom—Contributed

Section on Statistical Education

Chair(s): Mary Mortlock, California Polytechnic State University

8:35 a.m. Teaching the Consequences of Data Transformations—
◆ Christopher Malone, Winona State University; Brant Deppa, Winona State University

8:50 a.m. Illustrating Basic Probability Calculations Using the Dice Game 'Craps'—◆ Roger Johnson, South Dakota School of Mines & Technology

9:05 a.m. Some Illustrative Classroom Examples Regarding Sums of Discrete Random Variables with Finite Support—
◆ Jeff Terpstra, North Dakota State University

9:20 a.m. What Is the Probability of 'Pigging Out'?—◆ Mary Richardson, Grand Valley State University; David Coffey, Grand Valley State University

GENERAL PROGRAM SCHEDULE

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

- 9:35 a.m.** The Statistical Ecology of Google Whacking—
◆ Woolcott Smith, Temple University
- 9:50 a.m.** Statistics before Your Eyes: Photographs of Statistical Concepts—◆ Robert Jennigan, American University
- 10:05 a.m.** The Flat Earth Guide to Probabilities and Statistics—
◆ John Turner, U.S. Naval Academy

370 **MCC-208 A**

☆ **Methods and Models for Genomics—Contributed** Section on Statistical Computing

Chair(s): Patrick Gaffney, Imclone Systems

- 8:35 a.m.** Application of a Hidden Markov Model To Calculate the Probability of Ancestral Origin of Partially Informative Markers—◆ Stephen Kachman, University of Nebraska
- 8:50 a.m.** Likelihood-based Inference for Multicolor Optical Mapping Data—◆ Liping Tong, University of Washington; Mary Sara McPeck, The University of Chicago; Laurens Mets, The University of Chicago
- 9:05 a.m.** Bioinformatics Tools for Multivariate u-Statistics Applied to Screening for Genetic Risk Factors of Cardiovascular Diseases—◆ Knut M. Wittkowski, The Rockefeller University
- 9:20 a.m.** Model Search in Highly Dimensional Constrained Graphical Models with Application to Protein Backbone Nuclear Magnetic Resonance Assignment—◆ Olga Vitek, Purdue University
- 9:35 a.m.** Matrix Reduction Information Measures for Microarray Gene Expression and Other Applications—◆ Ehsan Soofi, University of Wisconsin, Milwaukee; Nader Ebrahimi, Northern Illinois University; Joseph J. Retzer, Maritz Research
- 9:50 a.m.** Floor Discussion

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

371 **MCC-200 ABC**

Late-breaking Session 2: The COX-2 Inhibitors Story: What Do (Should) We Know and When Do (Should) We Know It—and What Should We Do about It?

The ASA, ENAR, IMS, SSC, WNAR, Biopharmaceutical Section, Biometrics Section, Section on Risk Analysis,

Organizer(s): Susan Ellenberg, University of Pennsylvania

Chair(s): Susan Ellenberg, University of Pennsylvania

- 10:35 a.m.** A Metaanalysis of Effects of COX-2 Inhibitors—
◆ Patricia Kearney, University of Oxford
- 11:05 a.m.** Chronology of Clinically Important Cardiovascular (CV) Event Data in the Rofecoxib (VIOXX) Development Program—◆ Raymond Bain, Merck & Co., Inc.

- 11:35 a.m.** Disc: Stephen J.W. Evans, London School of Hygiene and Tropical Medicine
- 11:50 a.m.** Disc: Robert O'Neill, U.S. Food and Drug Administration
- 12:05 p.m.** Floor Discussion

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

372 **MCC-200 DE**

● ☆ **Noether Award Invited Session—Invited** Noether Award Committee

- 10:35 a.m.** All Statistical Methods, Confidence Quantiles—
◆ Emanuel Parzen, Texas A&M University
- 11:20 a.m.** Model Selection in Semiparametric Models—◆ Gerda Claeskens, Katholieke Universiteit Leuven
- 12:05 p.m.** Floor Discussion

373 **MCC-205 A**

Dealing with Bias in Observational Studies in the Health Sciences—Invited

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

Organizer(s): Sander Greenland, University of California, Los Angeles

- 10:35 a.m.** Extending Likelihood-based Algorithms and Inference to Nonidentified Bias Models—◆ Sander Greenland, University of California, Los Angeles
- 11:00 a.m.** A Counterfactual Approach to Sensitivity Analysis for Unmeasured Confounding and Selection Bias—
◆ Miguel A. Hernán, Harvard School of Public Health
- 11:25 a.m.** Monte Carlo Correction for Misclassification with Imperfect Internal Validation Data—◆ Timothy L. Lash, Boston University
- 11:50 a.m.** Disc: Paul Gustafson, University of British Columbia
- 12:15 p.m.** Floor Discussion

374 **MCC-102 C**

● **Statistics and Machine Learning—Invited** International Indian Statistical Association

Organizer(s): Malay Ghosh, University of Florida

Chair(s): Debashis Ghosh, University of Michigan

- 10:35 a.m.** A New Multiclass Generalization of AdaBoost—
◆ Ji Zhu, University of Michigan
- 11:00 a.m.** Support Vector Machine: Its Strength, Limitation, and Improvement—◆ Yoonkyung Lee, The Ohio State University

11:25 a.m. Bayesian Variable Selection in Neural Network and Support Vector Machine Models for Classification of Tumors Using Gene Expression Data—◆ Sounak Chakraborty, University of Florida; Malay Ghosh, University of Florida

11:50 a.m. Variable Selection for SVM—◆ Hao H. Zhang, North Carolina State University

12:15 p.m. Floor Discussion

375 MCC-213 AB

● ☆ **Isotonic Methods in Toxicology and Risk—Invited Section on Risk Analysis, WNAR, Biometrics Section**

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

Chair(s): Susan Simmons, University of North Carolina, Wilmington

10:35 a.m. A Survival-adjusted Test for Comparing Tumor Incidence Rates Using Historical Control Data—◆ Gregg E. Dinse, National Institute of Environmental Health Sciences; Shyamal D. Peddada, National Institute of Environmental Health Sciences; Grace E. Kissling, National Institute of Environmental Health Sciences

11:00 a.m. Bayesian Methods for Assessing Ordering in Hazard Functions—◆ Laura H. Gunn, Georgia Southern University; David Dunson, National Institute of Environmental Health Sciences

11:25 a.m. Applying Isotonic Regression To Identify the Ideal Recall Rate in Screening Mammography—◆ Michael J. Schell, The University of North Carolina at Chapel Hill; William E. Barlow, University of Washington; Bahjat F. Qaqish, The University of North Carolina at Chapel Hill; Bonnie C. Yankaskas, The University of North Carolina at Chapel Hill

11:50 a.m. Disc: A. John Bailer, Miami University

12:10 a.m. Floor Discussion

376 MCC-211 C

● **Robust Parameter Design: Past, Present, and Future—Invited**

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

Organizer(s): Timothy J. Robinson, University of Wyoming

Chair(s): John Borkowski, Montana State University

10:35 a.m. Robust Parameter Design: a Historical Perspective—◆ Raymond Myers, Virginia Polytechnic Institute and State University

11:05 a.m. Recent Advances in Robust Parameter Design—◆ Timothy J. Robinson, University of Wyoming

11:35 a.m. Designed Experiments in Robust Parameter Design—◆ Connie Borror, University of Illinois, Urbana-Champaign

12:05 p.m. Floor Discussion

377

MCC-102 B

● **Complex Data Structures—Invited SSC**

Organizer(s): James Stafford, University of Toronto

Chair(s): James Stafford, University of Toronto

10:35 a.m. LAGO: a Computationally Efficient Approach for Statistical Detection—◆ Mu Zhu, University of Waterloo

11:05 a.m. A Likelihood-based Approach—◆ Jason Loeppky, University of British Columbia; Derek Bingham, Simon Fraser University; William J. Welch, University of British Columbia

11:35 a.m. Extracting Correlation Information from the Gene Ontology Structures—◆ Rafal Kustra, University of Toronto

12:05 p.m. Floor Discussion

378

MCC-200 J

☆ **Dynamic Treatment Regimes—Invited ENAR, Biometrics Section**

Organizer(s): Susan Murphy, University of Michigan

Chair(s): Susan Murphy, University of Michigan

10:35 a.m. Acute HIV Infection and Structured Treatment Interruption: Can Therapy Be Discontinued?—◆ Eric S. Rosenberg, Massachusetts General Hospital/Harvard Medical School

11:00 a.m. Adaptive Multicourse Treatment Strategies in Two Oncology Trials—◆ Peter F. Thall, The University of Texas M. D. Anderson Cancer Center

11:25 a.m. Using Machine Learning to Approximate Dynamic Programming for Large-scale Sequential Decision Problems—◆ Andrew Barto, University of Massachusetts

11:50 a.m. Estimating Mean Response as a Function of Treatment Duration, Where Treatment Duration May Be Informative-censored—◆ Anastasios A. Tsiatis, North Carolina State University; Brent Johnson, The University of North Carolina at Chapel Hill

12:15 p.m. Floor Discussion

379

MCC-211 B

☆ **Wald II—Invited IMS**

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

Chair(s): Sunder Sethuraman, Iowa State University

10:35 a.m. Large Deviations in Different Contexts—◆ S.R. Srinivasa Varadhan, New York University

12:00 p.m. Floor Discussion

380

MCC-102 D

● Accounting for Constraints in Optimization of Survey Procedures—Invited

Section on Survey Research Methods

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

Chair(s): Jean D. Opsomer, Iowa State University

10:35 a.m. Handling Program Constraints in the Sample Design for the Commodities and Services Component of the U.S. Consumer Price Index—◆ Sylvia G. Leaver, Bureau of Labor Statistics; Darin T. Solk, Bureau of Labor Statistics

11:00 a.m. Designing and Analyzing Surveys under Severe Resource Constraints—◆ Stephen J. Haslett, Massey University

11:25 a.m. Sample Design for the FDIC's Asset Loss Reserve Project—◆ David W. Chapman, Federal Deposit Insurance Corporation

11:50 a.m. Disc: John L. Eltinge, Bureau of Labor Statistics

12:10 p.m. Floor Discussion

381

MCC-103 D

● Going Beyond ITT: Noncompliance in Randomized Trials—Invited

General Methodology, WNAR, Biopharmaceutical Section, Biometrics Section

Organizer(s): Michael R. Elliott, University of Pennsylvania

Chair(s): Michael R. Elliott, University of Pennsylvania

10:35 a.m. CATE (Complier Average Treatment Effect) in Trials Involving Two Active Treatments—◆ Qi Long, University of Michigan; Roderick J. Little, University of Michigan; Xihong Lin, Harvard University

11:00 a.m. Bounds on Causal Effects in Three-arm Trials with Noncompliance—◆ Jing Cheng, University of Pennsylvania; Dylan Small, The University of Pennsylvania

11:25 a.m. Longitudinal Nested Compliance Class Model in the Presence of Time-varying Noncompliance—◆ Julia Lin, University of Pennsylvania; Michael R. Elliott, University of Pennsylvania; Thomas T. Have, University of Pennsylvania

11:50 a.m. Causal Effects of Observed Error-prone Exposure Measures in Randomized Clinical Trials—◆ Els J. Goetghebeur, Ghent University; Stijn Vansteelandt, Ghent University

12:15 p.m. Floor Discussion

382

MCC-200 F

● ☆ Statistical Methods in Environmental Exposure Assessment—Invited

Biometrics Section, Section on Statistics and the Environment, WNAR

Organizer(s): Amy H. Herring, University of North Carolina at Chapel Hill

Chair(s): Michael Pennell, The University of North Carolina at Chapel Hill/NIEHS

10:35 a.m. An Overview of Statistical Approaches to Assessing Chemical Exposures—◆ Stephen M. Rappaport, The University of North Carolina at Chapel Hill

11:00 a.m. Structural Equation Models in Environmental Epidemiology—◆ Esben Budtz-Jorgensen, University of Copenhagen

11:25 a.m. Latent Variable Semiparametric Regression Models for Spatial-temporal Modeling of Mobile Source Pollution in the Greater Boston Area—◆ Brent Coull, Harvard School of Public Health; Alexandros Gryparis, Harvard School of Public Health; Joel Schwartz, Harvard School of Public Health; Helen Suh, Harvard School of Public Health

11:50 a.m. Bayesian Methods for Characterizing Complex Multivariate Exposures—◆ Amy H. Herring, The University of North Carolina at Chapel Hill

12:15 p.m. Floor Discussion

383

MCC-211 A

● ☆ Statistics for Molecular-level Experiments—Invited

IMS, WNAR, Biometrics Section

Organizer(s): Zhan-Qian J. Lu, National Institute of Standards and Technology

Chair(s): Nell Sedransk, National Institute of Standards and Technology

10:35 a.m. Stochastic Modeling in Single Molecule Biophysics—◆ Samuel Kou, Harvard University

Pick up Wednesday's
JSM Highlights

for the
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Recipients**

11:00 a.m. High-dimensional Analysis of Variance with Application to MALDI-TOF Mass Spectrometry in Synthetic Polymer Experiments—◆ Zhan-Qian J. Lu, National Institute of Standards and Technology

11:25 a.m. First Entrance of DNA into a Nanopore—◆ Charles Hagwood, National Institute of Standards and Technology; Charles Hagwood, National Institute of Standards and Technology

11:50 a.m. Disc: Kevin Coakley, National Institute of Standards and Technology

12:10 p.m. Floor Discussion

Invited Panels 10:30 a.m.–12:20 p.m.

384 **MCC-205 D**
Career Advice in Statistics Education: a Panel Discussion Including Waller Education Award Winners—Invited Section on Statistical Education

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

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

Panelists: ◆ Beth Chance, California Polytechnic State University
 ◆ John Holcomb, Cleveland State University
 ◆ Ginger Rowell, Middle Tennessee State University
 ◆ Thomas Moore, Grinnell College
 ◆ Jessica Utts, University of California, Davis

12:10 p.m. Floor Discussion

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

385 **MCC-212 AB**
 ☆ **Study Design for Genetic Epidemiology—Topic Contributed**

Section on Statistical Consulting

Organizer(s): Stephen Lake, Harvard Medical School

Chair(s): Stephen Lake, Harvard Medical School

10:35 a.m. Study Design Options for Assessing Gene-environment and Gene-gene Interaction—◆ W. James Gauderman, University of Southern California

10:55 a.m. Complex Diseases in Admixed Populations—◆ Hua Tang, Fred Hutchinson Cancer Research Center

11:15 a.m. Genomic Control—◆ Silviu-Alin Bacanu, University of Pittsburgh

11:35 a.m. Estimation of Genetic Effect at a Candidate Gene for Family-based Association Studies—◆ Mei-Chiung Shih, Harvard School of Public Health; Nan M. Laird, Harvard

School of Public Health; Christoph Lange, Harvard School of Public Health

11:55 a.m. Genomic Screening in Family-based Association Testing—◆ Christoph Lange, Harvard School of Public Health; Kristel Van Steen, Harvard School of Public Health

12:15 p.m. Floor Discussion

386 **MCC-103 B**
 ☆ **The American Time-use Survey: Findings and Methodological Issues—Topic Contributed**

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

Organizer(s): Polly Phipps, Bureau of Labor Statistics

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

10:35 a.m. How Do the Elderly Spend Their Time?—◆ Rachel Krantz-Kent, Bureau of Labor Statistics; Jay Stewart, Bureau of Labor Statistics

10:55 a.m. Nonresponse in the American Time-use Survey—◆ Grace O'Neill, Bureau of Labor Statistics

11:15 a.m. Pre-testing Sensitive Questions: Perceived Sensitivity, Comprehension, and Order Effects of Questions about Income and Weight—◆ Margaret Vernon, Bureau of Labor Statistics

11:35 a.m. The Relation between Response Propensity and Data Quality in the American Time-use Survey—◆ Scott Fricker, Bureau of Labor Statistics

11:55 a.m. Disc: Roger Tourangeau, Joint Program in Survey Methodology

12:15 p.m. Floor Discussion

387 **MCC-208 B**
 ☆ ☆ **Cutting-edge Bayesian Modeling and Diagnostics—Topic Contributed**

Section on Bayesian Statistical Science

Organizer(s): Iain Pardoe, University of Oregon

Chair(s): Ben B. Hansen, University of Michigan

10:35 a.m. A Bayesian SEIR Approach to Modeling Smallpox Epidemics—◆ Vanja Dukic, The University of Chicago; Bret Elder, The University of Chicago; Greg Dwyer, The University of Chicago

10:55 a.m. Strategies for Building and Validating Bayesian Models—◆ Mario Peruggia, The Ohio State University; Ilenia Epifani, Politecnico di Milano; Steven N. MacEachern, The Ohio State University

11:15 a.m. Modeling Dependence in Conjoint Choice Experiments—◆ Steven N. MacEachern, The Ohio State University; Angela Dean, The Ohio State University; Shiling Ruan, The Ohio State University

GENERAL PROGRAM SCHEDULE

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

11:35 a.m. Bayesian Approaches to Value-added Modeling of Teacher and School Effects—◆ J. R. Lockwood, RAND Corporation; Dan McCaffrey, RAND Corporation; Louis T. Mariano, RAND Corporation

11:55 a.m. Predicting Academy Award Winners Using Discrete Choice Modeling—◆ Iain Pardoe, University of Oregon

12:15 p.m. Floor Discussion

388 **MCC-208 C** ☆ Bayesian Design and Analysis in Medical Devices— Topic Contributed

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

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

Chair(s): Thomas A. Louis, Johns Hopkins University

10:35 a.m. Bayesian Experimental Design of Sequential and Nonsequential Medical Device Trials—◆ George G. Woodworth, The University of Iowa; David Breiter, Guidant Corporation; Mah Jeng, Guidant Corporation

10:55 a.m. A Bayesian Adaptive Sample Design in Comparing Hazard Rates of Two Therapies—◆ Feng Tang, Medtronic,

Inc.; Lou Sherfese, Medtronic, Inc.; Andrew Mugglin, Medtronic, Inc.

11:15 a.m. Comparing Several Methods for Estimating Sensitivity and Specificity in Medical Devices—◆ Wenji Pu, Medtronic, Inc.; Feng Tang, Medtronic, Inc.; Duo Zhou, Medtronic, Inc.

11:35 a.m. Bayesian Metaanalysis of Covered Stent and Drug Eluting Stent Trials—◆ Yongyi Yu, Boston Scientific Corporation

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

12:15 p.m. Floor Discussion

389 **MCC-200 G** ☆ Multiple Comparisons in Phase II Studies—Topic Contributed

Biopharmaceutical Section, WNAR

Organizer(s): Brian Wiens, Amgen Inc.; Alexei Dmitrienko, Eli Lilly and Company

Chair(s): Brian Wiens, Amgen Inc.

10:35 a.m. The Multistage Fallback Test for Clinical Trials with Multiple Objectives—◆ Alexei Dmitrienko, Eli Lilly and Company; Brian Wiens, Amgen Inc.



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10:55 a.m. Adaptive Design for Dose-response Studies Using the Partitioning Principle—Jason Hsu, The Ohio State University; ◆ Xiang Ling, The Ohio State University

11:15 a.m. A Modified Tukey Linear Trend Test in Dose-response Studies—◆ Chao-Yin Chen, University of Minnesota; Lan Kong, University of Pittsburgh; Huei Wang, Amgen Global Biostatistics; Thomas Liu, Amgen Global Biostatistics; Brian Wiens, Amgen Inc.

11:35 a.m. Performance of Some Multiple Testing Procedures To Compare Three Doses of a Test Drug and Placebo—◆ Lan Kong, University of Pittsburgh; Gary G. Koch, The University of North Carolina at Chapel Hill; Thomas Liu, Amgen Global Biostatistics; Huei Wang, Amgen Global Biostatistics

11:55 a.m. Multiple Inferences in Early Phase II Clinical Trials: Performance of Exact Methods for Dose Response—◆ Alok Krishen, GlaxoSmithKline; Rafe Donahue, GlaxoSmithKline

12:15 p.m. Floor Discussion

390 MCC-201 AB

● ☆ **Likelihood, Bayesian, and GEE Approaches to Informative Missingness—Topic Contributed**

Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Thomas R. Belin, University of California, Los Angeles

Chair(s): Samantha R. Cook, Columbia University

10:35 a.m. Addressing Alternative Missing-data Mechanisms in Multivariate Probit Models for Incomplete Ordinal Data—◆ Jun Xing, University of California, Los Angeles; Alan Rong, Amgen Inc.; Thomas R. Belin, University of California, Los Angeles

10:55 a.m. A Shared Random-effects Transition Model for Longitudinal Binary Data with Informative Missingness—◆ Jinhui Li, University of California, Los Angeles; Yingnian Wu, University of California, Los Angeles; Xiaowei Yang, BayesSoft, Inc.

11:15 a.m. Simulation Study for Longitudinal Data with Nonignorable Missing Data—◆ Rong Liu, Virginia Commonwealth University; V. Ramakrishnan, Virginia Commonwealth University

11:35 a.m. Shared Parameter Model with Nonparametric Trajectories—◆ Sarah Ratcliffe, University of Pennsylvania; Wensheng Guo, University of Pennsylvania

11:55 a.m. Handling Missing Data by Deleting Completely Observed Records—◆ Cuiling Wang, Albert Einstein College of Medicine of Yeshiva University; Myunghye Cho Paik, Columbia University

12:15 p.m. Floor Discussion

391

MCC-202 AB

● ☆ **Topics in Causal Inference—Topic Contributed**
Biometrics Section, WNAR

Organizer(s): Eva Petkova, Columbia University

Chair(s): Changxuan Mao, University of California, Riverside

10:35 a.m. Explanatory Analyses of Randomized Dose Response Trials with Direct and Indirect Effects—◆ Long-Long Gao, University of Pennsylvania; Marshall M. Joffe, University of Pennsylvania

10:55 a.m. Assessing Potential Mediator Variables via Structural Models—◆ Jeffrey Albert, Case Western Reserve University

11:15 a.m. A Formal Approach for Defining and Identifying the Fundamental Effects of Exposures on Disease from Experiments Conducted on Populations of Nonidentical Subjects—◆ Steven Mark, National Cancer Institute

11:35 a.m. Estimation of the Joint Causal Effects on Survival of Multistage Nonrandomized Treatment Sequences for Recurrent Diseases—◆ Xuelin Huang, The University of Texas M. D. Anderson Cancer Center

11:55 a.m. Covariate-adjusted Regression via Local Polynomial Modeling—◆ Danh Nguyen, University of California, Davis

12:15 p.m. Floor Discussion

392

MCC-102 E

● ☆ **Conduct and Analysis of Surveys to Measure HIV, Risk, and Disease—Topic Contributed**

Section on Survey Research Methods

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

Chair(s): Ramses Sadek, U.S. Centers for Disease Control and Prevention

10:35 a.m. Sampling Issues in National HIV Behavioral Surveillance of Injecting Drug Users—◆ Michael Monsour, U.S. Centers for Disease Control and Prevention; Lillian S. Lin, U.S. Centers for Disease Control and Prevention; Myron Katzoff, National Center for Health Statistics; Steven Thompson, Simon Fraser University

10:55 a.m. Constructing a Sampling Frame of HIV Care Facilities for Clinical Surveillance of Persons in Care for HIV Infection in the United States—◆ Maxine Denniston, U.S. Centers for Disease Control and Prevention; Kathleen Gallagher, U.S. Centers for Disease Control and Prevention; Martin Frankel, Baruch College, CUNY; S. Morton, RAND Corporation; Amy Drake, U.S. Centers for Disease Control and Prevention; Samuel Bozette, RAND Corporation; Sandra H. Berry, RAND Corporation; Eyasu Teshale, U.S. Centers for Disease Control and Prevention; M. Shapiro, RAND Corporation; Patrick Sullivan, U.S. Centers for Disease Control and Prevention

GENERAL PROGRAM SCHEDULE

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

- 11:15 a.m.** Detecting and Accounting for Clustering in Data from Time-space Sample (TSS) Surveys—◆ John Karon, Emergint Corporation
- 11:35 a.m.** Goodness-of-fit and Multilevel Models: Application to Survey Data from the Community Intervention Trial for Youth (CITY) Project—◆ DeMarc Hickson, Emory University; Lance A. Waller, Emory University
- 11:50 a.m.** Disc: Lillian S. Lin, U.S. Centers for Disease Control and Prevention
- 12:05 p.m.** Floor Discussion

393 **MCC-103 F**

* **Joint Social, Government Statistics, and Survey Research Methods Sections Student Competition Winners—Topic Contributed**

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

Organizer(s): Renee Miller, Energy Information Administration

Chair(s): Rachel Harter, NORC at the University of Chicago

- 10:35 a.m.** Design Effects in the Analysis of Longitudinal Survey Data—◆ Marcel de Toledo Vieira, University of Southampton
- 10:50 a.m.** Model-based Estimation in Network Sampling Using Samples Obtained by Subsampling—◆ Mike Kwanisai, NORC at the University of Chicago
- 11:15 a.m.** Research on Errors Associated with Period Reporters in Retail Trade Estimates—◆ Kelly Dixon, U.S. Census Bureau
- 11:35 a.m.** Bayesian Models To Adjust for Response Bias in Survey Data: an Example in Estimating Rape and Domestic Violence from the NCVS—◆ Qingzhao Yu, The Ohio State University; Elizabeth A. Stasny, The Ohio State University
- 11:55 a.m.** Imputation of Missing Hourly Pay Data Using Data Augmentation in the Case of Nonignorable Item-nonresponse—◆ Gabriele Durrant, University of Southampton
- 12:15 p.m.** Floor Discussion

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

394 **MCC-208 A**

What We've Learned from Computer-based Learning at Brigham Young University—Topic Contributed

Section on Statistical Education

Organizer(s): Patti Collings, Brigham Young University

Chair(s): Bruce Schaalje, Brigham Young University

- Panelists:** ◆ Patti Collings, Brigham Young University
◆ Howard Christensen, Brigham Young University
◆ Paul Fields, Brigham Young University
◆ Dennis Eggett, Brigham Young University

12:15 p.m. Floor Discussion

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

395 **MCC-211 D**

Wavelets and Functional Data Analysis—Contributed

Section on Nonparametric Statistics, ENAR, Biometrics Section

Chair(s): John R. Dixon, Florida State University

- 10:35 a.m.** Jump Reconstruction via Dilation Invariant Denoising—◆ Eric Chicken, Florida State University
- 10:50 a.m.** Minimax Estimation of Linear Functionals under Squared Error Loss—◆ Meng Zhao, Clemson University; K. B. Kulasekera, Clemson University
- 11:05 a.m.** Change Point Detection by Unbalance Continuous Wavelet Analysis—◆ Maarten Jansen, Technische Universiteit Eindhoven
- 11:20 a.m.** Wavelet-based Bootstrap for Long Memory Time Series—◆ Priya Kulkarni; David Hinkley, University of California, Santa Barbara
- 11:35 a.m.** Jump Detection in Regression Surfaces Using Both First-order and Second-order Derivatives—◆ Jingran Sun, University of Minnesota; Peihua Qiu, University of Minnesota
- 11:50 a.m.** Testing Equality of Curves—◆ Zhongfa Zhang, Case Western Reserve University; Jiayang Sun, Case Western Reserve University
- 12:05 p.m.** Diverging Moments, Wavelets, and Nonparametric Tail Estimation—◆ Rudolf Riedi, Rice University; Paulo Goncalves, INRIA Rhone-Alpes

396 **MCC-208 D**

* ☆ **Bayesian Clustering and Classification—Contributed**

Section on Bayesian Statistical Science, Social Statistics Section

Chair(s): Fang Yu, University of Connecticut

- 10:35 a.m.** Model-based Clustering of Large Datasets Using Bayesian Computational Statistics—◆ Herbert Hoijtink, Universiteit Utrecht
- 10:50 a.m.** Market Segmentation Using Bayesian Model-based Clustering—◆ Pascal van Hattum, University Utrecht
- 11:05 a.m.** On Population-based Methods of Clustering—◆ Gopika Goswami, Harvard University

- 11:20 a.m.** A Bayesian Treed Approach To Form Poststrata for Capture-recapture Data—◆ Xinlei Wang, Southern Methodist University; Johan Lim, Texas A&M University; Lynne Stokes, Southern Methodist University
- 11:35 a.m.** A Comparative Evaluation on the Performance of Binary and Multiclass Support Vector Machines in the Analysis and Classification of Remotely Sensed Satellite Data—◆ Sharath Tadepalli, Purdue University
- 11:50 a.m.** Discriminant Analysis in Longitudinal Data through a Bayesian Semiparametric Model—◆ Rolando De la Cruz-Mesia, Pontificia Universidad Catolica de Chile; Fernando A. Quintana, Pontificia Universidad Catolica de Chile; Peter Müller, The University of Texas M. D. Anderson Cancer Center
- 12:05 p.m.** Bayesian CART: Prior Specification and Posterior Simulation—◆ Yuhong Wu, Duke University; Haakon Tjelmeland, Norwegian University of Science and Technology; Mike West, Duke University

397 **MCC-103 C**
★ Analysis of Establishment Surveys—Contributed
Section on Government Statistics, Section on Survey Research Methods

Chair(s): Kathy Downey, Bureau of Labor Statistics

- 10:35 a.m.** Historical Reconstruction of Employment Time Series for Metropolitan Areas in the Current Employment Statistics Program—◆ Brian Dahlin, Bureau of Labor Statistics; Molly Garber, Bureau of Labor Statistics
- 10:50 a.m.** Developing Annual Estimates of Hires and Separations—◆ Brady Stephens, Bureau of Labor Statistics; Kim Riley, Bureau of Labor Statistics
- 11:05 a.m.** Estimation of the Change in Total Employment Using the U.S. Current Employment Statistics Survey—◆ Bogong Li, Bureau of Labor Statistics; Partha Lahiri, University of Maryland
- 11:20 a.m.** Data Modeling for a Simulation Study of the Quarterly Financial Report Estimator—◆ Donald M. Luery, U.S. Census Bureau
- 11:35 a.m.** From Lab to Market: Understanding the Role of Mergers, Acquisitions, and Technology Transfer in the Innovation Process—◆ Gary Anderson, National Institute of Standards and Technology
- 11:50 a.m.** Federal Funding of High-risk Research and Development: Findings from Multiple Award Competitions of the Advanced Technology Program—◆ Stephen Campbell, National Institute of Standards and Technology; Andrew Wang, National Institute of Standards and Technology
- 12:05 p.m.** Generalized Variance Estimation for Business Surveys—◆ James Chipperfield, Australian Bureau of Statistics

398 **MCC-200 H**
★ Power, Selection Bias, Type I Error, and Measurement Error—Contributed
Biopharmaceutical Section, WNAR

Chair(s): Hongwei Wang, Merck & Co., Inc.

- 10:35 a.m.** Trials in Trials: Sample Size Planning—◆ Sue-Jane Wang, U.S. Food and Drug Administration; Hsien-Ming (James) Hung, U.S. Food and Drug Administration
- 10:50 a.m.** A Mixed Nash Equilibrium Procedure for Minimizing Selection Bias in Clinical Trials—◆ William Grant, Duke University; Kevin Anstrom, Duke University; David Crosslin, Duke University; Kevin Schulman, Duke University
- 11:05 a.m.** Addressing the Type I Error Inflation Problem in Cumulative Metaanalysis—◆ Mingxiu Hu, Pfizer, Inc.; K. Gordon Lan, Sanofi-Aventis; Joseph Cappelleri, Pfizer, Inc.
- 11:20 a.m.** A Directional Error Study of Two-sided Multiple Comparison Procedure—◆ Tianhui Zhou, Temple University; Sanat K. Sarkar, Temple University
- 11:35 a.m.** An Alternative Weight Approach for the Least Squares Means—◆ Larry Ma, Merck & Co., Inc.; Anthony Rodgers, Merck & Co., Inc.
- 11:50 a.m.** Design and Analysis in Drug Abuse Potential Studies—◆ Ling Chen, U.S. Food and Drug Administration
- 12:05 p.m.** Evaluating the Sample Invariance Property of the Standard Error of Measurement—◆ Samiran Ghosh, University of Connecticut; Joseph Cappelleri, Pfizer, Inc.; Andrew Bushmakim, Pfizer, Inc.; William R. Lenderking, Pfizer, Inc.

399 **MCC-205 C**
Seasonality and Time Series—Contributed
Business and Economics Statistics Section

Chair(s): Brian McCall, University of Minnesota

- 10:35 a.m.** Comparing the Automatic ARIMA Model Selection Procedures of X-12-ARIMA Versions 0.2 and 0.3—◆ Ayonda Dent, U.S. Census Bureau; Kathleen M. McDonald-Johnson, U.S. Census Bureau; Catherine H. Hood, U.S. Census Bureau; Roxanne Feldpausch, U.S. Census Bureau
- 10:50 a.m.** Experiences with Indirect Seasonal Adjustment—◆ Kathleen M. McDonald-Johnson, U.S. Census Bureau; Catherine H. Hood, U.S. Census Bureau; Roxanne Feldpausch, U.S. Census Bureau
- 11:05 a.m.** Statistical Properties of Signal Extraction Diagnostics—◆ Tucker McElroy, U.S. Census Bureau
- 11:20 a.m.** An Empirical Comparison of Methods for Benchmarking Seasonally Adjusted Series to Annual Totals—◆ Catherine H. Hood, U.S. Census Bureau

Wednesday

GENERAL PROGRAM SCHEDULE

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

11:35 a.m. Model-based Analysis of Seasonal Heteroskedasticity in Census Bureau Construction Time Series—◆ Thomas M. Trimbur, U.S. Census Bureau

11:50 a.m. Issues in Estimating Easter Regressors Using regARIMA Models with X-12-ARIMA—◆ Brian C. Monsell, U.S. Census Bureau; David Findley, U.S. Census Bureau; Kellie Wills, Corporate Executive Board

12:05 p.m. Floor Discussion

400

● Modeling Strategies to Accommodate Longitudinal/Spatial Correlations—Contributed

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

Chair(s): Erning Li, Texas A&M University

10:35 a.m. Semiparametric Mixed Models for Longitudinal Data—◆ Guei-Feng Tsai, Oregon State University; Annie Qu, Oregon State University

10:50 a.m. Nonparametric Correlation Estimation in Colon Carcinogenesis—◆ Yehua Li, Texas A&M University; Naisyin Wang, Texas A&M University; Raymond J. Carroll, Texas A&M University

11:05 a.m. Adjusted Quasi-least Squares for Analysis of Correlated Binary Data—◆ Justine Shults, University of Pennsylvania; Wenguang Sun, University of Pennsylvania

11:20 a.m. A Continuous-time Markov Chain Approach to Data Analysis on Longitudinal Categorical Outcome—◆ Wenyaw Chan, The University of Texas Health Science Center at Houston; Yen-Peng Li, The University of Texas Health Science Center at Houston

11:35 a.m. Spatio-temporal Analysis of Emergency Room Visits for Ischemic Heart Disease in NSW, Australia—◆ Subharup Guha, Harvard School of Public Health; Louise Ryan, Harvard University

11:50 a.m. Defining a Reproducibility Statistic as a Function of a Continuous Variable in Biomarker Studies—◆ Irene B. Helenowski, Northwestern University; Edward Vonesh, Baxter Healthcare Corporation; Borko Jovanovic, Northwestern University; Vijayalakshmi Ananthanarayanan, Northwestern University; Peter H. Gann, Northwestern University

12:05 p.m. Floor Discussion

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401

Distributional Approximations—Contributed General Methodology, IMS

Chair(s): Bo Yang, Schering-Plough

10:35 a.m. A Halfgraph Depth for Functional Data—◆ Sara Lopez-Pintado, Universidad Carlos III de Madrid; Juan Romo, Universidad Carlos III de Madrid

10:50 a.m. Inversion Formulas of the Univariate C-characteristic Function and Their Applications—◆ Thomas J. Jiang, National Chengchi University; Kun-Lin Kuo, National Chengchi University

11:05 a.m. Developments in Weak Convergence—◆ John Fresen, University of Limpopo

11:20 a.m. An Iterative Procedure for General Probability Measures To Obtain I-Projections onto Intersections of Convex Sets—◆ Bhaskar Bhattacharya, Southern Illinois University, Carbondale

11:35 a.m. Simulation as an Alternative to the Delta Method—◆ Patrick R. Johnston, Abt Associates, Inc.

11:50 a.m. Improving the Delta Method for Nonlinear Functions—◆ Paul Duty, University of Missouri, Columbia; Nancy Flournoy, University of Missouri, Columbia

12:05 p.m. Nonstandard Asymptotics for Quantile Regression—◆ Chuan Goh, University of Toronto

402

Process Performance and Control—Contributed Section on Physical and Engineering Sciences, Section on Quality and Productivity

Chair(s): Derek Bingham, Simon Fraser University

10:35 a.m. Lab Evaluation of Fiber Optic EFPI Sensors for Extreme Environment Tests—◆ David Banaszak, Air Force Research Laboratory; Larry O. Kretz, Air Force Research Laboratory

10:50 a.m. Robust Parameter Design with Feedback Control—◆ Tirthankar Dasgupta, Georgia Institute of Technology; Jeff Wu, Georgia Institute of Technology

11:05 a.m. A New Nuclear Material Safeguard Method Based on Fractal Dimension—◆ David Booth, Kent State University; Stephane Booth, Kent State University

11:20 a.m. Integration of Multivariate Statistics and Design of Experiments To Identify Critical Process Variables for Pharmaceutical Process Analytical Technology (PAT) Applications—◆ Huiquan Wu, U.S. Food and Drug Administration; Ajaz S. Hussain, Office of Pharmaceutical Science

11:35 a.m. Two Designs for Weak Quantum State Discrimination—◆ Michael Frey, Bucknell University

MCC-103 E

MCC-200 I

MCC-209 AB

11:50 a.m. Optimal Estimation of Variance from Uniformly-spaced Data—◆ Thomas Bzik, Air Products and Chemicals

12:05 p.m. Floor Discussion

403 **MCC-210 AB**
Spatial and Spatio-temporal Modeling—Contributed
Section on Statistics and the Environment, ENAR,
WNAR, Biometrics Section

Chair(s): Matthew Bognar, The University of Iowa

10:35 a.m. Assessing Spatial Point Process Models Using Weighted K-functions: Analysis of California Earthquakes—

◆ Alejandro Veen, University of California, Los Angeles; Frederic Paik Schoenberg, University of California, Los Angeles

10:50 a.m. Fitting Spatial Point Process Models Using Subsampling—

◆ Yongtao Guan, University of Miami

11:05 a.m. Detecting Spatial Clustering in Matched-case Control Studies—◆ Andrea Cook, Harvard School of Public Health; Yi Li, Dana-Farber Cancer Institute, Harvard School of Public Health

11:20 a.m. The Contest between MLE, GMM, and Subsampling for Huge Spatial Autoregressive Models—◆ Janette Walde, University of Innsbruck; Mario Larch, University of Innsbruck; Gottfried Tappeiner, University of Innsbruck

11:35 a.m. Robustness of Data Augmentation for the Analysis of Censored Spatial Data—◆ Brooke Fridley, University of Wisconsin, La Crosse

11:50 a.m. Calibration of Texas Radar Rainfall Estimates by Rain Gauge Data—◆ Bo Li, Texas A&M University; Michael Sherman, Texas A&M University; Raymond J. Carroll, Texas A&M University; Marian Eriksson, Texas A&M University; Raghavan Srinivasan, Texas A&M University

12:05 p.m. Testing and Modeling Lack of Symmetry in Spatial-temporal Processes—◆ Man Sik Park, North Carolina State University; Montserrat Fuentes, North Carolina State University

404 **MCC-205 B**
Bayesian Approaches to Epidemiologic Data Analysis—Contributed

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

Chair(s): Andrew Hill, Emory University

10:35 a.m. Methodological Issues in Modeling of Mental Functioning in the Australian Longitudinal Study of Ageing—

◆ Petra Graham, CSIRO; Louise Ryan, Harvard University; Mary Luszcz, Flinders University School of Psychology; Gary Andrews, University of South Australia

10:50 a.m. Bayesian Multistate Growth Processes with Unknown Initiation Times—◆ James Slaughter, The University of North Carolina at Chapel Hill; Amy H. Herring, The University of North Carolina at Chapel Hill

11:05 a.m. A Gene-environment Independence in Case-control Study—◆ Li Zhang, University of Florida; Bhramar Mukherjee, University of Florida; Malay Ghosh, University of Florida; Samiran Sinha, Texas A&M University

11:20 a.m. Identification of Treatment Responders in an Interstitial Cystitis Clinical Trial Using a Bayesian Multivariate Growth Curve Mixture Model—◆ Benjamin Leiby, University of Pennsylvania; Mary Sammel, University of Pennsylvania; Thomas Ten Have, University of Pennsylvania; Kevin Lynch, University of Pennsylvania

11:35 a.m. Semiparametric Classification of Longitudinal Trajectories with Application to Hormone Curves—◆ Jamie Bigelow, National Institute of Environmental Health Sciences; David Dunson, National Institute of Environmental Health Sciences

11:50 a.m. Estimation in the Presence of Missing Data: an Application of Bayesian Methods to the Analysis of North Dakota Death Certificate Data—◆ Betsy L. Cadwell, U.S. Centers for Disease Control and Prevention; Edward F. Tierney, U.S. Centers for Disease Control and Prevention; Theodore J. Thompson, U.S. Centers for Disease Control and Prevention; James P. Boyle, U.S. Centers for Disease Control and Prevention

12:05 p.m. Floor Discussion

405 **MCC-102 F**
Telephone Survey Issues—Contributed
Section on Survey Research Methods, Social Statistics Section

Chair(s): Joe Murphy, RTI International

10:35 a.m. A List-assisted Telephone Sampling: Conjugate Pair Selection—◆ Hee-Choon Shin, NORC at the University of Chicago

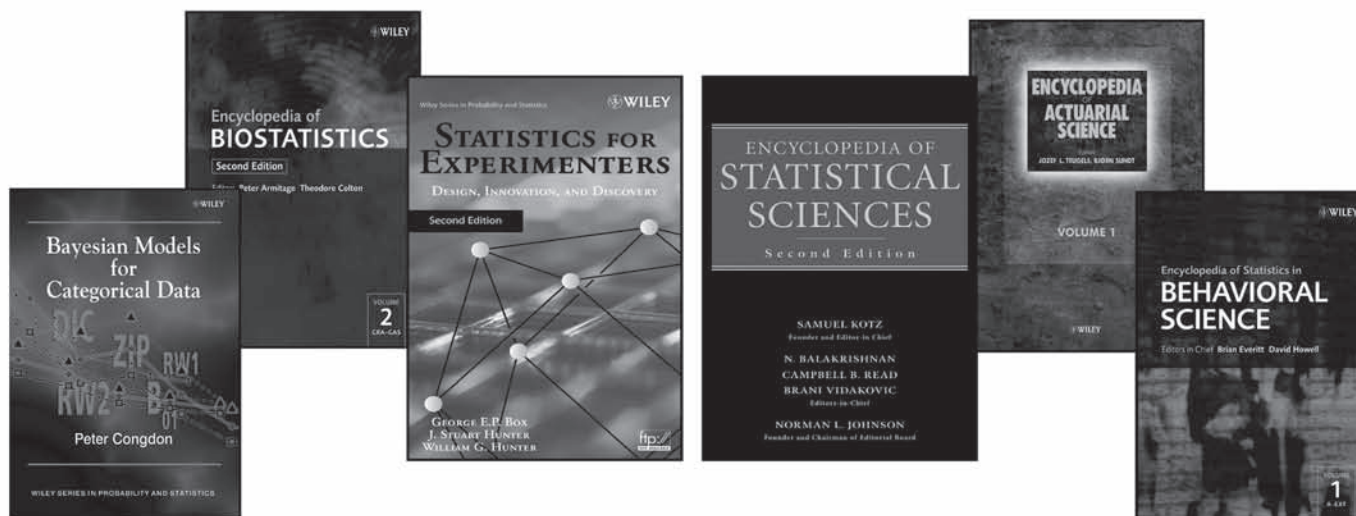
10:50 a.m. Extensions to the Two-stratum Model for Sampling Rare Subpopulations in Telephone Surveys—William D. Kalsbeek, The University of North Carolina at Chapel Hill; ◆ Walter R. Boyle, RTI International

11:05 a.m. Optimizing Call Time Lags by Modeling the Probability of Call Outcomes—◆ Brian Meekins, Bureau of Labor Statistics; Roberta Sangster, Bureau of Labor Statistics; John F. Meekins, Aerospace Corporation

11:20 a.m. Compensating for Noncoverage of Nontelephone Households Using the National Health Interview Survey—◆ Karen Davis, National Center for Health Statistics; Meena Khare, National Center for Health Statistics

Wednesday

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Peter Congdon

ISBN: 0-470-09237-8

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Pages: 446 (Paper)

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Encyclopedia of Actuarial Science, 3-Volume Set

Jozef Teugels, Bjørn Sundt & Contributors

ISBN: 0-471-75497-8

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Pages: 1,944 (Paper)

Date: November 2004

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Brian Everitt, David Howell

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Date: June 2005

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 **WILEY**

11:35 a.m. Analysis of Behavioral Risk Factor Surveillance System Partial Completes and Terminations—◆ Herbert F.

Stackhouse, U.S. Centers for Disease Control and Prevention; Ziya Gizlice, North Carolina State Center for Health Statistics; Lina Balluz, U.S. Centers for Disease Control and Prevention

11:50 a.m. Assessing Representativeness in RDD Surveys: Coverage and Nonresponse in the Behavioral and Risk Factor Surveillance System—◆ Sowmya R. Rao, Abt Associates, Inc.;

Michael W. Link, Centers for Disease Control and Prevention; Michael Battaglia, Abt Associates, Inc.; Martin R. Frankel, Abt Associates, Inc.; Pamela Giambo, Abt Associates, Inc.; Ali H. Mokdad, U.S. Centers for Disease Control and Prevention

12:05 p.m. Floor Discussion

406 MCC-103 A

● **Collecting and Reporting Race, Ethnicity, and Gender—Contributed**

Section on Survey Research Methods, Social Statistics Section

Chair(s): Katie Joseph, George Washington University

10:35 a.m. Race Reporting by Latin American Immigrants in Census 2000—◆ Sharon R. Ennis, U.S. Census Bureau; Jorge del Pinal, U.S. Census Bureau

10:50 a.m. Self-reported Race and Ethnicity in School Surveys—

◆ James G. Ross, ORC Macro International, Inc.; Ronald Iachan, ORC Macro International, Inc.; William H. Robb, ORC Macro International, Inc.; Katherine H. Flint, ORC Macro International, Inc.; Alan Bloch, U.S. Centers for Disease Control and Prevention; Pedro J. Saavedra, ORC Macro International, Inc.

11:05 a.m. Processing of Race and Ethnicity in the National Survey on Drug Use and Health—◆ Eric Grau, RTI International;

Peilan Martin, RTI International; Peter Frechtel, RTI International; Jeanne Snodgrass, RTI International; Rachel Caspar, RTI International

11:20 a.m. Using Names To Check Accuracy of Race and Gender Coding in NAEP—◆ Jennifer Czuprynski Kali, Westat;

James Bethel, Westat; John Burke, Westat; David Morganstein, Westat; Sharon Hirabayashi, Westat

11:35 a.m. A Simulation Study of Cell Collapsing in Poststratification—◆ Jay J. Kim, National Center for Health Statistics; Richard L. Valliant, University of Michigan; Linda Tompkins, National Center for Health Statistics

11:50 a.m. Investigating the Role of Hispanic Origin in Estimating the Number of Uninsured—◆ Sharareh Craig, U.S. Census Bureau; Joanna M. Turner, U.S. Census Bureau

12:05 p.m. Floor Discussion

Speaker Luncheon 12:30 p.m.–1:50 p.m.

407 MCC-206 AB

Section on Health Policy Statistics Speaker Luncheon (fee event)—Luncheons

Section on Health Policy Statistics

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

WL00 A Miner's Guide to the United States Renal Data System—
◆ Robert N. Foley, United States Renal Data System

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

408 MCC-Ballroom B

Biopharmaceutical Section Roundtable Luncheons (fee event)—Luncheons

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

WL01 Statistical Issues Related to the FDA Draft Guidance 'The Clinical Evaluation of QT/QTc Interval Prolongation and Proarrhythmic Potential for Nonantiarrhythmic Drugs'—
◆ Lisa Hickey, Merck Research Laboratories

WL02 Pharmacogenomics: the Critical Path to Personalized Medical Products—◆ Alison Graham, GlaxoSmithKline; Xiaohua Zhang, Merck Research Laboratories; Amber Anderson, GlaxoSmithKline

WL03 Registration of Trials and Reporting of Results: Old Concerns or New Trends?—◆ C. V. Damaraju, Ortho-McNeil Pharmaceuticals, Johnson & Johnson

WL04 Diagnostic Medical Devices—◆ Lakshmi Vishnuvajjala, U.S. Food and Drug Administration

WL05 Current Issues in the Design and Analysis of Dose-finding Studies: Multiple-comparison Procedures versus Modeling—
◆ Jose Pinheiro, Novartis Pharmaceuticals

WL06 The Biopharmaceutical Section: Learn What It Does, How To Become Involved, Offer Suggestions on Ways It Can Better Serve Its Members—◆ Leonard Oppenheimer, Eisai Medical Research

WL07 Current Thinking on the Use of Bayesian Inference in the Drug-approval Process—◆ Stacy R. Lindborg, Eli Lilly and Company

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

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

WL08 Bayesian Modeling of Spatial and Spatiotemporal Processes—
◆ Christopher K. Wikle, University of Missouri, Columbia

WL09 Bayesian Evaluation of Surrogate Endpoints—◆ Mary K. Cowles, The University of Iowa

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

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

WL10 A-76 Competitive Sourcing and Government Statistics—
◆ Arthur Kendall, Social Research Consultants

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

Organizer(s): Thomas Loughin, Kansas State University

WL11 Surviving in Industry: Advice for Newcomers—◆ Fred Hulting, General Mills, Inc.

WL12 Designing Real Experiments: Tricks of the Trade—◆ George Milliken, Kansas State University

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

Organizer(s): Martha Gardner, GE Global Research

WL13 Statistical Models for Financial Applications—◆ Radu Neagu, GE Company

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

Organizer(s): Juergen Symanzik, Utah State University

WL14 Just Because You Can, Doesn't Mean You Should: Better Charts with Excel—◆ Naomi B. Robbins, NBR

414 **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

WL15 Nearest Neighbor Methods—◆ Ronald E. McRoberts, USDA
USDA Forest Service

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

Organizer(s): Lisa Sullivan, Boston University

WL16 Monitoring and Improving the Quality of U.S. Elections—
◆ Arlene Ash, Boston University

WL17 Bridging the Gap: Statisticians Working as Principal Investigators of Epidemiology Studies—◆ Lisa Sullivan, Boston University; George Howard, University of Alabama at Birmingham; Kiang Liu, Northeastern University

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

Organizer(s): David R. Judkins, Westat

WL18 Web-based Surveys: What Do We Know about Data Quality?—◆ Vicki Pineau, Knowledge Networks, Inc.

WL19 The Transition from Graduate School to a Career in Statistics—◆ Edward M. English, NORC at the University of Chicago

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

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

WL20 Human Welfare and Population Trends—◆ Kelvin Pollard, Population Reference Bureau

418 **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

WL21 Distance Education in Biostatistics—◆ Scott Evans, Harvard University

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

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

WL22 Preparing Students To Be Actuaries—◆ Richard Cleary, Bentley College

WL23 Using Concept Mapping To Teach Statistics—◆ Marjorie Bond, Monmouth College

WL24 Integrating Ethics into Statistics Education—◆ Mary Gray, American University

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

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

- WL25** Building and Validating Simulation Models in Defense—
 ◆ David Banks, Duke University

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

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

- WL26** Delivering Client-focused Results—◆ Karl Heiner, SUNY, New Paltz

422 **MCC-Ballroom B**
Statistical Society of Canada Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Georgia R. Roberts, Statistics Canada

- WL27** Structural Equation Modeling: Where Do We Go from Here?—◆ David Binder
- WL28** The Canadian Model for Accreditation of Professional Statisticians—◆ Judy-Anne Chapman, Statistical Society of Canada

Invited Sessions 2:00 p.m.–3:50 p.m.

423 **MCC-200 DE**
Joseph Fleiss Memorial Session—Invited Memorial, Biometrics Section, ENAR, WNAR

Organizer(s): Emilia Bagiella, Columbia University

Chair(s): Emilia Bagiella, Columbia University

- 2:05 p.m.** Building on SMRP—◆ Bruce Levin, Columbia University
- 2:35 p.m.** Reliability as a Statistical Topic: the Impact of Joseph L. Fleiss on Studies of Medical and Psychiatric Diagnosis—◆ Patrick E. Shrout, New York University
- 3:05 p.m.** Measures of Inter-rater Agreement for Unbalanced Designs—◆ J. Richard Landis, University of Pennsylvania
- 3:35 p.m.** Floor Discussion

424 **MCC-208 D**
Modeling Abundance and Occurrence of Plants and Animals—Invited

Section on Statistics and the Environment, WNAR

Organizer(s): Andy Royle, U.S. Geological Survey

Chair(s): Jay Ver Hoef, Alaska Department of Fish and Game

- 2:05 p.m.** Hierarchical Spatial Modeling of Avian Abundance and Occurrence from Spatially Replicated Survey Data—
 ◆ Andy Royle, U.S. Geological Survey; Marc Kery, Swiss Ornithological Institute

- 2:30 p.m.** Improving Removal-based Estimates of Local Abundance in a Metapopulation of Endangered Fishes—
 ◆ Robert M. Dorazio, U.S. Geological Survey; Howard L. Jelks, U.S. Geological Survey; Frank Jordan, Loyola University New Orleans

- 2:55 p.m.** Hierarchical Bayesian Matrix Models for Describing the Spatio-temporal Population Dynamics of Invasive Species—◆ Mevin B. Hooten, University of Missouri, Columbia; Christopher K. Wikle, University of Missouri, Columbia

- 3:20 p.m.** Bayesian Estimation of Wildlife Population Sizes Using Noninformative Priors—◆ Chong Z. He, University of Missouri, Columbia; Xiaoyin Wang, Towson University

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

425 **MCC-213 AB**
EM Algorithm: Upgrading the Imputation Work Horse for Modern-day Computational Statistics Applications—Invited

Section on Statistical Computing

Organizer(s): Richard Levine, San Diego State University

Chair(s): Richard Levine, San Diego State University

- 2:05 p.m.** Aitken and Step-lengthening Methods for EM—
 ◆ Tim C. Hesterberg, Insightful Corp.
- 2:35 p.m.** Stochastic Variants of EM: Monte Carlo, Quasi-Monte Carlo and More—◆ Wolfgang Jank, University of Maryland
- 3:05 p.m.** EM as a Unifying Approach for Incomplete Data Structures—◆ Robert Shumway, University of California, Davis
- 3:35 p.m.** Floor Discussion

426 **MCC-200 J**
JASA Applications and Case Studies Invited Paper Session—Invited

JASA, Applications and Case Studies

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

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

- 2:05 p.m.** Hidden Markov Models for Microarray Time-course Data in Multiple Biological Conditions—Ming Yuan, Georgia Institute of Technology; ◆ Christina Kendzioriski, University of Wisconsin, Madison
- 2:40 p.m.** Disc: Hongzhe Li, University of California, Davis
- 2:55 p.m.** Disc: John Storey, University of Washington

GENERAL PROGRAM SCHEDULE

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

3:10 p.m. Disc: Dan Nettleton, Iowa State University

3:35 p.m. Floor Discussion

427 **MCC-200 ABC**

● ☆ **Applications of Environmental Statistics—Invited**
WNAR, ENAR, Section on Statistics and the Environment, Biometrics Section

Organizer(s): Timothy G. Gregoire, Yale University

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

2:05 p.m. Residual-based Diagnostics for Spatial Regression Models—◆ Oliver Schabenberger, SAS Institute, Inc.; Carol A. Gotway Crawford, U.S. Centers for Disease Control and Prevention

2:35 p.m. Stratified Estimation for Forest Inventory Applications Using Satellite Imagery—◆ Ronald E. McRoberts, USDA USDA Forest Service

3:05 p.m. Estimation Strategies for Rapid Assessment of Changes in U.S. Forests from Wildfire—◆ Gretchen Moisen, USDA USDA Forest Service; Mark Finco, USDA USDA Forest Service; Ken Brewer, USDA USDA Forest Service

3:35 p.m. Floor Discussion

428 **MCC-208 C**

☆ **Advances in Nonparametric Econometrics—Invited**
Business and Economics Statistics Section, Section on Nonparametric Statistics

Organizer(s): Aman Ullah, University of California, Riverside

Chair(s): Aman Ullah, University of California, Riverside

2:05 p.m. A Model Selection Test for Bivariate Failure-time Data—◆ Yanqin Fan, Vanderbilt University

2:25 p.m. New Grounds for Bandwidth Selection in Kernel Smoothing: the Univariate and Multivariate Cases—◆ Ibrahim Ahmad, University of Central Florida

2:40 p.m. Combined Estimator of Time Series Conditional Heteroskedasticity—◆ Aman Ullah, University of California, Riverside; Santosh Mishra, Oregon State University; Liangjun Su, Peking University

3:00 p.m. A Nonparametric Wald Test of General Nonlinear Restrictions—◆ Jeffrey Racine, McMaster University

3:20 p.m. Disc: Victoria Zinde-Walsh, McGill University

3:40 p.m. Floor Discussion

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429 MCC-205 C

● **Distance Learning in the Health Sciences—Invited** Section on Statistical Education, Section on Teaching Statistics in the Health Sciences

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

Chair(s): Scott Evans, Harvard University

- 2:05 p.m.** Basic Biostatistics Online: a Distance Education Success Story—◆ John McGready, Johns Hopkins University
- 2:30 p.m.** Distance Learning from the Trenches: Lessons Learned—◆ Carol Bigelow, University of Massachusetts; Penelope Pekow, University of Massachusetts
- 2:55 p.m.** Distance Learning in Statistical Training of Health Care Professionals Conducting Research—◆ Robert H. Riffenburgh, Naval Medical Center San Diego
- 3:20 p.m.** Floor Discussion

430 MCC-211 C

☆ **Interface between Mathematics and Statistics—Invited** IMS

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

Chair(s): Ramon Littell, University of Florida

- 2:05 p.m.** A Tutorial on MM Algorithms—◆ Kenneth Lange, University of California, Los Angeles
- 2:30 p.m.** Applications of Dirac's Delta Function in Statistics—◆ André I. Khuri, University of Florida
- 2:55 p.m.** Square-root N Consistent and Exhaustive Estimation of Dimension Reduction Space—◆ Bing Li, The Pennsylvania State University
- 3:20 p.m.** Applications of Reproducing Kernel Hilbert Spaces in Statistics—◆ Randall L. Eubank, Texas A&M University
- 3:45 p.m.** Floor Discussion

431 MCC-103 C

● **Research Access to Confidential Data for Analysis—Invited**

Section on Government Statistics, Social Statistics Section, Section on Statisticians in Defense and National Security, Section on Survey Research Methods

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

Chair(s): Jacob Bournazian, Energy Information Administration

- 2:05 p.m.** Issues in Designing a Confidentiality-preserving Model Server—◆ Philip Steel, U.S. Census Bureau
- 2:30 p.m.** Confidentiality Protection in the U.S. Census Bureau's Quarterly Workforce Indicators—◆ John M. Abowd,

Cornell University/U.S. Census Bureau; Bryce Stephens, University of Maryland/U.S. Census Bureau; Lars Vilhuber, Cornell University

- 2:55 p.m.** Methods of Secure Computation and Data Integration—◆ Jerome Reiter, Duke University
- 3:20 p.m.** Disc: Stephen F. Roehrig, Carnegie Mellon University
- 3:40 p.m.** Floor Discussion

432 MCC-208 A

● ☆ **Bayesian Methods for Cartographic Problems—Invited**

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

Organizer(s): Alan E. Gelfand, Duke University

Chair(s): Bradley P. Carlin, University of Minnesota

- 2:05 p.m.** Estimating Nonstationary Spatial Covariance Using Deformations—◆ Peter Guttorp, University of Washington
- 2:30 p.m.** Gradients Gone Wild—◆ Alan E. Gelfand, Duke University
- 2:55 p.m.** Modeling Map Positional Error To Infer about True Feature Location—◆ Jarrett J. Barber, Montana State University; Alan E. Gelfand, Duke University
- 3:20 p.m.** Disc: Sudipto Banerjee, University of Minnesota
- 3:45 p.m.** Floor Discussion

433 MCC-103 A

● ☆ **Measuring Poverty: New Developments—Invited** Social Statistics Section, Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Susan Schechter, Office of Management and Budget

Chair(s): Katherine Wallman, Office of Management and Budget

- 2:05 p.m.** NAS Workshop Summary Report—◆ John Iceland, University of Maryland
- 2:30 p.m.** Estimating Resources for Poverty Measurement—◆ Kathleen S. Short, U.S. Census Bureau
- 2:55 p.m.** Developing Poverty Thresholds—◆ Thesia I. Garner, Bureau of Labor Statistics
- 3:20 p.m.** Disc: Timothy M. Smeeding, Syracuse University
- 3:40 p.m.** Floor Discussion

Wednesday

434

MCC-200 I

● **Feature Extraction in Signals and Images via Nonparametric Methods—Invited**

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

Organizer(s): Eric Chicken, Florida State University

Chair(s): Eric Chicken, Florida State University

- 2:05 p.m.** Statistical Models for Feature Extraction and Matching in Fingerprint Images—◆ Sarat C. Dass, Michigan State University; Arun Ross, West Virginia University; Anil Jain, Michigan State University
- 2:30 p.m.** Chirplets: Multiscale Detection and Recovery of Chirps from Very Noisy Data—◆ Emmanuel J. Candes, California Institute of Technology
- 2:55 p.m.** A Bayesian MRF Framework for Labeling Terrain Using Hyperspectral Imaging—◆ Robert E. Neher, Air Force Institute of Technology; Anuj Srivastava, Florida State University
- 3:20 p.m.** Recent Progresses of Multiscale Analysis in Image Detection—Xiaoming Huo, Georgia Institute of Technology; ◆ Xuelei Ni, Georgia Institute of Technology
- 3:45 p.m.** Floor Discussion

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MCC-209 AB

● ☆ **High-level Image Analysis: from Images to Understanding—Invited**

IMS, Section on Statisticians in Defense and National Security, Section on Statistical Graphics

Organizer(s): Thomas Lee, Colorado State University

Chair(s): Thomas Lee, Colorado State University

- 2:05 p.m.** New Asymptotic Results in Multiscale Image Analysis—◆ Xiaoming Huo, Georgia Institute of Technology; Xuelei Ni, Georgia Institute of Technology
- 2:30 p.m.** Multiscale, Multigranular Image Analysis—◆ Eric Kolaczyk, Boston University; Junchang Ju, Boston University; Sucharita Gopal, Boston University
- 2:55 p.m.** A General Cluster Sampling Method for Bayesian Inference—◆ Adrian Barbu, University of California, Los Angeles; Song-Chun Zhu, University of California, Los Angeles
- 3:20 p.m.** From Information Scaling of Natural Images to Regimes of Statistical Models—◆ Yingnian Wu, University of California, Los Angeles; Song-Chun Zhu, University of California, Los Angeles; Cheng-En Guo, University of California, Los Angeles
- 3:45 p.m.** Floor Discussion

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MCC-202 AB

● **Statistical Methods for the Analysis of Hormonal Time-series Data—Invited**

Biometrics Section, Section on Statistics in Epidemiology, WNAR

Organizer(s): Timothy D. Johnson, University of Michigan

Chair(s): Timothy D. Johnson, University of Michigan

- 2:05 p.m.** Functional Mixed Effects Models with Prior Information—◆ Wensheng Guo, University of Pennsylvania; Li Qin, Fred Hutchinson Cancer Research Center
- 2:35 p.m.** Detecting Pulsatile Hormone Secretions Using Nonlinear Mixed-effects Partial Spline Models—◆ Yuedong Wang, University of California, Santa Barbara; Yu-Chieh Yang, National Taichung Institute of Technology; Anna Liu, University of Massachusetts
- 3:05 p.m.** Modeling of Hormone Secretion with Marked Nonhomogeneous Poisson Process—◆ Anna Liu, University of Massachusetts; Yuedong Wang, University of California, Santa Barbara
- 3:35 p.m.** Floor Discussion

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

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MCC-205 B

● **Multivariate Longitudinal Data—Topic Contributed**

Biometrics Section, WNAR

Organizer(s): Geert Verbeke, Katholieke Universiteit Leuven

Chair(s): Geert Verbeke, Katholieke Universiteit Leuven

- 2:05 p.m.** Using Multivariate Mixed-effects Models To Predict Prostate Cancer—◆ Christopher Morrell, Loyola College in Maryland; Larry J. Brant, National Institute on Aging; Shan Sheng, National Institute on Aging; E. Jeffrey Metter, National Institute on Aging
- 2:25 p.m.** Three-mode Models for Multivariate Longitudinal Data of Multiple Groups—◆ Frans J. Oort, University of Amsterdam
- 2:45 p.m.** Random-effects Models for Multivariate Repeated Responses—◆ Steffen Fieuws, Katholieke Universiteit Leuven; Geert Verbeke, Katholieke Universiteit Leuven
- 3:05 p.m.** Analysis of Spatially-correlated Multidimensional Longitudinal Data—◆ Jason Roy, University of Rochester
- 3:25 p.m.** Penalized Likelihood Estimation of a Mixed-effect Transfer Function Model—◆ Elizabeth Hansen, The University of Iowa; Kung-Sik Chan, The University of Iowa
- 3:45 p.m.** Floor Discussion

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Remo Ostini

University of Queensland in Brisbane, Australia

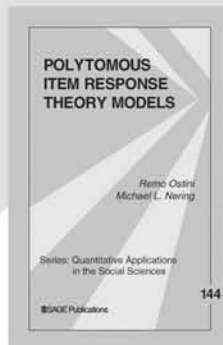
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This book provides a unified, comprehensive introduction to the range of polytomous models available within item response theory (IRT). Practical examples of major models using real data are provided, as is a chapter on choosing an appropriate model.

Quantitative Applications in the Social Sciences, Vol 144
July 2005, 120 pages

Paperback: \$15.95, ISBN: 0-7619-3068-X

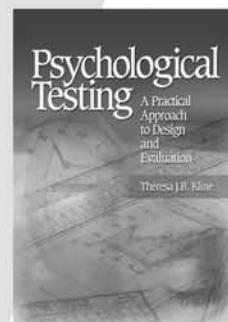


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MCC-200 H

● **Quality Management in Statistical Organizations II—Topic Contributed**

Section on Quality and Productivity

Organizer(s): Eugene Burns, Bureau of Transportation Statistics

Chair(s): Eugene Burns, Bureau of Transportation Statistics

- 2:05 p.m.** Avoiding Correlated Observations When Control-charting Hierarchically Structured Data—◆ Carl Pierchala, National Highway Traffic Safety Administration; Jyoti Surti, National Highway Traffic Safety Administration
- 2:25 p.m.** Quality Assurance Efforts for the 2006 Census Test Requirements Management Process—◆ Megan C. Sheppard, U.S. Census Bureau; John M. Bushery, U.S. Census Bureau; Jennifer W. Reichert, U.S. Census Bureau
- 2:45 p.m.** Survey Quality Self-assessments—◆ Thomas Broene, Energy Information Administration
- 3:05 p.m.** Internal Quality Audits at the Portuguese National Statistical Institute—◆ Maria João Zilão, Instituto Nacional de Estatística
- 3:25 p.m.** Disc: David Morganstein, Westat
- 3:45 p.m.** Floor Discussion

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MCC-200 G

Calibration Issues in Diagnostic Medicine—Topic Contributed

Section on Statistics in Epidemiology, Biopharmaceutical Section, WNAR

Organizer(s): Mojtaba Noursalehi, Abbott Laboratories; Estelle Russek-Cohen, U.S. Food and Drug Administration

Chair(s): Kristen Meier, U.S. Food and Drug Administration

- 2:05 p.m.** Evaluation of Accuracy and Optimal Cutoff of Diagnostic Devices in the Same Study—◆ Marina Kondratovich, U.S. Food and Drug Administration; Waleed Yousef, U.S. Food and Drug Administration
- 2:25 p.m.** Computer Simulation in Medical Diagnostic Assay Calibration Evaluation—◆ Ping Shi, Abbott Laboratories
- 2:45 p.m.** Parametric and Nonparametric Approaches for Method Comparisons in Diagnostic Devices: Strengths and Weaknesses—◆ May Mo, Abbott Laboratories; Mojtaba Noursalehi, Abbott Laboratories
- 3:05 p.m.** Precision and Accuracy of an Analytical Method: Total Error of Measurement—◆ Beimar Iriarte, Abbott Laboratories

- 3:25 p.m.** Sample Size and Study Design Considerations for Method Comparison Studies Based on Regression Analyses—◆ Estelle Russek-Cohen, U.S. Food and Drug Administration; Marina Kondratovich, U.S. Food and Drug Administration

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

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MCC-212 AB

● ☆ **Statistical Methods in Computer Intrusion Detection—Topic Contributed**

Section on Statisticians in Defense and National Security, Section on Statistical Graphics

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

Chair(s): David Marchette, Naval Surface Warfare Center, Dahlgren Division

- 2:05 p.m.** A Nonparametric Multichart CUSUM Test for Rapid Intrusion Detection—◆ Alexander G. Tartakovsky, University of Southern California; Boris Rozovskii, University of Southern California
- 2:25 p.m.** A Model of Backscatter as Escher Tessellations—◆ Kendall Giles, Johns Hopkins University; David Marchette, Naval Surface Warfare Center, Dahlgren Division; Carey Priebe, Johns Hopkins University
- 2:45 p.m.** Application Protocol Recognition in Encrypted Internet Traffic—◆ Charles Wright, Johns Hopkins University; Fabian Monroe, Johns Hopkins University; Gerald Masson, Johns Hopkins University
- 3:05 p.m.** Visualization Tools for Detecting Network Attacks Using Internet Packet Data—◆ Karen Kafadar, University of Colorado, Denver
- 3:25 p.m.** Disc: Edward J. Wegman, George Mason University
- 3:45 p.m.** Floor Discussion

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MCC-208 B

● ☆ **Recent Advances in Event Studies Including Recurrent Events—Topic Contributed**

Section on Bayesian Statistical Science

Organizer(s): Lynn Kuo, University of Connecticut

Chair(s): Lynn Kuo, University of Connecticut

- 2:05 p.m.** Unified Bayesian Modeling for Survival Data with a Surviving Fraction—◆ Dipak Dey, University of Connecticut
- 2:25 p.m.** Sequential Monte Carlo Approach to Dynamic Data-driven Event Reconstruction for Atmospheric Releases—◆ Gardar Johannesson, Lawrence Livermore National Laboratory
- 2:45 p.m.** Bayesian Analysis for Studies with Outcome-dependent Clinic Visits—◆ Debajyoti Sinha, Medical University of South

Carolina; Bani Mallick, Texas A&M University; Stuart Lipsitz, Medical University of South Carolina; Duchwan Ryu, Texas A&M University

3:05 p.m. Dynamic Models for Recurrent Event Data—

◆ Changhong Song, University of Connecticut; Lynn Kuo, University of Connecticut

3:25 p.m. Recurrent Event Modeling and Analysis—◆ Edsel Pena, University of South Carolina; Jun Han, University of South Carolina; Elizabeth Slate, Medical University of South Carolina

3:45 p.m. Floor Discussion

442 MCC-103 B

*** Distribute Trades Surveys—Sharing Experiences Amongst Countries—Topic Contributed**

Section on Government Statistics

Organizer(s): Robert Lussier, Statistics Canada

Chair(s): Robert Lussier, Statistics Canada

2:05 p.m. The United Nations' Statistics Division Activities in Distributive Trades Statistics: an Outline—◆ Vladimir Markhonko, United Nations

2:25 p.m. Backcasting and Seasonal Adjustment of Canada's National Retail Commodity Survey—◆ Norman Fyfe, Statistics Canada; Richard Evans, Statistics Canada

2:45 p.m. Measuring the Economy's Middleman in an Era of Global Supply Chains and Electronic Business—◆ Anne Russell, U.S. Census Bureau

3:05 p.m. Satellite Trade Accounts in France—◆ Odile Bovar, INSEE France

3:25 p.m. Disc: Jennifer Ribarsky, Bureau of Economic Analysis

3:45 p.m. Floor Discussion

443 MCC-103 F

*** Joint Survival and Longitudinal Modeling—Topic Contributed**

Section on Health Policy Statistics, Social Statistics Section, WNAR

Organizer(s): Chris Barker, Scios, Inc.

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

2:05 p.m. A Nonlinear Latent Process Model for Multivariate Longitudinal Data—◆ Jeremy Taylor, University of Michigan; Cecile Proust, INSERM, University of Bordeaux 2; Helene Jacqmin-Gadda, INSERM, University of Bordeaux 2

2:25 p.m. Estimation for Generalized Linear Models When Covariates Are Random Effects for Longitudinal Data—◆ Erning Li, Texas A&M University; Daowen Zhang, North Carolina State University; Marie Davidian, North Carolina State University

2:45 p.m. Modeling Longitudinal and Recurrent Event Outcomes with Application—◆ Elizabeth Slate, Medical University of South Carolina; Edsel Pena, University of South Carolina; Jun Han, University of South Carolina

3:05 p.m. Disc: Frank E. Harrell, Jr., Vanderbilt University

3:25 p.m. Disc: Kiros Berhane, University of Southern California

3:45 p.m. Floor Discussion

444 MCC-201 AB

*** ☆ Design and Analysis Issues in Medical Devices Including Postmarket Surveillance—Topic Contributed Biopharmaceutical Section, WNAR**

Organizer(s): Jeng Mah, Guidant Corporation; Gosford Sawyerr, Medtronic, Inc.

Chair(s): George G. Woodworth, The University of Iowa

2:05 p.m. Statistical Design and Analysis with Pharmacogenomic, Drug-diagnostic Codevelopment—◆ Lakshmi Vishnuvajjala, U.S. Food and Drug Administration; Gene Pennello, U.S. Food and Drug Administration

2:25 p.m. Drugs vs. Diagnostics: Key Concepts, Similarities, and Differences—◆ Mojtaba Noursalehi, Abbott Laboratories

2:45 p.m. Statistical Methods in Signaling and Monitoring Medical Device Adverse Reports—◆ Chang Lao, U.S. Food and Drug Administration

3:05 p.m. Design and Analysis of the Postmarket Surveillance Study in Medical Device Industry—◆ Chi-Hong Tseng, New York University

3:25 p.m. Disc: Gosford Sawyerr, Medtronic, Inc.

3:45 p.m. Floor Discussion

445 MCC-102 D

*** Exploring Calibration—Topic Contributed Section on Survey Research Methods**

Organizer(s): Phillip S. Kott, National Agricultural Statistics Service

Chair(s): Phillip S. Kott, National Agricultural Statistics Service

2:05 p.m. Calibration Estimation Using Empirical Likelihood Ratio in Survey—◆ Jae-kwang Kim, Yonsei University; Tae Hoon Lee, Yonsei University

2:25 p.m. Using Equalization Constraints To Find Optimal Calibration Weights—◆ Reid Alan Rottach, U.S. Census Bureau; David Warren Hall, U.S. Census Bureau

2:45 p.m. Calibration Adjustments When Not All Targets Can Be Met—Matthew J. Fetter, National Agricultural Statistics Service; ◆ James Gentle, George Mason University; Charles R. Perry, National Agricultural Statistics Service

3:05 p.m. On Nonresponse Adjustment via Calibration—◆ Michael Sverchkov, Bureau of Labor Statistics; Alan Dorfman,

GENERAL PROGRAM SCHEDULE

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

Bureau of Labor Statistics; Lawrence R. Ernst, Bureau of Labor Statistics; Thomas Moerhle, Bureau of Labor Statistics; Steven P. Paben, Bureau of Labor Statistics; Chester H. Ponikowski, Bureau of Labor Statistics

- 3:25 p.m.** Variance Estimation for Volunteer Panel Web Surveys Using Propensity Score Adjustment and Calibration Adjustment—◆ Sunghee Lee, University of California, Los Angeles; Richard L. Valliant, University of Michigan
- 3:45 p.m.** Floor Discussion

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

446 **MCC-205 D** **CAUSE Updates on Research, CAUSEweb, and USCOTS—** **Topic Contributed**

Section on Statistical Education

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

Chair(s): Ginger Holmes Rowell, Middle Tennessee State University

- Panelists:** ◆ Dennis Pearl, The Ohio State University
◆ Joan Garfield, University of Minnesota
◆ Deborah Rumsey, The Ohio State University
◆ Roger Woodard, North Carolina State University

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

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

447 **MCC-102 C** **Poisson and Counting Processes and Survival** **Analysis—Contributed**

General Methodology, Biometrics Section

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

- 2:05 p.m.** Monitoring a Continuous Poisson Process Subject to Change—◆ Marlo Brown, Niagara University
- 2:20 p.m.** Analysis of Interval-censored Survival Data in the Presence of Informative Examination Times Using an EM Algorithm—◆ Anjela Tzontcheva, University of Toronto; James Stafford, University of Toronto
- 2:35 p.m.** Imputation Methods for Doubly Censored Survival Data with an Interval-censored Covariate—◆ Wei Zhang, The University of Iowa; Ying Zhang, The University of Iowa; Kathryn Chaloner, The University of Iowa
- 2:50 p.m.** Semiparametric Transformation Models for Survival Data with a Cure Fraction—◆ Donglin Zeng, The University of North Carolina at Chapel Hill; Guosheng Yin, The University of Texas M. D. Anderson Cancer Center; Joseph G.

Ibrahim, The University of North Carolina at Chapel Hill

- 3:05 p.m.** Inference for the Bivariate Positive Stable Frailty Models—◆ Madhujha Mallick, Merck Research Laboratories; Nalini Ravishanker, University of Connecticut
- 3:20 p.m.** Nonparametric Survival Analysis on Time-dependent Covariate Effects in Case-cohort Sampling Design—◆ Chunfeng Huang, North Dakota State University; Haimeng Zhang, Concordia College
- 3:35 p.m.** Regression Analysis of Mean Lifetime: Exploring Nonlinear Relationship with Heteroscedasticity—◆ Linda Sun, Northwestern University; Wenxin Jiang, Northwestern University

448 **MCC-102 B** **Model Checking and Model Selection—Contributed** **General Methodology**

Chair(s): Sarah Ratcliffe, University of Pennsylvania

- 2:05 p.m.** Nonconcave Penalized Likelihood with a Diverging Number—◆ Heng Peng, Princeton University
- 2:20 p.m.** Variable Selection in Finite Mixture of Regression Models—◆ Abbas Khalili, University of Waterloo; Jiahua Chen, University of Waterloo
- 2:35 p.m.** Goodness-of-testing Based on Components of Pearson's Chi-squared Statistic Using Marginal Frequencies of Multinomial Data—◆ Mark Reiser, Arizona State University; Martin Knott, London School of Economics
- 2:50 p.m.** Partial Intrinsic Bayes Factor—◆ Yongsung Joo, University of Florida; George Casella, University of Florida
- 3:05 p.m.** Testing Time-series Linearity: Goodness-of-fit Approach—◆ Nusrat Jahan, James Madison University; Jane Harvill, Mississippi State University
- 3:20 p.m.** Floor Discussion

449 **MCC-200 F** *** Bayesian and Adaptive Methods in Clinical Trials—** **Contributed**

Biopharmaceutical Section, Section on Bayesian Statistical Science, WNAR

Chair(s): Dong Xu, Bristol-Myers Squibb Company

- 2:05 p.m.** Planning from Pilot Study to Confirmatory Trial Using a Bayesian Approach—◆ Hong Amy Xia, Amgen Inc.; Bin Yao, Amgen Inc., Cambridge; Moraye Bear, Amgen Inc.; Alan Forsythe, Amgen Inc.
- 2:20 p.m.** Comparison of Exact, Approximate, and Bayesian Tests for Testing the Hypothesis of Efficacy—◆ Pralay Mukhopadhyay, Bristol-Myers Squibb Company; Roger Berger, Arizona State University; Sujit K. Ghosh, North Carolina State University

- 2:35 p.m.** Bayesian Hierarchical Modeling of Drug Stability Data—◆ Jinglin Zhong, Merck & Co., Inc.; Jie Chen, Merck & Co., Inc.; Lei Nie, University of Maryland Baltimore County
- 2:50 p.m.** A Bayesian Test for Binary Outcomes in Fixed-dose Combination Drug Studies—◆ Melinda Holt, Southeastern Louisiana University; James Stamey, Stephen F. Austin State University; John Seaman, Baylor University; Dean M. Young, Baylor University; Dean M. Young, Baylor University
- 3:05 p.m.** Estimation Following Adaptive Design—◆ Chengqing Wu, National Institute of Child and Health & Human Development; Aiyi Liu, National Institute of Child and Health & Human Development; Kai F. Yu, National Institute of Child and Health & Human Development; James F. Troendle, National Institute of Child and Health & Human Development
- 3:20 p.m.** Floor Discussion

450 **MCC-103 D**
Sampling and Censoring—Contributed
Section on Nonparametric Statistics, Section on Survey Research Methods

Chair(s): Omer Ozturk, The Ohio State University

- 2:05 p.m.** Efficient Estimation in Interval-censored Data with Nonparametric Covariate Effects—◆ Tingting Yi, Michigan State University
- 2:20 p.m.** Shrinkage Nonparametric Estimation of Mean Survival Time from Censored Data—◆ Mohammad Rahbar, Michigan State University; Alla Sikorskii, Michigan State University; S. Ejaz Ahmed, University of Windsor; Sangchoon Jeon, Michigan State University; Joseph C. Gardiner, Michigan State University
- 2:35 p.m.** A Confidence Interval for the Median of a Finite Population under Unequal Probability Sampling: a Model-assisted Approach—◆ Suzanne Dubnicka, Kansas State University
- 2:50 p.m.** Judgment Poststratification and Auxiliary Information—◆ Xiaobai Li, The Ohio State University; Steven N. MacEachern, The Ohio State University; Elizabeth A. Stasny, The Ohio State University
- 3:05 p.m.** Ranked Set Sampling: Improving Estimates Obtained from a Stratified Simple Random Sample—◆ Christopher Sroka, The Ohio State University
- 3:20 p.m.** Not Worth the Effort: Balanced Ranked Set Sampling and Random Predictor OLS Regression—◆ Elizabeth J. Murff, Eastern Washington University; Thomas W. Sager, The University of Texas at Austin
- 3:35 p.m.** Rank Set Sampling: Allocation of Sample Units to the Judgment Order Statistics—◆ Jessica Kohlschmidt, The Ohio State University; Elizabeth A. Stasny, The Ohio State University; Doug Wolfe, The Ohio State University

451 **MCC-210 AB**
New Methods in Estimation of Models—Contributed
IMS

Chair(s): C. Shane Reese, Brigham Young University

- 2:05 p.m.** Detecting Abrupt Changes in Locally Stationary Time Series—◆ Michael Last, University of California, Davis
- 2:20 p.m.** An Application of Empirical Processes to ROC Curve—◆ Costel Chirila, University of Kentucky; Arne Bathke, University of Kentucky; Arnold J. Stromberg, University of Kentucky
- 2:35 p.m.** Estimation for the Simple Linear Boolean Model—◆ Catherine Crespi, University of California, Los Angeles; Kenneth Lange, University of California, Los Angeles
- 2:50 p.m.** Local Likelihood Estimation of the Intensity Function for Spike Trains Observed on Overlapping, Nonidentical Intervals—◆ Matt Gregas, University of Minnesota
- 3:05 p.m.** A Two-step Empirical Likelihood Approach for Combining Sample and Population Data in Regression Estimation—◆ Sanjay Chaudhuri, University of Washington; Mark S. Handcock, University of Washington; Michael S. Rendall, RAND Corporation
- 3:20 p.m.** A General Class of Linearly-structured Bivariate Lifetime Distributions—◆ Norou Diawara, Auburn University; Mark Carpenter, Auburn University; Yi Han, Auburn University
- 3:35 p.m.** Full Likelihood Inference for Exchangeable Poisson Data—◆ Sankar Bokka, The University of Mississippi; Hanxiang Peng, The University of Mississippi; LaTonya Garner, The University of Mississippi

452 **MCC-211 D**
Experimental Design and Functional Data Analysis—Contributed
IMS

Chair(s): Nick Hengartner, Los Alamos National Laboratory

- 2:05 p.m.** A Geometric Method for Singular C-optimal Designs—◆ Shenghua Fan, National University of Singapore; Kathryn Chaloner, The University of Iowa
- 2:20 p.m.** p-Optimal Designs for a Linear Log Contrast Model for Experiments with Mixtures—◆ Miao-Kuan Huang, National Sun Yat-sen University; Mong-Na L. Huang, National Sun Yat-sen University
- 2:35 p.m.** A-optimal Designs for Weighted Polynomial Regression—◆ Fu-Chuen Chang, National Sun Yat-sen University
- 2:50 p.m.** Optimal Designs for Calibrations in Multiresponse-univariate Linear Regression Models—◆ Chun-Sui Lin, National Sun Yat-sen University; Mong-Na L. Huang, National Sun Yat-sen University

GENERAL PROGRAM SCHEDULE

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

3:05 p.m. Modeling Computer Experiments with Functional Response—◆ Zhe Zhang, The Pennsylvania State University

3:20 p.m. Curve Forecasting by Functional Autoregression—
◆ Vladislav Kargin, New York University; Alexei Onatski, Columbia University

3:35 p.m. Floor Discussion

453 **MCC-102 E**

● **Variance Estimation for Surveys II—Contributed** Section on Survey Research Methods, Social Statistics Section

Chair(s): Steve Miller, Bureau of Labor Statistics

2:05 p.m. Application of Jackknife Replication Method to Two-stage Sample Data with a Large Number of Certainty PSUs—◆ Donsig Jang, Mathematica Policy Research, Inc.

2:20 p.m. Variance Estimation for Fractionally Imputed Survey Data—◆ Arindam Chatterjee, Iowa State University; Wayne A. Fuller, Iowa State University; Jean D. Opsomer, Iowa State University

2:35 p.m. A Simulation Study of Three Methods of Variance Estimation with Two-stage Cluster Sampling and Hot-deck Imputation—◆ Michael E. Jones, Westat; J. Michael Brick, Westat; Richard L. Valliant, University of Michigan

2:50 p.m. Poststratified Estimator and Variance Estimation in Stratified Multistage Cluster Sampling—◆ Kyongryun Kim, Texas A&M University; Suojin Wang, Texas A&M University

3:05 p.m. Variance Estimation for Systematic Sampling—
◆ Xiaoxi Li, Iowa State University; Jean D. Opsomer, Iowa State University

3:20 p.m. Variance Estimation under Balanced Sampling Plans Excluding Adjacent Units—◆ James Wright, Bucknell University

3:35 p.m. Replicate Control Totals—◆ Varma S. D. S. Nadimpalli, Westat; David R. Judkins, Westat; Samson A. Adeshiyan, U.S. Census Bureau

454 **MCC-102 F**

● **Coverage and Frames for Household Survey—Contributed** Section on Survey Research Methods, Social Statistics Section

Chair(s): Donald Camburn, RTI International

2:05 p.m. Enumeration Status of Census 2000 Enumerations Deemed Insufficient Information for Matching and Followup—◆ Paul W. Livermore Auer, U.S. Census Bureau

2:20 p.m. Complex Sample Design Effects Using the Census 2000 A.C.E. Sample and Logistic Regression Modeling—

◆ Douglas Olson, U.S. Census Bureau; Richard Griffin, U.S. Census Bureau

2:35 p.m. Lessons Learned in the 2004 Census Test of Overseas Enumeration—◆ Mary Frances E. Zelenak, U.S. Census Bureau

2:50 p.m. Geocoding Procedure To Find Geographic Identifiers in the Housing Component of the Consumer Price Index—◆ John Schilp, Bureau of Labor Statistics

3:05 p.m. Evaluating the Frame Development Operation for Group Quarters—◆ Carrae Echols, U.S. Census Bureau

3:20 p.m. Simple Approaches to Estimating the Variance of the Propensity Score Weighted Estimator Applied on Volunteer Panel Web Survey Data: a Comparative Study—◆ Annica Isaksson, Statistics Sweden; Sunghye Lee, University of California, Los Angeles

3:35 p.m. Floor Discussion

455 **MCC-205 A**

● **Hierarchical and Latent Variable Modeling with Epidemiologic Applications—Contributed** Section on Statistics in Epidemiology, Section on Bayesian Statistical Science, WNAR

Chair(s): Renee Moore, Emory University

2:05 p.m. Hierarchical Latent Class Model for Evaluating Diagnostic Tests—◆ Alula Hadgu, U.S. Centers for Disease Control and Prevention; Nandini Dendukuri, McGill University

2:20 p.m. Profiling VA Facilities Using Bayesian Hierarchical Models—◆ Chuan Zhou, University of Washington

2:35 p.m. Multilevel Flexible Models for Bivariate Longitudinal Data—◆ Nuoo-Ting Molitor, University of Southern California; Kiros Berhane, University of Southern California

2:50 p.m. The Multilevel Hierarchical Random Effect Models: What Do We Gain by Accounting for More Levels?—◆ An-Lin Cheng, Yale University; Haiqun Lin, Yale University

3:05 p.m. Comparison of PQL and Laplace 6 Estimates of Hierarchical Generalized Linear Models When Comparing Groups of Small Incident Rates in Cluster-Randomized Trials—◆ Rafael Diaz, University of California, Davis

3:20 p.m. A Composite Clustering Model for Space-time Disease Counts—◆ Ping Yan, University of Wisconsin, Madison; Murray K. Clayton, University of Wisconsin, Madison

3:35 p.m. Floor Discussion

456 MCC-103 E Statistics in Basketball, Baseball, Football, Hockey, and Golf—Contributed

Section on Statistics in Sports, Section on Statistical Education

Chair(s): Michael Anderson, IBM

- 2:05 p.m.** On Successive Proportions of Binary Sequences—
◆ Laurence D. Robinson, Ohio Northern University;
Mihai Caragiu, Ohio Northern University
- 2:20 p.m.** A Spatial Analysis of Basketball Shot Chart Data—
◆ Brian Reich, University of Minnesota; Bradley P. Carlin,
University of Minnesota; James Hodges, University of
Minnesota; Adam Reich, University of Minnesota
- 2:35 p.m.** Who Controls the Plate?—◆ Ben Alamar, University of
California at San Francisco; Gabriel Desjardins, Avnera
Corporation
- 2:50 p.m.** Some Properties of Playoff Systems for NCAA I-A
Football—◆ David Annis, Naval Postgraduate School;
Samuel Wu, University of Florida
- 3:05 p.m.** Position and Location in Ice Hockey Using a Markov
Chain Model—◆ Andrew Thomas, Harvard University
- 3:20 p.m.** The Importance of Individual Golf Skills and How These
Change with Innovations in Technology—◆ Erik Heiny,
University of Northern Colorado
- 3:35 p.m.** Floor Discussion

457 MCC-211 A Reliability and Survival Modeling—Contributed

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

Chair(s): Vivek Ajmani, General Mills, Inc.

- 2:05 p.m.** The Eyring Rate Reaction Model and Its Use in Sensitivity
Analysis—◆ Haiming Ma, Iowa State University; William Q.
Meeker, Iowa State University
- 2:20 p.m.** The Performance of Hazard Plotting in Estimating the
Parameters of a Weibull Life Distribution in the
Presence of an Independent Competing Weibull Failure
Mode—◆ John I. McCool, Pennsylvania State Great Valley;
Edward Romanowski, QVC, Inc.
- 2:35 p.m.** Weibull Confidence Bounds with Few or Zero Failures—
◆ Ulrike Genschel, University of Dortmund; William Q. Meeker,
Iowa State University
- 2:50 p.m.** Bivariate Weibull Reliability/Survival Models—◆ Yi Han,
Auburn University; Mark Carpenter, Auburn University; Norou
Diawara, Auburn University
- 3:05 p.m.** Beta-Weibull Distribution and Its Applications—
◆ Felix Famoye, Central Michigan University; Carl Lee, Central
Michigan University

- 3:20 p.m.** Generalized Log-logistic Families of Lifetime
Distributions—◆ James Gleaton, University of North Florida;
James Lynch, University of South Carolina

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

458 MCC-211 B Network Traffic and Datastreams—Contributed

Section on Physical and Engineering Sciences,
Section on Statisticians in Defense and National
Security, Section on Quality and Productivity

Chair(s): Peter Hovey, University of Dayton

- 2:05 p.m.** Waiting Time Distribution of Tandem Queues with
Correlated Service Nodes—◆ Alfred Akinsete, Marshall
University
- 2:20 p.m.** Statistical Models for Network Traffic Measurements—
◆ Bowei Xi, Purdue University
- 2:35 p.m.** Statistical Analysis of Equipment Profiles—◆ Theresa
Utlaut, Intel Corporation
- 2:50 p.m.** Statistical Design and Data Mining for Microsensor
Arrays—◆ Nell Sedransk, National Institute of Standards and
Technology; Zhan-Qian J. Lu, National Institute of Standards
and Technology
- 3:05 p.m.** Statistical Investigation of Chaotic Datastreams Using
a Haar Wavelet Transform—◆ Carolyn Morgan, Hampton
University; Morris H. Morgan, III, Hampton University
- 3:20 p.m.** Statistical Analysis of Star Data—◆ John Rigsby, Naval
Surface Warfare Center, Dahlgren Division; Yasmin Said,
George Mason University
- 3:35 p.m.** Floor Discussion

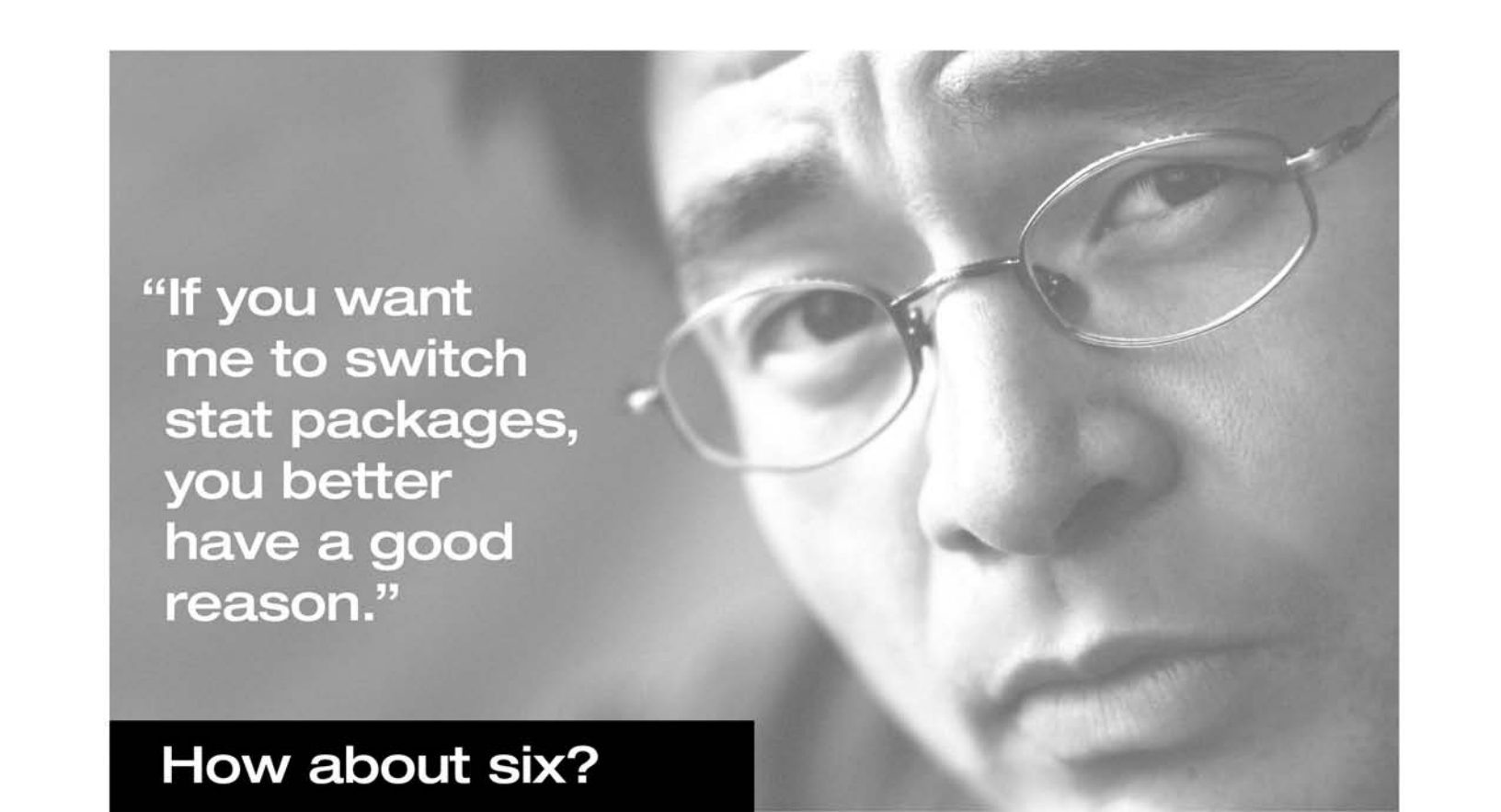
Invited Sessions 4:00 p.m.–5:50 p.m.

459 MCC-Ballroom A COPSS Awards and Fisher Lecture Session—Invited

Committee of Presidents of Statistics Societies
(COPSS), The ASA, ENAR, IMS, SSC, WVAR,
Biometrics Section

Chair(s): Linda J. Young, University of Florida

- 4:00 p.m.** Presentation of Awards—◆ Linda J. Young, University of
Florida
- 4:20 p.m.** Dimension Reduction in Regression—◆ R. D. Cook,
University of Minnesota
- 5:30 p.m.** Floor Discussion



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