

MONDAY, AUGUST 7

Tours

9:00 a.m.–12:00 p.m. CC-Convention Place
TR03 - Seattle City Highlights Tour (fee event)

9:00 a.m.–11:00 a.m. CC-Convention Place
TR04 - Walking Tour of the Pike Place Market (fee event)

12:30 p.m.–4:00 p.m. CC-Convention Place
TR05 - Cruise the Locks (fee event)

Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. S-Douglas Room
Committee on Archives and Historic Materials Annual Business Meeting
Chair(s): Rich Allen, ASA Committee on Archives and History

7:00 a.m.–8:30 a.m. H-Douglas Boardroom & Foyer
Social Statistics Section Executive Board Meeting (closed)
Chair(s): Susan Schechter, Office of Management and Budget

7:00 a.m.–8:30 a.m. H-Portland
Technometrics Management Committee (closed)
Chair(s): Roger W. Hoerl, GE Global Research

7:00 a.m.–8:30 a.m. S-Cedar Room
SPAIG Committee Meeting (closed)
Chair(s): George Williams, Amgen Inc.

7:00 a.m.–8:30 a.m. H-Sherman
Survey Review Committee Annual Meeting
Chair(s): Virginia M. Lesser, Oregon State University

7:00 a.m.–8:30 a.m. H-Excelsior
JABES Management Committee (closed)
Chair(s): Timothy Gregoire, Yale University

7:00 a.m.–8:30 a.m. S-Juniper
Section on Statistical Graphics Executive Committee (closed)
Chair(s): Paul Murrell, The University of Auckland

7:00 a.m.–8:30 a.m. H-Chatham
Section on Government Statistics Executive Committee Meeting

Chair(s): Stephanie Shipp, National Institute of Standards and Technology

7:00 a.m.–8:30 a.m. H-Blewett Suite
Science Policy Task Force Business Meeting
Chair(s): Virginia A. de Wolf, Consultant

7:00 a.m.–8:30 a.m. H-Cayuse
ASA-SIAM Series Editorial Board (closed)
Chair(s): Martin T. Wells, Cornell University

7:00 a.m.–8:30 a.m. H-Discovery
Section on Statistics and the Environment Executive Meeting (closed)
Chair(s): Jay Ver Hoef, National Marine Mammal Lab

7:00 a.m.–8:30 a.m. H-Stevens Boardroom & Foyer
ASA-MAA Joint Committee on Undergraduate Statistics Meeting
Chair(s): Madhuri Mulekar, University of South Alabama

7:00 a.m.–8:30 a.m. S-Everett
Section on Teaching Statistics in the Health Sciences Executive Committee Meeting (closed)
Chair(s): Cynthia Long, Palmer Center for Chiropractic Research

7:00 a.m.–8:30 a.m. S-Willow B
Section on Health Policy Statistics Executive Committee Meeting (closed)
Chair(s): Thomas McLaughlin, University of Massachusetts School of Medicine

7:00 a.m.–9:00 a.m. CC-302
Committee on Membership Retention and Recruitment Meeting (closed)
Chair(s): Dayanand Naik, Old Dominion University

7:00 a.m.–11:00 a.m. CC-4C-3
JSM 2007 Program Committee Meeting (closed)
Chair(s): Allan Rossman, California Polytechnic State University, San Luis Obispo

7:00 a.m.–6:00 p.m. CC-507, CC-508
Speaker Work Rooms

7:00 a.m.–10:00 p.m. CC-Level 4 South Lobby
Cyber Center



SSC

**Statistical Society of Canada
Société Statistique du Canada**

Statistical Society of Canada is a long-standing participant in JSM

Join us at the SSC Reception

Monday, August 7th, 2006

5:00P.M. – 7:00P.M.

Grand Hyatt Seattle - Princessa II Ballroom

www.ssc.com

577 King Edward Avenue, Ottawa, Ontario, K1N 6N5

Tel: 613.562.5320 / Fax: 613.565.6774 / email: info@ssc.ca

GENERAL PROGRAM SCHEDULE

⊗ Themed Session ● Applied Session ✦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

7:30 a.m.–8:30 a.m. S-Ballard

Council of Chapters International Science and Engineering Fair (ISEF) Breakfast Meeting (closed)

Chair(s): John E. Boyer, Kansas State University

7:30 a.m.–8:30 a.m. H-Chinook

Deming Lectureship Committee Business Meeting (closed)

Chair(s): Lorraine Denby, Avaya Labs Research

7:30 a.m.–8:30 a.m. S-Spruce Room

Committee on Professional Ethics

Chair(s): Barbara Bailar, Consultant

7:30 a.m.–9:00 a.m. S-Admiral

Committee on Minorities in Statistics Business Meeting (closed)

Chair(s): Nagambal Shah, Spelman College

7:30 a.m.–9:00 a.m. S-Aspen Room

Carnegie Mellon Alumni and Faculty Breakfast (closed)

Organizer(s): Margaret Smykla, Carnegie Mellon University

7:30 a.m.–6:00 p.m. CC-Level 4 South Lobby

JSM Main Registration ASA Membership/Special Assistance Desk

8:00 a.m.–9:30 a.m. S-Willow A

Communications in Statistics Editorial Meeting (closed)

Organizer(s): Narayanaswamy Balakrishnan, McMaster University

8:00 a.m.–6:00 p.m. CC-Exhibit Hall 4B

Career Placement Service

8:00 a.m.–6:00 p.m. CC-Exhibit Hall 4A

Exhibitor Lounge

8:00 a.m.–6:00 p.m. CC-209

Amgen Inc. Interview Room (by invitation only)

Organizer(s): Chander Varma, Amgen Inc.

8:30 a.m.–9:30 a.m. S-Ballard

Council of Chapters Governing Board Planning and Executive Committee Meeting (closed)

Chair(s): Ronald Wasserstein, Washburn University

8:30 a.m.–9:30 a.m. S-Ballard

Council of Chapter Governing Board Status Committee Meeting (closed)

Chair(s): Joan Chmiel, Northwestern University

9:00 a.m.–10:00 a.m. S-Willow B

Transportation Statistics Interest Group Annual Meeting

Organizer(s): Promod Chandhok, Bureau of Transportation Statistics

9:00 a.m.–10:30 a.m. S-Metropolitan Ballroom B

Academic Program Representatives Meeting (closed)

Chair(s): John Stufken, University of Georgia

9:00 a.m.–10:30 a.m. H-Chatham

JASA Editors Meeting (closed)

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

9:00 a.m.–11:00 a.m. CC-301

Advisory Committee on Continuing Education Business Meeting (closed)

Chair(s): Charles Tan, Merck & Co., Inc.

9:00 a.m.–5:00 p.m. CC-Level 4 South Lobby

ASA Marketplace

9:00 a.m.–5:00 p.m. CC-Level 1

Citywide Concierge Center

9:00 a.m.–6:00 p.m. CC-Exhibit Hall 4A

EXPO 2006

ASA Communities Booth #101

9:30 a.m.–12:30 p.m. H-Excelsior

Current Index to Statistics Management Committee Meeting (closed)

Chair(s): Duncan Murdoch, University of Western Ontario

9:30 a.m.–2:00 p.m. S-Admiral

Council of Chapters Governing Board Meeting (closed)

Chair(s): Ronald Wasserstein, Washburn University

12:30 p.m.–1:50 p.m. H-Discovery

Committee on Gay and Lesbian Concerns in Statistics Meeting

Chair(s): Barry Johnson, Internal Revenue Service

Monday

JSM 2006

IMS

Member Social



When?

Monday, August 7
5:30–7:00 p.m.

Where?

Sheraton-Aspen
Room

All IMS members are welcome

This is an opportunity to see old friends, network with colleagues and relax in an intimate setting. Appetizers and drinks will be served.

If you wish to join the IMS, but haven't, please come by the reception and we will have applications available, or you can join online at www.imstat.org



IMS members socializing in Barcelona

JSM 2006

IMS

Welcome Reception



When?

Tuesday, August 8
5:30–6:30 p.m.

Where?

Sheraton-Willow A
Room

New Members, New Graduates and Students

All members who have joined the IMS during the past two years, all IMS New Graduate members and all IMS student members are encouraged to attend. Appetizers and an open bar will be available.

If you wish to join the IMS, but haven't, please come by the reception and we will have applications available, or you can join online at www.imstat.org



*Last year's New Members' Reception
at JSM Minneapolis*

12:30 p.m.–2:00 p.m. H-Portland
Section on Bayesian Statistical Science Executive Committee Meeting (closed)
Chair(s): Dalene Stangl, Duke University

12:30 p.m.–2:00 p.m. H-Princessa II Ballroom
JASA Editorial Board Meeting (closed)
Chair(s): Mark S. Kaiser, Iowa State University

12:30 p.m.–2:00 p.m. CC-302
Section on Statistical Computing Executive Committee (closed)
Chair(s): Stephan Sain, University of Colorado at Denver and Health Sciences Center

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

2:00 p.m.–3:30 p.m. S-Cedar Room
Careers in Statistics Panel for High Schools and Two-Year Colleges
Chair(s): Janice Lent, Research and Innovative Technology Administration

2:00 p.m.–4:00 p.m. H-Excelsior
Finance Committee Meeting (closed)
Chair(s): Sastry Pantula, North Carolina State University

4:00 p.m.–5:00 p.m. S-Juniper
International Indian Statistical Association Executive Board Meeting
Organizer(s): Hira L. Koul, Michigan State University

4:00 p.m.–6:00 p.m. CC-613
Consortium for the Advancement of Undergraduate Statistics Education Meeting (closed)
Organizer(s): Dennis K. Pearl, The Ohio State University

4:30 p.m.–6:00 p.m. H-Portland
Section on Nonparametric Statistics Executive Committee (closed)
Chair(s): Pranab K. Sen, The University of North Carolina at Chapel Hill

5:00 p.m.–6:00 p.m. CC-604
Medical Devices Special Interest Group Meeting
Chair(s): Estelle Russek-Cohen, U.S. Food and Drug Administration

5:00 p.m.–6:00 p.m. H-Blewett Suite
JASA T&M Associate Editors Mixer (closed)
Chair(s): Stephen L. Portnoy, University of Illinois at Urbana-Champaign

5:00 p.m.–6:30 p.m. S-Douglas Room
Journal of Quality Technology Editorial Review Board (closed)
Organizer(s): Enrique del Castillo, The Pennsylvania State University

5:00 p.m.–6:30 p.m. H-Discovery
Section on Quality and Productivity Tactical Planning (closed)
Chair(s): Christine M. Anderson-Cook, Los Alamos National Laboratory

5:00 p.m.–7:00 p.m. H-Leonesa Ballroom II
Iowa State University Statistics Alumni Reception (closed)
Organizer(s): Kenneth Koehler, Iowa State University

5:00 p.m.–7:00 p.m. H-Princessa II Ballroom
Statistical Society of Canada Reception (all are welcome)
Organizer(s): Charmaine Dean, Simon Fraser University

5:00 p.m.–7:00 p.m. S-Willow A
Texas A&M University Reunion (closed)
Organizer(s): Simon Sheather, Texas A&M University

5:00 p.m.–7:00 p.m. S-Cirrus Ballroom
NISS/SAMSI Reception
Organizer(s): Alan Karr, National Institute of Statistical Sciences

5:30 p.m.–7:00 p.m. S-Juniper
Section on Statistics in Sports Business Meeting
Chair(s): Phil Everson, Swarthmore College

5:30 p.m.–7:00 p.m. H-Douglas Boardroom & Foyer
Section on Risk Analysis Business Meeting
Chair(s): Susan Sereika, University of Pittsburgh

5:30 p.m.–7:00 p.m. CC-4C-1
Section on Statistics and the Environment Business Meeting and Reception
Chair(s): Jay Ver Hoef, National Marine Mammal Lab

5:30 p.m.–7:00 p.m. S-Aspen Room
Institute of Mathematical Statistics Member Reception
Organizer(s): Elyse Gustafson, IMS

GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

5:30 p.m.–7:00 p.m. S-Everett

Social Statistics Section Business Meeting

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

5:30 p.m.–7:00 p.m. S-Ballard

Section on Statistics in Epidemiology Executive Committee Meeting (closed)

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

5:30 p.m.–7:00 p.m. H-Stevens Boardroom & Foyer

Caucus for Women in Statistics Reception

Organizer(s): Mary W. Gray, American University

5:30 p.m.–7:00 p.m. H-Leonesa Ballroom I

The University of North Carolina at Chapel Hill Department of Biostatistics Alumni Reception

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

5:30 p.m.–7:00 p.m. S-Governors Suite

ASA/NSF Research Fellowship Reception (closed)

Organizer(s): Carolyn Kesner, American Statistical Association

5:30 p.m.–7:00 p.m. CC-602

Biometrics Section Annual Business Meeting

Chair(s): Karen Bandeen-Roche, The Johns Hopkins Bloomberg School of Public Health

5:30 p.m.–7:00 p.m. S-Spruce Room

Section on Health Policy Statistics Business Meeting

Chair(s): Thomas McLaughlin, University of Massachusetts School of Medicine

5:30 p.m.–7:00 p.m. S-Cedar Room

Section on Teaching Statistics in the Health Sciences Business Meeting and Mixer

Chair(s): Cynthia Long, Palmer Center for Chiropractic Research

5:30 p.m.–7:30 p.m. CC-307 & 308

Service-Oriented Consulting: What Can Students Do in the Community?

Organizer(s): Gayla R. Olbricht, Purdue University

6:00 p.m.–7:00 p.m. CC-4C-3

President's Invited Speaker Reception (by invitation only)

Chair(s): Sallie Keller-McNulty, Rice University

6:00 p.m.–7:00 p.m. CC-305

Russian and Former Soviet Union Statisticians Mixer

Organizer(s): Stanislav Kolenikov, University of Missouri-Columbia

6:00 p.m.–7:30 p.m. S-Metropolitan Ballroom B

JSM Student Mixer (students only, included in registration fee)

Chair(s): Dayanand Naik, Old Dominion University

6:00 p.m.–7:30 p.m. CC-601

CDC/ATSDR Statistical Advisory Group Open Meeting

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

6:00 p.m.–7:30 p.m. CC-302

Committee on Minorities in Statistics Reception

Chair(s): Nagambal Shah, Spelman College

6:00 p.m.–7:30 p.m. H-Sherman

Committee on Gay and Lesbian Concerns in Statistics Social Meeting (with guest speaker)

Chair(s): Barry Johnson, Internal Revenue Service

6:00 p.m.–7:30 p.m. CC-603

Committee on Applied Statisticians Business Meeting

Chair(s): Mani Lakshminarayanan, Pfizer Inc.

6:00 p.m.–7:30 p.m. H-Leonesa Ballroom III

Pfizer Reception (by invitation only)

Organizer(s): Carolyn Pittman, Pfizer, Inc.

6:00 p.m.–8:00 p.m. H-Cayuse

Section on Survey Research Methods Executive Committee Meeting (closed)

Chair(s): Roger Tourangeau, University of Maryland

6:00 p.m.–8:00 p.m. CC-303

Korean Statisticians Annual Meeting

Organizer(s): Sin-Ho Jung, Duke University

6:00 p.m.–8:00 p.m. S-Willow B

Eli Lilly and Company Faculty Reception (closed)

Organizer(s): Todd Sanger, Eli Lilly and Company

6:00 p.m.–9:00 p.m. CC-605

Amgen Inc. (by invitation only)

Organizer(s): Chander Varma, Amgen Inc.

6:30 p.m.–7:30 p.m. S-Metropolitan Ballroom A
ASA Long Time Member Reception (closed)

Chair(s): Dayanand Naik, Old Dominion University

7:00 p.m.–9:00 p.m. CC-607
Merck Research Laboratories Reception (closed)

Organizer(s): Beverly Jacobsen, Merck Research Laboratories

7:30 p.m.–10:00 p.m. CC-4C-2
Joint Section on Statistical Graphics and Section on Statistical Computing Business Meeting

Chair(s): Paul Murrell, The University of Auckland; Stephan Sain, University of Colorado at Denver and Health Sciences Center

7:30 p.m.–10:00 p.m. S-Douglas Room
Southern Methodist University Alumni Social

Organizer(s): Richard Gunst, Southern Methodist University

Continuing Education (Fee Events)

CE_14C CC-305

8:00 a.m.–12:00 p.m.

Spatial Survey Design with a Focus on Natural Resources

The ASA, Section on Statistics and the Environment

Instructor(s): Anthony R. Olsen, U.S. Environmental Protection Agency; Donald L. Stevens, Jr., Oregon State University

CE_15C CC-304

8:00 a.m.–12:00 p.m.

Analysis of Multivariate Failure Time Data

The ASA, Section on Nonparametric Statistics

Instructor(s): Danyu Lin, The University of North Carolina at Chapel Hill

CE_16C CC-307 & 308

8:30 a.m.–5:00 p.m.

Multiple Comparisons and Multiple Tests

The ASA

Instructor(s): Peter Westfall, Texas Tech University

Longtime Member Reception

BY INVITATION ONLY

MONDAY, AUGUST 7, 6:30 TO 7:30 P.M.

SHERATON – METROPOLITAN BALLROOM A

IF YOU JOINED THE ASA 35 OR MORE YEARS AGO,
 THE AMERICAN STATISTICAL ASSOCIATION
 WOULD LIKE TO THANK YOU FOR
 YOUR LONGTIME SUPPORT.

PLEASE JOIN US FOR A RECEPTION IN YOUR HONOR.

SPONSORED BY THE ASA MEMBERSHIP COMMITTEE.

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

CE_17C CC-309
8:30 a.m.–5:00 p.m.

Statistical Demography with Applications

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

Instructor(s): Bruce D. Spencer, Northwestern University; Juha M. Alho, University of Joensuu

CE_18C CC-303
8:30 a.m.–5:00 p.m.

Analysis of Clinical Trials: Theory and Applications

The ASA

Instructor(s): Christy Chuang-Stein, Pfizer Inc.; Alex Dmitrienko, Eli Lilly and Company; Geert Molenberghs, Limburgs Universitair Centrum

CE_19C CC-306
8:30 a.m.–5:00 p.m.

Applied Bayesian Nonparametric Modeling

The ASA, Section on Bayesian Statistical Science

Instructor(s): Alan E. Gelfand, Duke University; Athanasios Kottas, University of California, Santa Cruz

CE_20C CC-310
8:30 a.m.–5:00 p.m.

Generalized Linear and Latent Mixed Models

The ASA, Biometrics Section

Instructor(s): Sophia Rabe-Hesketh, University of California, Berkeley; Anders Skrdal, London School of Economics

CE_21C CC-305
1:00 p.m.–5:00 p.m.

Creating More Effective Graphs

The ASA, Section on Statistical Graphics, Section on Statistical Education

Instructor(s): Naomi B. Robbins, NBR

Roundtables with Coffee 7:00 a.m.–8:15 a.m.

77 CC-4C-1 Section on Statistical Consulting Roundtable with Coffee (fee event)

Section on Statistical Consulting

Organizer(s): Wendy Tseng, Procter & Gamble

ML01 Effective Collaboration via Concise Statistical Graphics—
♦ Thomas G. Filloon, Procter & Gamble

78 CC-4C-1 Section on Statistical Education Roundtable with Coffee (fee event)

Section on Statistical Education

Organizer(s): Patti Collings, Brigham Young University

ML02 Using Japanese Lesson Study in Teaching Statistics—
♦ Robert DelMas, University of Minnesota; Joan Garfield, University of Minnesota

79 CC-4C-1 Section on Statistics and the Environment Roundtable with Coffee (fee event)

Section on Statistics and the Environment

Organizer(s): Peter Guttorp, University of Washington

ML03 Comparison of Laboratory Methods for the Same
Chemical—♦ Estelle Russek-Cohen, U.S. Food and
Drug Administration

80 CC-4C-1 Section on Statistical Graphics Roundtable with Coffee (fee event)

Section on Statistical Graphics

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

ML04 Graphics for Data Mining—♦ Martin Theus, University
of Augsburg

81 CC-4C-1 Section on Physical and Engineering Sciences Roundtable with Coffee (fee event)

Section on Physical and Engineering Sciences

Organizer(s): Winson Taam, The Boeing Company

ML05 Data from Automotive Online Shoppers: Fact, Fiction, or
Somewhere in between?—♦ Lynn Truss, GM Research
& Development

82 CC-4C-1 Section on Teaching Statistics in the Health Sciences Roundtable with Coffee (fee event)

Section on Teaching Statistics in the Health Sciences

*Organizer(s): Patrick Tarwater, The University of Texas Health Science
Center at Houston*

ML06 Online-Based Approaches to Statistical Education—
♦ John McGready, The Johns Hopkins University

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

83 CC-400

● ☼ Introductory Overview Lectures: Statistical Consulting—Other

The ASA, ENAR, IMS, SSC, WNAR, Section on Statistical Consulting, Section on Statistical Education

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

Chair(s): Todd Nick, Cincinnati Children's Hospital Medical Center

8:35 a.m. The Business Side of Consulting—✦ Susan J. Devlin, The Artemis Group LLC

9:25 a.m. Creating Effective Encounters: the Heart of Meeting Global Challenges—✦ Douglas Zahn, 5x3 Associates

10:15 a.m. Floor Discussion

Invited Sessions 8:30 a.m.–10:20 a.m.

84 CC-614

☼ Statistical Models for Networks—Invited

Chance, Section on Statisticians in Defense and National Security, Section on Physical and Engineering Sciences, Section on Statistical Graphics

Organizer(s): David Banks, Duke University

Chair(s): Michael Lavine, Duke University

8:35 a.m. Information Processing in Cellular Networks—
✦ Ravi Iyengar, Mount Sinai School of Medicine;
Avi Ma'ayan, Mount Sinai School of Medicine

9:00 a.m. Bayesian Solutions to the Degeneracy of Network Models—✦ Mark S. Handcock, University of Washington; Martina Morris, University of Washington

9:25 a.m. Dynamical Analysis of Networks in Neural Systems—✦ Emery N. Brown, Massachusetts Institute of Technology

9:50 a.m. Disc: Tian Zheng, Columbia University

10:10 a.m. Floor Discussion

85 CC-213

● Measurement Error Models—Invited

ENAR, Biometrics Section, WNAR

Organizer(s): David Ruppert, Cornell University

Chair(s): Sally W. Thurston, University of Rochester Medical Center

8:35 a.m. Semiparametric Methods and the Estimation of Nutrient Intakes—✦ Raymond J. Carroll, Texas

A&M University; Arnab Maity, Texas A&M University; Yanyuan Ma, Texas A&M University

9:00 a.m. A Latent Variable Model for Measurement Error Correction Using Replicate Data—✦ Sohee Park, National Cancer Center, Korea; Louise Ryan, Harvard School of Public Health; David Ruppert, Cornell University; John Meeker, University of Michigan; Russ Hauser, Harvard School of Public Health

9:25 a.m. Measurement Error in Population Dynamics Models—✦ John Staudenmayer, University of Massachusetts; John Buonaccorsi, University of Massachusetts

9:50 a.m. Generalized Measurement Error Models and Bias Reduction—✦ Leonard A. Stefanski, North Carolina State University

10:15 a.m. Floor Discussion

86 CC-608

● Directions for the Second Statistics Course—Invited

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

Organizer(s): Robert Dobrow, Carleton College

Chair(s): Rosemary Roberts, Bowdoin College

8:35 a.m. What Should Be the Second Statistics Course?—
✦ Karla V. Ballman, Mayo Clinic College of Medicine

8:55 a.m. Methods of Data Analysis: a Second Course in Statistics at Oregon State University—✦ Fred Ramsey, Oregon State University

9:15 a.m. Second Statistics Course at a Liberal Arts College—✦ Michael Kahn, Wheaton College

9:35 a.m. Risky Business: a Second Statistics Course at Business Schools—✦ Noreen R. Sharpe, Babson College; Richard Cleary, Bentley College

9:55 a.m. Spanning the Parametric/Nonparametric Divide—✦ John Holcomb, Jr., Cleveland State University

10:15 a.m. Floor Discussion

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

87 CC-610

● ⚙️ Forest Fires and Fish Stocks: Statistics on Long-Term Trends from Lake Sediments and Tree Rings—Invited

SSC, Section on Statistics and the Environment

Organizer(s): Rick Routledge, Simon Fraser University

Chair(s): Rick Routledge, Simon Fraser University

- 8:35 a.m. **Patterns of Biological Productivity in Saanich Inlet**—♦ Frank Whitney, Institute of Ocean Sciences; Ann Gargett, Institute of Ocean Sciences; Melissa McQuoid, Institute of Ocean Sciences
- 9:05 a.m. **Inference of Past Environmental Changes from Fossil Midges**—♦ Ian Walker, The University of British Columbia
- 9:35 a.m. **Forest Fires in Space and Time: Comparing Long Records of Forest Fires To Understand Their Climatic Controls**—♦ Dan Gavin, University of Vermont; Kenneth Lertzman, Simon Fraser University; Feng S. Hu, University of Illinois
- 10:05 a.m. **Floor Discussion**

88 CC-201

● ⚙️ Mining and Exploring Clinical Trials Data: Why, What, and How?—Invited

Biopharmaceutical Section, Committee on Applied Statisticians, Section on Statistical Consulting, ENAR, Section on Statistical Graphics

Organizer(s): Mani Lakshminarayanan, Pfizer Inc.

Chair(s): Mani Lakshminarayanan, Pfizer Inc.

- 8:35 a.m. **Secondary Analysis of Clinical Trials and Claims Data for Risk Minimization and Outcomes Evaluation**—♦ Michael O'Connell, Insightful Corporation
- 9:00 a.m. **Data Mining Trees: Mining Clinical Trials Data**—♦ Javier Cabrera, Rutgers University
- 9:25 a.m. **Logistic Regression on Autopilot**—♦ Trevor Hastie, Stanford University
- 9:50 a.m. **Disc: Ana Szarfman, U.S. Food and Drug Administration**
- 10:10 a.m. **Floor Discussion**

89 CC-602

● ⚙️ Statistics and the Millennium Development Goals—Invited

Section on Government Statistics

Organizer(s): Jana L. Asher, American Association for the Advancement of Science

Chair(s): Susan Hinkins, National Opinion Research Center

- 8:35 a.m. **The Role of Monitoring and Evaluation in Development Programs**—♦ Paul Wassenich, Inter-American Development Bank
- 9:00 a.m. **Statisticians and the Millennium Development Goals**—♦ Paul Fields, Brigham Young University
- 9:25 a.m. **A Role for Experimental Evaluation in Efforts To Achieve Millennium Development Goals**—♦ David J. Fitch, Universidad del Valle de Guatemala
- 9:50 a.m. **Disc: Fritz J. Scheuren, National Opinion Research Center**
- 10:10 a.m. **Floor Discussion**

90 CC-4C-4

Semisupervised Learning—Invited

IMS, Biometrics Section, Section on Nonparametric Statistics

Organizer(s): Yoonkyung Lee, The Ohio State University

Chair(s): Yoonkyung Lee, The Ohio State University

- 8:35 a.m. **Semisupervised Learning: an Overview**—♦ Xiaojin Zhu, University of Wisconsin-Madison
- 9:05 a.m. **Statistical and Geometric Principles of Semisupervised Learning**—♦ Mikhail Belkin, The Ohio State University
- 9:35 a.m. **Variable Selection for Semisupervised Learning**—♦ Elizaveta Levina, University of Michigan; Ji Zhu, University of Michigan
- 10:05 a.m. **Floor Discussion**

91 CC-615

● ⚙️ Some Current Issues in Industrial Statistics—Invited

Section on Physical and Engineering Sciences

Organizer(s): Luis A. Escobar, Louisiana State University

Chair(s): Luis A. Escobar, Louisiana State University

- 8:35 a.m. **Use of Computer Simulation To Plan Complicated Industrial Experiments**—♦ William Q. Meeker, Jr., Iowa State University
- 9:05 a.m. **Forecasting Warranty Claims**—Jerald F. Lawless, University of Waterloo; ♦ Marc Fredette, HEC Montréal
- 9:35 a.m. **Degradation-Based Models for Analyzing Repairable Systems**—♦ Vijay Nair, University of Michigan; Anupap Somboonsavatdee, University of Michigan; Ananda Sen, University of Michigan
- 10:05 a.m. **Floor Discussion**

92 CC-205 Recent Advances in Design and Analysis of Vaccine Studies—Invited

Biometrics Section, ENAR, WNAR

Organizer(s): M. Elizabeth Halloran, Fred Hutchinson Cancer Research Center

Chair(s): M. Elizabeth Halloran, Fred Hutchinson Cancer Research Center

- 8:35 a.m. On Estimation of Vaccine Efficacy Using Validation Samples with Selection Bias—**
✦ Michael Daniels, University of Florida; Daniel Scharfstein, The Johns Hopkins Bloomberg School of Public Health; M. Elizabeth Halloran, Fred Hutchinson Cancer Research Center; Haitao Chu, The Johns Hopkins Bloomberg School of Public Health
- 9:00 a.m. Accounting for Variability in Sample Size Estimation with Application to a Malaria Vaccine Phase II Trial—**✦ Michael P. Fay, National Institute of Allergy and Infectious Diseases; M. Elizabeth Halloran, Fred Hutchinson Cancer Research Center; Dean A. Follmann, National Institute of Allergy and Infectious Diseases
- 9:25 a.m. Statistical Methods for Assessing HIV Vaccine Efficacy in Repeated Low-Dose Challenge Experiments—**✦ Michael G. Hudgens, The University of North Carolina at Chapel Hill; Peter Gilbert, Fred Hutchinson Cancer Research Center/University of Washington
- 9:50 a.m. Disc:** Thomas A. Louis, The Johns Hopkins University
- 10:10 a.m. Floor Discussion**

93 CC-619 ● ✦ Statistical and Computational Issues in Climate Research—Invited

Section on Statistical Computing, Section on Physical and Engineering Sciences, Section on Statistical Graphics

Organizer(s): Donald B. Percival, University of Washington

Chair(s): Donald B. Percival, University of Washington

- 8:35 a.m. Statistical Analysis of Spatial Patterns of Climate Variability—**✦ J. Michael Wallace, University of Washington
- 9:00 a.m. Interpreting Recent Climate Change—**✦ Francis W. Zwiers, Canadian Centre for Climate Modelling and Analysis

- 9:25 a.m. Statistical Problems in Climate Change and Geophysical Fluids—**✦ Carl Wunsch, Massachusetts Institute of Technology
- 9:50 a.m. Disc:** Richard L. Smith, The University of North Carolina at Chapel Hill
- 10:10 a.m. Floor Discussion**

94 CC-612 ● ✦ SAMS Session on Statistical Issues in Metabolomics—Invited

Statistical and Applied Mathematical Sciences Institute, Biometrics Section

Organizer(s): James Berger, SAMSI; David Banks, Duke University

Chair(s): James Berger, SAMSI

- 8:35 a.m. Measurement Issues in Metabolomics Data—**
✦ Xiaodong Lin, University of Cincinnati
- 9:00 a.m. Exploring a Complex Metabolomics Dataset—**
✦ Susan J. Simmons, The University of North Carolina at Wilmington; Xiaodong Lin, University of Cincinnati
- 9:25 a.m. Pathway-Based Analysis of Metabolic Profiles—**
✦ Jacqueline Hughes-Oliver, North Carolina State University
- 9:50 a.m. Disc:** Clifford Spiegelman, Texas A&M University
- 10:10 a.m. Floor Discussion**

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

95 CC-203 ● ✦ Design and Analysis in Medical Devices— Topic-Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

Organizer(s): Zhen Huang, Duke Clinical Research Institute; Greg Campbell, U.S. Food and Drug Administration

Chair(s): Shein-Chung Chow, Duke University

- 8:35 a.m. Hypothesis Testing in Clinical Study with Mixed Patient Population—**✦ Yonghong Gao, U.S. Food and Drug Administration; Chul H. Ahn, U.S. Food and Drug Administration
- 8:55 a.m. Placebo Control Group in Medical Device Clinical Trials—**✦ Sarah Kogut, W. L. Gore & Associates, Inc.
- 9:15 a.m. To Pair or Not To Pair? Noninferiority Test for the Difference in Correlated Binary Outcomes—**
✦ Dong Li, Guidant Corporation; David Breiter,

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- Guidant Corporation; Shu Han, Guidant Corporation; Jia Wang, Guidant Corporation
- 9:35 a.m. **Covariate-Adjusted Noninferiority Tests with Binary Endpoints**—♦ Lei Peng, Guidant Corporation
- 9:55 a.m. **Noninferiority Testing with a Variable Margin**—♦ Zhiwei Zhang, U.S. Food and Drug Administration
- 10:15 a.m. **Floor Discussion**

96 CC-609 ● ♦ **Modeling and Testing of Economic Time Series—Topic-Contributed**

Business and Economics Statistics Section

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

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

- 8:35 a.m. **Cost-of-Living Index Based on an Estimated Variable Elasticity of Substitution Utility Function**—♦ Peter Zadrozny, Bureau of Labor Statistics
- 8:55 a.m. **Stochastic Volatility and Cointegration in Statistics Canada's Retail Trade Series**—♦ Thierno A. Balde, Statistics Canada; Ioana Schiopu-Kratina, Statistics Canada; Benoit Quenneville, Statistics Canada
- 9:15 a.m. **Model-Based Formulas for Growth Rates and Their Standard Errors**—♦ Tucker S. McElroy, U.S. Census Bureau
- 9:35 a.m. **Measuring Trend Growth Rates with an Application to Consumer Prices**—♦ Peter Kenny, PBK Research
- 9:55 a.m. **Adjustment of Data from Period Reporters in Estimates of Monthly Retail Trade**—♦ Donald Martin, U.S. Census Bureau; David Findley, U.S. Census Bureau
- 10:15 a.m. **Floor Discussion**

97 CC-214 ● ♦ **Statistical Approaches to Assess Ethnic Differences: Impact on Drug Development—Topic-Contributed**

ENAR

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

Chair(s): Ji Zhang, sanofi-aventis

- 8:35 a.m. **Design and Analysis for Showing the Similarity of Drug Efficacy between Two Clinical Studies**—♦ Yoshiharu Horie, Nippon Boehringer

- Ingelheim Co., Ltd.; Hajime Uno, Kitasato University; Masahiro Takeuchi, Kitasato University
- 8:55 a.m. **Evaluation of Treatment-Country Interaction in Global Clinical Trials**—♦ Hajime Uno, Kitasato University; Yoshiharu Horie, Nippon Boehringer Ingelheim Co., Ltd.; Masahiro Takeuchi, Kitasato University
- 9:15 a.m. **Minority Differences in Cancer Survival on Cooperative Group Clinical Trials**—♦ Beow Yeap, Harvard Medical School/Massachusetts General Hospital; Marvin Zelen, Harvard School of Public Health
- 9:35 a.m. **Delivering Robust Outcomes from Multiregional Clinical Trials**—♦ Yoko Tanaka, Eli Lilly and Company
- 9:55 a.m. **Statistical and Related Issues of Global Drug Development: Experience in the PMDA Consultation Meetings**—♦ Yuki Ando, Pharmaceuticals and Medical Devices Agency
- 10:15 a.m. **Floor Discussion**

98 CC-618 ♦ **Prediction and Detection in Defense and Homeland Security Applications—Topic-Contributed**

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

Organizer(s): Michael Porter, University of Virginia

Chair(s): Michael Porter, University of Virginia

- 8:35 a.m. **Geospatial Modeling in an Information Theoretic Framework as Applied to Forecasting of Insurgent Activity**—♦ Jason Dalton, Spatial Data Analytics Corporation
- 8:55 a.m. **Signal Detection in Radiation Portal Monitoring Data**—♦ Tom Burr, Los Alamos National Laboratory; Jim Gattiker, Los Alamos National Laboratory; George Tompkins, Los Alamos National Laboratory
- 9:15 a.m. **Cokriging with Generalized Cross-Covariances for Detecting Radioactivity**—♦ Chunfeng Huang, The Ohio State University; Noel Cressie, The Ohio State University; Yonggang Yao, The Ohio State University; Tailen Hsing, The Ohio State University

- 9:35 a.m. **Monitoring Safety of Food Supply by Analyzing Consumer Complaints**—❖ Artur Dubrawski, Carnegie Mellon University; Maheshkumar Sabhnani, Carnegie Mellon University; Andrew Moore, Carnegie Mellon University
- 9:55 a.m. **Logistic Joinpoint Models with Applications in Criminal Processes**—❖ Ryan Gill, University of Louisville
- 10:15 a.m. **Floor Discussion**

99 CC-2A ● Competing Risk Events in Cancer Epidemiology—Topic-Contributed

Section on Statistics in Epidemiology, Biometrics Section, ENAR
Organizer(s): Mousumi Banerjee, University of Michigan
Chair(s): Jaya M. Satagopan, Memorial Sloan-Kettering Cancer Center

- 8:35 a.m. **Competing Risks Models in the Monogenic Cancer Susceptibility Syndromes**—❖ Philip S. Rosenberg, National Cancer Institute
- 8:55 a.m. **Analyzing Survival Data with Competing Risks**—❖ Leah Ben-Porat, Memorial Sloan-Kettering Cancer Center; Jaya M. Satagopan, Memorial Sloan-Kettering Cancer Center
- 9:15 a.m. **Bayesian Competing Risks Analysis of Cancer Survival Data from the SEER Program**—❖ Sanjib Basu, Northern Illinois University; Ram Tiwari, National Institutes of Health
- 9:35 a.m. **Competing Risks Analysis in Breast Cancer with Missing Cause of Death**—❖ Mousumi Banerjee, University of Michigan; Ananda Sen, University of Michigan
- 9:55 a.m. **Development of Cohort Life Tables for 'Other Causes' for Use in Simulation Modeling**—❖ Marjorie Rosenberg, University of Wisconsin-Madison
- 10:15 a.m. **Floor Discussion**

100 CC-3B ● Bayesian Models in Finance—Topic-Contributed

Section on Bayesian Statistical Science
Organizer(s): Refik Soyer, The George Washington University
Chair(s): Alaattin Erkanli, Duke University Medical Center

- 8:35 a.m. **Bayesian Forecasting of Prepayment Rates for Individual Pools of Mortgages**—❖ Ivilina Popova, Seattle University; Elmira Popova, The

University of Texas at Austin; Edward I. George, University of Pennsylvania

- 8:55 a.m. **Bayesian Inference for Derivative Prices**—❖ Jonathan Stroud, University of Pennsylvania; Nicholas Polson, The University of Chicago
- 9:15 a.m. **Reliability and Survival in Financial Risk**—❖ Nozer Singpurwalla, The George Washington University
- 9:35 a.m. **A Computational Approach to Bayesian Portfolio Selection**—❖ Refik Soyer, The George Washington University
- 9:55 a.m. **Floor Discussion**

101 CC-3A Inference for Dynamic Graphical Models—Topic-Contributed

Section on Bayesian Statistical Science
Organizer(s): Makram Talih, City University of New York-Hunter College
Chair(s): Chris Volinsky, AT&T Labs-Research

- 8:35 a.m. **Stochastic ARMA Models**—❖ Bo Thiesson, Microsoft Research; Jesper Lind, Microsoft Research; David M. Chickering, Microsoft Research; David Heckerman, Microsoft Research; Christopher Meek, Microsoft Research
- 8:55 a.m. **Strategies for Online Inference with Dynamic Graphs**—❖ Makram Talih, City University of New York-Hunter College
- 9:15 a.m. **Network-Based Marketing**—❖ Shawndra Hill, New York University; Chris Volinsky, AT&T Labs-Research; Foster Provost, New York University
- 9:35 a.m. **Bayesian Analysis of Longitudinal Binary Data Using Markov Regression Models with Skewed Links**—Seongho Song, University of Cincinnati; ❖ Younshik Chung, Pusan National University; Dipak Dey, University of Connecticut; Alaattin Erkanli, Duke University Medical Center
- 9:55 a.m. **Disc: Kevin Murphy, The University of British Columbia**
- 10:15 a.m. **Floor Discussion**

GENERAL PROGRAM SCHEDULE

⚙ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

Topic-Contributed Panels

8:30 a.m.–10:20 a.m.

102 CC-607

● Finite Population Correction Factors—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Gary Shapiro, Westat

Chair(s): Gary Shapiro, Westat

- Panelists:** ♦ Wayne Fuller, Iowa State University
♦ Keith Rust, Westat/University of Maryland
♦ Phillip S. Kott, National Agricultural Statistics Service
♦ Barry I. Graubard, National Cancer Institute
♦ S. Lynne Stokes, Southern Methodist University

10:15 a.m. Floor Discussion

Regular Contributed Sessions

8:30 a.m.–10:20 a.m.

103 CC-206

● Advances in Variable Selection—Contributed

Biometrics Section

Chair(s): Qin Yu, University of Rochester

- 8:35 a.m. **Bayesian Variable Selection in Cox Models—**
♦ Naijun Sha, The University of Texas at El Paso;
Mahlet G. Tadesse, University of Pennsylvania;
Marina Vannucci, Texas A&M University
- 8:50 a.m. **FSR Methods in the Cox Proportional Hazards Model—**♦ Yun Chen, North Carolina State University; Dennis A. Boos, North Carolina State University; Leonard A. Stefanski, North Carolina State University
- 9:05 a.m. **Variable Selection in Linear Mixed Models for Longitudinal Data—**♦ Lan Lan, North Carolina State University; Daowen Zhang, sanofi-aventis; Hao Zhang, North Carolina State University
- 9:20 a.m. **Variable Selection with Penalized GEE—**♦ John Dziak, The Pennsylvania State University
- 9:35 a.m. **Adaptive-LASSO for Cox's Proportional Hazards Model—**♦ Wenbin Lu, North Carolina State University; Hao Zhang, North Carolina State University

- 9:50 a.m. **The LASSO Method for Variable Selection for Right-Censored Data—**♦ Lili Yu, The Ohio State University; Dennis K. Pearl, The Ohio State University

10:05 a.m. Floor Discussion

104 CC-211

● Proteomics—Contributed

Biometrics Section, ENAR

Chair(s): Jeanette E. Eckel-Passow, Mayo Clinic College of Medicine

- 8:35 a.m. **Design and Analysis of Experiments in Proteomics—**♦ John Aleong, University of Vermont
- 8:50 a.m. **Logistic and Probit Regression Modeling of Proteomic Mass Spectra in a Case Control Study on Diagnosis for Colon Cancer—**♦ Bart Mertens, Leiden University Medical Center
- 9:05 a.m. **Preprocessing Method and Nested Cross-Validation Classification of Lung Cancer Using Mass Spectrometry Proteomics—**♦ Jingjing Ye, University of California, Davis
- 9:20 a.m. **Statistical Approaches to Discovery of Biomarkers for Early Detection of Cancer Using LC-MS/MS—**
♦ Xiaochun Li, Dana-Farber Cancer Institute; Meredith A. Goldwasser, Dana-Farber Cancer Institute
- 9:35 a.m. **Statistical Methods for Protein Interactions Predictions—**♦ Inyoung Kim, Yale University; Yin Liu, Yale University; Hongyu Zhao, Yale University
- 9:50 a.m. **Multi-Dimensional NMR Spectra Identification for Protein Structure Determination—**♦ Nicoleta Serban, Georgia Institute of Technology
- 10:05 a.m. **Inferring Protein Associations Using Protein Pull-Down Assays—**♦ Julia Sharp, Montana State University; Kevin K. Anderson, Pacific Northwest National Laboratory; Don S. Daly, Pacific Northwest National Laboratory; Deanna L. Auberry, Pacific Northwest National Laboratory; John Borkowski, Montana State University; William R. Cannon, Pacific Northwest National Laboratory

105 CC-603 Salient Variables for Select Research Populations—Contributed

Social Statistics Section

Chair(s): Jennifer Madans, National Center for Health Statistics

- 8:35 a.m. **Is There Evidence of Racial Bias for the Federal Death Sentence?**—◆ Matthias Schonlau, RAND Corporation
- 8:50 a.m. **A Measure of Intergroup Discrimination Other Than the Difference between Median Wage Incomes**—◆ John Angle, Economic Research Service
- 9:05 a.m. **Missing Value Imputation and Weights Adjustment for Binary Variables**—◆ Mingue Park, University of Nebraska-Lincoln; David Johnson, University of Nebraska-Lincoln
- 9:20 a.m. **The Analysis of Seasonal Variations in Vital Statistics in Croatia: Two Approaches**—◆ Ante Rozga, University of Split; Zeljko Banovic, T-Com Croatia
- 9:35 a.m. **Mixtures of Regressions**—◆ Derek Young, The Pennsylvania State University
- 9:50 a.m. **Joint Modeling of Quality of Life and Disease Progression**—◆ Rebecca Hubbard, University of Washington; Lurdes Y. T. Inoue, University of Washington
- 10:05 a.m. **Detecting Bias in Jury Selection**—◆ Bruce Barrett, The University of Alabama

106 CC-604 ● Sample Survey Quality II—Contributed

Section on Survey Research Methods

Chair(s): Rachel Harter, National Opinion Research Center

- 8:35 a.m. **Analysis of Inconsistency in Coverage Estimates for Children in the 2000 Census**—◆ Andrew Keller, U.S. Census Bureau
- 8:50 a.m. **Difficulties and Solutions for Surveying Refugees: Bosnian Refugees in St. Louis**—◆ Kevin McIntyre, Saint Louis University; Hisako Matsuo, Saint Louis University; Terry Tomazic, Saint Louis University
- 9:05 a.m. **Residential Address Lists vs. Traditional Listing: Enumerating Households and Group Quarters**—◆ Sylvia Dohrmann, Westat; Daifeng Han, Westat; Leyla Mohadjer, Westat
- 9:20 a.m. **Employment in Nonprofit Entities: Coverage, Bias, and Measurement Errors in QCEW and**

Public IRS Information, 1999–2003—◆ Martin David, Urban Institute

- 9:35 a.m. **Use of Administrative Data To Explore Effect of Establishment Nonresponse Adjustment on the National Compensation Survey Estimates**—◆ Chester Ponikowski, Bureau of Labor Statistics; Erin E. McNulty, Bureau of Labor Statistics
- 9:50 a.m. **Does a Final Coverage Check Reduce Census Coverage Errors?**—◆ Elizabeth Martin, U.S. Census Bureau; Don Dillman, Washington State University
- 10:05 a.m. **Nonresponse Bias Analysis in the 2003 National Survey of Recent College Graduates**—◆ Aref Dajani, U.S. Census Bureau; Jerry J. Maples, U.S. Census Bureau; Ronald S. Fecso, National Science Foundation

107 CC-606 ● Unit Nonresponse in Surveys II—Contributed

Section on Survey Research Methods

Chair(s): Thanh Lê, Westat

- 8:35 a.m. **Modeling the Relationship between Cell Phone Usage and RDD Contact Effort**—◆ Joseph Sakshaug, University of Michigan
- 8:50 a.m. **Web versus Email Data Collection: Experience in the Current Employment Statistics Program**—Richard Rosen, Bureau of Labor Statistics; Antonio Gomes, Bureau of Labor Statistics; ◆ Louis Harrell, Bureau of Labor Statistics; Jason Chute, Bureau of Labor Statistics; Hong Yu, Bureau of Labor Statistics
- 9:05 a.m. **Effects of Incentives in the U.S. Consumer Expenditures Quarterly Survey**—◆ David McGrath, BAE Systems/BLS
- 9:20 a.m. **Indirect Monetary Incentives with a Complex Agricultural Establishment Survey**—◆ Daniel Beckler, National Agricultural Statistics Service; Kathleen Ott, National Agricultural Statistics Service
- 9:35 a.m. **A Study of Nonrespondents in the Canadian Vehicle Survey**—◆ Martin Beaulieu, Statistics Canada; Francois Gagnon, Statistics Canada
- 9:50 a.m. **The Impact of Questionnaire Length on Economic Census Return Rates**—◆ Diane K. Willimack, U.S. Census Bureau
- 10:05 a.m. **Respondents Reasons for Participation in Telephone Surveys**—◆ Nadra Garas, American University; Johnny Blair, Abt Associates Inc.

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

108

CC-2B

● ♦ Genetic Interactions/Genetic Imprinting—Contributed

Section on Statistics in Epidemiology, Biometrics Section, ENAR

Chair(s): Sanjay Shete, M. D. Anderson Cancer Center

- 8:35 a.m. **Case-Control Studies of Haplotype Environment Interactions with Genetic Misclassification—** ♦ Christine Spinka, University of Missouri-Columbia; Raymond J. Carroll, Texas A&M University; Nilanjan Chatterjee, National Cancer Institute
- 8:50 a.m. **Strategy for Analyzing Multifactorial Epidemiological Data Involving Host, Genetic, and Environmental Factors—** ♦ John Molitor, University of Southern California
- 9:05 a.m. **A Tree-Based Regression Model for Exploring Complex Gene-Gene and Gene-Environment Interactions—** ♦ Jinbo Chen, University of Pennsylvania; Terry M. Therneau, Mayo Clinic College of Medicine
- 9:20 a.m. **Genetic Interaction Networks in Association Studies of Complex Diseases—** ♦ Momiao Xiong, The University of Texas Health Science Center at Houston
- 9:35 a.m. **Estimation of Gene by Exposure Interactions in Case-Parent Triad Studies—** ♦ Tracy Bergemann, University of Minnesota
- 9:50 a.m. **Linkage Analysis of Affected Sib Pairs Allowing for Parent-of-Origin Effects: Multilocus Trait Models—** ♦ Chih-Chieh Wu, M. D. Anderson Cancer Center; Sanjay Shete, M. D. Anderson Cancer Center
- 10:05 a.m. **Testing for Genomic Imprinting Using Relative Pairs—** ♦ Wei Guo, The University of Hong Kong; Wing K. Fung, The University of Hong Kong

109

CC-611

● Nonstandard Regression and Correlation Problems with Environmental Data—Contributed

Section on Statistics and the Environment, WNAR

Chair(s): Bahman Shafii, University of Idaho

- 8:35 a.m. **Over-Estimation of Trend Caused by Negative Binomial Regression Fit to Zero-Inflated Count Data—** ♦ Mihoko Minami, The Institute of Statistical Mathematics
- 8:50 a.m. **Estimating Correlation with Multiply Censored Data—** ♦ Elizabeth Newton, Silent Spring

- Institute; Ruthann Rudel, Silent Spring Institute
- 9:05 a.m. **Bayesian Modeling for Ordinal Substrate Size Using EPA Stream Data—** ♦ Megan Dailey Higgs, Colorado State University; Jennifer A. Hoeting, Colorado State University; Brian Bledsoe, Colorado State University
- 9:20 a.m. **Empirical Evaluation of Sufficient Similarity in Dose-Responsiveness for Environmental Risk Assessment of Chemical Mixtures—** ♦ LeAnna G. Stork, Monsanto Company; Chris Gennings, Virginia Commonwealth University; W. Hans Carter, Jr., Virginia Commonwealth University; Linda Teuschler, U.S. Environmental Protection Agency; Edward W. Carney, The Dow Chemical Company
- 9:35 a.m. **Developing a Worldwide Botanical Database: Factors That Predict the Overlap of Collectors at Herbaria—** ♦ Cathy Furlong, FCPS/American University
- 9:50 a.m. **Semiparametric Composite Likelihood Inference in Spatial Generalized Linear Mixed Models—** ♦ Tatiyana Apanasovich, Cornell University
- 10:05 a.m. **Search for Multivariate Structure for EMAP Fish Data Using Partition Modeling Approach—** ♦ Feng Gao, Virginia Polytechnic Institute and State University; Eric P. Smith, Virginia Polytechnic Institute and State University; Samantha C. Prins, Virginia Polytechnic Institute and State University

110

CC-613

● Statistical Applications in Hydrology and Geosciences—Contributed

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

Chair(s): Bruce A. Craig, Purdue University

- 8:35 a.m. **Nonparametric Transfer Function Models for Hydrological Forecasting—** ♦ Heung Wong, The Hong Kong Polytechnic University
- 8:50 a.m. **Testing Outliers Using a Mixture Population When Some Data Are Missing and Training Data Are Unlabeled—** ♦ Aruna Saram, Sam Houston State University; Ferry Butar Butar, Sam Houston State University
- 9:05 a.m. **State-Space Models for within-Stream Network Dependence—** ♦ William Coar, Colorado State University; F. Jay Breidt, Colorado State University

- 9:20 a.m. **Estimation of Space-Time Branching Process Models in Seismology Using an EM-Type Algorithm**—✦ Alejandro Veen, IBM T.J. Watson Research Center; Frederic P. Schoenberg, University of California, Los Angeles
- 9:35 a.m. **Robust Estimation for Periodic Autoregressive Time Series**—✦ Qin Shao, The University of Toledo
- 9:50 a.m. **Functional Clustering of Water Pressure Data**—✦ Snehalata Huzurbazar, University of Wyoming
- 10:05 a.m. **Circulant Embedded Extended CAR Models for Large Spatial Data**—✦ Ernst Linder, University of New Hampshire

111 CC-210 Prediction and Classification in Genetics and Analysis of Phylogenetic Trees—Contributed

Biometrics Section, ENAR

Chair(s): Song Wu, University of Florida

- 8:35 a.m. **Boosting Nearest Shrunken Centroid Classifier for Microarray Data**—✦ Baolin Wu, University of Minnesota
- 8:50 a.m. **Robust-Affected Sib Pair Linkage Analysis for a Stratified Sample**—✦ Guan Xing, Case Western Reserve University; Tao Wang, Case Western Reserve University; Robert C. Elston, Case Western Reserve University; J. S. Rao, Case Western Reserve University
- 9:05 a.m. **Application of Bayesian Logistic Regression on Gene Expression Prediction**—✦ Yuan Yuan, Harvard University; Lei Guo, Harvard University; Lei Shen, GlaxoSmithKline; Jun Liu, Harvard University
- 9:20 a.m. **Statistical Learning for Analyzing Functional Genomic Data**—✦ Axel Benner, German Cancer Research Center; Carina Ittrich, German Cancer Research Center
- 9:35 a.m. **Nonnegative Matrix Factorization: a New Paradigm for Large-Scale Biological Data Analysis**—✦ Karthik Devarajan, Fox Chase Cancer Center
- 9:50 a.m. **A Two-Stage Peeling Algorithm and Its Applications to Phylogeny**—✦ Arindam Roy Choudhury, University of Washington; Joseph Felsenstein, University of Washington; Elizabeth A. Thompson, University of Washington

- 10:05 a.m. **Phylogeography of Modern Africa Gorillas Using MCMC**—✦ Joungyoun Kim, University of Wisconsin-Madison

112 CC-204 ● Bayesian Methods in Biopharmaceuticals—Contributed

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

Chair(s): Priya Kulkarni, Merck Research Laboratories

- 8:35 a.m. **Bayesian Adaptive Noninferiority Assessment with Safety Measure**—✦ Melissa Spann, Eli Lilly and Company; Stacy Lindborg, Eli Lilly and Company; John W. Seaman, Baylor University
- 8:50 a.m. **Bayesian Sequential Analysis for Survival Data**—✦ Lili Zhao, The University of Iowa; George G. Woodworth, The University of Iowa
- 9:05 a.m. **Bayesian Approach for Predicting the Margin of Safety in Nonclinical Safety Assessment Studies: a Case Study**—✦ Gheorghe Doros, Yale University; Vientcent Reynolds, Eli Lilly and Company; Eyas Aby-Raddad, Eli Lilly and Company
- 9:20 a.m. **Bayesian and Composite Designs for Drug Combination Studies**—✦ Yuehui Wu, GlaxoSmithKline; Vladimir Dragalin, GlaxoSmithKline; Vlareii Fedorov, GlaxoSmithKline
- 9:35 a.m. **A Bayesian Simulation-Based Approach in Investigating Physiologically-Based Drug-Drug Interaction Prediction**—✦ Zhiping Wang, Indiana University Purdue University Indianapolis; Lang Li, Indiana University; Stephen Hall, Indiana University
- 9:50 a.m. **Bayesian Adaptive Dose Selection**—Melissa Spann, Eli Lilly and Company; ✦ David Manner, Eli Lilly and Company; John W. Seaman, Baylor University
- 10:05 a.m. **Predicting Phase III Trial**—✦ Madhuja Mallick, Merck Research Laboratories; Bret Musser, Merck Research Laboratories

GENERAL PROGRAM SCHEDULE

⚙ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

113 CC-212 ● Diagnostic Tests and Cancer Screening—Contributed

Biometrics Section, Section on Health Policy Statistics, ENAR

Chair(s): John M. Williamson, Centers for Disease Control and Prevention

- 8:35 a.m. **Bootstrap Confidence Intervals for the Area under the ROC Curve**—♦ Gengsheng Qin, Georgia State University; Lejla Hotilovac, Georgia State University
- 8:50 a.m. **Analysis of Medical Diagnostic Test Data with a Test Ignorance Region**—♦ Andrzej Kosinski, Duke University
- 9:05 a.m. **Skill Curves: a New Method for Evaluating Diagnostic Tests**—Russell Zaretzki, University of Tennessee; ♦ William M. Briggs, Weill Medical College of Cornell University
- 9:20 a.m. **Incorporation of Metabolic Insight into Analysis of High-Dimensional Structural Lipid Datasets**—♦ Michelle Wiest, Lipomics Technologies, Inc.; UyenThao Nguyen, Lipomics Technologies, Inc.; Aldo Bernasconi, Lipomics Technologies, Inc.
- 9:35 a.m. **Challenges for Statisticians in Cervical Cancer Screening Research**—♦ Jong Soo Lee, M. D. Anderson Cancer Center
- 9:50 a.m. **Quantitative Impact of Length-Biased Sampling in Cancer Screening**—♦ Sonya Heltshe, University of Colorado at Denver and Health Sciences Center; Karen Kafadar, University of Colorado
- 10:05 a.m. **Bayesian Inference for the Lead Time in Periodic Cancer Screening**—♦ Dongfeng Wu, Mississippi State University; Gary L. Rosner, M. D. Anderson Cancer Center; Lyle D. Broemeling, M. D. Anderson Cancer Center

114 CC-620 Estimation—Contributed

Section on Statistical Computing

Chair(s): Andrzej Galecki, University of Michigan

- 8:35 a.m. **The Gentle Side of Kalman Filtering**—♦ Yolanda Munoz Maldonado, The University of Texas School of Public Health
- 8:50 a.m. **On Some Aspects of Estimation of a Common Mean of Two Independent Normal Populations**—♦ Pranab Mitra, University of Maryland Baltimore County

- 9:05 a.m. **A Comparison Study of Procedures for Estimating the Tail Index of Heavy-Tailed Distributions**—♦ Bruno C. de Sousa, Universidade do Minho; George Michailidis, University of Michigan
- 9:20 a.m. **Estimation of the Parameter of the Skewed Double Exponential Distributions**—♦ Keshav Jagannathan, Coastal Carolina University
- 9:35 a.m. **A Note on the Estimation of Extreme Value Distributions Using Maximum Product of Spacings**—♦ Tony Siu Tung Wong, The University of Hong Kong; Wai K. Li, The University of Hong Kong
- 9:50 a.m. **Inference on the Mean Parameter of the Skewed Distribution**—♦ Toshinari Kamakura, Chuo University
- 10:05 a.m. **Comparing Ratio Estimators Based on Systematic Samples**—♦ Hasan Hamdan, James Madison University

115 CC-605 ● Statistical Methods and Applications—Contributed

General Methodology

Chair(s): Lori Dodd, National Cancer Institute

- 8:35 a.m. **On the Stability of Statistical Tests**—♦ Daniele De Martini, Università del Piemonte Orientale
- 8:50 a.m. **A Test of Independence in Two-Way Contingency Tables Based on Maximal Correlation**—♦ Deniz Yenigun, Bowling Green State University; Gabor Szekely, Bowling Green State University
- 9:05 a.m. **Multiple Comparison Procedures**—♦ Yan Li, The Pennsylvania State University
- 9:20 a.m. **Using Permutation Tests To Study Infant Handling by Female Baboons**—♦ Thomas Moore, Grinnell College; Vicki Bentley-Condit, Grinnell College
- 9:35 a.m. **Selection Bias Due to Immigration in Pharmacoepidemiologic Studies**—♦ Henrik Stovring, University of Southern Denmark
- 9:50 a.m. **Playing Fast and Loose with Time and Space: Statistics in Forensic Science**—♦ Max Houck, West Virginia University
- 10:05 a.m. **Identifying and Interpreting Regional Convergence Clusters across Europe: Asymptotic versus Bootstrapped Inference**—♦ Luisa Corrado, University of Cambridge; Melvyn Weeks, University of Cambridge

116 CC-401 Frontiers in Bioinformatics—Contributed

IMS, Biometrics Section, ENAR

Chair(s): Biao Xing, Genentech, Inc.

- 8:35 a.m. Nonparametric Functional Mapping of Quantitative Trait Loci with Incomplete Genotypic Data**—❖ Jie Yang, University of Florida; George Casella, University of Florida
- 8:50 a.m. Context-Dependent Models for Discovery of Transcription Factor Binding Sites**—❖ Chuancai Wang, The Pennsylvania State University; Jun Xie, Purdue University; Bruce A. Craig, Purdue University
- 9:05 a.m. Estimating the Variation in S Phase Duration Using Branching Processes**—❖ Sara Larsson, Lund University
- 9:20 a.m. Determination of Differentially Expressed Features in a Combined LC-MS and LC-MS/MS Proteomics Work Flow**—❖ Olga Vitek, Institute for Systems Biology; Andrew Garbutt, Institute for Systems Biology; Ruedi Aebersold, Institute for Molecular Systems Biology
- 9:35 a.m. Estimation of Variance in Two-Way Semilinear Models**—❖ Weihua Tang, Rutgers University; Jian Huang, The University of Iowa; Cun-Hui Zhang, Rutgers University
- 9:50 a.m. Treating Expression Levels of Different Genes as a Sample: Does It Do a Good Job?**—❖ Andrei Yakovlev, University of Rochester; Lev Klebanov, Charles University
- 10:05 a.m. Model-Based Analysis of Tiling-Arrays for ChIP-chip**—❖ William Evan Johnson, Harvard University; Wei Li, Dana Farber Cancer Institute; Clifford Meyer, Dana Farber Cancer Institute; X. Shirley Liu, Dana Farber Cancer Institute

117 CC-601 Frames—Contributed

Section on Government Statistics

Chair(s): Leonard Gaines, Empire State Development

- 8:35 a.m. A Confidence Set for Estimates from Data Collected Using Double Sampling**—❖ Zhanyun Zhao, Mathematica Policy Research, Inc.; John Hall, Mathematica Policy Research, Inc.
- 8:50 a.m. Using Sensitivity Analysis To Manage Uncertain Matching in Multiple Systems Estimation**—❖ Patrick Ball, Human Rights Data Analysis

Group; Scott Weikart, Human Rights Data Analysis Group; Rapheal Kaplan, Human Rights Data Analysis Group; Romesh Silva, Human Rights Data Analysis Group; Jeff Klingner, Human Rights Data Analysis Group

- 9:05 a.m. Measuring Employment and Wages in the Aftermath of Hurricanes Katrina and Rita**—❖ Linda Unger, Bureau of Labor Statistics; Richard Clayton, Bureau of Labor Statistics
- 9:20 a.m. How Quickly Do New Construction Addresses Appear on the Delivery Sequence File?**—❖ Tina Flanagan, U.S. Census Bureau; Clifford Loudermilk, U.S. Census Bureau
- 9:35 a.m. Evaluation of Two Subcategories of the Delivery Sequence File**—❖ Robert Colosi, U.S. Census Bureau; Aliza Kwiat, U.S. Census Bureau
- 9:50 a.m. Identifying and Accounting for Mergers and Acquisitions in Measuring Employment**—❖ Gordon Mikkelsen, Bureau of Labor Statistics; Linda Unger, Bureau of Labor Statistics; Doreen LeBel, Connecticut Department of Labor
- 10:05 a.m. Floor Discussion**

118 CC-616 ● Process Monitoring—Contributed

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

Chair(s): William H. Woodall, Virginia Polytechnic Institute and State University

- 8:35 a.m. Monitoring in the Presence of Dynamically Changing Observations**—❖ Emmanuel Yashchin, IBM Research
- 8:50 a.m. Statistical Monitoring of Heteroscedastic Dose-Response Profiles from High-Throughput Screening**—❖ James D. Williams, GE Global Research; Jeffrey B. Birch, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University; Nancy Ferry, DuPont Crop Protection
- 9:05 a.m. Profile Monitoring via Linear Mixed Models**—❖ Willis Jensen, W. L. Gore & Associates, Inc.; Jeffrey B. Birch, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University

GENERAL PROGRAM SCHEDULE

⚙ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 9:20 a.m. **Monitoring of the Process Mean with Double Sampling EWMA Control Charts**—♦ Keunpyo Kim, PRA International; Marion R. Reynolds, Jr., Virginia Polytechnic Institute and State University
- 9:35 a.m. **Multivariate SPC for Batch Processes**—Benjamin M. Adams, The University of Alabama; ♦ Young Kim, The University of Alabama
- 9:50 a.m. **Estimation of Process Parameters To Determine the Optimum Diagnosis Interval for Control of Defective Items**—♦ Abhyuday Mandal, University of Georgia; Tirthankar Dasgupta, Georgia Institute of Technology
- 10:05 a.m. **An Extension of a Change Point Problem**—♦ Albert Vexler, National Institute of Child Health & Human Development; Chengqing Wu, National Institute of Child Health & Human Development; Aiyi Liu, National Institute of Child Health & Human Development; Brian W. Whitcomb, National Institute of Child Health & Human Development; Enrique F. Schisterman, National Institute of Child Health & Human Development

119

● Mixture Modeling—Contributed

Section on Nonparametric Statistics

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

- 8:35 a.m. **Nonparametric Mixture Regression**—♦ Alex Rojas, Carnegie Mellon University; Christopher Genovese, Carnegie Mellon University; Larry Wasserman, Carnegie Mellon University
- 8:50 a.m. **A New Approach to Modeling the PET Data and Input Function**—♦ Huiping Jiang, Columbia University
- 9:05 a.m. **Local Linear Regression by Mixture**—♦ Weixin Yao, The Pennsylvania State University
- 9:20 a.m. **A Mixture Model with Dependent Observations for the Analysis of CFSE-Labeling Experiments**—♦ Ollivier Hyrien, University of Rochester; Martin S. Zand, University of Rochester
- 9:35 a.m. **Prevalence Estimation from Multiple Incomplete Lists Using the Rasch Model**—♦ Changxuan Mao, University of California, Riverside

CC-617

- 9:50 a.m. **Semiparametric Mixture Approach for the Measurement Error Problem in the Presence of Additional Error-Free Covariate**—♦ Byungtae Seo, The Pennsylvania State University; Bruce G. Lindsay, The Pennsylvania State University
- 10:05 a.m. **Nonparametric Mixture Model**—♦ Mian Huang, The Pennsylvania State University

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

120

CC-3A

● ♦ Statistical Graphics: Applications in Drug Discovery and Clinical Development—Invited

Section on Statistical Graphics, Biometrics Section

Organizer(s): Stephen Kaluzny, Insightful Corporation

Chair(s): Stephen Kaluzny, Insightful Corporation

- 10:35 a.m. **Graphical Analysis of Clinical Data: Exploratory and Production Environments**—♦ Matthew Austin, Amgen Inc.
- 11:00 a.m. **Statistical Graphics: Applications in Drug Discovery and Clinical Development**—♦ C. George Rochester, U.S. Food and Drug Administration; Charles K. Cooper, U.S. Food and Drug Administration; Mat Soukup, U.S. Food and Drug Administration; Ana Szarfman, U.S. Food and Drug Administration; Robert T. O'Neill, U.S. Food and Drug Administration
- 11:25 a.m. **Statistical Graphics for Effective Scientific and Business Decisionmaking throughout Drug Discovery, Development, Postmarketing, and Portfolio Management**—♦ Thomas G. Filloon, Procter & Gamble
- 11:50 a.m. Disc: Michael O'Connell, Insightful Corporation
- 12:10 p.m. **Floor Discussion**

121 CC-3B Machine Learning and beyond: a Session in Memory of Leo Breiman—Invited

Memorial, Section on Statistical Computing, Section on Statistical Graphics,
Section on Nonparametric Statistics

*Organizer(s): Elizaveta Levina, University of Michigan; Vijay Nair,
University of Michigan*

Chair(s): Elizaveta Levina, University of Michigan

**10:35 a.m. Leo's Many Lives: Probabilist, Statistician,
Applied and Theoretical, Machine-Learning
Guru and Gadfly—♦ Peter J. Bickel, University of
California, Berkeley**

**11:05 a.m. Predictive Learning via Rule Ensembles—
♦ Jerome H. Friedman, Stanford University**

**11:35 a.m. Random Forests: Variable Importance and
Proximities—♦ Adele Cutler, Utah State
University**

12:05 p.m. Floor Discussion

122 CC-616 ● ⊗ **Balancing the Multiple Objectives of a Good Design of Experiments—Invited**

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

*Organizer(s): Christine M. Anderson-Cook, Los Alamos National
Laboratory*

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

**10:30 a.m. The Effect of Cost and Other Constraints on
Optimal Split-Plot Designs—♦ Alejandro
Heredia-Langner, Pacific Northwest National
Laboratory; Timothy Robinson, University
of Wyoming; Christine M. Anderson-Cook,
Los Alamos National Laboratory; Douglas C.
Montgomery, Arizona State University**

**11:05 a.m. Evaluation Criteria for Second-Order Split-
Plot Designs—♦ Peter A. Parker, National
Aeronautics and Space Administration; Christine
M. Anderson-Cook, Los Alamos National
Laboratory; Timothy Robinson, University of
Wyoming; Li Liang, Duke Clinical Research
Institute**

**11:35 a.m. Criteria for Designing Experiments: Some
Practical Considerations—♦ Douglas C.
Montgomery, Arizona State University**

12:05 p.m. Floor Discussion

123 CC-608 Consistency and Convergence Rates for Bayesian Methods—Invited

Section on Bayesian Statistical Science

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

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

**10:35 a.m. On Posterior Consistency in Nonparametric
Regression Problems—♦ Taeryon Choi,
University of Maryland Baltimore County**

**11:05 a.m. Rates of Convergence for Posterior
Distributions—♦ Stephen Walker, University of
Kent**

STUDENT MIXER



MONDAY, AUGUST 7

6:00 p.m.–7:00 p.m.

Sheraton-Metropolitan B Ballroom

GENERAL PROGRAM SCHEDULE

⚙ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

11:35 a.m. **Recent Advances in Posterior Convergence Problem**—♦ Subhashis Ghosal, North Carolina State University

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

124

CC-617

● ⚙ Theory and Analysis of Complex Networks—Invited

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

Organizer(s): Cosma Shalizi, Carnegie Mellon University

Chair(s): Cosma Shalizi, Carnegie Mellon University

10:35 a.m. **Community Detection in Large Networks**—♦ Jörg Reichardt, University of Bremen

11:00 a.m. **Semimetric and Scale-Free Structure in Document Networks**—♦ Luis Rocha, Indiana University

11:25 a.m. **Exponential-Family Models of Random Graphs for Social Networks**—♦ Martina Morris, University of Washington

11:50 a.m. **Depth Partitions and Hierarchical Structure in a Tokyo Industrial District**—Tsutomu Nakano, Kwansei Gakunin University; ♦ Douglas White, University of California, Irvine

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

125

CC-2B

● Real-Life Problems Advancing Missing Data Techniques—Invited

Biopharmaceutical Section, Biometrics Section, Section on Health Policy Statistics

Organizer(s): Sunni A. Barnes, Mayo Clinic College of Medicine

Chair(s): Sunni A. Barnes, Mayo Clinic College of Medicine

10:35 a.m. **Missing Data in Smoking Cessation Trials**—♦ Michael D. Larsen, Iowa State University; Sunni A. Barnes, Mayo Clinic College of Medicine; Paul Decker, Mayo Clinic College of Medicine; Darrell Schroeder, Mayo Clinic College of Medicine; Robert Klesges, Mayo Clinic College of Medicine; Mark W. Vander Weg, Mayo Clinic College of Medicine

11:00 a.m. **A Novel Pattern Mixture Model Applied to QOL Data**—♦ Page C. Moore, University of Arkansas for Medical Sciences; John W. Seaman, Baylor University; Sunni A. Barnes, Mayo Clinic College of Medicine

11:25 a.m. **The Impact of Missing Data and How It Is Handled on the Rate of False Positive Results in Drug Development**—♦ Stacy Lindborg, Eli Lilly and Company; Craig Mallinckrodt, Eli Lilly and Company; Michael K. Carter, Eli Lilly and Company; Sunni A. Barnes, Mayo Clinic College of Medicine

11:50 a.m. **Disc:** Nathaniel Schenker, National Center for Health Statistics

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

126

CC-4C-4

JASA Theory and Methods Invited Paper Session—Invited

JASA, Theory and Methods

Organizer(s): Walter W. Piegorsch, University of South Carolina

Chair(s): Stephen L. Portnoy, University of Illinois at Urbana-Champaign

10:35 a.m. **Quantile Autoregression**—♦ Roger Koenker, University of Illinois

11:20 a.m. **Disc:** Keith Knight, University of Toronto

11:35 a.m. **Disc:** Jianqing Fan, Princeton University

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

127

CC-619

● ⚙ Spatial Modeling To Address Problems in Ecology—Invited

Section on Statistics and the Environment, WNAR

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

Chair(s): Eric P. Smith, Virginia Polytechnic Institute and State University

10:35 a.m. **Geostatistical Modeling: Model Selection and Parameter Estimation**—♦ Jennifer A. Hoeting, Colorado State University

11:00 a.m. **Markov Chain Monte Carlo for a Spatial-Temporal Autologistic Regression Model**—♦ Jun Zhu, University of Wisconsin-Madison

11:25 a.m. **Application and Comparison of Alternative Spatial Modeling Approaches of Zero-Inflated Data**—♦ Mary C. Christman, University of Florida

11:50 a.m. **Disc:** Dale Zimmerman, The University of Iowa

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

128 CC-601 ● ☼ Cross-National Research on Immigration—Invited

Social Statistics Section

Organizer(s): Kevin Deardorff, U.S. Census Bureau

Chair(s): Pamela White, Statistics Canada

10:35 a.m. Measuring Migration between Canada and the United States: a Case Study for Best Practices—

Melissa L. Therrien, U.S. Census Bureau;
❖ Margaret Michalowski, Statistics Canada

11:00 a.m. Counting Immigrants and Expatriates: a New Perspective—❖ Jean-Christophe Dumont, Organisation for Economic Co-operation and Development; Georges LeMaitre, Organisation for Economic Co-operation and Development

11:25 a.m. Mexican Immigration to the United States: Challenges and Options—❖ Jeffrey S. Passel, Pew Hispanic Center

11:50 a.m. Disc: Angela Me, United Nations Economic Commission for Europe

12:10 p.m. Floor Discussion

129 CC-206 ● Subset Selection in Random Effects and Variance Component Models—Invited

ENAR, Biometrics Section, WNAR

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

Chair(s): David B. Dunson, National Institute of Environmental Health Sciences

10:35 a.m. A New Class of Model Selection Strategies with Applications in Mixed Model Selection—❖ Jiming Jiang, University of California, Davis

11:05 a.m. Variance Components and Reliability in FMRI Studies—❖ Hal Stern, University of California, Irvine; Sandip Sinharay, Educational Testing Service

11:35 a.m. BART: a Nonparametric Random Effects Model—Hugh A. Chipman, Acadia University; ❖ Edward I. George, University of Pennsylvania; Robert E. McCulloch, The University of Chicago

12:05 p.m. Floor Discussion

130 CC-400 ● Inference under Biased Sampling—Invited

General Methodology

Organizer(s): Barry I. Graubard, National Cancer Institute

Chair(s): Barry I. Graubard, National Cancer Institute

10:35 a.m. Estimation of Treatment Effects in Observational Studies—❖ Danny Pfeiffermann, Hebrew University/University of Southampton

11:00 a.m. Maximum-Likelihood Inference on a Mixed Conditionally and Marginally Specified Regression Model in Genetic Epidemiologic Studies with Two-Phase Sampling—❖ Nilanjan Chatterjee, National Cancer Institute; Yi-Hau Chen, Academia Sinica

11:25 a.m. The Design and Analysis of Two-Phase Sampling—❖ Alastair J. Scott, The University of Auckland; Christopher J. Wild, The University of Auckland; Yannan Jiang, The University of Auckland

11:50 a.m. Weighted Likelihood for Semiparametric Models and Two-Phase Stratified Samples with Application to Cox Regression—❖ Norman E. Breslow, University of Washington; Jon A. Wellner, University of Washington

12:15 p.m. Floor Discussion

Invited Panels 10:30 a.m.–12:20 p.m.

131 CC-401 ● ☼ Having an Impact in a Multidisciplinary Setting—Invited

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

Organizer(s): Janice Derr, U.S. Food and Drug Administration; Lillian Lin, Centers for Disease Control and Prevention

Chair(s): Christina M. Gullion, Kaiser Permanente Center for Health Research

- Panelists:**
- ❖ Janice Derr, U.S. Food and Drug Administration
 - ❖ Janet Powell, University of Washington
 - ❖ Lillian Lin, Centers for Disease Control and Prevention
 - ❖ Kevin Cain, University of Washington
 - ❖ W. Scott Clark, Eli Lilly and Company

12:15 p.m. Floor Discussion

GENERAL PROGRAM SCHEDULE

⚙ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

Topic-Contributed Sessions

10:30 a.m.–12:20 p.m.

132

CC-606

● ♦ Advances in Confidence Intervals on Variance Components—Topic-Contributed

Section on Health Policy Statistics

Organizer(s): Joseph Cappelleri, Pfizer Inc.

Chair(s): Kye Gilder, Biogen Idec

- 10:35 a.m. A Comparison of Two Confidence Interval Approaches on the Dependability Coefficient in a Two-Factor Crossed Design—♦ Joseph Cappelleri, Pfizer Inc.; Naitee Ting, Pfizer Inc.
- 10:55 a.m. Confidence Intervals on General Variance Components Model: Modified Large Sample Approach—♦ Yonghee Lee, Ewha Womans University
- 11:15 a.m. Confidence Intervals on Intermediate Precision Measures in Analytical Method Validations and Transfers—♦ Richard Burdick, Amgen Inc.; Shea Watrin, Amgen Inc.
- 11:35 a.m. Confidence Intervals of a Common Intraclass Correlation Coefficient—♦ Lili Tian, University of Buffalo
- 11:55 a.m. Disc: Naitee Ting, Pfizer Inc.
- 12:15 a.m. Floor Discussion

133

CC-602

● Recent Advances in Small-Area Issues—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Karabi Sinha, University of Illinois at Chicago

Chair(s): Karabi Sinha, University of Illinois at Chicago

- 10:35 a.m. Small-Area Modeling for Survey Data with Smoothed Error Covariance Structure via Generalized Design Effects—♦ Ralph Folsom, RTI International; Avinash C. Singh, Statistics Canada; Akhil Vaish, RTI International
- 10:55 a.m. Hierarchical and Empirical Bayesian Analysis of Bivariate Binary Data: an Application to Small-Area Estimation—♦ Ananya Roy, University of Florida; Malay Ghosh, University of Florida
- 11:15 a.m. Robust Estimation of the Mean Square Error of an EBLUP of a Small-Area Mean—♦ Shijie Chen, RTI International; Partha Lahiri, University of Maryland; Jon N. K. Rao, Carleton University

- 11:35 a.m. Small-Area Estimation Using Nonparametric Regression—♦ Tathagata Bandyopadhyay, Indian Institute of Management Ahmedabad
- 11:55 a.m. Bayesian Estimation of the Percentiles of Overweight—♦ Jai Choi, National Center for Health Statistics; Balgobin Nandram, Worcester Polytechnic Institute
- 12:15 p.m. Floor Discussion

134

CC-603

● Meta-analysis in Survey Research: Analysis of Multiple Response Rates and Other Applications—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Hiroaki Minato, National Opinion Research Center

Chair(s): Hiroaki Minato, National Opinion Research Center

- 10:35 a.m. Differences in Survey Nonresponse Components over Time in Various Domains—♦ Brad Edwards, Westat; David Cantor, Westat; Lisa Moses, Westat
- 10:55 a.m. Monitoring Survey Response Rates and Measuring Nonresponse Bias in a Federal Statistical Agency: National Center for Education Statistics (NCES)—♦ Marilyn Seastrom, National Center for Education Statistics
- 11:15 a.m. Sources of Variation in Response Rates to the Behavioral Risk Factor Surveillance System—♦ David W. Smith, The University of Texas School of Public Health
- 11:35 a.m. Meta-analysis in the Human Sciences—♦ Mack Shelley, Iowa State University
- 11:55 a.m. Disc: Allan L. McCutcheon, University of Nebraska-Lincoln
- 12:15 p.m. Floor Discussion

135

CC-609

● ♦ Recent Advances in Bayesian Computation and Bioinformatics—Topic-Contributed

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

Organizer(s): Raphael Gottardo, The University of British Columbia

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

- 10:35 a.m. Model-Based Correlations: a Tool for Revealing Interactions in Microarray Data—♦ Beatrix Jones, Massey University; Marie Fitch, Massey University

- 10:55 a.m. **Recent Developments in Population Monte Carlo**—✦ David Stephens, Imperial College London
- 11:15 a.m. **Multiple Testing Using the Posterior Probability of Half-Space: Application to Microarray Data**—✦ Aurelie Labbe, Universite Laval; Mary Thompson, University of Waterloo
- 11:35 a.m. **Markov Chain Density Estimation with Applications in Bioinformatics**—✦ Mark Briers, University of Cambridge; Arnaud Doucet, The University of British Columbia; Raphael Gottardo, The University of British Columbia
- 11:55 a.m. **Bayesian Analysis of ChIP-chip Experiments**—✦ Raphael Gottardo, The University of British Columbia
- 12:15 p.m. **Floor Discussion**

136 CC-203 ● ✦ Coalescent/Evolution Theory—Topic-Contributed

Section on Statistics in Epidemiology

Organizer(s): Ingo Ruczinski, The Johns Hopkins University

Chair(s): Varghese George, Medical College of Georgia

- 10:35 a.m. **The McDonald-Kreitman Test in Studies of Molecular Evolution**—✦ Jason Gardenier, The College of William & Mary
- 10:55 a.m. **Beyond the TDT**—✦ Knut Wittkowski, The Rockefeller University; Ephraim Sehayek, The Rockefeller University
- 11:15 a.m. **Coalescent Theory for a Completely Random Mating Monoecious Population**—✦ Edward Pollak, Iowa State University
- 11:35 a.m. **Poisson Stars and Phylogenetic Trees: Limits of Inferences on Population History**—✦ James Dunyak, The MITRE Corporation; Marc Colosimo, The MITRE Corporation; Lynette Hirschman, The MITRE Corporation
- 11:55 a.m. **Strategies for Optimally Identifying Significant SNPs in Case-Control and Trio Association Data**—✦ Christina Bromley, BioStat Solutions Inc.; Ronald L. Bromley, BioStat Solutions Inc.; Sandy Close Kirkwood, Eli Lilly and Company; Richard D. Hockett, Eli Lilly and Company; Nitai Mukhopadhyay, Eli Lilly and Company
- 12:15 p.m. **Floor Discussion**

137 CC-611 ● ✦ Bayesian Bioinformatics—Topic-Contributed

Section on Bayesian Statistical Science, Biometrics Section, ENAR

Organizer(s): Lynn Kuo, University of Connecticut

Chair(s): Ram Tiwari, National Institutes of Health

- 10:35 a.m. **Bayesian Analysis of EST Data with Multiple Libraries and Multiple Types of Tissues**—✦ Fang Yu, University of Connecticut; Ming-Hui Chen, University of Connecticut; Lynn Kuo, University of Connecticut; Peng Huang, Medical University of South Carolina; Wanling Yang, The University of Hong Kong
- 10:55 a.m. **Protein Structure Prediction: Statistical and Machine-Learning Approaches**—✦ Sujay Datta, Texas A&M University
- 11:15 a.m. **Identifying Activated Molecular Pathways Using Bayesian Methods**—✦ Yifang Zhao, University of Connecticut; Lynn Kuo, University of Connecticut; Dong-Guk Shin, University of Connecticut; Fang Yu, University of Connecticut
- 11:35 a.m. **Normalization of Microarrays in Transcription Inhibition Experiments**—✦ Yan Zheng, University of Minnesota; Cavan Reilly, University of Minnesota
- 11:55 a.m. **Bayesian Models for Pooling Microarray Studies with Multiple Sources of Replications**—✦ Erin Conlon, University of Massachusetts
- 12:15 p.m. **Floor Discussion**

138 CC-211 ● ✦ Statistical Issues in Cardiovascular Medical Device Clinical Trials—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

Organizer(s): Jeng Mah, American Medical Systems Inc.; Michael Lu, Edwards Life Sciences

Chair(s): Ning Li, U.S. Food and Drug Administration

- 10:35 a.m. **The Use of a Correlated Binary Data Model for Sample Size Calculation and Analysis of Accessions Data**—✦ John C. Evans, Boston Scientific Corporation; Corina M. Sirbu, Boston Scientific Corporation; Kay M. Larholt, Boston Scientific Corporation; Brian Johnson, Boston Scientific Corporation
- 10:55 a.m. **Statistical and Clinical Significance: a Practical Example Utilizing ST-Segment Monitor Endpoints in Acute ST Elevation MI (STEMI)**—✦ Cynthia Green, Duke Clinical Research Institute

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 11:15 a.m. **An Application of Propensity Score Method in Medical Device Trials**—❖ Minglei Liu, Medtronic, Inc.; Jianming Wang, Medtronic, Inc.; Jane Gau, Medtronic, Inc.
- 11:35 a.m. **Patient-Prosthesis Mismatch and Operative Mortality after Aortic Valve Replacement Surgery**—❖ Sean M. O'Brien, Duke University; Elizabeth R. DeLong, Duke University; Lawrence H. Muhlbauer, Duke University; Charles R. Bridges, University of Pennsylvania; Eric D. Peterson, Duke University
- 11:55 a.m. **Receiver Operating Characteristic Curve Method for Evaluating Surrogate Endpoints for Predicting Target Lesion Revascularization in a Second-Generation Drug Eluting Stent Trial**—❖ Hong Wang, Boston Scientific Corporation; Sarah Bass, Boston Scientific Corporation; Peter S. Lam, Boston Scientific Corporation
- 12:15 p.m. **Floor Discussion**

139

CC-214

● Methods in Cancer Research—Topic-Contributed

Biometrics Section, ENAR

Organizer(s): Terry Hyslop, Thomas Jefferson University

Chair(s): Karla V. Ballman, Mayo Clinic College of Medicine

- 10:35 a.m. **A Primer on Quantitative RT-PCR (q-RT-PCR) with Applications in Colorectal Cancer Biomarker Studies**—❖ Terry Hyslop, Thomas Jefferson University; Yanyan Li, Thomas Jefferson University; Inna Chervoneva, Thomas Jefferson University
- 10:55 a.m. **Estimation of RT-PCR Amplification Efficiency with Application to Relative Quantification**—❖ Inna Chervoneva, Thomas Jefferson University; Yanyan Li, Thomas Jefferson University; Terry Hyslop, Thomas Jefferson University; Boris Iglewicz, Temple University
- 11:15 a.m. **Sample Size for FDR-Control in Microarray Data Analysis**—❖ Sin-Ho Jung, Duke University
- 11:35 a.m. **An Experimental Design for Clinical Trials Evaluating Combination Agents**—❖ Christine McLaren, University of California, Irvine; Vernon M. Chinchilli, The Pennsylvania State University; Wen-Pin Chen, Chao Family Comprehensive Cancer Center; Frank L. Meyskens, Chao Family Comprehensive Cancer Center

- 11:55 a.m. **Adaptive Phase I Clinical Trial Designs for Biologic Agents and Molecularly Targeted Therapies**—❖ Sumithra Mandrekar, Mayo Clinic College of Medicine; Daniel Sargent, Mayo Clinic College of Medicine
- 12:15 p.m. **Floor Discussion**

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

140

CC-607

Expanding Access to Research Data: Reconciling Risks and Opportunity—Topic-Contributed

Section on Government Statistics, Section on Statistical Education, Section on Statistical Consulting

Organizer(s): Connie Citro, Committee on National Statistics

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

- Panelists:** ❖ Eleanor Singer, University of Michigan
❖ Margo Anderson, University of Wisconsin-Milwaukee
❖ John Haltiwanger, University of Maryland
❖ Daniel Weinberg, U.S. Census Bureau
❖ Donald Rubin, Harvard University

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

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

141

CC-210

Causal Inference and Noncompliance—Contributed

Biometrics Section, Section on Health Policy Statistics, ENAR

Chair(s): Ming An, The Johns Hopkins University

- 10:35 a.m. **On Estimating Treatment Effects under Noncompliance in Randomized Clinical Trials**—❖ Heejeung Bang, Cornell University; Clarence E. Davis, The University of North Carolina at Chapel Hill
- 10:50 a.m. **Efficient Nonparametric Estimation of Causal Effects in Randomized Trials with Noncompliance**—❖ Jing Cheng, University of Pennsylvania; Dylan S. Small, University of

Pennsylvania; Thomas R. Ten Have, University of Pennsylvania; Zhiqiang Tan, The Johns Hopkins University

- 11:05 a.m. Nested Markov Compliance Class Model in the Presence of Time-Varying Noncompliance—**✦ Julia Lin, University of Pennsylvania; Thomas R. Ten Have, University of Pennsylvania; Michael R. Elliott, University of Michigan

- 11:20 a.m. Use of a Marginal Structural Model To Estimate the Causal Effect of Epoetin Use on Hematocrit Value among Hemodialysis Patients—**✦ Yi Zhang, Medical Technology and Practice Patterns Institute; Mae Thamer, Medical Technology and Practice Patterns Institute; Dennis J. Cotter, Medical Technology and Practice Patterns Institute; James Kaufman, U.S. Department of Veterans Affairs/VA Boston Healthcare System; Miguel A. Hernán, Harvard School of Public Health

- 11:35 a.m. The Causal Effect of Finasteride on the Severity of Prostate Cancer—**✦ Bryan Shepherd, Vanderbilt University; Mary W. Redman, Southwest Oncology Group; Donna P. Ankerst, University of Munich

- 11:50 a.m. Location Design in Location-Controlled Follow-up Studies—**✦ Fan Li, The Johns Hopkins Bloomberg School of Public Health

- 12:05 p.m. How To Make Inference from Experiments Conducted on Populations with Different Disease Determinants—**✦ Steven D. Mark, University of Colorado Health Sciences Center

142 CC-610 Nonparametric Regression Methods I—Contributed

Section on Nonparametric Statistics

Chair(s): Veera Baladandayuthapani, M. D. Anderson Cancer Center

- 10:35 a.m. Two-Sample Comparison with Long Memory Errors—**✦ Fang Li, Indiana University Purdue University Indianapolis
- 10:50 a.m. Some Diagnostic Methods for Choosing the Degree of Smoothing in Nonparametric Regression—**✦ Craig Andres, Kettering University; Robert Kushler, Oakland University
- 11:05 a.m. Spline-Backfitted Kernel Smoothing of Additive Regression Models—**✦ Jing Wang, Michigan State University; Lijian Yang, Michigan State University

- 11:20 a.m. Boundary Kernel Method in Nonparametric Deconvolution—**✦ Shunpu Zhang, University of Nebraska-Lincoln

- 11:35 a.m. Double-Smoothing for Bias Reduction in Local Linear Regression—**✦ Hua He, University of Rochester Medical Center; Li-Shan Huang, University of Rochester

- 11:50 a.m. A Comparative Study of Stage-1 and Stage-2 Semiparametric Estimation of Hemodynamic Response Function for fMRI Data—**✦ Chunming Zhang, University of Wisconsin-Madison; Yuan Jiang, University of Wisconsin-Madison; Tao Yu, University of Wisconsin-Madison

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

143 CC-605 Contributions in National Security—Contributed

Section on Statisticians in Defense and National Security

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

- 10:35 a.m. Albert Einstein: Centennial Appreciation of a Master Statistician—**✦ Boris Iglewicz, Temple University

- 10:50 a.m. Toward Effective Anomaly Detection in Public Health Surveillance—**✦ Colin Goodall, AT&T Labs-Research; Sylvia Halasz, AT&T Labs-Research; Arnold Lent, AT&T Labs - Research; Simon Tse, AT&T Labs - Research; John Allegra, Emergency Medical Associates Research Foundation; Dennis Cochrane, Emergency Medical Associates Research Foundation

- 11:05 a.m. A Bayesian Approach to Radiographic Surveillance in Children—**✦ Namhee Kim, The Ohio State University; Prem K. Goel, The Ohio State University; Bema Bonsu, Columbus Children's Hospital; M. Marvin, Children's Hospital

- 11:20 a.m. Statistical Analysis of Department of Energy Safety Data—**✦ Rama Sastry, U.S. Department of Energy

- 11:35 a.m. Time Transformation Methods for Analyzing Time Series with Time-Varying Frequencies—**✦ James R. Haney, Southern Methodist University; Wayne A. Woodward, Southern Methodist University; Henry L. Gray, Southern Methodist University

GENERAL PROGRAM SCHEDULE

✧ Themed Session ● Applied Session ✦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

11:50 a.m. Minimum Hellinger Distance Estimation Using Synthetic Data—✦Bret Hanlon, Cornell University; Anand Vidyashankar, Cornell University

12:05 p.m. Error Modeling in Vector-Based GIS Data—
✦Kimberly Love, Virginia Polytechnic Institute and State University; Keying Ye, The University of Texas at San Antonio; Eric P. Smith, Virginia Polytechnic Institute and State University; Stephen Prisley, Virginia Polytechnic Institute and State University

144

● ✧ Epidemiologic Modeling—Contributed

Section on Statistics in Epidemiology, ENAR

Chair(s): Liang Li, The Cleveland Clinic

10:35 a.m. A Minimum-Distance Approach to Logistic Regression via the Case-Control Formulation—
✦Howard Bondell, North Carolina State University

10:50 a.m. A Wavelet-Based Method for the Prospective Monitoring of Disease Incidence Counts in Space and Time—✦J. Brooke Marshall, Virginia Polytechnic Institute and State University; Dan Spitzner, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University

11:05 a.m. Estimating the Causal Effect of LTVV on ALI with G-Computation—✦Weiwei Wang, The Johns Hopkins University; Daniel Scharfstein, The Johns Hopkins Bloomberg School of Public Health; Dale Needham, Johns Hopkins Medical Institutions; Roy Brower, Johns Hopkins Medical Institutions; Peter Pronovost, Johns Hopkins Medical Institutions

11:20 a.m. Joint Modeling of Birthweight and Gestational Age—✦Betsy Enstrom, Duke University; Alan E. Gelfand, Duke University; Geeta K. Swamy, Duke University Medical Center; Marie L. Miranda, Duke University

11:35 a.m. A Cross-Cultural Investigation of College Student Alcohol Consumption: a Classification Trees Analysis—✦Panagiota Kitsantas, East Carolina University; Anastasia Kitsantas, George Mason University; Tanya Anagnostopoulou, Hellenic Institute of Psychology and Health

11:50 a.m. Smoothing U.S. State Life Tables for Years 1999–2001—✦Rong Wei, National Center for Health Statistics; Lester R. Curtin, Centers for Disease Control and Prevention; Robert Anderson,

National Center for Health Statistics; Elizabeth Arias, National Center for Health Statistics

12:05 p.m. Clustered Odds Ratio—✦Wanjie Sun, The George Washington University; Patricia Cleary, The George Washington University; John M. Lachin, The George Washington University

145

● Survey-Based Estimation I—Contributed

Section on Survey Research Methods

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

10:35 a.m. Estimating Dynamic Price Indexes—✦Alan Dorfman, Bureau of Labor Statistics; Mary Kokoski, Bureau of Labor Statistics

10:50 a.m. Categorical Time Series Modeling Using Data from the Current Population Survey—✦Stephen Miller, Bureau of Labor Statistics

11:05 a.m. An Examination of Poststratification Techniques for the Behavioral Risk Factor Surveillance System—
✦Michael P. Battaglia, Abt Associates Inc.; Martin R. Frankel, Abt Associates Inc.; Michael W. Link, Centers for Disease Control and Prevention

11:20 a.m. Power Analysis of the Rao-Scott First-Order Adjustment to the Pearson Test for Homogeneity—✦Sunyeong Heo, Changwon National University

11:35 a.m. Estimating Counterfactual Temporal Trends—
✦Andrea Piesse, Westat; David R. Judkins, Westat

11:50 a.m. Testing the Robustness of HLM and SUDAAN—
✦Jiaquan Fan, Westat; David R. Judkins, Westat

12:05 p.m. Hierarchical Linear Modeling Using Complex Survey Data Based on the Pre-Elementary Education Longitudinal Study (PEELS)—
✦Hyunshik Lee, Westat; Frank Jenkins, Westat; Sunyeong Heo, Changwon National University

146

● ✧ Disease Surveillance Methods—Contributed

Section on Statistics in Epidemiology, Biometrics Section, ENAR

Chair(s): Lei Shen, The Ohio State University

10:35 a.m. Disease Outbreak Surveillance: Using Prescription Data as a Proxy Source for Detection—✦A. Elizabeth Allen, IMS Health; Kennon Copeland, IMS Health

10:50 a.m. A Comparison of Two Methods for Disease Surveillance—✦Gerald Shoultz, Grand Valley

CC-205

CC-604

CC-201

State University; Paul Stephenson, Grand Valley State University; J. Wanzer Drane, University of South Carolina

11:05 a.m. Prospective Surveillance of Influenza Data Using Hidden Markov Models—◆ Al Ozonoff, Boston University; Paola Sebastiani, Boston University

11:20 a.m. Modeling and Prediction of Influenza Outbreaks Using Chest Radiograph Data—Peter F. Craigmile, The Ohio State University; Namhee Kim, The Ohio State University; ◆ Soledad Fernandez, The Ohio State University; Bema Bonsu, Columbus Children's Hospital

11:35 a.m. Detection of Outbreaks in Syndromic Surveillance Data Using Monotonic Regression—◆ Jared Burdin, The MITRE Corporation; James Dunyak, The MITRE Corporation; Mojdeh Mohtashemi, The MITRE Corporation/MIT/AI Lab; Martin Kulldorff, Harvard Medical School/Harvard Pilgrim Health Care

11:50 a.m. Surveillance of Occupational Drivers Using k Nearest Neighbor Methods on the Line—◆ Svetla Slavova, University of Kentucky; Terry Bunn, University of Kentucky; Dmitri Pavlov, Pfizer Inc.; Richard J. Kryscio, University of Kentucky

12:05 p.m. A Mathematical Model for the Influence of the Pneumococcal Vaccine on S. pneumoniae Vaccine and Nonvaccine Serotypes—◆ Robertino Mera, GlaxoSmithKline

147 CC-620 Reliability and Life Testing—Contributed

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

Chair(s): Peter Hovey, University of Dayton

10:35 a.m. Estimating Failure Probability: Exploring Methods—◆ Jason Overstreet, Honeywell Inc.; Eric B. Howington, Coastal Carolina University; Alexia M. Athienitis-Makris, Applied Health Outcomes

10:50 a.m. Graphical Estimators of Location and Scale from Probability Plots with Censored Data—◆ Anupap Somboonsavatdee, University of Michigan; Vijay Nair, University of Michigan; Ananda Sen, University of Michigan

11:05 a.m. Design of Sudden Death Tests for Estimation of a Weibull Percentile—◆ John McCool, The Pennsylvania State University

11:20 a.m. Accelerate Life Test Planning with Independent Weibull Competing Risks with Known Shape Parameter—◆ Francis Pascual, Washington State University

11:35 a.m. Proportional Odds Families of Lifetime Distributions—◆ James Gleaton, University of North Florida; James Lynch, University of South Carolina

11:50 a.m. Robust Prediction and Extrapolation Designs for Censored Data—◆ Xiaojian Xu, University of Alberta

12:05 p.m. Comparison Sequential Testing for Reliability: Optimal Test Truncation—◆ Genady Grabarnik, IBM T. J. Watson Research Center; Haim Michlin, Technion-Israel Institute of Technology

148 CC-613 Assessment of Student Performance—Contributed

Section on Statistical Education

Chair(s): Joan Weinstein, Pine Manor College

10:35 a.m. Pedagogical Utilization and Assessment of the Statistic Online Computational Resource in Introductory Probability and Statistics Courses—◆ Juana Sanchez, University of California, Los Angeles; Ivo Dinov, University of California, Los Angeles; Nicolas Christou, University of California, Los Angeles

10:50 a.m. Assessing College Students' Success in the Elementary Statistics Course—◆ Jen-Ting Wang, SUNY at Oneonta; Shu-Yi Tu, University of Michigan; Yann-Yann Shieh,

11:05 a.m. Be Realistic! Analysis and Pedagogical Benefits of Soliciting Students' Exam Score Estimates—◆ Douglas M. Andrews, Wittenberg University

11:20 a.m. Predictors of Group Performance on Projects—◆ William L. Harkness, The Pennsylvania State University

11:35 a.m. Are the Students Ready for the Challenge?—◆ Mammo Woldie, Texas Southern University

11:50 a.m. A Comparison of Gender Performance on Parallel Mathematics Questions—◆ Kenn Pendleton, GED Testing Service

12:05 p.m. Changing Answers in Exams: for the Better or for the Worse?—◆ Juergen Symanzik, Utah State University; Natascha Vukasinovic, Utah State University

149

CC-614

● Insights for Advanced Undergraduate Statistics Courses—Contributed

Section on Statistical Education, Section on Statistical Consulting

Chair(s): William Peterson, Middlebury College

- 10:35 a.m. **Writing Experiences in a Second Statistics Class**—❖ Terry King, Northwest Missouri State University
- 10:50 a.m. **Datasets for Teaching Statistics and Design**—❖ Charles Stegman, University of Arkansas; Calli Holaway-Johnson, University of Arkansas
- 11:05 a.m. **Attracting the Brightest Students into Statistics**—❖ Greg Taylor, Winston-Salem State University
- 11:20 a.m. **Intermediate Statistics with SAS: Interactive**—❖ Phyllis Curtiss, Grand Valley State University
- 11:35 a.m. **Computer Activities To Support Learning Traditional Math Stat Topics**—❖ Mary Parker, The University of Texas at Austin/Austin Community College
- 11:50 a.m. **Teaching an Undergraduate Capstone Course in Statistical Consulting**—❖ Heather Smith, California Polytechnic State University, San Luis Obispo; John Walker, California Polytechnic State University, San Luis Obispo
- 12:05 p.m. **Integrating Statistical Knowledge through an Undergraduate Capstone Course**—❖ John Walker, California Polytechnic State University, San Luis Obispo; Heather Smith, California Polytechnic State University, San Luis Obispo

150

CC-612

Mixture Models and Misspecified Models—Contributed

Section on Bayesian Statistical Science

Chair(s): Sujit Ghosh, North Carolina State University

- 10:35 a.m. **Bayes Methodology Accounting for Uncertainty of Commonality in 'Random Effects' in a Linear Mixed Model**—❖ Guofen Yan, University of Virginia; Joseph Sedransk, Case Western Reserve University
- 10:50 a.m. **How Well Does a Logistic Regression Model Estimated with Complex, Multistage Survey Data Fit Data from a New Sample?**—❖ Tyson Rogers, University of Minnesota
- 11:05 a.m. **Bayesian Model for Misclassified Binary Response with Covariate Subject to**

Measurement Error—

❖ Anna McGlothlin, Baylor University

- 11:20 a.m. **Label Switching in Finite Mixture Models**—❖ Tong Wang, University of Southern California; Steven L. Scott, University of Southern California
- 11:35 a.m. **Bayesian Inference of Population Structure from Dominant Markers Using Mixture of Betas**—❖ Rongwei Fu, Oregon Health & Science University; Dipak Dey, University of Connecticut; Kent E. Holsinger, University of Connecticut
- 11:50 a.m. **Flexible Bayesian Variable Selection in Multivariate Linear Regression**—❖ Nan Lin, Washington University in St. Louis
- 12:05 p.m. **The Average Effects of Misspecified Models and Diffuse Interaction Models**—❖ Juxin Liu, The University of British Columbia; Paul Gustafson, The University of British Columbia

151

CC-618

Model Selection and Diagnostics—Contributed

IMS

Chair(s): Albert Kim, University of Washington

- 10:35 a.m. **AIC for Change-Point Models**—❖ Yoshiyuki Ninomiya, Kyushu University
- 10:50 a.m. **Iterative Bias Correction on Cross-Validation**—❖ Hirokazu Yanagihara, University of Tsukuba; Hironori Fujisawa, The Institute of Statistical Mathematics
- 11:05 a.m. **Model Assessment Tools for a Model False World**—❖ Jiawei Liu, Georgia State University; Bruce G. Lindsay, The Pennsylvania State University
- 11:20 a.m. **Context Tree Estimation for Not Necessarily Finite Memory Processes, via BIC and MDL**—❖ Zsolt Talata, Georgia Institute of Technology; Imre Csiszar, Alfréd Rényi Institute of Mathematics
- 11:35 a.m. **Variable Selection via Penalized Likelihood in Semiparametric Regression**—❖ Xiao Ni, North Carolina State University; Daowen Zhang, sanofi-aventis; Hao Zhang, North Carolina State University
- 11:50 a.m. **Highest Posterior Model Selection**—❖ Tanujit Dey, Case Western Reserve University; Hemant Ishwaran, The Cleveland Clinic; J. S. Rao, Case Western Reserve University

12:05 p.m. **Residuals and Diagnostics in Dirichlet Regression**—♦ Rafiq Hijazi, United Arab Emirates University

152 CC-213 ● Missing Covariates, Covariate Measurement Error, and Misclassification—Contributed

Biometrics Section, WNAR, ENAR

Chair(s): Sebastien Haneuse, Group Health Cooperative

10:35 a.m. **A Pseudolikelihood Approach for Analyzing Nutritional Epidemiologic Data in the Presence of Dietary Measurement Error**—♦ Samiran Sinha, Texas A&M University; Raymond J. Carroll, Texas A&M University; Bani K. Mallick, Texas A&M University

10:50 a.m. **Instrumental Variable Estimation in Logistic Regression Models with Measurement Error**—♦ Kimberly Weems, North Carolina State University; Leonard A. Stefanski, North Carolina State University

11:05 a.m. **Simultaneous Inference for Semiparametric Nonlinear Mixed-Effects Models with Covariate Measurement Errors and Missing Responses**—♦ Wei Liu, The University of British Columbia; Lang Wu, The University of British Columbia

11:20 a.m. **Sieve Maximum Likelihood Estimation for Missing Covariates in Regression Models**—♦ Qingxia Chen, Vanderbilt University; Donglin Zeng, The University of North Carolina at Chapel Hill; Joseph G. Ibrahim, The University of North Carolina at Chapel Hill

11:35 a.m. **Composite Tests Using Matrix Pooling: Minimizing Tests, Maximizing Results**—♦ Bethany Hedt, Harvard School of Public Health; Marcello Pagano, Harvard School of Public Health

11:50 a.m. **The Effect of Differential Misclassification in the Chuuk's Mudslide Study**—♦ Tzesan Lee, National Center for Environmental Health; Josephine Malilay, National Center for Environmental Health

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

153 CC-615 Inference—Contributed

Section on Statistical Computing

Chair(s): Anuradha Roy, The University of Texas at San Antonio

10:35 a.m. **Inference on Reliability in Two-Parameter Exponential Stress-Strength Model**—♦ Shubhabrata Mukherjee, University of Louisiana at Lafayette; Kalimuthu Krishnamoorthy, University of Louisiana at Lafayette; Huizhen Guo, Xavier University

10:50 a.m. **The Distribution of the S-Statistic for Samples of Size 4 Drawn from Uniform and Exponential Populations**—♦ Winston Richards, The Pennsylvania State University

11:05 a.m. **Modified Normal Approximations to the Binomial Distribution**—♦ David Vlieger, Northwest Missouri State University

11:20 a.m. **On the Simultaneous Lower Confidence Bounds for Order Restricted Inference**—♦ Chu-In C. Lee, Memorial University of Newfoundland; Jianan Peng, Acadia University; Lin Liu, University of California, San Diego

11:35 a.m. **A Partially Exchangeable Model and Its Applications in Correlated Data**—♦ Latonya Garner, University of Mississippi; Hanxiang Peng, University of Mississippi

11:50 a.m. **A Continuing Study on a New Resampling Method To Reduce Small-Sample Bias: an Extension to Nonnormal Distributions**—♦ Haiyan Bai, University of Cincinnati; Wei Pan, University of Cincinnati

12:05 p.m. **Shape-Restricted Regression Splines and Applications**—♦ Mary Meyer, University of Georgia

154 CC-2A ● Adaptive Methods—Contributed

Biopharmaceutical Section

Chair(s): Wei Zhong, ICON Clinical Research

10:35 a.m. **A Two-Stage Adaptive Design for Phase III Trials To Establish Noninferiority and Superiority**—♦ Yulan Li, Novartis Pharmaceuticals Corporation; Qing Liu, Johnson & Johnson; Jeffrey Maca, Novartis Pharmaceuticals Corporation

GENERAL PROGRAM SCHEDULE

⚙ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

10:50 a.m. Confidence Intervals Following an Adaptive Group Sequential Design—♦ Cyrus Mehta, Cytel Inc.

11:05 a.m. Implementing Adaptive Designs in Clinical Trials: Risks and Benefits—♦ Christopher Khedouri, U.S. Food and Drug Administration; Thamban Valappil, U.S. Food and Drug Administration; Mohammad Huque, U.S. Food and Drug Administration

11:20 a.m. Dynamic Treatment Allocation and Randomization Tests in Clinical Trials—♦ Lee-Lian Kim, Centocor R&D, Inc.; Yaung-Kaung Shen, Centocor R&D, Inc.; Jewel Johanns, Centocor R&D, Inc.; Aparna Raychaudhuri, Centocor R&D, Inc.

11:35 a.m. Resampling Methods for Adaptive Designs—♦ Hui Zhang, Bristol-Myers Squibb Company

11:50 a.m. Evaluating Exploratory and Confirmatory Evidence Collectively—♦ Qian Li, U.S. Food and Drug Administration

12:05 p.m. Adjusted Two-Sided Combination Tests for Adaptive Clinical Trials—♦ Zhilong Yuan, Johnson & Johnson Pharmaceutical R&D; Yang Song, Johnson & Johnson Pharmaceutical R&D; Xiaolong Luo, Johnson & Johnson Pharmaceutical R&D; George Chi, Johnson & Johnson Pharmaceutical R&D

155 CC-204 ● Analysis of Microarrays—Contributed

Biometrics Section, ENAR

Chair(s): Xueli Liu, University of Florida

10:35 a.m. Biweight Correlation as a Measure of Distance between Genes on a Microarray—♦ Aya Mitani, Pitzer College

10:50 a.m. Modified Wilcoxon Mann-Whitney Methods for Identifying Functional Gene Categories in Microarray Experiments—♦ Liu Hua, University of Kentucky; Constance Wood, University of Kentucky; Arnold J. Stromberg, University of Kentucky

11:05 a.m. MicroRNA Regulation of mRNA Expression in Neuronal Development—♦ Diane Richardson, Rutgers University; Rebecka Jornsten, Rutgers University

11:20 a.m. Point and Interval Predictions of Protein Concentrations in ELISA Microarray Assays—♦ Don S. Daly, Pacific Northwest National

Laboratory; Kevin K. Anderson, Pacific Northwest National Laboratory; Amanda M. White, Pacific Northwest National Laboratory; Susan S. Varnum, Pacific Northwest National Laboratory; Richard C. Zangar, Pacific Northwest National Laboratory

11:35 a.m. A Nonparametric Likelihood Ratio Test To Identify Differentially Expressed Genes from Microarray Data—♦ Sunil Mathur, University of Mississippi; Sankar Bokka, University of Mississippi

11:50 a.m. A Statistical Framework To Infer Functional Gene Associations from Multiple Biologically Dependent Microarray Experiments—♦ Siew-Leng Teng, University of California, Berkeley

12:05 p.m. Cluster Analysis for Gene Expression Data with Liquid Association Structure—♦ Yijing Shen, University of California, Los Angeles; Ker-Chau Li, University of California, Los Angeles; Shinseng Yuan, University of California, Los Angeles

156 CC-212 ● Models for Data Collected over Time—Contributed

Biometrics Section

Chair(s): Patrick Heagerty, University of Washington

10:35 a.m. Analysis of Mixture Random Effects Models for Longitudinal Data—♦ Yimeng Lu, Columbia University; Hongtu Zhu, Columbia University and New York State Psychiatric Institute; Thaddeus Tarpey, Wright State University; Eva Petkova, Columbia University

10:50 a.m. Nonparametric Inference for High-Dimensional Longitudinal Data—♦ Ke Zhang, Kansas State University; Haiyan Wang, Kansas State University

11:05 a.m. Violating the Assumption of Independence of the Error Components in the Linear Mixed Model for Longitudinal Data—♦ Matthew Gurka, University of Virginia; Lloyd Edwards, The University of North Carolina at Chapel Hill; Keith E. Muller, The University of North Carolina at Chapel Hill

11:20 a.m. A Marginal Model for Multistate Panel Data under Heterogeneity—♦ Wei-Ting Hwang, University of Pennsylvania School of Medicine

- 11:35 a.m. **Nonparametric Inference for Panel Count Data**—♦Ying Zhang, The University of Iowa
- 11:50 a.m. **Estimation of the Mean Function of Panel Count Data Using Monotone Polynomial Splines**—
♦Minggen Lu, The University of Iowa; Ying Zhang, The University of Iowa; Jian Huang, The University of Iowa
- 12:05 p.m. **Floor Discussion**

Topic-Contributed Poster Session 10:30 a.m.–12:20 p.m.

157 CC-Level 6 East Lobby Topic-Contributed Poster Session: Data Exposition—Topic-Contributed

Section on Statistical Graphics, Section on Statistical Computing, Section on Statistics and the Environment

Organizer(s): Paul Murrell, The University of Auckland

Chair(s): Maura E. Stokes, SAS Institute, Inc.

Graphics, visualization

- 01 **Using Data Mining Tools in the Study of NASA Ozone Data**—♦Wei-hong Wang, The College of New Jersey; Pin-Shuo Liu, William Paterson University
- 02 **Identifying Outliers in Multivariate Spatial Data**—
♦Anthony Franklin, Coastal Carolina University; Eric B. Howington, Coastal Carolina University; Keshav Jagannathan, Coastal Carolina University
- 03 **Exploratory Data Analysis of Meteorological Data Using SAS Stat Studio**—♦Frederick Wicklin, SAS Institute, Inc.; Yun Chen, North Carolina State University
- 04 **SparkMats: a Graphical Method of Exploring Spatially Distributed Time Series**—♦John Emerson, Yale University; Walton Green, Yale University
- 05 **Novel Two-Step Process for Graphically Summarizing Multivariate Spatial Temporal Data in Two Dimensions**—
♦Svetlana K. Eden, Vanderbilt University; Theresa A. Scott, Vanderbilt University; Angel An, Vanderbilt University; Jeffrey Horner, Vanderbilt University; Cathy Jenkins, Vanderbilt University
- 06 **Using Kriging and 3-D Graphics To Explore Trends of Total Column Ozone Amount and Tropospheric Weather Systems in Central America from 1995 to 2000**—♦Kening Wang, University of Arkansas; Charles Stegman, University of Arkansas; Sean W. Mulvenon, University of Arkansas; Yanling Xia, University of Arkansas
- 07 **Dynamic Data Visualization of Meteorological Data**—
♦Bruce Peterson, Terastat

- 08 **A Web-Centric Graphical Approach to Gain Insight into NASA's NUMB3RS**—♦Robert Allison, SAS Institute, Inc.
- 09 **Another View at Central America**—Hadley Wickham, Iowa State University; ♦Jonathan Hobbs, Iowa State University; Dianne Cook, Iowa State University; Heike Hofmann, Iowa State University
- 10 **Graphical Display of Model-Based Temperature Data**—♦Jeff Slezak, Mayo Clinic College of Medicine
- 11 **Multiple Lagged Differences in Spatial Time Series**—
Rafe Donahue, Vanderbilt University Medical Center; ♦Jeffrey Horner, Vanderbilt University
- 12 **Exploring Spatial and Temporal Characteristics of Atmospheric Ozone Concentration Using Visualization**—♦Sudeshna Paul, Purdue University; Souleymane Fall, Purdue University; Devdutta Niyogi, Purdue University; Bruce A. Craig, Purdue University
- 13 **Visualizing Several Abnormal Climate Changes in Central America from January 1995–December 2000**—
♦Sang-Hoon Cho, University of Wisconsin-Madison; Hyonho Chun, University of Wisconsin-Madison; Deepayan Sarkar, State University of Wisconsin
- 14 **Data Display Principles Revealed in the NASA Data**—
♦Rafe Donahue, Vanderbilt University Medical Center

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

158 CC-Level 6 East Lobby Contributed Posters—Contributed

General Methodology, Section on Statistical Computing, Biometrics Section, Section on Statistics and the Environment, Section on Statistical Graphics

Organizer(s): Maura E. Stokes, SAS Institute, Inc.

Chair(s): Maura E. Stokes, SAS Institute, Inc.

Cognitive science, linguistics, artificial intelligence

- 15 **Intervention Models To Avoid**—♦Bradley Huitema, Western Michigan University

Computational statistics, numerical methods

- 16 **JSL Scripts for Extending Available Statistical Tests in JMP Version 6**—♦Andy Mauromoustakos, University of Arkansas; Kevin Thompson, University of Arkansas

Data mining and knowledge discovery, machine learning

- 17 **Interactive Web Site for Data Analysis**—♦Roger Lamb, Saginaw Valley State University; Morteza Marzjarani, Saginaw Valley State University; Josh Urbain, Saginaw Valley State University

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

Graphics, visualization

- 18 **Novel Methods in the Visualization of Transitional Phenomena**—♦ Bruce Swihart, University of Colorado at Denver and Health Sciences Center; Brian Caffo, The Johns Hopkins University; Matthew Strand, University of Colorado at Denver and Health Sciences Center; Naresh Punjabi, The Johns Hopkins University
- 19 **Using Multivariate Statistical Techniques To Analyze Environmental Data**—♦ Kyle Bradford, James Madison University; Steaphanie Pearson, James Madison University

Speaker Luncheon 12:30 p.m.–1:50 p.m.

159 CC-4C-1 Statistics in Sports Speaker with Lunch (fee event)—Speaker with Lunch

Section on Statistics in Sports

Organizer(s): Scott Berry, Berry Consultants

- ML07 Every Play, Every Day: a Success Story for Statistics in Sports—♦ Gilbert Fellingham, Brigham Young University

Roundtables with Lunch 12:30 p.m.–1:50 p.m.

160 CC-4C-2 Section on Bayesian Statistical Science Roundtable with Lunch (fee event)

Section on Bayesian Statistical Science

Organizer(s): Merlise Clyde, Duke University

- ML08 Bayesian Bioinformatics—♦ Jeffrey S. Morris, M. D. Anderson Cancer Center

161 CC-4C-2 Biopharmaceutical Section Roundtables with Lunch (fee event)

Biopharmaceutical Section

Organizer(s): Amit Bhattacharyya, GlaxoSmithKline

- ML09 New Development and Challenges in Phase I and Phase I/II Dose-Finding Studies—♦ Weili He, Merck & Co., Inc.
- ML10 Analysis and Evaluation of Safety Information from Clinical Trial Data—♦ H. Amy Xia, Amgen Inc.
- ML11 Time-to-Event Analysis with Uncertain Endpoints—♦ Li Chen, Amgen Inc.

- ML12 Analyses of Stratified Trials: Tips for Improving Power—♦ Devan V. Mehrotra, Merck Research Laboratories
- ML13 Using Computer Simulation To Aid in Dose Selection in Clinical Trials—♦ Kenneth Liu, Merck & Co., Inc.
- ML14 Assessing the Concordance of Two-Measurement Methods—♦ Jason Liao, Merck Research Laboratories
- ML15 Pharmacogenomics for Drug Development and Personalized Medicine—♦ Xuejun Peng, Takeda Global Research and Development Center
- ML16 What To Do with Interaction Effects at Interim Analysis?—♦ Yuko Palesch, Medical University of South Carolina
- ML17 Preparation of Interim Reports for Independent Data Monitoring Committee Review—♦ KyungMann Kim, University of Wisconsin-Madison
- ML18 Statistical Design and Analysis Issues Associated with the Establishment of the Safety and Effectiveness of Medical Devices—♦ Gary Kamer, U.S. Food and Drug Administration
- ML19 Issues in Planning Two-Arm Clinical Trials of Active Drugs—♦ Sheela Talwalker, T'Walker Consulting
- ML20 Analysis of Multiple Failure Outcomes—♦ Guowen Sun, sanofi-aventis
- ML21 What Are the Statistical Issues in Subgroup Analysis - Design, Analysis, and Interpretation?—♦ Chul H. Ahn, U.S. Food and Drug Administration
- ML22 Conducting Multiple Event Analysis in Clinical Trials—♦ Xiang Zhang, Amgen Inc.

162 CC-4C-3 Business and Economics Statistics Section Roundtable with Lunch (fee event)

Business and Economics Statistics Section

Organizer(s): David Dickey, North Carolina State University

- ML23 MBA Statistics Courses Should Start with Regression—♦ J. Keith Ord, Georgetown University

163 CC-4C-3 Section on Statisticians in Defense and National Security Roundtable with Lunch (fee event)

Section on Statisticians in Defense and National Security

Organizer(s): Lara S. Schmidt, RAND Corporation

- ML24 Metrics for National Defense: What Metrics Would You Use To Measure Success or Make Decisions If You Were the Secretary of Defense or a Senator or Congressman?—♦ Nancy Spruill, Office of the Secretary of Defense

164 CC-4C-3 Section on Statistical Education Roundtables with Lunch (fee event)

Section on Statistical Education

Organizer(s): Patti Collings, Brigham Young University

- ML25 Service Learning throughout the Statistics Curriculum—
✦ Craig A. Johnson, Brigham Young University, Idaho
- ML26 Finding Internet Resources for Teaching Statistics Using
CAUSEweb—✦ Ginger Rowell, Middle Tennessee State
University
- ML27 What Can We Do To Implement the GAISE Guidelines in
Our Classrooms?—✦ Mary Parker, The University of
Texas at Austin/Austin Community College

165 CC-4C-3 Section on Statistics in Epidemiology Roundtable with Lunch (fee event)

Section on Statistics in Epidemiology

Organizer(s): Jennifer Clark Nelson, Group Health Cooperative

- ML28 Sampling from Large Cohorts When Covariate
Ascertainment Is Expensive—✦ William Barlow, Cancer
Research and Biostatistics

166 CC-4C-3 Section on Government Statistics Roundtable with Lunch (fee event)

Section on Government Statistics

Organizer(s): Roberta Sangster, Bureau of Labor Statistics

- ML29 Katrina: Unanticipated Data Needs—✦ Christa Jones,
U.S. Census Bureau

167 CC-4C-3 Section on Health Policy Statistics Roundtable with Lunch (fee event)

Section on Health Policy Statistics

Organizer(s): Bonnie Ghosh-Dastidar, RAND Corporation

- ML30 Measuring Health Disparities—✦ James Scanlan, James
P. Scanlan, Attorney at Law

168 CC-4C-3 Section on Physical and Engineering Sciences Roundtable with Lunch (fee event)

Section on Physical and Engineering Sciences

Organizer(s): Winson Taam, The Boeing Company

- ML31 Using All Them Machines: Grid Computing for Statistical

Applications—✦ Randall Tobias, SAS Institute, Inc.;
Peter Westfall, Texas Tech University

169 CC-4C-3 Section on Quality and Productivity Roundtables with Lunch (fee event)

Section on Quality and Productivity

Organizer(s): William R. Myers, Procter & Gamble

- ML32 Use of Genetic Algorithms in Experimental Design—
✦ John Borkowski, Montana State University
- ML33 Bayesian Methods in Reliability—✦ Alyson Wilson, Los
Alamos National Laboratory

170 CC-4C-3 Section on Risk Analysis Roundtable with Lunch (fee event)

Section on Risk Analysis

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

- ML34 Risks of Computerized Voting Systems—✦ Michael
Orkin, Exponent, Inc.

171 CC-4C-3 Section on Survey Research Methods Roundtables with Lunch (fee event)

Section on Survey Research Methods

Organizer(s): Steven G. Heeringa, University of Michigan

- ML35 The Importance of Nonresponse for Survey Design—
✦ Roger Tourangeau, University of Maryland
- ML36 Optimization of Survey Procedures in the Presence of
Limited Cost Information—✦ John L. Eltinge, Bureau of
Labor Statistics

172 CC-4C-3 Social Statistics Section Roundtable with Lunch (fee event)

Social Statistics Section

Organizer(s): Allen Schirm, Mathematica Policy Research, Inc.

- ML37 The Future of U.S. Income Statistics—✦ Connie Citro,
Committee on National Statistics

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

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

173 CC-4C-4 Late-Breaking Session #1: Statistical/ Mathematical Challenges in Biodefense Immune Modeling—Other

The ASA, ENAR, IMS, SSC, WNAR

Organizer(s): Hulin Wu, University of Rochester

Chair(s): Andrei Yakovlev, University of Rochester

2:05 p.m. **A Kernel Method for Subpopulation Discovery and Analysis in Polychromatic Flow Cytometry—**
David Foster, Duke University; Cliburn Chan, Duke University; ♦ Thomas B. Kepler, Duke University

2:30 p.m. **Multidimensional Scaling Analysis To Study Temporal Transcriptome Fingerprint Clustering in Human Dendritic Cells Infected with Wild-Type and Chimeric Viruses—**♦ Yongchao Ge, Mount Sinai School of Medicine; Ana Fernandez-Sesma, Mount Sinai School of Medicine; Thomas M. Moran, Mount Sinai School of Medicine; Stuart C. Sealfon, Mount Sinai School of Medicine

2:55 p.m. **Data Analysis for Multiplex Assays—**♦ Shlomo Ta'asan, Carnegie Mellon University

3:20 p.m. **Identifiability and Statistical Inverse Problems for Biomedical Dynamic Systems—**♦ Hulin Wu, University of Rochester

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

Invited Sessions 2:00 p.m.–3:50 p.m.

174 CC-205 Bayesian Finance—Invited

Business and Economics Statistics Section, Section on Bayesian Statistical Science

Organizer(s): Robert E. McCulloch, The University of Chicago; Nicholas Polson, The University of Chicago

Chair(s): Robert E. McCulloch, The University of Chicago

2:05 p.m. **Random Field and Affine Models for Interest Rates: an Empirical Comparison—**♦ Alan Bester, The University of Chicago

2:30 p.m. **Optimal Filtering of Jump-Diffusions: Extracting Latent States from Asset Prices—**Michael Johannes, Columbia University; ♦ Nicholas Polson, The University of Chicago; Jonathan Stroud, University of Pennsylvania

2:55 p.m. **Macroeconomic Filtering from the Yield Curve—**
♦ Satadru Hore, The University of Chicago

3:20 p.m. **Disc:** Nicholas Polson, The University of Chicago

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

175 CC-201 Section on Statistics in Sports Invited Session— Invited

Section on Statistics in Sports, Section on Statistical Education

Organizer(s): Kara Morgan

Chair(s): Kara Morgan

2:05 p.m. **An Objective Scoring Method for Graded Count Variables with Applications to Olympics and Baseball—**♦ John Daniels, Central Michigan University

2:35 p.m. **Evaluation and Analysis of the Impact of Recruiting on College Football—**♦ Justin W. Davis, University of Missouri-Columbia; David Annis, Naval Postgraduate School

3:05 p.m. **The Combination of Subjective Judgment with Statistical Projections in the Evaluation of a Baseball Player—**♦ Sig Mejdal, St. Louis Cardinals

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

176 CC-3B Forensic Statistics—Invited

Section on Statisticians in Defense and National Security

Organizer(s): David Banks, Duke University

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

2:05 p.m. **Another Look at the Kennedy Assassination—**
♦ Clifford Spiegelman, Texas A&M University

2:35 p.m. **Forensic Statistics: Intelligence, Evidence, and Law—**♦ David Kaye, Arizona State University

3:05 p.m. **The Probative Value of Trace Evidence: What Sources of Error Are Really Important?—**♦ Alicia Carriquiry, Iowa State University

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

177 CC-604 Variance Estimation in the Presence of Nonresponse and Outliers—Invited

Section on Survey Research Methods

Organizer(s): Ralf T. Münnich, University of Trier

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

- 2:05 p.m. **Estimation of the Total Variance of Survey Statistics under Unweighted Imputation—**
✦ Santanu Pramanik, University of Maryland; Partha Lahiri, University of Maryland
- 2:30 p.m. **Adjusted Jackknife for Imputation under Unequal Probability Sampling without Replacement—**
✦ Yves G. Berger, The University of Reading; Jon N. K. Rao, Carleton University
- 2:55 p.m. **Variance Estimation for Complex Surveys in the Presence of Outliers—**✦ Ralf T. Münnich, University of Trier; Beat Hulliger, Swiss Federal Statistical Office
- 3:20 p.m. Disc: Susanne Rässler, Institute for Employment Research
- 3:40 p.m. **Floor Discussion**

178 CC-210 ● ⊛ **Statistical Issues in Disaster Response—Invited**

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

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

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

- 2:05 p.m. **Statistical GeoInformatics of Hotspot Detection and Prioritization for Early Warning and Disaster Management—**✦ Ganapati P. Patil, The Pennsylvania State University; Luiz Duczmal, Universidade Federal de Minas Gerais; Reza Modarres, The George Washington University; Stephen L. Rathbun, University of Georgia
- 2:30 p.m. **Changing Perspectives in the Analysis of Natural Disaster Data—**✦ Maria J. Sirois, Tulane University; David Banks, Duke University
- 2:55 p.m. **Preparing for a Disaster—**✦ Vicki M. Bier, University of Wisconsin-Madison; Lee Clarke, Rutgers University
- 3:20 p.m. Disc: David Banks, Duke University
- 3:40 p.m. **Floor Discussion**

179 CC-613 ● ⊛ **Statistical Methods in Climate Modeling and Seismology—Invited**

WNAR, Section on Physical and Engineering Sciences, Section on Bayesian Statistical Science, Section on Statistics and the Environment

Organizer(s): Gabriel Huerta, University of New Mexico

Chair(s): Gabriel Huerta, University of New Mexico

- 2:05 p.m. **Probabilistic Projections of Climate Change: Bayesian Models for Analyzing Ensembles of Global Climate Models—**✦ Claudia Tebaldi, National Center for Atmospheric Research; Richard L. Smith, The University of North Carolina at Chapel Hill; Douglas W. Nychka, National Center for Atmospheric Research; Linda O. Mearns, National Center for Atmospheric Research
- 2:35 p.m. **Uncertainty Estimation in Geophysics—**✦ Mrinal K. Sen, The University of Texas at Austin
- 3:05 p.m. **Estimating Parametric Uncertainties of the Community Atmospheric Model (CAM3) and Processes Controlling Global Climate Change—**
✦ Charles S. Jackson, The University of Texas at Austin
- 3:35 p.m. **Floor Discussion**

180 CC-609 **Sensitivity Analysis for Missing Data and Causal Inference: Principles and Practice—Invited**

Biometrics Section

Organizer(s): Joseph W. Hogan, Brown University

Chair(s): Michael Daniels, University of Florida

- 2:05 p.m. **A Sensitivity Analysis Paradigm for Randomized Trials with Potentially Informative Censored Data—**✦ Daniel Scharfstein, The Johns Hopkins Bloomberg School of Public Health
- 2:35 p.m. **Mixture Models and Informative Priors for Analyzing Incomplete Longitudinal Data—**
✦ Joseph W. Hogan, Brown University
- 3:05 p.m. **Sensitivity Analysis for Instrumental Variables Regression with Overidentifying Restrictions—**
✦ Dylan S. Small, University of Pennsylvania
- 3:35 p.m. **Floor Discussion**

181 CC-211 **Management of Statistical Decisionmaking in a Large Organization—Invited**

Section on Physical and Engineering Sciences, Section on Statistical Education, Section on Statistical Consulting

Organizer(s): Sarah Kalicin, Intel Corporation

Chair(s): Sarah Kalicin, Intel Corporation

- 2:05 p.m. **Maximizing the Effectiveness of Statistical Resources in Industry—**✦ Henry T. Davis, Becton, Dickinson, and Company

GENERAL PROGRAM SCHEDULE

⚙ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 2:30 p.m. **The Future of Corporate Statistics Organizations**—♦ Roger W. Hoerl, GE Global Research
- 2:55 p.m. **Teaching Engineers To Think Statistically**—♦ Scott A. Pardo, Purdue Frederick Labs
- 3:20 p.m. **Collaboration with Nonstatisticians**—♦ Joanne Wendelberger, Los Alamos National Laboratory
- 3:45 p.m. **Floor Discussion**

182 CC-3A ● ♦ Genome-Wide Association Studies—Invited

Section on Statistical Computing, Biometrics Section, ENAR, WNAR

Organizer(s): Charles Kooperberg, Fred Hutchinson Cancer Research Center

Chair(s): Michael LeBlanc, Fred Hutchinson Cancer Research Center

- 2:05 p.m. **Genome-Wide Disease Gene Mapping by Association Analysis**—♦ Jurg Ott, The Rockefeller University
- 2:30 p.m. **The Genetics of Insulin Resistance: Clusters and SNPs**—♦ Richard A. Olshen, Stanford University
- 2:55 p.m. **Identifying Interactions in Genome-Wide Association Studies**—♦ Charles Kooperberg, Fred Hutchinson Cancer Research Center
- 3:20 p.m. **Choices and Consequences of Genetic Marker Selection on Whole-Genome Association Scans**—♦ Lon Cardon, University of Oxford
- 3:45 p.m. **Floor Discussion**

183 CC-619 Regression Models with Functional Predictors—Invited

Section on Nonparametric Statistics

Organizer(s): Philip Reiss, Columbia University

Chair(s): Philip Reiss, Columbia University

- 2:05 p.m. **Functional Variance Processes and Volatility Modeling**—♦ Hans-Georg Mueller, University of California, Davis
- 2:35 p.m. **Interpretable Functional Regression Models**—♦ Gareth James, University of Southern California
- 3:05 p.m. **Aspects of Feature Selection in Functional Data**—♦ Philip J. Brown, University of Kent
- 3:35 p.m. **Floor Discussion**

184 CC-611 Threshold Regression Models and Applications—Invited

Section on Statistics in Epidemiology

Organizer(s): Mei-Ling T. Lee, The Ohio State University

Chair(s): Marvin Zelen, Harvard School of Public Health

- 2:05 p.m. **Threshold Regression for Survival Analysis: Modeling Event Occurrence When Latent Health Status Decreases to a Threshold**—♦ George A. Whitmore, McGill University
- 2:30 p.m. **Application of Threshold Regression in Analyzing Lung Cancer Rates in Women**—♦ Mei-Ling T. Lee, The Ohio State University; Bernard Rosner, Harvard Medical School
- 2:55 p.m. **Latent Process Models with Multiple Types of Observations**—♦ Daniel Commenges, Université Bordeaux
- 3:20 p.m. **Disc:** David Oakes, University of Rochester Medical Center
- 3:40 p.m. **Floor Discussion**

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

185 CC-618 ● Applications of Machine Learning Techniques in Bioinformatics and Other Areas—Topic-Contributed

Biometrics Section, Section on Nonparametric Statistics, ENAR

Organizer(s): Sujay Datta, Texas A&M University

Chair(s): Sujay Datta, Texas A&M University

- 2:05 p.m. **Graph-Based Classifiers in Semisupervised Learning**—♦ George Michailidis, University of Michigan
- 2:25 p.m. **Estimating Differential Equation Models of Gene Expression Dynamics**—♦ Theodore Perkins, McGill University
- 2:45 p.m. **Statistical Models on Protein Complex Alignments**—♦ Tony Chiang, Fred Hutchinson Cancer Research Center
- 3:05 p.m. **Neural Network Imputation: an Experience with the National Resources Inventory Survey**—♦ Tapabrata Maiti, Iowa State University

3:25 p.m. **Analyzing Gene Expression Data Using Tree-Based Models**—◆ Bret Musser, Merck Research Laboratories

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

186 **● Postmarket Issues in Medical Devices—Topic-Contributed** CC-610

Biopharmaceutical Section

Organizer(s): Steve Boeh, Medtronic, Inc.

Chair(s): Steve Boeh, Medtronic, Inc.

2:05 p.m. **Limiting Distributions of Resistances for Specific Radiation Sterilization Doses**—◆ Harry Bushar, U.S. Food and Drug Administration

2:25 p.m. **Issues Encountered in Statistical Analyses of Complex Experimental Medical Device Data**—◆ Hollington Lu, Center for Devices and Radiological Health; Barbara Krasnicka, U.S. Food and Drug Administration

2:45 p.m. **Frailty Model for Assessing Treatment Effect between Bare-Metal and Drug-Eluting Stents with Multiple Cardiac Events: Experience from Post-Marketing Registries**—◆ So Jung Imm, Boston Scientific Corporation; Scott Wehrenberg, Boston Scientific Corporation; Aijun Song, Boston Scientific Corporation; Zheng Zhou, Boston Scientific Corporation

3:05 p.m. **Multiple Imputation for Missing Data in Propensity Score Generation: Application in Comparing Two Stenting Techniques Using Post-Marketing Registry Data**—◆ Aijun Song, Boston Scientific Corporation; Scott Wehrenberg, Boston Scientific Corporation; Zheng Zhou, Boston Scientific Corporation

3:25 p.m. **Disc:** Andrew Mugglin, University of Minnesota

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

187 **● ⊛ Bayesian Applications in Medical Devices—Topic-Contributed** CC-2B

Section on Bayesian Statistical Science, Biometrics Section, ENAR

Organizer(s): Yihua Zhao, U.S. Food and Drug Administration;

Gosford Sawyerr, Medtronic, Inc.

Chair(s): Yihua Zhao, U.S. Food and Drug Administration

2:05 p.m. **Using Auxiliary Information in Clinical Trials**—◆ Shu Han, Guidant Corporation; Donald Berry, The University of Texas

2:25 p.m. **The Role of Accrual Rate and Follow-up Time in a Bayesian Adaptive Design**—◆ Xuefeng Li, U.S. Food and Drug Administration

2:45 p.m. **A Tiered Treatment Design for a Historically Controlled Medical Device Clinical Trial**—◆ Alistair O'Malley, Harvard Medical School

3:05 p.m. **How Bayesian Hierarchical Models Handle Multiplicity Issues Automatically: a Case Study in a Medical Device Trial**—◆ Feng Tang, Medtronic, Inc.; Lou Sherfese, Medtronic, Inc.; Andrew Mugglin, University of Minnesota

3:25 p.m. **Disc:** Cynthia DeSouza, Medtronic, Inc.

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

188 **Statistical Methods for Evaluating Racial-Ethnic Disparities in Health—Topic-Contributed** CC-606

Section on Health Policy Statistics

Organizer(s): Marc Elliott, RAND Corporation

Chair(s): Marika Suttrop, RAND Corporation

2:05 p.m. **A New Method for Estimating Racial/Ethnic Disparities Where Administrative Records Lack Self-Reported Race/Ethnicity**—◆ Marc Elliott, RAND Corporation; Allen Fremont, RAND Corporation; Nicole Lurie, RAND Corporation; Peter A. Morrison, RAND Corporation; Philip Pantoja, RAND Corporation; Allan Abrahamse, RAND Corporation

2:25 p.m. **Power of Tests for a Dichotomous Independent Variable Measured with Error**—◆ Daniel McCaffrey, RAND Corporation; Marc Elliott, RAND Corporation

2:45 p.m. **Improving the Accuracy of Health Estimates for Small Racial-Ethnic Groups by Weighted Pooling over Time**—◆ Brian Finch, San Diego State University; Marc Elliott, RAND Corporation; Daniel McCaffrey, RAND Corporation; David Klein, RAND Corporation; Daniela Golinelli, RAND Corporation

3:05 p.m. **Differential Use of 0–10 Rating Scales by Racial-Ethnic Minorities in CAHPS[®]**—◆ Robert Weech-Maldonado, University of Florida; Marc Elliott, RAND Corporation; K. Cameron Schiller, University of Florida; Ron D. Hays, University of California, Los Angeles

3:25 p.m. **Disc:** William D. Kalsbeek, The University of North Carolina at Chapel Hill

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

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

189 CC-620 ● Ranked Sampling I—Topic-Contributed

Section on Nonparametric Statistics

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

Chair(s): S. Lynne Stokes, Southern Methodist University

2:05 p.m. **New Imperfect Rankings Models for Ranked-Set Sampling**—♦ Jesse Frey, Villanova University

2:25 p.m. **Ranked Set Sample Inference under the Constraint of Stochastic Ordering of Judgment Ranking Classes**—♦ Omer Ozturk, The Ohio State University

2:45 p.m. **Concomitant of Multivariate Order Statistics with Application to Judgment Post-Stratification**—
♦ Xinlei Wang, Southern Methodist University; S. Lynne Stokes, Southern Methodist University; Johan Lim, Texas A&M University; Min Chen, The University of Texas at Austin

3:05 p.m. **Approximate Confidence Intervals from a Ranked Set Sample**—♦ Christopher Sroka, The Ohio State University; Elizabeth Stasny, The Ohio State University; Douglas Wolfe, The Ohio State University

3:25 p.m. Disc: Douglas Wolfe, The Ohio State University

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

190 CC-608 Synthetic Data or No Data: Choices in Disclosure Avoidance Methods—Topic-Contributed

Section on Government Statistics

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

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

2:05 p.m. **U.S. Census Bureau Disclosure Avoidance Practices and Research: an Update for JSM 2006**—♦ Laura Zayatz, U.S. Census Bureau

2:25 p.m. **Part 2: Myth & Reality - Complementary Cell Suppression**—♦ Ramesh Dandekar, Energy Information Administration

2:45 p.m. **Partial Synthesis for Disclosure Avoidance**—
♦ Sam Hawala, U.S. Census Bureau

3:05 p.m. **The Disclosure Limitation Protocol for the Census Bureau's 'On the Map' Origin-Destination Transportation Application**—♦ Fredrik Andersson, Cornell University; John Abowd, Cornell University; Marc Roemer, U.S. Census Bureau

3:25 p.m. **Inferences on Two-Stage, Multiply-Imputed Data**—♦ Satkartar Kinney, Duke University; Jerome Reiter, Duke University

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

191 CC-601 ● Census Coverage Measurement—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Richard Griffin, U.S. Census Bureau

Chair(s): William R. Bell, U.S. Census Bureau

2:05 p.m. **2010 Census Coverage Measurement: Initial Results of Net Error Empirical Research Using Logistic Regression**—♦ Richard Griffin, U.S. Census Bureau; Thomas Mule, U.S. Census Bureau; Doug Olson, U.S. Census Bureau

2:25 p.m. **2010 Census Coverage Measurement Research on Person Coverage Estimates by Housing Unit Enumeration Status**—♦ Vincent Mule, U.S. Census Bureau

2:45 p.m. **A Nonparametric Approach to Census Population Size Estimation**—♦ Song X. Chen, Iowa State University; Chengyong Tang, Iowa State University; Jean D. Opsomer, Iowa State University; Sarah M. Nusser, Iowa State University

3:05 p.m. **2010 Census Coverage Measurement: the Hunt for the Magic Variables**—♦ Eric Schindler, U.S. Census Bureau

3:25 p.m. **Framework for Census Coverage Error Components**—♦ Mary Mulry, U.S. Census Bureau; Donna Kostanich, U.S. Census Bureau

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

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

192 CC-2A ● Hiring a Consulting Statistician: What We Look for—Topic-Contributed

Section on Statistical Consulting, Section on Statistical Education

Organizer(s): Christina M. Gullion, Kaiser Permanente Center for Health Research

Chair(s): Brenda Gaydos, Eli Lilly and Company

Panelists: ♦ Christina M. Gullion, Kaiser Permanente Center for Health Research

- ❖ K. B. Boomer, The Pennsylvania State University
- ❖ Fred Hulting, General Mills, Inc.
- ❖ Don Harder, Eli Lilly and Company

3:45 p.m. Floor Discussion

193 CC-607 ● ⊛ The Promise and Potential of the American Community Survey—Topic-Contributed

Social Statistics Section

Organizer(s): Charles Hirschman, University of Washington

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

- Panelists:**
- ❖ Charles Hirschman, University of Washington
 - ❖ Linda Gage, California Department of Finance
 - ❖ Linda Jacobsen, Population Reference Bureau

3:45 p.m. Floor Discussion

194 CC-401 ● Learning from and Applying Statistics Education Research to Our Own Teaching—Topic-Contributed

Section on Statistical Education

Organizer(s): Jackie Miller, The Ohio State University

Chair(s): Jackie Miller, The Ohio State University

- Panelists:**
- ❖ Christine Franklin, University of Georgia
 - ❖ Roxy Peck, California Polytechnic State University, San Luis Obispo
 - ❖ Robert Gould, University of California, Los Angeles
 - ❖ Joy Jordan, Lawrence University

3:35 p.m. Floor Discussion

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

195 CC-603 ● Sample Survey Design II—Contributed

Section on Survey Research Methods

Chair(s): Michael E. Jones, Westat

- 2:05 p.m. Properties and Modifications of a Probability Proportional to Size Sampling Procedure—
❖ Lawrence R. Ernst, Bureau of Labor Statistics
- 2:20 p.m. Supplementing RDD Surveys with Web-Based Survey Data—❖ Karol Krotki, RTI International

2:35 p.m. Comparison of Mixed-Mode and Address Frame Designs to Random Digit Dialing for General Population Surveys—❖ Michael W. Link, Centers for Disease Control and Prevention; Michael P. Battaglia, Abt Associates Inc.; Martin R. Frankel, Abt Associates Inc.; Larry Osborn, Abt Associates Inc.

2:50 p.m. Probability Sample Designs that Impose Superpopulation Models on Survey Data—
❖ Stephen Woodruff

3:05 p.m. A Review of the Sample Design for the 2001, 2003, and 2005 California Health Interview Survey—❖ Ismael Flores Cervantes, Westat; Michael E. Jones, Westat; Laura Alvarez-Rojas, Westat; J. Michael Brick, Westat; John H. Kurata, University of California, Los Angeles; David Grant, University of California, Los Angeles

3:20 p.m. Comparing Alternate Designs for a Multidomain Cluster Sample—Pedro Saavedra, ORC Macro; ❖ Mareena McKinley Wright, ORC Macro; Joseph P. Riley, U.S. Department of Housing and Urban Development

3:35 p.m. The Impact of Unequal Minority Distribution across Schools on PPS Oversampling Methods—
❖ William Robb, ORC Macro; Joshua Brown, ORC Macro; James Ross, ORC Macro; Ronaldo Iachan, ORC Macro

196 CC-602 ● Nonresponse, Imputation, and Estimation—Contributed

Section on Survey Research Methods

Chair(s): Steven Pedlow, National Opinion Research Center

2:05 p.m. Multiple Imputation for Incomplete Multivariate Data under a Latent-Class Selection Model—
❖ Hyekyung Jung, The Pennsylvania State University; Joseph L. Schafer, The Pennsylvania State University

2:20 p.m. Inferences on Missing Information and the Number of Imputation—❖ Ofer Harel, University of Connecticut

2:35 p.m. Enhancements to the 2006 Canadian Census Edit and Imputation System—❖ Wesley Benjamin, Statistics Canada

2:50 p.m. Separating the Wheat from the Chaff: the Search for the Best Imputation Methodology—❖ Paula Weir, Energy Information Administration; Pedro Saavedra, ORC Macro

GENERAL PROGRAM SCHEDULE

✧ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 3:05 p.m. **Analyses of Measures of Respondent Burden at the National Agricultural Statistics Service—**
◆Fatu Wesley, U.S. Department of Agriculture
- 3:20 p.m. **Multiple Imputation for Response Biases in NLAAS Due to Survey Instruments—**◆Jingchen Liu, Harvard University; Xiao-Li Meng, Harvard University; Chihnan Chen, Boston University; Margarita Alegria, Cambridge Health Alliance
- 3:35 p.m. **Multiple Imputation Strategy for Alameda County Study—**◆Irina Bondarenko, University of Michigan; Trivellore E. Raghunathan, University of Michigan

197 CC-203

●✧ Challenges and Innovative Methods for Teaching Biostatistics in the Health Sciences—Contributed

Section on Teaching Statistics in the Health Sciences

Chair(s): Dongseok Choi, Oregon Health & Science University

- 2:05 p.m. **The Implications of the Increasing Sophistication of Statistical Methods in The New England Journal of Medicine—**◆Suzanne Switzer, Smith College; Nicholas J. Horton, Smith College
- 2:20 p.m. **How To Reduce the Risk of Nervous Breakdown in Physicians Taking an Introductory Biostatistics Course—**◆Patrick Arbogast, Vanderbilt University
- 2:35 p.m. **Basic Biostats: Online Learning versus Onsite Learning—**◆John McGready, The Johns Hopkins University
- 2:50 p.m. **The Design and Evaluation of Computer-Assisted Instruction on Biostatistics: an Example of Central Limit Theorem—**◆Lai-Chu See, Chang Gung University; Yu Hsuan Huang, Chang Gung Memorial Hospital; Yi Hua Chang, Chang Gung University; Pei-I Peng, Chang Gung University
- 3:05 p.m. **Enhancing Medical Students' Understanding of Risk Information Using a Large Group Interactive Audience Response System—**◆Fredric Wolf, University of Washington; David Masuda, University of Washington; Linda Pinsky, University of Washington
- 3:20 p.m. **Learner-Centered Approach to Biostatistics in Health Sciences Settings—**◆Ralph M. Turner, University of the Sciences in Philadelphia
- 3:35 p.m. **Floor Discussion**

198 CC-614

● Advances in Graphical Methods—Contributed

Section on Statistical Graphics

Chair(s): Li Li, George Mason University

- 2:05 p.m. **Letter Value Box Plots: Box Plots for Large Datasets—**◆Karen Kafadar, University of Colorado; Heike Hofmann, Iowa State University; Hadley Wickham, Iowa State University
- 2:20 p.m. **Censored Q-Q Plot: Diagnostic Tool for Checking Population Heteroscedasticity—**◆Jong Kim, Portland State University
- 2:35 p.m. **Variations on the Histogram—**◆Lorraine Denby, Avaya Labs Research; Colin Mallows, Avaya Labs Research
- 2:50 p.m. **Ideas about Forestry Data Visualization—**
◆Lutong Zhou, University of Western Ontario; Willard J. Braun, University of Western Ontario
- 3:05 p.m. **Of Forests, Trees, and Logs: Application and Visualization of Tree-Based Methods for Large Data—**◆Simon Urbanek, AT&T Labs-Research
- 3:20 p.m. **Simple Visualizations of Paired Comparisons—**
◆Spencer Graves, PDF Solutions, Inc.; Hans-Peter Piepho, University of Hohenheim
- 3:35 p.m. **Floor Discussion**

199 CC-612

●✧ Longitudinal Models—Contributed

Section on Statistics in Epidemiology, Biometrics Section, ENAR

Chair(s): Owen Devine, Centers for Disease Control and Prevention

- 2:05 p.m. **Modeling Individual Addition Behavior Using a Mixed-Effect Model with Three States—**◆Sheng Luo, The Johns Hopkins University; Ciprian M. Crainiceanu, The Johns Hopkins University; Thomas A. Louis, The Johns Hopkins University; Nilanjan Chatterjee, National Cancer Institute
- 2:20 p.m. **Quantile Regression Methods for Modeling CD4 T-Cell Trajectory among HIV-Infected Men and Women on Long-Term, Highly Active Antiretroviral Therapy—**◆Haitao Chu, The Johns Hopkins Bloomberg School of Public Health; Ying Wei, Columbia University; Alvaro Munoz, The Johns Hopkins Bloomberg School of Public Health; Stephen J. Gange, The Johns Hopkins Bloomberg School of Public Health
- 2:35 p.m. **On the Equivalence of Case-Crossover and Time-Series Methods—**◆Yun Lu, The Johns Hopkins University; Scott Zeger, The Johns Hopkins University

- 2:50 p.m. **Analysis of Longitudinal Trinomial Outcome through a Surrogate Variable**—♦Wenyaw Chan, The University of Texas School of Public Health; Yen-Peng Li, The University of Texas Health Science Center at Houston; Hung-Wen Yeh, The University of Texas School of Public Health
- 3:05 p.m. **The Log Multinomial Regression Model for Nominal Outcomes with More Than Two Attributes**—♦Leigh Blizzard, Menzies Research Institute; David W. Hosmer, University of Massachusetts
- 3:20 p.m. **Bayesian Hierarchical Models for Racial and Socioeconomic Predictors of Mortality in a Sample of the U.S. Medicare Population**—♦Yijie Zhou, The Johns Hopkins University; Francesca Dominici, The Johns Hopkins University; Thomas A. Louis, The Johns Hopkins University
- 3:35 p.m. **Bayesian Estimation for Epidemic Models on a Social Network**—♦Crystal Linkletter, Simon Fraser University; Randy R. Sitter, Simon Fraser University; Nicolas Hengartner, Los Alamos National Laboratory

200 CC-605 Choice Experiments in Marketing—Contributed

Section on Statistics and Marketing

Chair(s): Arindam RoyChoudhury, University of Washington

- 2:05 p.m. **Managing Large Conjoint Studies**—♦Ulderico Santarelli, Consultant
- 2:20 p.m. **Designing a Stated Choice Survey To Study Food Product Eco-Labels**—♦Iain Pardoe, University of Oregon
- 2:35 p.m. **Fusing Best/Worst Choices and Ratings Data for Comparisons on a Common Scale**—♦Lynd D. Bacon, Sighthound Solutions, Inc.; Peter J. Lenk, University of Michigan; Katya Seryakova, Knowledge Networks, Inc.
- 2:50 p.m. **The Impact of Choice Set Complexity on Respondent Screening Behavior**—♦Joseph Retzer, Maritz Research
- 3:05 p.m. **Misspecification and Decision Strategies in Choice Design Parameter Assumptions**—♦Jennifer Golek, DuPont; Robert W. Mee, University of Tennessee
- 3:20 p.m. **Thurstone Scaling via Maximum Likelihood in Order Statistics**—♦Stan Lipovetsky, GfK-CRI

- 3:35 p.m. **Partial Profile Choice Experiments: an Assessment**—♦Terry Elrod, University of Alberta

201 CC-213 Statistical Methods and Ecological Applications—Contributed

Section on Statistics and the Environment

Chair(s): Samantha C. Prins, Virginia Polytechnic Institute and State University

- 2:05 p.m. **Choice of Weights in Meta-analysis of Mark-Recapture Survival Studies**—♦James R. Faulkner, U.S. Department of Commerce; Steven G. Smith, U.S. Department of Commerce
- 2:20 p.m. **Trend Estimation in a Periodic Survey of North-American Waterfowl**—♦Mark Otto, U.S. Fish and Wildlife Service
- 2:35 p.m. **Bayesian Spatio-Temporal Models for Radio-Telemetry Contacts**—♦Albert N. Hendrix, R2 Resource Consultants, Inc.; Rip Shively, U.S. Geological Survey; Barbara Adams, U.S. Geological Survey
- 2:50 p.m. **Evaluating Sampling Approaches for Monitoring Chronic Wasting Disease (CWD) in Deer Populations**—♦Ling Huang, Iowa State University; Sarah M. Nusser, Iowa State University; William R. Clark, Iowa State University; David L. Otis, Iowa State University
- 3:05 p.m. **The Federally Threatened Plant Species, Missouri Bladderpod: Model Selection and Validation**—♦William Leeds, Truman State University; Hyun-Joo Kim, Truman State University; Corey Elledge, Truman State University; Michael Kelrick, Truman State University; Elizabeth Bobzien, Truman State University; James Franklin, Truman State University
- 3:20 p.m. **Effects of Sample Survey Design on the Accuracy of Classification Tree Models in Ecology**—♦Thomas C. Edwards, U.S. Geological Survey; D. Richard Cutler, Utah State University; Gretchen Moisen, U.S. Forest Service; Niklaus E. Zimmermann, Swiss Federal Research Institute WSL; Linda Geiser, U.S. Department of Agriculture
- 3:35 p.m. **Spatio-Temporal Analysis Incorporating a Spatial Correlation Structure on a Long-Term Forestry Field Research Dataset**—♦Bronson Bullock, North Carolina State University; Edward Boone, The University of North Carolina at Wilmington

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

202

● Biostatistical Modeling—Contributed

Biometrics Section, Section on Bayesian Statistical Science, ENAR

Chair(s): Louise Ryan, Harvard School of Public Health

- 2:05 p.m. Inter-Rater Reliability of Pressure Ulcer Staging: Ordinal Probit Bayesian Hierarchical Model That Allows for Uncertain Rater Response—**♦Byron Gajewski, The University of Kansas Medical Center; Sara Hart, The University of Kansas Medical Center; Sandra Bergquist-Beringer, The University of Kansas Medical Center; Nancy Dunton, The University of Kansas Medical Center
- 2:20 p.m. A Random-Effects Four-Part Model for Longitudinal Medical Costs—**♦Lei Liu, University of Virginia; Mark R. Conaway, University of Virginia
- 2:35 p.m. Bayesian Analysis of Repeated Data with Many Zeros: Application to the Longitudinal Adolescent Substance Abuse Study—**♦Hyonggin An, The University of Iowa
- 2:50 p.m. Repeated Measures Mixture Modeling with Applications to Postmortem Tissue Studies in Schizophrenia—**♦Zhuoxin Sun, Dana-Farber Cancer Institute; Ori Rosen, The University of Texas at El Paso; Allan R. Sampson, University of Pittsburgh
- 3:05 p.m. A Hidden Markov Model To Describe Responses to Alcoholism Treatment—**♦Kenneth Shirley, University of Pennsylvania; Dylan S. Small, University of Pennsylvania
- 3:20 p.m. Mixture Gaussian Model-Based Bayesian Clustering—**♦Wei Zhang, Harvard University
- 3:35 p.m. Modeling Distortion Product Otoacoustic Emissions Using Noncentral-F Mixed Effects Models—**♦Lai Wei, The Ohio State University; Peter F. Craigmile, The Ohio State University; Wayne M. King, The Ohio State University; Stephanie Jones, The Ohio State University

203

● Methodology for Survival and Censored Data—Contributed

Biometrics Section, WNAR, ENAR

Chair(s): Sudipto Banerjee, University of Minnesota

- 2:05 p.m. Constructing Multivariate Prognostic Expression Profiles for Survival Endpoints—**♦Derick R. Peterson, University of Rochester; Alexander Pearson, University of Rochester

CC-616

- 2:20 p.m. Predict Survival Using Gene Expression Data under Cox PH Models—**♦Wenqing He, University of Western Ontario; Grace Y. Yi, University of Waterloo
- 2:35 p.m. Model Combining in Survival Analysis—**♦Lihua Chen, The University of Toledo
- 2:50 p.m. Median Regression Analysis from Doubly Censored Data—**♦Sundar Subramanian, University of Maine
- 3:05 p.m. Smoothed Bootstrap-Based Bandwidth Estimation—**♦Derek Bean, University of Maine; Sundar Subramanian, University of Maine
- 3:20 p.m. Equivalences of Nonparametric Estimators and Noninformative Censoring Conditions—**♦Yingfu Li, University of Houston-Clear Lake; Jiantian Wang, Kean University
- 3:35 p.m. Floor Discussion**

204

Mixed Models and Data Mining—Contributed

Section on Statistical Computing

Chair(s): Hasan Hamdan, James Madison University

- 2:05 p.m. A Comparison of the Reporting of Problems Encountered in the Estimation of Covariance Parameters in Linear Mixed Models Using SAS, SPSS, R, Stata, and HLM—**♦Brady West, University of Michigan; Kathy Welch, University of Michigan; Andrzej Galecki, University of Michigan
- 2:20 p.m. A Note on Testing of Hypothesis of Kronecker Product Covariance Structure in Doubly Multivariate Data—**♦Anuradha Roy, The University of Texas at San Antonio
- 2:35 p.m. On Hierarchical Linear Mixed Modeling Using the Multivariate t Distribution with Missing Information—**♦Tsung-I Lin, National Chung Hsing University; Jack C. Lee, National Chiao Tung University
- 2:50 p.m. Automatic Approximation of the Marginal Likelihood in Non-Gaussian Hierarchical Models—**♦Hans J. Skaug, University of Bergen; David A. Fournier, Otter Research Ltd.
- 3:05 p.m. Adversarial Learning—**♦Bowe Xi, Purdue University; Murat Kantarcioglu, The University of Texas at Dallas; Chris Clifton, Purdue University

CC-400

3:20 p.m. **Maximum Entropy Data Camouflaging**—✦Kurt Pflughoeft, Market Probe; Ehsan S. Soofi, University of Wisconsin-Milwaukee; Refik Soyer, The George Washington University

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

205 CC-206 ● ⊛ **A Changing World: Katrina, Children, Judges, and More—Contributed**

Business and Economics Statistics Section

Chair(s): David Dickey, North Carolina State University

2:05 p.m. **Statistics - Sociophysics - Mediaphysics (Statistical Physics of Social Mass Media Phenomena)**—✦Dmitri V. Kuznetsov, Media Planning Group; Igor Mandel, Media Planning Group

2:20 p.m. **The Impact of Hurricane Katrina on Business Establishments**—✦Ron S. Jarmin, U.S. Census Bureau

2:35 p.m. **Estimating the Change in the Gender Wage Gap When Employment Composition Changes: Evidence for Japan, 1987–2002**—✦Daiji Kawaguchi, Hitotsubashi University; Hisahiro Naito, Tsukuba University

2:50 p.m. **When Do Judges Explain Themselves?**—✦Alan Izenman, Temple University; David Hoffman, Temple University

3:05 p.m. **Do Regular Cycles Occur in American Politics?**—✦Samuel Merrill, Wilkes University; Bernard Grofman, University of California, Irvine

3:20 p.m. **Tolls, Exchange Rates, and International Bridge Traffic**—✦Thomas Fullerton, The University of Texas at El Paso

3:35 p.m. **High-Frequency Returns, Jumps, and the Mixture of Normals Hypothesis**—✦Jeff Fleming, Rice University; Brad Paye, Rice University

206 CC-615 ● **Stochastic Processes with Applications—Contributed**

Biometrics Section

Chair(s): Jamie McClave Baldwin, Info Tech, Inc.

2:05 p.m. **Intensity Estimates for Spike Train Data Observed under Multiple Behavioral States**—✦Matt Gregas, Harvard School of Public Health

2:20 p.m. **Probabilistic Model To Evaluate Biological Process**—✦Hrishikesh Chakraborty, RTI

International; Pranab K. Sen, The University of North Carolina at Chapel Hill

2:35 p.m. **Parametric Inference from Window-Censored Renewal Processes and Applications**—✦Yanxing Zhao, The Ohio State University; H. N. Nagaraja, The Ohio State University

2:50 p.m. **Stochastic Models for MRI Lesion Count Data from Patients with Relapsing Remitting Multiple Sclerosis**—✦Xiaobai Li, The Ohio State University; H. N. Nagaraja, The Ohio State University

3:05 p.m. **Tracking of Multiple Merging and Splitting Targets with Application to Convective Systems**—✦Curtis Storlie, North Carolina State University

3:20 p.m. **An Efficient Algorithm for Exact Distribution of Discrete Scan Statistics**—✦Morteza Ebneshrashoob, California State University, Long Beach; Tangan Gao, California State University, Long Beach; Mengnien Wu, Tamkang University

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

207 CC-214 **Estimating Functions, Goodness-of-Fit, and Smoothing for Nonparametric and Semiparametric Models—Contributed**

IMS, Biometrics Section, Section on Nonparametric Statistics, ENAR

Chair(s): Qunhua Li, University of Washington

2:05 p.m. **Minimax Estimation Using Higher-Order Estimating Functions**—✦Lingling Li, Harvard School of Public Health; Eric Tchetgen, Harvard School of Public Health; James Robins, Harvard School of Public Health; Aad van der Vaart, Vrije Universiteit Amsterdam

2:20 p.m. **Higher Order Influence Functions for Inference in Monotone Missing Data Models**—✦Eric Tchetgen, Harvard School of Public Health; Lingling Li, Harvard School of Public Health; James Robins, Harvard School of Public Health; Aad van der Vaart, Vrije Universiteit Amsterdam

2:35 p.m. **Minimax Interval Estimation of Optimal Treatment Strategies**—✦James Robins, Harvard School of Public Health; Eric Tchetgen, Harvard School of Public Health; Lingling Li, Harvard School of Public Health; Aad Van der Vaart, Amsterdam

GENERAL PROGRAM SCHEDULE

⚙️ Themed Session ● Applied Session ♦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 2:50 p.m. **A Semi-Adaptive Smoothing Algorithm in Bispectrum Estimation**—♦ Wei Yang, University at Albany; Igor Zurbenko, University at Albany
- 3:05 p.m. **Estimation in Constrained Models**—♦ Hanxiang Peng, University of Mississippi
- 3:20 p.m. **Goodness-of-Fit Tests via Phi-Divergences**—♦ Leah R. Jager, University of Washington; Jon A. Wellner, University of Washington
- 3:35 p.m. **Extensions of the Penalized Spline Propensity Prediction Method for Monotone Missing Data**—♦ Guangyu Zhang, University of Michigan; Roderick J. Little, University of Michigan

208 CC-204 Advances in Bayesian Computation—Contributed

Section on Bayesian Statistical Science

Chair(s): Subhashis Ghosal, North Carolina State University

- 2:05 p.m. **Likelihood Subgradient Densities**—♦ Kjell Nygren, IMS Health; Lan Nygren, Rider University
- 2:20 p.m. **Likelihood Approximations in Bayesian Multiple Curve Fitting**—♦ Carsten Botts, Williams College; Michael Daniels, University of Florida
- 2:35 p.m. **Video Segmentation Using a Bayesian Online EM Algorithm**—♦ Johan Lindström, Lund University; Finn Lindgren, Lund University; Kalle Åström, Lund University; Jan Holst, Lund University; Ulla Holst, Lund University
- 2:50 p.m. **Two-Stage EM Algorithm on the Random Transfer Function Model**—♦ Hyunyoung Choi, University of California, Santa Barbara; Bonnie K. Ray, IBM T. J. Watson Research Center
- 3:05 p.m. **Bayesian Variable Selection in Clustering High Dimensional Data with Substructure**—♦ Michael D. Swartz, M. D. Anderson Cancer Center; Marina Vannucci, Texas A&M University
- 3:20 p.m. **Floor Discussion**

209 CC-212 Design and Analysis of Response Surface Experiments—Contributed

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

Chair(s): Jason Loeppky, The University of British Columbia

- 2:05 p.m. **Semiparametric Techniques for Response Surface Methodology**—♦ Stephanie Pickle, Virginia Polytechnic Institute and State University; Jeffrey B. Birch, Virginia Polytechnic Institute and State University; Timothy Robinson, University of Wyoming
- 2:20 p.m. **Rethinking Steepest Ascent**—♦ Robert W. Mee, University of Tennessee; Jihua Xiao, University of Tennessee
- 2:35 p.m. **Sequential Methodology for Detecting Jumps in Complex Surfaces**—♦ Yan Lan, University of Michigan; George Michailidis, University of Michigan
- 2:50 p.m. **Minimal-Point Optimal Designs for Second-Order Response Surfaces**—♦ Ray-Bing Chen, National University of Kaohsiung; Yu-Jen Tsai, National University of Kaohsiung; Dennis K. J. Lin, The Pennsylvania State University
- 3:05 p.m. **Alphabet-Optimal Central Composite Designs**—♦ Trevor A. Craney, Sikorsky
- 3:20 p.m. **Orthogonal Blocking in Response Surface Designs with Split-Plot Structure**—♦ Li Wang, Virginia Polytechnic Institute and State University; Scott Kowalski, Minitab Inc.; Geoff Vining, Virginia Polytechnic Institute and State University
- 3:35 p.m. **Floor Discussion**

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

210 CC-Level 6 East Lobby Contributed Posters—Contributed

Business and Economics Statistics Section, Section on Statistical Education, Biopharmaceutical Section, Section on Statistics in Epidemiology, Section on Bayesian Statistical Science, Section on Teaching Statistics in the Health Sciences, Section on Health Policy Statistics, Social Statistics Section, WNAR, Section on Statistical Consulting, Section on Survey Research Methods, Section on Statistics and Marketing

Organizer(s): Maura E. Stokes, SAS Institute, Inc.

Chair(s): Maura E. Stokes, SAS Institute, Inc.

Business, financial, marketing statistics

- 01 **Measuring Financial Data Quality Assessment and Improvement**—♦ George Sirbu, Bentley College; Mary Ann Robbert, Bentley College; Donna Fletcher, Bentley College

- 02 **Perceptions of Men versus Women in a Business Organization in 2005**—✦ Kris Moore, Baylor University; Dawn Carlson, Baylor University; Dwayne Whiten, Texas A&M University
- 03 **Inference for a Hazard Rate Change Point under Dependent Censoring**—✦ Nan Zhang, Rice University; Xuelin Huang, M. D. Anderson Cancer Center
- 04 **Model Identification and Forecasting of Stationary Models with GARCH(P,Q) Errors**—✦ Melody Ghahramani, University of Manitoba
- 05 **The Magnet Effect of Price Limits: Evidence from Transactions Data**—✦ Ping-Hung Hsieh, Oregon State University; Yong H. Kim, University of Cincinnati; J. Jimmy Yang, Oregon State University
- 06 **Robust Granger Causality Tests in the VARX Framework**—✦ Alex Maynard, University of Toronto; Dietmar Bauer, Arsenal Research
- 07 **Uplift Modeling in Direct Marketing**—✦ John Lin, Epsilon; Qizhi Wei, Epsilon

General

- 08 **How Bad Could Your Data Be? Variance Maximization**—✦ Jeffrey Stuart, Pacific Lutheran University
- 09 **Characterizations of Factor Analytic Covariance Structure**—✦ Timothy Costigan, Eli Lilly and Company

Health policy, public health

- 10 **Assessment of Small-Area Estimates from a Complex Survey Cancer Surveillance Project**—✦ Van Parsons, National Center for Health Statistics; Nathaniel Schenker, National Center for Health Statistics; Trivellore E. Raghunathan, University of Michigan; Dawei Xie, University of Pennsylvania; William Davis, National Cancer Institute
- 11 **Methodology for Estimating Age of Onset of Overweight Using Self-Reported Historical Height and Weight Data**—✦ Henry Xia, Centers for Disease Control and Prevention; Virginia Freid, Centers for Disease Control and Prevention; Patricia Pastor, Centers for Disease Control and Prevention

Social and behavioral science

- 12 **A Multivariate Statistical Analysis of Substance Abuse in the United States**—✦ Monique Owens, SUMSRI at Miami University; Joshua Svenson, SUMSRI at Miami University
- 13 **Adaptive Poisson Modeling of Medication Adherence in HIV-Positive Methadone Patients**—✦ Kevin Delucchi, University of California, San Francisco; George Knafl, Oregon Health & Science University; Nancy

Haug, University of California, San Francisco; James Sorensen, University of California, San Francisco

- 14 **Assessing Publication Bias in Meta-analysis**—✦ Xin Li, The University of Texas at Austin; Tasha Beretvas, The University of Texas at Austin
- 15 **University Graduate Mentoring**—✦ Terry Tomazic, Saint Louis University; Michael Donovan, Saint Louis University; John Hicks, Saint Louis University; Eric Watterson, Saint Louis University; Barry Katz, Saint Louis University
- 16 **Gender Differences and Factors Affecting the Interface Performance Level**—✦ Dennis Kira, Concordia University; Fassil Nebebe, Concordia University; Raafat G. Saade, Concordia University

Teaching, training, consulting

- 17 **Statistical Analysis of Aphid Data: a Case Study for AP Statistics**—✦ James Matis, Texas A&M University; Thomas Kiffe, Texas A&M University; Timothy Matis, Texas Tech University; Douglass Stevenson, Texas A&M University
- 18 **Favorite Datasets from Early Phases of Drug Research: Part 6**—Thomas E. Bradstreet, Merck Research Laboratories; ✦ Thomas H. Short, Indiana University of Pennsylvania
- 19 **Statistics Jeopardy!®**—✦ Neal Rogness, Grand Valley State University; Adam Weimer, The Ohio State University
- 20 **Expectations for Statistical Literacy: a Comparison among Psychology, Business, and Public Health Professions**—✦ S. David Kriska, Restat Systems; Mark C. Fulcomer, Richard Stockton College of New Jersey; Marcia M. Sass, University of Medicine & Dentistry of New Jersey
- 21 **A Bayesian Model for Predicting the Probability of Additional Positive Axillary Nodes in Breast Cancer Patients with Positive Sentinel Lymph Node Biopsy**—✦ Sunni A. Barnes, Mayo Clinic College of Medicine; Tanya Hoskin, Mayo Clinic College of Medicine; Cody Hamilton, Baylor Health Care System
- 22 **Introducing Data Quality in the Classroom**—✦ Mark C. Fulcomer, Richard Stockton College of New Jersey
- 23 **A Menu System for Stats/List on the TI Voyage 200**—✦ John Turner, U.S. Naval Academy
- 24 **Program Assessment in Statistics at the Master's Level**—✦ Julia Norton, California State University, East Bay; Lynn Eudey, California State University, East Bay

GENERAL PROGRAM SCHEDULE

⬠ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 25 **Discussing Factor Analysis in a 50-Minute Class Period**—vJ. Burdeane Orris, Butler University; Bruce Bowerman, Miami University of Ohio
- 26 **Strategies for Making Your Curriculum Vita Numerical and Graphical for Promotion, Tenure, and Career Awards**—❖ Charlie Goldsmith, McMaster University
- 27 **Development of an Introductory Biostatistics Course for Graduate Students in Biomedical Sciences**—❖ John Rutledge, Weill Medical College of Cornell University; Kylie Bryant, Weill Medical College of Cornell University; Kathy Zhou, Weill Medical College of Cornell University; Yolanda Barron, Weill Medical College of Cornell University; Anita Mesi, Weill Medical College of Cornell University; Heejung Bang, Cornell University; Eduardo Martinez-Ceballos, Weill Medical College of Cornell University; Lorraine Gudas, Weill Medical College of Cornell University;

Selina Chen-Kiang, Weill Medical College of Cornell University; Madhu Mazumdar, Weill Medical College of Cornell University

Invited Sessions 4:00 p.m.–5:50 p.m.

211 CC-Ballroom 6ABC President's Invited Address—Invited

The ASA, ENAR, WNAR, SSC, IMS

Organizer(s): Sallie Keller-McNulty, Rice University

Chair(s): Sallie Keller-McNulty, Rice University

4:05 p.m. **A Data-Driven World: Why Now, and What Do We Do about It?**—❖ William R. Pulleyblank, IBM Business Consulting Services

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

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