

# PROGRAM

*Book*

JSM2005  
August 7-11  
**Minneapolis**  
Using Our Discipline to Enhance Human Welfare

sponsored by:

The American Statistical Association  
Institute of Mathematical Statistics  
International Biometrics Society

Eastern North American Region

Western North American Region

Statistical Society of Canada

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Version  
5.5

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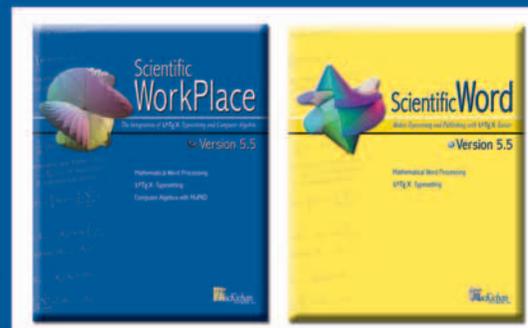
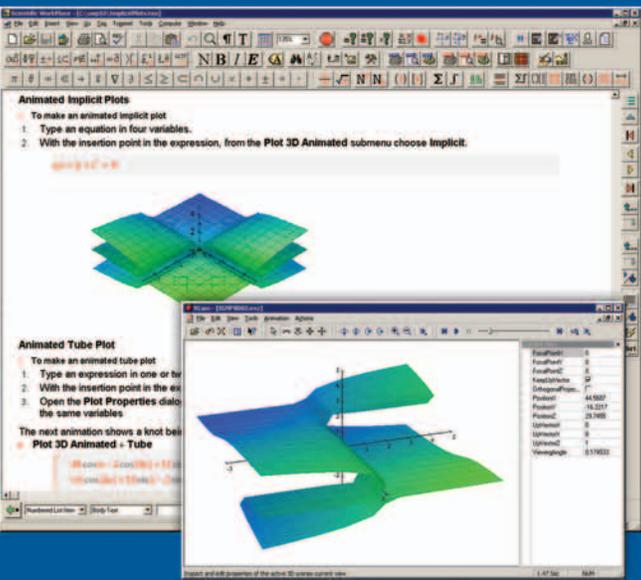
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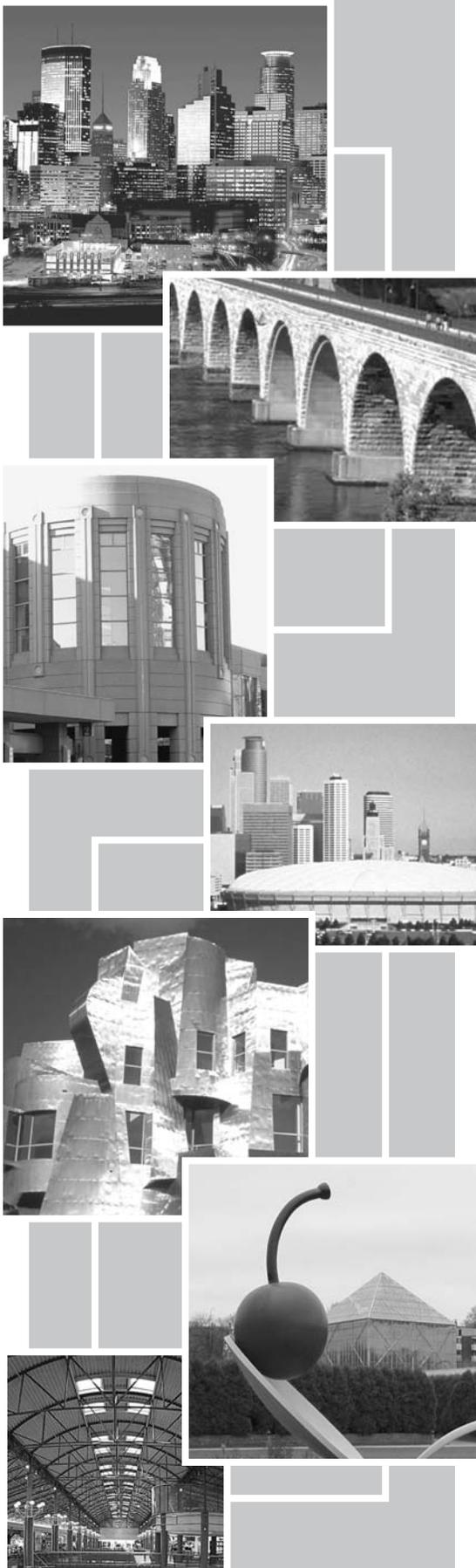
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# COMMITTEES

## JSM 2005 Program Committee



**Daniel F. Heitjan**  
JSM Program Chair  
University of  
Pennsylvania



**Naisyin Wang**  
International Biometric  
Society (ENAR)  
Texas A&M University



**Robert Weiss**  
International Biometric  
Society (WNAR)  
UCLA



**David Madigan**  
Institute of Mathematical  
Statistics (Invited)  
Rutgers, The State  
University of New Jersey



**Dave Higdon**  
Institute of Mathematical  
Statistics (Contributed)  
Los Alamos National  
Laboratory



**Radu Craiu**  
Statistical Society of  
Canada (SSC)  
University of Toronto



**Winston Anston  
Richards**  
The ASA Council of  
Chapters  
Penn State University at  
Harrisburg



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The ASA Committee on  
Committees  
University of Wisconsin-  
Milwaukee

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Administration

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Labor Statistics

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**Madge Haven**  
Education Manager

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### ASA Meetings

**Elaine L. Powell,  
CMP**  
Assistant Director  
of Meetings

**Kathleen Wert**  
Meetings Planner

**Margarita E. Navas**  
Meetings Planner

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Invited and Contributed  
Posters  
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Database:  
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**W. Robert Stephenson**

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**Thomas P. Capizzi**

Council of Sections Chair  
**E. Jacquelin Dietz**

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Web site: [www.amstat.org](http://www.amstat.org)

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President-Elect  
**Charmaine Dean**

Past President  
**Nancy Reid**

Secretary  
**Penny Brasher**

Treasurer  
**Edward Chen**

Public Relations Officer  
**Jock Mackay**

### **Business Office:**

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Email: [info@ssc.ca](mailto:info@ssc.ca)  
Web site: [www.ssc.ca](http://www.ssc.ca)

# International Biometric Society—Eastern North American Region

## January–December 2005

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Past President  
**Marie Davidian**

President-Elect  
**Jane Pendergast**

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**Lance Waller**

Treasurer (2004–2005)  
**Joanna Shih**

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Six members (*elected to three-year terms*):

Regional Advisory Board (RAB) Chair  
**Stacy Lindborg**

2003–2005  
**Stephen George**  
**Roderick Little**

2004–2006  
**Bruce Craig**  
**Amita Manatunga**

2005–2007  
**Gregory Campbell**  
**Naisyin Wang**

Regional Members of the Council of the International Biometric Society:  
**Marie Davidian, Walter W. Piegorsch, Ron Brookmeyer, Louise Ryan, Janet Wittes**

Appointed Members of the RAB (*three-year terms*)  
Chair  
**Stacy Lindborg**

2003–2005  
**Scarlett Bellamy, Christopher R. Bilder, DuBois Bowman, James J. Chen,**

**Michael Daniels, Francesca Dominici, Montserrat Fuentes, Stacy Lindborg, Brian D. Marx, Alicia Y. Toledano**

2004–2006  
**Hongshik Ahn, Brent Coull, Debashis Ghosh, Amy Herring, Tom Loughin, Jared Lunceford, Jeffrey Morris, Kerrie Nelson, Frank Roesch, Helen Zhang**

2005–2007  
**Barbara Bailey, Sudipto Banerjee, Jason Conner, Todd Durham, Kirk Easley, Abie Ekangaki, Deborah Ingram, Xuejen Peng, James Rosenberger, Maura Stokes**

### Programs

2005 Joint Statistical Meeting  
**Naisyin Wang**

2006 Joint Statistical Meeting  
**Brent Coull**

2005 Spring Meeting—Austin, Texas  
Program Chair: **A. John Bailer**  
Program Co-Chair: **Maura Stokes**

2006 Spring Meeting—  
New Orleans, Louisiana  
Local Arrangements Chairs:  
**Julia Volanfuva and Brian Marx**  
Local Arrangements Co-Chair:  
**Todd Nick**

Program Chair: **Montserrat Fuentes**  
Program Co-Chair: **José Pinheiro**

*Biometrics* Editors  
**Lawrence Freedman, Mike Kenward, and Xihong Lin**

*Biometric Bulletin* Editor  
**Urania Dafne**

ENAR Correspondent for the *Biometric Bulletin*  
**Roslyn Stone**

ENAR Executive Director  
**Kathy Hoskins**

International Biometric Society  
Business Manager  
**Claire Shanley**

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President: **Peter B. Imrey**  
Past President: **Marie Davidian**  
President-Elect: **Jane Pendergast**

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Nominating: **Marie Davidian**  
Sponsorship: **Frank Shen**  
Information Technology Oversight (ITOC):  
**Bonnie La Fleur**

American Association for the Advancement of Science (Joint with WJAR) Terms through February 22, 2005

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**Stephen Rathbun**

Section G, Biological Sciences:  
**Geof Givens**

Section N, Medical Sciences:  
**Joan Hilton**

Section O, Agriculture:  
**Kenneth Portier**

Section U, Statistics  
**Mary Foulkes**

National Institute of Statistical Sciences (ENAR President is also an ex-officio member) Board of Trustees Member:  
**Peter B. Imrey**

### Business Office:

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12100 Sunset Hills Road, Suite 130  
Reston, VA 20190  
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Fax: (703) 435-4390  
Email: [enar@enar.org](mailto:enar@enar.org)  
Web site: [www.enar.org](http://www.enar.org)

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**David Yanez**

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**Kenneth Kopecky**

Program Coordinator  
**Weng Kee Wong**

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**Todd Alonzo, Barbra Richardson**

2004–2006:  
**Ken Burnham, Sandrine Dudoit**

2003–2005:  
**Stephanie Monks, Lang Wu**

IBS Council Representatives  
**John Neuhaus, Christine McLaren**

### Business Office:

**WNAR Membership Services  
Cancer Research and Biostatistics**  
1730 Minor Avenue, Suite 1900  
Seattle, WA 98101-1468  
Email: [wnar@crab.org](mailto:wnar@crab.org)  
Web site: [www.wnar.org](http://www.wnar.org)

## Institute of Mathematical Statistics

### Executive Committee

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**Thomas G. Kurtz**

Past President  
**Terry Speed**

Program Secretary  
**Andrew Nobel**

Executive Secretary  
**Alicia Carriquiry**

Treasurer  
**Jiayang Sun**

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**Robert Adler**

Editor, *The Annals of Probability*  
**Steve Lalley**

Editors, *The Annals of Statistics*  
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Jianqing Fan**

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**J. Theodore Cox**

Editor, *Electronic Communications  
in Probability*  
**Martin Barlow**

Managing Editor,  
*Electronic Probability Journals*  
**Zhenqing Q. Chen**

### Council

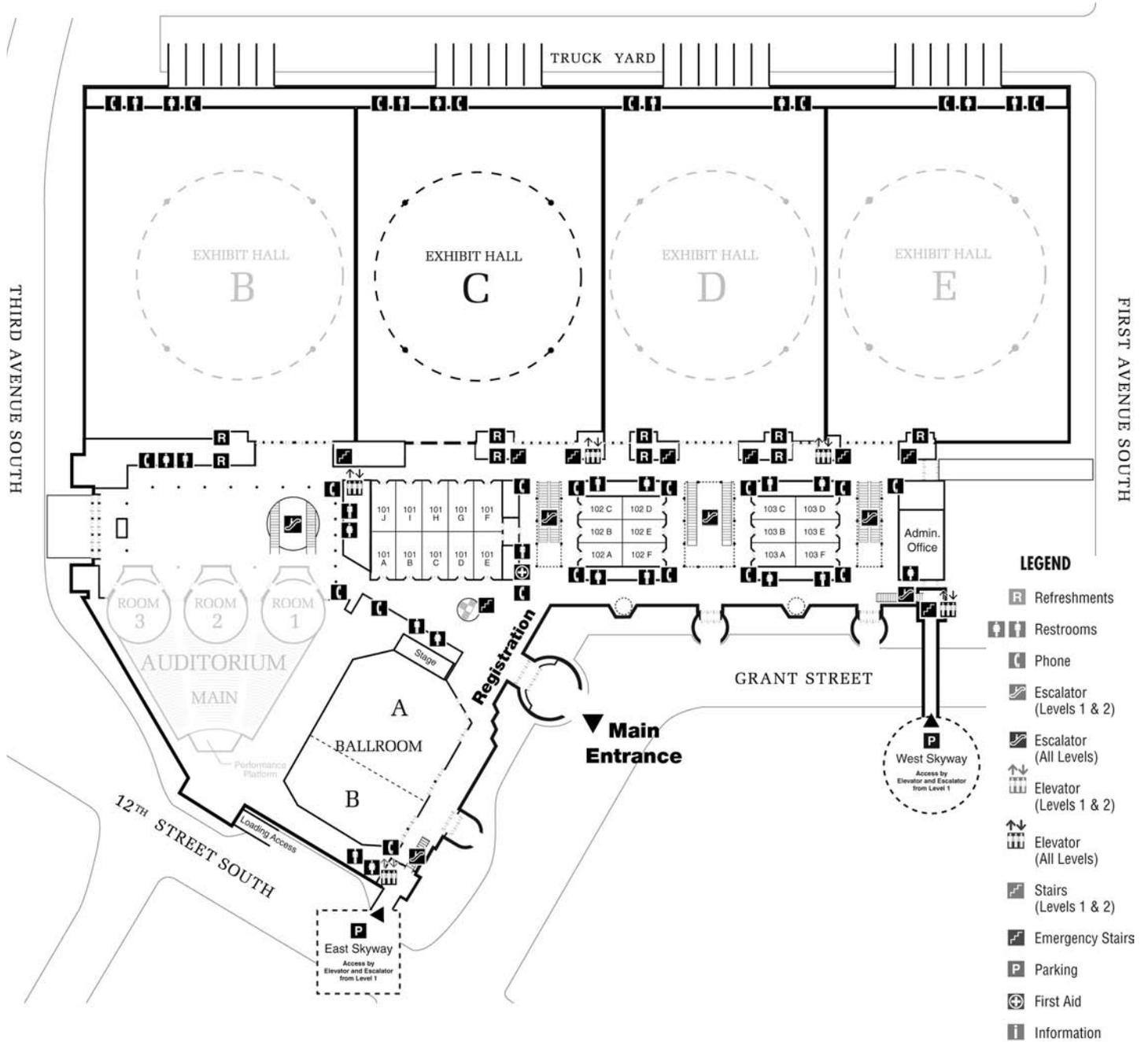
<b>Alan Karr</b>	<b>2005</b>
<b>J. Steve Marron</b>	<b>2005</b>
<b>Per Mykland</b>	<b>2005</b>
<b>David W. Scott</b>	<b>2005</b>
<b>Jane-Ling Wang</b>	<b>2005</b>
<b>Richard Gill</b>	<b>2006</b>
<b>Hans R. Künsch</b>	<b>2006</b>
<b>Christian P. Robert</b>	<b>2006</b>
<b>Ruth J. Williams</b>	<b>2006</b>
<b>Susan Holmes</b>	<b>2007</b>
<b>Nancy Flournoy</b>	<b>2007</b>
<b>Erwin Bolthausen</b>	<b>2007</b>
<b>Michael Steele</b>	<b>2007</b>
<b>Xuming He</b>	<b>2007</b>

### Business Office:

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Executive Director**  
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Fax: (216) 295-5661  
Email: [ims@imstat.org](mailto:ims@imstat.org)  
Web site: [www.imstat.org](http://www.imstat.org)

# MINNEAPOLIS CONVENTION CENTER—LEVEL ONE

JSM Registration Area; General Sessions (Ballroom A); Roundtables (Ballroom B);  
EXPO 2005 and Career Placement Service (Hall C); Meeting Rooms 101 A–J, 102 A–F, 103 A–F;

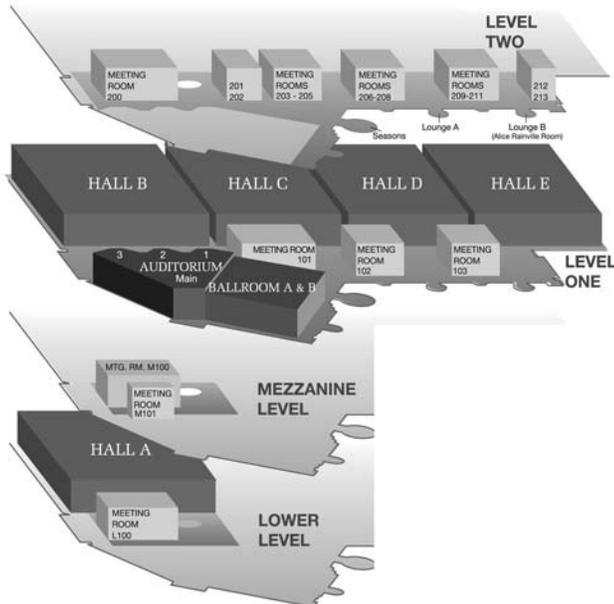
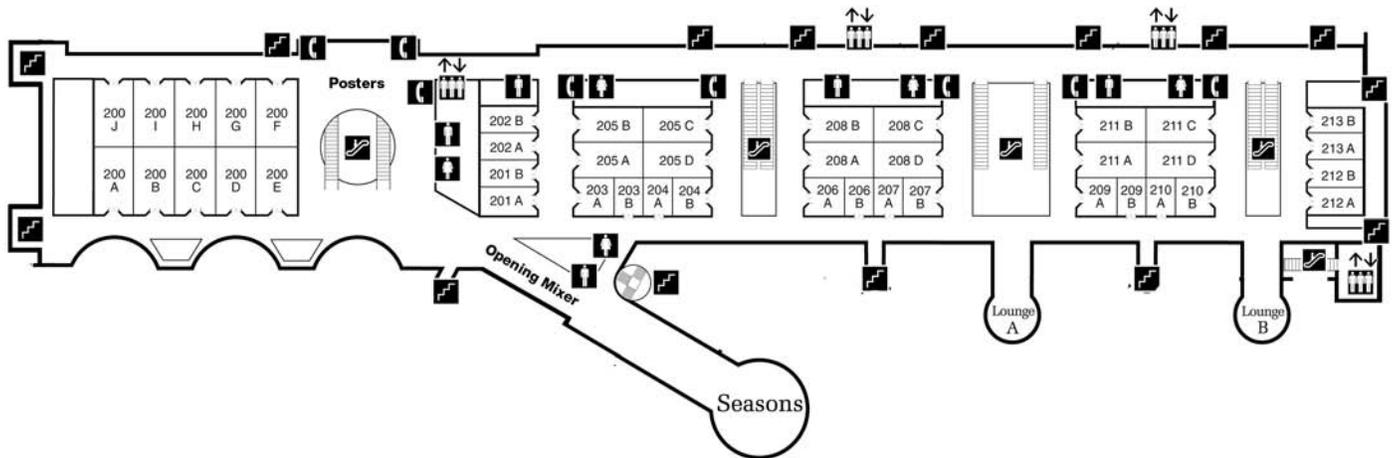


## Meeting Rooms

Meeting rooms are labeled with “letters,” designating in which facility the room is located:  
Minneapolis Convention Center = “MCC” Hilton Minneapolis Hotel = “H” Hyatt Regency Minneapolis = “HY”

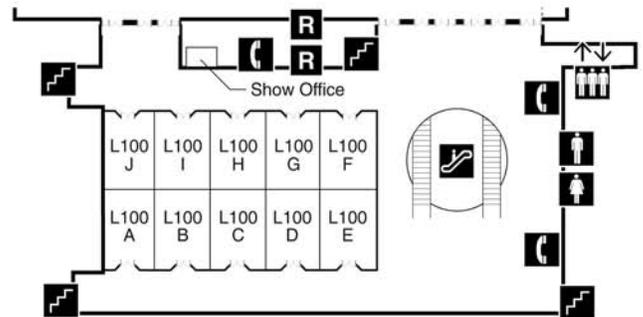
## MINNEAPOLIS CONVENTION CENTER—LEVEL TWO

Meeting Rooms 200 A–J, 201 A–B, 202 A–B, 203 A–B, 204 A–B, 205 A–D, 206 A–B, 207 A–B, 208 A–D, 209 A–B, 210 A–B, 211 A–D, 212 A–B, 213 A–B; Poster Session; Opening Mixer



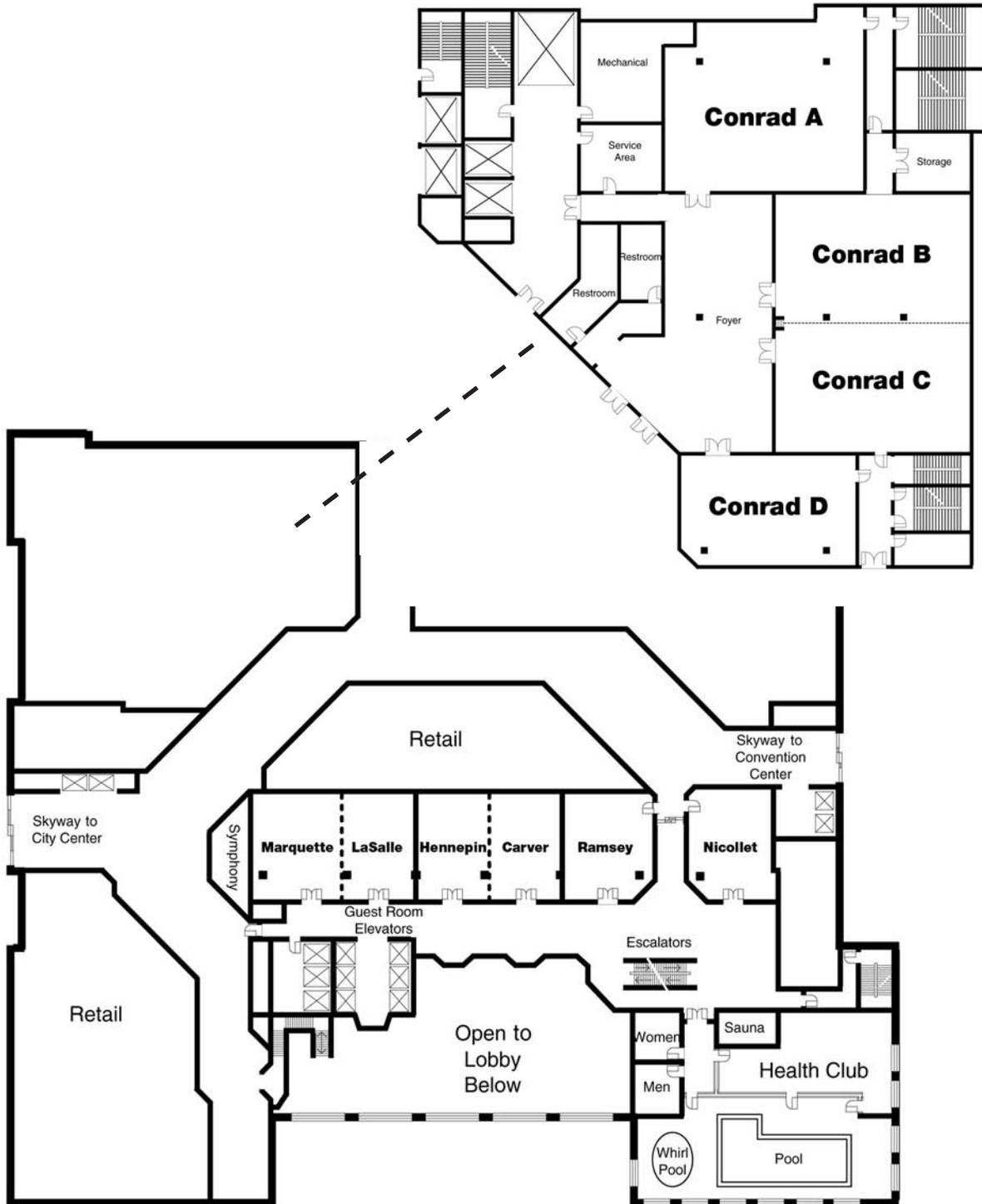
## MINNEAPOLIS CONVENTION CENTER—LOWER LEVEL

Meeting Rooms L100 A–J, Continuing Education Courses, Computer Technology Workshops



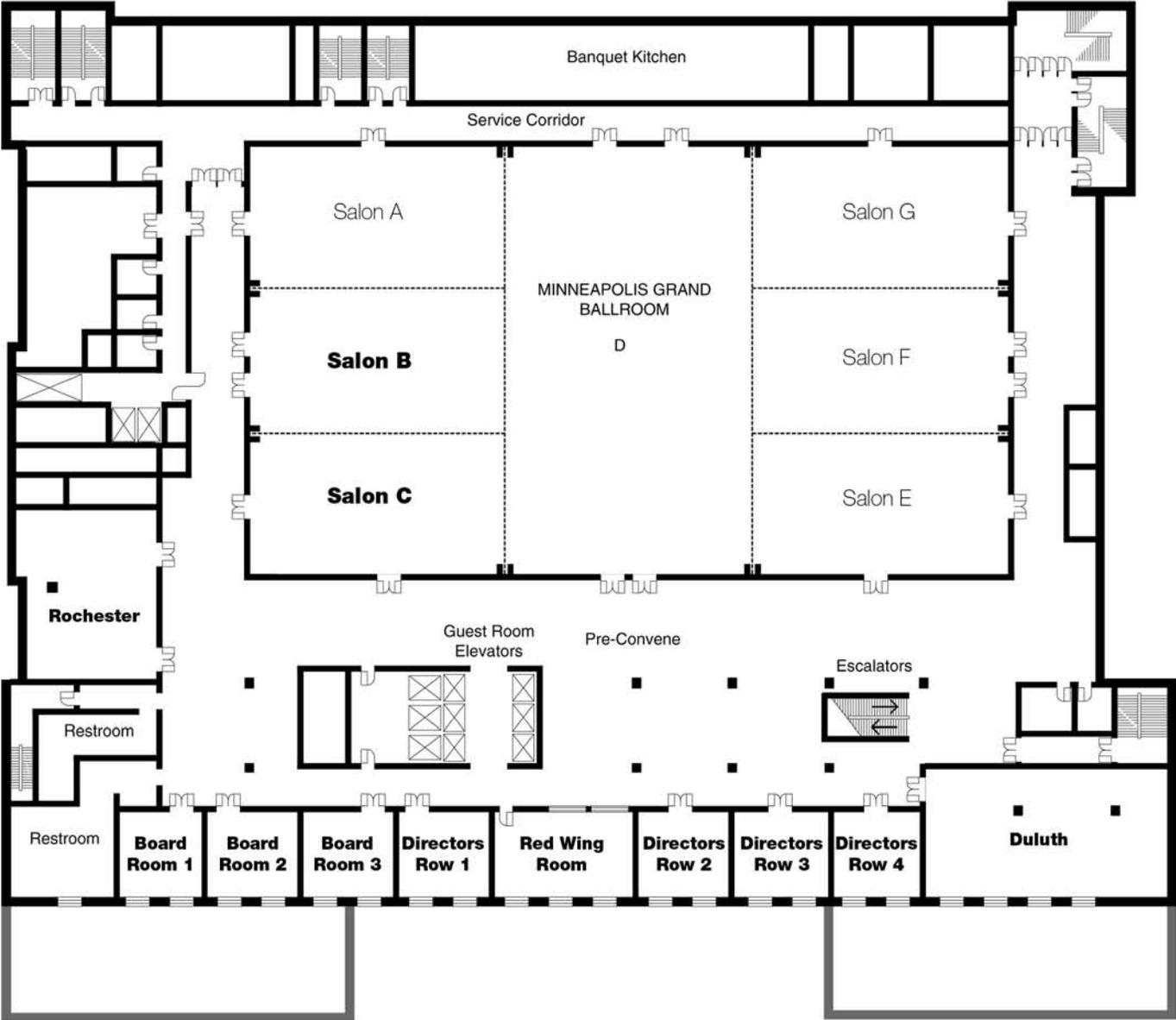
**HILTON MINNEAPOLIS—2nd FLOOR**

Carver, Hennepin, LaSalle, Marquette, Nicollet, Ramsey,  
Conrad Rooms (Conrad A,B,C,D)



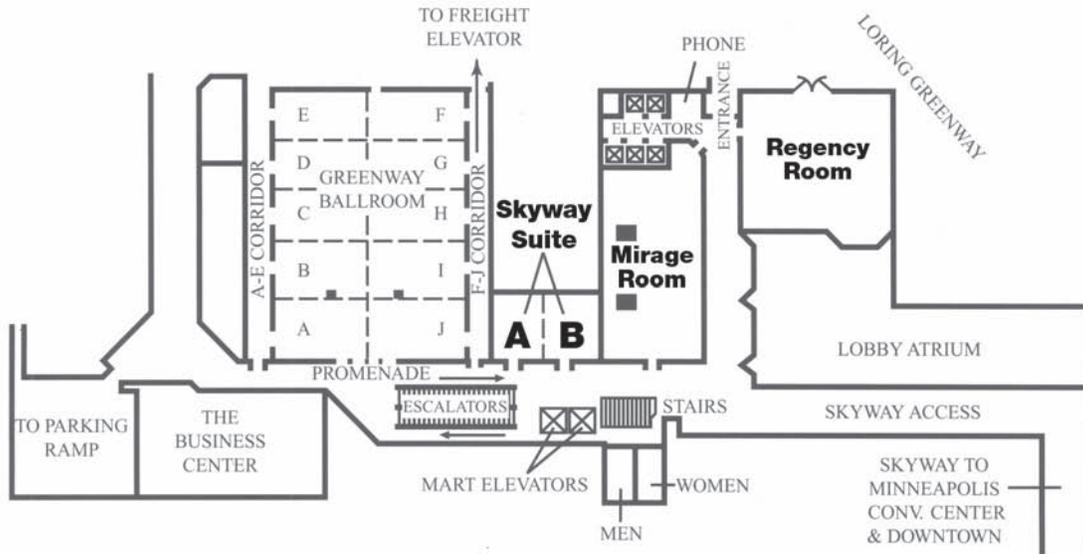
# HILTON MINNEAPOLIS—3rd FLOOR

Board Rooms 1-3, Directors Row 1-4, Red Wing Room, Duluth, Rochester, Salon B, Salon C



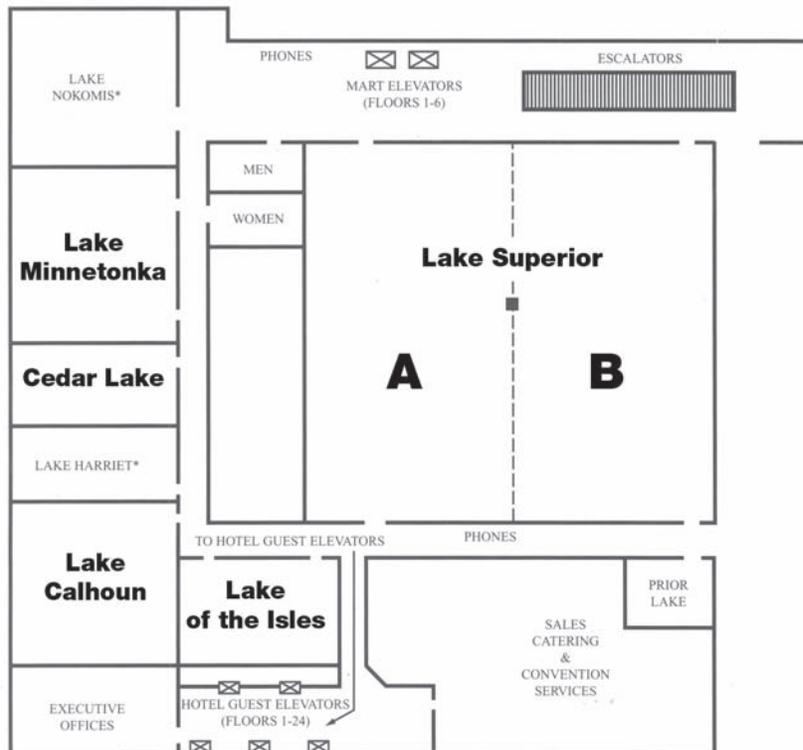
**HYATT REGENCY MINNEAPOLIS—SECOND LEVEL**

Skyway Suite A & B, Mirage Room, Regency Room



**HYATT REGENCY MINNEAPOLIS—FIFTH LEVEL**

Lake Suites Conference Center: Lake of the Isles, Lake Calhoun, Cedar Lake, Lake Minnetonka, Lake Superior A & B



*American Statistical Association*

# OPEN MEETING

**Fritz J. Scheuren, ASA President**

Sunday, August 7, 2005, 6:00 p.m.

Minneapolis Convention Center, Room 102 A

*Find out what  
your Association is doing!*

Come to the open meeting, meet your officers, hear about the following items (among others) and voice your opinions about the ASA:

- ✓ 2005 Board task force feedback
- ✓ Update on ASA finances
- ✓ New trends in statistical research
- ✓ ASA international outreach
- ✓ ASA public policy initiatives
- ✓ ASA building
- ✓ Response to 2004 Open Meeting queries

*Please plan to attend and lend your voice to the discussion of important issues affecting the future of the ASA.*

# Minneapolis, Minnesota



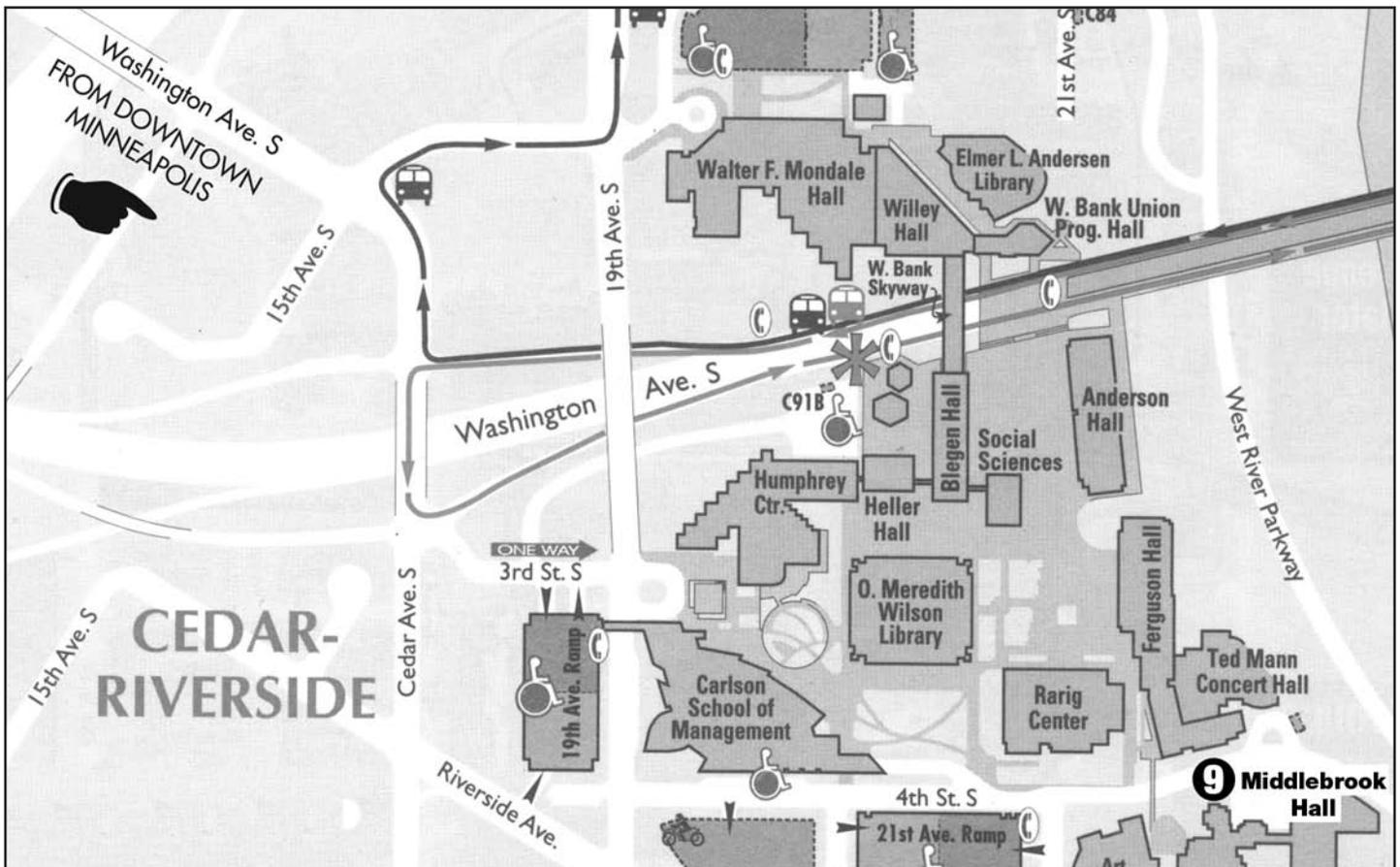
Minneapolis  
Convention Center  
(1301 Second Avenue South)

Wesley  
United Meth.  
Church

Central  
Lutheran  
Church

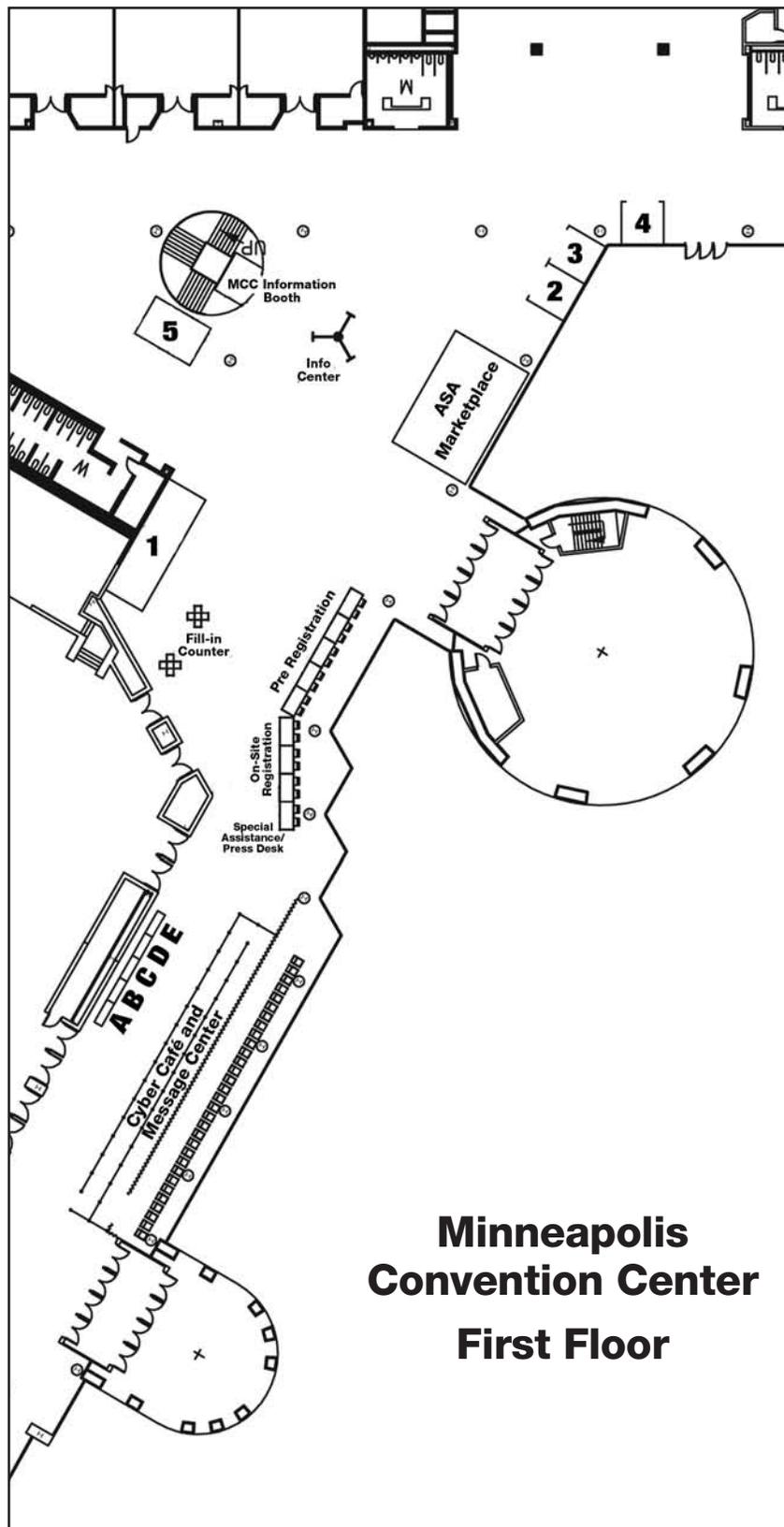
- 1 Hilton Minneapolis**  
1001 Marquette Avenue  
*COC/COS, committee, and social activities*
- 2 Hyatt Regency Minneapolis**  
1300 Nicollet Mall  
*Committee and social activities*
- 3 Millennium Hotel Minneapolis**  
1313 Nicollet Mall  
*No scheduled activities*
- 4 Marriott City Center**  
30 South Seventh Street  
*No scheduled activities*
- 5 Holiday Inn Express Hotel & Suites**  
225 South Eleventh Street  
*No scheduled activities*

- 6 Radisson Plaza Hotel Minneapolis**  
35 South Seventh Street  
*No scheduled activities*
- 7 Crowne Plaza Northstar Hotel**  
618 Second Avenue South  
*No scheduled activities*
- 8 Embassy Suites Minneapolis–Downtown**  
425 South 7th Street  
*No scheduled activities*
- Radisson Hotel Metrodome**  
615 SE Washington Avenue  
*No scheduled activities*  
**(not pictured on map)**
- 9 University of Minnesota, Middlebrook Hall**  
412 22nd Avenue South  
**(see map below)**



## JSM Registration Area and Society Booths

1. ASA Communities Booth
  2. Institute of Mathematical Statistics (IMS)
  3. Eastern North American Region of the International Biometric Society (ENAR)
  4. International Statistical Institute (ISI)
  5. Minneapolis Restaurant Reservations/Information Desk
- A. Gay and Lesbian Concerns in Statistics Committee
  - B. Federal Committee on Statistical Methodologies
  - C. The Caucus for Women in Statistics
  - D. International Indian Statistical Association
  - E. International Chinese Statistical Association



## Emergency Telephone Messages

The general conference telephone number is (612) 335-6860. This will connect you to the JSM Special Assistance and Press Desk and should be used for emergency purposes only. Emergency messages will be posted in the electronic JSM Message Center, located in the registration area at the Minneapolis Convention Center. All other calls or messages should be left on the attendee's guestroom voice mail.

## Convention Hotels

The main phone numbers for the convention hotels are:

<b>Hilton Minneapolis</b>	(612) 376-1000
<b>Hyatt Regency Minneapolis</b>	(612) 370-1234
<b>Millennium Hotel Minneapolis</b>	(612) 332-6000
<b>Marriott City Center</b>	(612) 349-4000
<b>Holiday Inn Express Hotel &amp; Suites</b>	(612) 341-3300
<b>Radisson Plaza Hotel Minneapolis</b>	(612) 339-4900
<b>Crowne Plaza Northstar Hotel</b>	(612) 338-2288
<b>Embassy Suites Minneapolis–Downtown</b>	(612) 333-3111
<b>Radisson Hotel Metrodome</b>	(612) 379-8888
<b>University of Minnesota, Middlebrook Hall</b>	(612) 625-0536

## Assistance for the Disabled

If you have a disability that may impede your participation, please contact a staff member at the Special Assistance and Press Desk on the First Level of the Minneapolis Convention Center.

## Child Care

Nanny Professionals will provide child care at JSM. Nannies will come directly to your hotel room; the rate is \$13 per hour for the first one or two children, increasing \$1 per hour up to five children. After five children, a second nanny will be needed. In addition, there is a \$10 mileage fee plus parking. There is a minimum of five hours during the day and four hours in the evening. Nanny Professionals has served the Twin Cities at major hotels and the convention center since 1984. Visit their web site at [www.nannyprofessionals.com](http://www.nannyprofessionals.com) or contact them directly by phone, (651) 221-0587, or email, [nannypro@bevcomm.net](mailto:nannypro@bevcomm.net), for more information.

The Caucus for Women in Statistics will provide a subsidy toward three hours of babysitting per family for up to 14 families. If you are interested, please contact Julia Bienias, president of The Caucus for Women in Statistics, at [jbienias@rush.edu](mailto:jbienias@rush.edu).

## Electronic Devices

Please turn off all cell phones, pagers, and other electronic devices before attending any JSM session. These devices cause interference with the audiovisual equipment and are a distraction to the session speaker and attendees.

## No Smoking Policy

For the comfort and health of all attendees, smoking is not permitted at any JSM function. This includes plenary sessions, concurrent sessions, workshops, luncheons, and receptions (unless the event is outdoors).

## Photographs and Videotaping

Taking photographs or using video equipment in any session or at any JSM event is prohibited; violators will be asked to leave. This is a disruption for the speakers, a distraction for the audience, and an infringement on intellectual property rights. Only the official JSM photographer will be authorized to take photographs.

## Recycling at JSM

Your participation can make the difference. You may help by making use of the Towel and Linen Programs in use at the area hotels. Also, simply change the option from print to not print at the Cyber Café and Message Center to help us continue our efforts to conserve. Please note, area hotels and the convention center do sort items for recycling. If you have additional questions, please stop by the Special Assistance and Press Desk in the Minneapolis Convention Center registration area.



## Invited Poster Session

MCC - Level Two, Lobby B

Invited posters will be showcased Sunday, August 7, from 4:00 p.m. to 5:50 p.m. The session is designed for the display of state-of-the-art statistical technology. Details are available in the general program schedule. Authors are assigned a poster board corresponding to the number in the program and will remain for the allotted time.

## Poster Sessions

MCC - Level Two, Lobby B

Regular and Topic Contributed Poster Sessions are held Sunday from 8:00 p.m. to 9:50 p.m. and Monday and Tuesday from 10:30 a.m. to 12:20 p.m. and 2 p.m. to 3:50 p.m. These sessions are designed for the display of graphical materials, charts, printouts, etc., rather than the text of the paper. Details are available in the general program schedule. Authors are assigned a poster board corresponding to the number in the program and will remain for the allotted time.

## Introductory Overview Lectures

The Introductory Overview Lectures are a series of talks on a variety of topics. No preregistration is necessary, and they are open to all JSM registrants. If you have suggestions for next year, please contact 2006 JSM Program Chair Lisa LaVange at [llavange@inspirepharm.com](mailto:llavange@inspirepharm.com).

### Sunday, August 7

4:00 p.m.—5:50 p.m.

MCC-200ABC

Session 37

Introductory Overview Lecture on Visual Data Mining

### Monday, August 8

10:30 a.m.—12:20 p.m.

MCC-200ABC

Session 110

Introductory Overview Lecture on Multivariate Probability Density Estimation

### Tuesday, August 9

8:30 a.m.—10:20 a.m.

MCC-200ABC

Session 203

Introductory Overview Lecture on Data Confidentiality

### Wednesday, August 10

8:30 a.m.—10:20 a.m.

MCC-200ABC

Session 334

Introductory Overview Lecture on Recurrent Events Data Analysis for Applications

### Thursday, August 11

8:30 a.m.—10:20 a.m.

MCC-L100G

Session 460

Introductory Overview Lecture on Objective Bayesian Inference

## Late-breaking Sessions

The JSM partner societies recently approved two additional session slots for special invited Late-Breaking Sessions to cover important topics that might emerge close in time to each JSM. This is an exciting addition to the JSM program, most of which is organized well in advance.

### Monday, August 8

2:00 p.m.—3:50 p.m.

MCC-200ABC

Session 164

Late-Breaking Session 1—Bias in Exit Polls

### Wednesday, August 10

10:30 a.m.—12:20 p.m.

MCC-200ABC

Session 371

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



## Business and Committee Meetings

All meetings are open unless shown as “closed” or “by invitation only.” Section business meetings are open to all, and members are urged to attend. Business meetings of the ASA Sections provide the opportunity to give suggestions on Section business.

**Opening Mixer,** MCC-Seasons and Bridge  
Sunday, August 7, 8:00 p.m.–10:30 p.m.

Don't miss your chance to get JSM 2005 off to a great start and enjoy refreshments with your colleagues. New this year, an assortment of contributed posters will be on display during the mixer. We will see you there!

**JSM First-Time Attendee Orientation and Reception,** MCC-L100 F  
Sunday, August 7, 6:00 p.m.–7:30 p.m.

Learn more about how to get the most out of your first JSM experience, meet new people, and network.

**Student Mixer,** H-Conrad A  
Monday, August 8, 6:00 p.m.–7:00 p.m.

Student registrants can enjoy refreshments, meet their peers, and make plans for local events and outings at this mixer. The 2005 Student Mixer is sponsored by the ASA Committee on Membership Retention and Recruitment. A number of door prizes will be given away. Students, you don't want to miss it!

**The ASA Longtime Member Reception,**  
H-Conrad B  
Monday, August 8, 6:30 p.m.–7:30 p.m.

If you joined the ASA 35 or more years ago, the American Statistical Association would like to thank you for your longtime support. The reception is sponsored by the ASA Membership Committee.

## Society Business Meetings

You are encouraged to attend your society business meetings, if held during JSM. This is your chance to give your input to the officers and other members of your society.

**American Statistical Association**  
Sunday, August 7, 6:00 p.m.–7:30 p.m. MCC-102A

**Statistical Society of Canada**  
Monday, August 8, 5:00 p.m.–7:00 p.m. HY-Regency

**International Biometric Society,  
ENAR Business Meeting**  
Tuesday, August 9, 5:30 p.m.–7:30 p.m. MCC-103A

**IMS Business Meeting**  
Tuesday, August 9, 12:30 p.m.–1:30 p.m. MCC-102A



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[www.amstat.org](http://www.amstat.org)  
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service at  
1 (888) 231-3473

## MEMBERS ENJOY:

**A SUBSCRIPTION** to *Amstat News*, the ASA's monthly membership magazine, full of upcoming events and job opportunities.

**NETWORKING** through the ASA's regional Chapters and special-interest Sections.

**MEMBERS-ONLY FEATURES** of the ASA JobWeb at <http://jobs.amstat.org/>, including "Post Your Resume" and "Notify Me!"

**OPPORTUNITIES** to expand career horizons with the ASA's Career Placement Service at the Joint Statistical Meetings.

**DISCOUNTED** registration fees for the annual Joint Statistical Meetings and Continuing Education Courses.

**ONLINE ACCESS** to the Current Index to Statistics (CIS), a bibliographic index to publications in statistics and related fields.

## ASA Membership Exhibit Booth Hours

MCC - Hall E, Booth 700

Sunday, August 7	1:00 p.m.–6:00 p.m.
Monday, August 8	9:00 a.m.–6:00 p.m.
Tuesday, August 9	9:00 a.m.–6:00 p.m.
Wednesday, August 10	9:00 a.m.–2:00 p.m.

**Become a MEMBER of ASA—join at the ASA Communities Booth and save \$15 on your first year!**

Most membership categories include a subscription to *Amstat News*. Student members also receive *STATS: The Magazine for Students of Statistics*. All members receive discounts on ASA publications, meetings, and educational programs. For information regarding your benefits, including how to subscribe to additional publications or register for ASA meetings, contact customer service at 1 (888) 231-3473 or visit our web site, [www.amstat.org/join](http://www.amstat.org/join).

## Recycling Badge Holders

JSM badges and badge holders will be collected for recycling. Please place those you are not reusing in a designated bin at the registration area.

## 2005 JSM Proceedings

Order your JSM 2005 Proceedings in advance! Order forms also are available at the ASA Membership booths in the JSM Registration Area and in EXPO 2005. CDs will mail in January 2006.

Would you like to publish your presentation in the 2005 Proceedings? Eligibility guidelines and author instructions for JSM 2005 presenters are available at [www.amstat.org/meetings/jsm/2005](http://www.amstat.org/meetings/jsm/2005). Click the Program tab and select "Proceedings." Submissions must be in electronic format; the submission site opened August 1, 2005.

## JSM 2006

The 2006 Joint Statistical Meetings will be held in Seattle, Washington, August 6–10, 2006, at the Washington State Convention & Trade Center. Preliminary information about JSM 2006 can be found at the Seattle Booth #704 in this year's EXPO 2005. The complete listing of the 2006 Program Committee and instructions on the submission of contributed papers appeared in the June issue of *Amstat News*.



## If You Are Not a Member...

Information about the American Statistical Association, the Eastern and Western North American Regions of the International Biometric Society, the Institute of Mathematical Statistics, and the Statistical Society of Canada will be available at the society booths located in the registration area and in the Exhibit Hall at the Minneapolis Convention Center. Publications and other materials also will be on display. If you are not a member, pick up an application form today. Each society provides a variety of publications and activities to anyone interested in applied and/or theoretical aspects of statistics. Student memberships are offered at substantially reduced rates.

**If you are not already a member of the ASA, join now and receive \$15 off a one-year ASA membership. This offer is not applicable to student, senior, or discounted memberships. Return your completed application and payment of \$70 to the ASA Membership Booth by Thursday, August 11, at 10 a.m. to receive your discount. Make an investment in your career and begin enjoying all membership benefits right away by joining today!**

## ASA Communities Booth Hours

MCC - Level 1, Registration Lobby

Saturday, August 6	7:00 a.m.–6:00 p.m.
Sunday, August 7	7:00 a.m.–8:30 p.m.
Monday, August 8	7:30 a.m.–6:00 p.m.
Tuesday, August 9	7:30 a.m.–4:30 p.m.
Wednesday, August 10	7:30 a.m.–4:30 p.m.
Thursday, August 11	7:30 a.m.–10:30 a.m.

## ASA Membership Exhibit Booth Hours

MCC - Hall C, Booth 700

Sunday, August 7	1:00 p.m.–6:00 p.m.
Monday, August 8	9:00 a.m.–6:00 p.m.
Tuesday, August 9	9:00 a.m.–6:00 p.m.
Wednesday, August 10	9:00 a.m.–2:00 p.m.

## Registration

All persons attending JSM, including participants in the program, are required to register. Materials for all those who registered in advance are available at the JSM Registration Desk, located on Level One of the Minneapolis Convention Center. You also may add Continuing Education Courses, the Career Placement Service, tours, guests, or luncheons to your JSM registration at the JSM Registration Desk. Onsite career placement applicants are required to register. Hours of operation:

Saturday, August 6	7:00 a.m.–6:00 p.m.
Sunday, August 7	7:00 a.m.–8:30 p.m.
Monday, August 8	7:30 a.m.–6:00 p.m.
Tuesday, August 9	7:30 a.m.–4:30 p.m.
Wednesday, August 10	7:30 a.m.–4:30 p.m.
Thursday, August 11	7:30 a.m.–10:30 a.m.

JSM registration includes the Program and Abstract books, access to the Exhibit Hall, admission to the Sunday night Opening Mixer (dry snacks, beer, and soft drinks), the Monday evening Student Mixer (students only), and the Informal Dance Party on Tuesday evening (dancing, dry snacks, and cash bar). If you did not purchase luncheon tickets with your advance registration, ask at the JSM Registration Desk for availability. Limited seating is still available for some luncheons. Tickets will be sold until 2 p.m. on the day prior to the scheduled luncheon. NOTE: No onsite Kosher or Heart Healthy meal tickets will be available.

## ASA Continuing Education (CE) Courses

Courses will be held in meeting rooms at the Minneapolis Convention Center. For room assignments, please review the general program or visit the Special Assistance and Press Desk on Level One of the Minneapolis Convention Center.

**Onsite CE Registration:** Go to the JSM Registration Desk, located on Level One of the Minneapolis Convention Center. Availability may be limited. Textbooks will not be available.

## Speaker Work Rooms

There will be two Speaker Work Rooms this year, both at the Minneapolis Convention Center on Level Two in Rooms 204A and 204B. Hours of operation:

Saturday, August 6	7:00 a.m.–6:00 p.m.
Sunday, August 7	7:00 a.m.–6:00 p.m.
Monday, August 8	7:00 a.m.–6:00 p.m.
Tuesday, August 9	7:00 a.m.–6:00 p.m.
Wednesday, August 10	7:00 a.m.–6:00 p.m.
Thursday, August 11	7:00 a.m.–10:30 a.m.

A Speaker Work Room is available for all presenters. There will be two stations available in each room: one with an overhead projector and screen and one with a data projector and screen. To accommodate more than 3,200 presenters, each speaker will be limited to 10 minutes to test the equipment. Please rehearse your verbal presentation in the privacy of your own hotel room to ensure everyone has a chance to test the equipment.

Presenters using laptops for presentations are encouraged to report to the Speaker Work Room for training on how to connect properly to the data projector. Audiovisual technicians will be available to assist with questions or problems.

## Career Placement Service

*MCC-Exhibit Hall C*

The JSM 2005 Career Placement Service will be located in the Minneapolis Convention Center, Exhibit Hall C. Hours of operation:

Saturday, August 6	9:00 a.m.–5:00 p.m.
Onsite Registration Only	
Sunday, August 7	1:00 p.m.–6:00 p.m.
Full Career Placement Service Open	
Monday, August 8	8:00 a.m.–6:00 p.m.
Full Career Placement Service Open	
Tuesday, August 9	8:00 a.m.–6:00 p.m.
Full Career Placement Service Open	
Wednesday, August 10	8:00 a.m.–6:00 p.m.
Full Career Placement Service Open <i>(Onsite placement registration closes at Noon)</i>	

## EXPO 2005

*MCC-Exhibit Hall C*

Visit publishers, software companies, and recruiters. See state-of-the-art products designed for the statistical community.

## Exhibitors Move in and out Information

### Exhibitor Move in Only

Saturday, August 6	8:00 a.m.–5:00 p.m.
Sunday, August 7	8:00 a.m.–11:00 a.m.

### Exhibitor Move out Only

Wednesday, August 10	2:00 p.m.–8:00 p.m.
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## Show Hours of Operation

Sunday, August 7	1:00 p.m.–6:00 p.m.
Monday, August 8	9:00 a.m.–6:00 p.m.
Tuesday, August 9	9:00 a.m.–6:00 p.m.
Wednesday, August 10	9:00 a.m.–2:00 p.m.

**Cyber Café and Message Center**

*MCC-Level 1, Registration Lobby*

There will be terminals designated in the Message Center for internet access. The Cyber Café and electronic Message Center are for registered JSM attendees and are located in the JSM Registration Area on Level One of the Minneapolis Convention Center. There will NOT be 24-hour access to the Cyber Café and Message Center. To reach an attendee when the Message Center is closed, please call his/her hotel directly. Hours of operation:

Saturday, August 6	7:00 a.m.–11:00 p.m.
Sunday, August 7	7:00 a.m.–11:00 p.m.
Monday, August 8	7:00 a.m.–11:00 p.m.
Tuesday, August 9	7:00 a.m.–11:00 p.m.
Wednesday, August 10	7:00 a.m.–11:00 p.m.
Thursday, August 11	7:00 a.m.–10:30 a.m.

**ASA Marketplace**

*MCC-Level 1, Registration Lobby*

The ASA Marketplace is your store for JSM and ASA souvenirs. Purchase your official JSM 2005 T-shirt, new shirt designs, great new gifts, and clearance items. Hours of operation:

Saturday, August 6	12:00 p.m.–5:00 p.m.
Sunday, August 7	9:00 a.m.–5:00 p.m.
Monday, August 8	9:00 a.m.–5:00 p.m.
Tuesday, August 9	9:00 a.m.–5:00 p.m.
Wednesday, August 10	9:00 a.m.–5:00 p.m.
Thursday, August 11	8:00 a.m.–10:30 a.m.

**Special Assistance and Press Desk**

*MCC-Level 1, Registration Lobby*

Information on activities in Minneapolis, Minnesota, local restaurants, attractions, local maps, and organized tours are available at the Special Assistance and Press Desk on Level One of the Minneapolis Convention Center in the JSM Registration area. Hours of operation:

Saturday, August 6	7:00 a.m.–6:00 p.m.
Sunday, August 7	7:00 a.m.–8:30 p.m.
Monday, August 8	7:30 a.m.–6:00 p.m.
Tuesday, August 9	7:30 a.m.–4:30 p.m.
Wednesday, August 10	7:30 a.m.–4:30 p.m.
Thursday, August 11	7:30 a.m.–10:30 a.m.



**Minneapolis Restaurant Reservations/  
Information Desk**

*MCC-Level One, Registration Lobby*

The Minneapolis Convention Center will provide a Restaurant Reservations/Information Desk in the main lobby area of the South Building entrance. The desk will provide information on the Minneapolis Convention Center and the city. Attendants also will offer directions; provide maps; and suggest restaurants, local activities, and attractions. Hours of operation:

Saturday, August 6	10:00 a.m.–6:00 p.m.
Sunday, August 7	10:00 a.m.–6:00 p.m.
Monday, August 8	9:00 a.m.–5:00 p.m.
Tuesday, August 9	9:00 a.m.–5:00 p.m.
Wednesday, August 10	9:00 a.m.–5:00 p.m.

**First Aid Office**

*MCC-Level 1, Registration Lobby*

Sunday, August 7	2:00 p.m.–10:30 p.m.
Monday, August 8	8:30 a.m.–6:00 p.m.
Tuesday, August 9	8:30 a.m.–6:00 p.m.
Wednesday, August 10	8:30 a.m.–6:00 p.m.
Thursday, August 11	8:30 a.m.–12:30 p.m.



# Statistical Society of Canada Société Statistique du Canada

# SSC

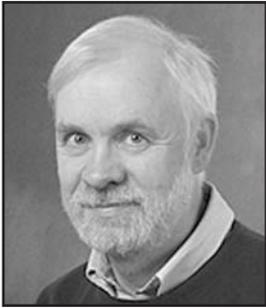
Statistical Society of Canada  
– a long-standing participant  
in the *JSM*.

Join us at the  
**SSC Reception**

Monday, August 8, 5:00 p.m.–7:00 p.m.  
at the Hyatt Regency in the Regency Room

**[www.ssc.ca](http://www.ssc.ca)**

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### **President's Invited Address— *A Bayes/Frequentist Roadmap***

Monday, August 8, 4:00 p.m.

**Roderick J. Little**, University of Michigan

Rod Little is Richard D. Remington Collegiate Professor of Biostatistics and Professor of Statistics at the University of Michigan. He has more than 150 publications, notably on methods for the analysis of data with missing values and model-based survey inference and the application of statistics to diverse scientific areas, including medicine, demography, economics, psychiatry, aging, and the environment. He is interested in federal statistical issues and has served on many National Research Council committees.



### **IMS Presidential Address— *The Poisson Paradigm***

Monday, August 8, 8:00 p.m.

**Louis H. Y. Chen**, National University of Singapore

Louis Chen received his bachelor's degree from the University of Singapore in 1964 and his doctorate from Stanford University in 1971. He is currently the Director of the Institute for Mathematical Sciences at the National University of Singapore, and was President of the Bernoulli Society for Mathematical Statistics and Probability from 1997 to 1999. He works mainly in probability and is best known for his pioneering work in the development of Stein's method in the context of Poisson approximation.

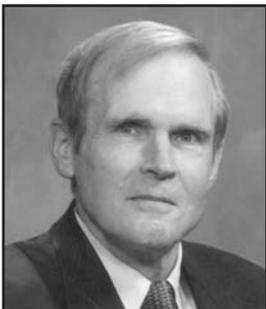


### **Deming Lecture— *Statistics, Quality, and Organizational Excellence***

Tuesday, August 9, 4:00 p.m.

**A. Blanton Godfrey**, North Carolina State University

A. Blanton (Blan) Godfrey is Dean and Joseph D. Moore Professor of Textile & Apparel Technology & Management, College of Textiles, North Carolina State University. He has given seminars, consulted, or taught courses in more than 55 countries; his written materials have been translated, collectively, in more than 15 languages; and he has worked with many of the top executives of leading companies throughout the world. His research interests include statistical graphics, quality and productivity management, strategic deployment, mistake proofing, and applied statistics.



### **The ASA Presidential Address— *Statistics: a Rights Discipline***

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

**Fritz J. Scheuren**, University of Chicago

Currently VP Statistics, NORC, University of Chicago, Fritz Scheuren works mainly on sampling issues in applied settings. In recent years, these applications have largely involved human rights matters, both overseas and in the United States. Among other practitioner honors, he has received the Harry Roberts Statistical Advocate Award (from the Chicago ASA Chapter) and the Shiskin Award for Contributions to Economic Statistics (from the National Association of Business Economists and the Washington Statistical Society).



### **COPSS Fisher Lecture— *Dimension Reduction in Regression***

Wednesday, August 10, 4:00 p.m.

**R. Dennis Cook**, University of Minnesota

R. Dennis Cook, Professor of Statistics at the University of Minnesota, will deliver the Fisher Lecture on dimension reduction. The Lectureship honors a leading statistician who has contributed to scientific investigation through the development and promotion of statistical methods. Cook is recognized for his contributions in regression diagnostics and graphics, optimal experimental design, nonlinear modeling, and the design and analysis of aerial surveys for snow geese, deer, wild horses, and moose. His contributions have been seminal, including the introduction of the "Cook's distance" measure of influence.



**Neyman Lecture**

Sunday, August 7, 4:00 p.m.

**David Brillinger**, University of California, Berkeley

David Brillinger was born in Toronto, Canada. He obtained a bachelor's degree in pure mathematics from the University of Toronto, and earned both a master's degree and a PhD at Princeton University under the supervision of John W. Tukey. He then completed a post-doctoral assignment at the London School of Economics before returning to Princeton to act as a joint lecturer in mathematics for two years. Next, Dr. Brillinger spent five years as statistics lecturer and reader at the London School of Economics. At the end of 1969, he took a position at the University of California, at Berkeley as professor of statistics and has remained there ever since. Dr. Brillinger also is a member of Technical Staff at Bell Telephone Labs.



**Wald Lectures**

Tuesday, August 9, 4:00 p.m.; Wednesday, August 10, 10:30 a.m.; and Thursday, August 11, 10:30 a.m.

**S. R. Srinivasa Varadhan**, New York University

S. R. S. Varadhan received his doctoral degree from the Indian Statistical Institute, Calcutta, India, and has spent almost his entire professional career at the Courant Institute of Mathematical Sciences of New York University. His work covers several areas in probability theory, with connections to analysis and mathematical physics. He is a member of the U.S. National Academy of Sciences and a Fellow of the Royal Society in the United Kingdom.

# BRINGING the ASA *to Minneapolis*

Visit the **ASA Communities Booth** at JSM and learn about the many programs available. Within the ASA Communities Booth, you can get information about:

- ☆ **SECTIONS**—Get information about 22 Sections that encompass several special interests in statistics
- ☆ **CHAPTERS**—Discover the 77 ASA Chapters in 6 Districts covering 3 Regions
- ☆ **THE COMMITTEE ON CAREER DEVELOPMENT**—Providing information to help members of the Association make informed decisions on formulating and meeting their career objectives
- ☆ **EDUCATION**—Pick up brochures on statistics in education such as Adopt-a-School, Poster Competition and Project Competition, Student Teacher Network, AP Statistics, and Beyond AP Statistics.

MCC - Level 1, Registration Lobby	
Saturday, August 6	7:00 a.m.–6:00 p.m.
Sunday, August 7	7:00 a.m.–8:30 p.m.
Monday, August 8	7:30 a.m.–6:00 p.m.
Tuesday, August 9	7:30 a.m.–4:30 p.m.
Wednesday, August 10	7:30 a.m.–4:30 p.m.
Thursday, August 11	7:30 a.m.–10:30 a.m.

**And more!**

*Discover the benefits of membership*

TIME	COURSE	INSTRUCTOR(S)	COURSE TITLE
<b>Saturday, August 6, 2005</b>			
8:00 a.m.–4:00 p.m.	CE_01C	Terence P. Speed/Benjamin M. Bolstad/ Yee Hwa Jean Yang/James Wettenhall	Analysis of Gene Expression Data (2 days)
8:00 a.m.–4:00 p.m.	CE_02C	Peter Mueller/Jack Lee	Bayesian Clinical Trial Design—Approaches and Implementation
8:00 a.m.–4:00 p.m.	CE_03C	Robert Kohn/Christopher K. Carter	Bayesian Methods for Multivariate Regression: Variable Selection and Covariance Selection Models
8:00 a.m.–4:00 p.m.	CE_04C	Hongyu Zhao	Introduction to Statistical Methods in Human Genetics
8:15 a.m.–4:15 p.m.	CE_05C	Terry Therneau	Extending the Cox Model
8:15 a.m.–4:15 p.m.	CE_06C	Steven K. Thompson	Adaptive Sampling
8:15 a.m.–4:15 p.m.	CE_07C	Frank E. Harrell, Jr.	Regression Modeling Strategies
<b>Sunday, August 7, 2005</b>			
8:00 a.m.–4:00 p.m.	CE_01C	Terence P. Speed/Benjamin M. Bolstad/ Yee Hwa Jean Yang/James Wettenhall	Analysis of Gene Expression Data (2 days)
8:00 a.m.–4:00 p.m.	CE_08C	Scott M. Berry/Donald A. Berry	Adaptive Bayesian Clinical Trials
8:00 a.m.–4:00 p.m.	CE_09C	Allan Donner/Neil Klar	Design and Analysis of Cluster Randomization Trials
8:15 a.m.–4:15 p.m.	CE_10C	Donald B. Rubin/Trivellore E. Raghunathan	Multiple Uses of Multiple Imputation
★ 8:15 a.m.–4:15 p.m.	CE_11C	Geert Verbeke/Geert Molenberghs	Models for Repeated Discrete Data
1:00 p.m.–5:00 p.m.	CE_12C	Tim Hesterberg	Bootstrap Methods and Permutation Tests for Doing and Teaching Statistics
<b>Monday, August 8, 2005</b>			
8:00 a.m.–4:00 p.m.	CE_13C	Ralph O'Brien/John Castelloe	Sample-size Analysis for Study Planning
8:00 a.m.–4:00 p.m.	CE_14C	Christy Chuang-Stein/Alex Dmitrienko/ Geert Molenberghs	Analysis of Clinical Trials: Theory and Applications
8:15 a.m.–4:15 p.m.	CE_15C	Richard M. Heiberger/Burt Holland	Statistical Analysis and Data Display
8:15 a.m.–4:15 p.m.	CE_16C	Bradley P. Carlin/Sudipto Banerjee/ Alan E. Gelfand	Hierarchical Modeling and Analysis for Spatial Data
8:15 a.m.–4:15 p.m.	CE_17C	Peter H. Westfall	Multiple Comparisons and Multiple Tests
8:15 a.m.–4:15 p.m.	CE_18C	Geof H. Givens/Jennifer Hoeting	Computational Statistics: Methods for Optimization and Monte Carlo Integration
1:00 p.m.–5:00 p.m.	CE_19C	Margaret S. Pepe	Statistical Methods for Evaluating Tests and Biomarkers in Medicine
1:00 p.m.–5:00 p.m.	CE_20C	Ingram Olkin	Metaanalysis: Statistical Methods for Combining the Results of Independent Studies
<b>Tuesday, August 9, 2005</b>			
8:00 a.m.–Noon	CE_21C	Edward Wegman	Statistical Data Mining
8:00 a.m.–4:00 p.m.	CE_22C	Wayne Nelson	Applied Recurrent Events Data Analysis
8:00 a.m.–4:00 p.m.	CE_23C	Bruno Sansó	Bayesian Inference
8:15 a.m.–4:15 p.m.	CE_24C	Jun S. Liu	Monte Carlo Methods in Bayesian Modeling with Applications to Bioinformatics
8:15 a.m.–4:15 p.m.	CE_25C	Charles S. Davis	Categorical Data Analysis
8:15 a.m.–4:15 p.m.	CE_26C	David Ruppert/Ciprian Crainiceanu	Semiparametric Regression
<b>Wednesday, August 10, 2005</b>			
8:00 a.m.–9:45 a.m.	CE_27T	John Castelloe	Power and Sample Size Analysis Using SAS/STAT Software
8:00 a.m.–9:45 a.m.	CE_28T	Dan Steinberg/Mikhael Golovnya	Introduction to CART: Data Mining with Decision Trees
8:00 a.m.–9:45 a.m.	CE_29T	Cyrus R. Mehta	East v4: a Comprehensive Package for Adaptive and Group Sequential Design, Interim Monitoring, and Simulation
10:00 a.m.–11:45 a.m.	CE_30T	Oliver Schabenberger	Statistical Analysis with the GLIMMIX Procedure
10:00 a.m.–11:45 a.m.	CE_31T	Dan Steinberg/Mikhael Golovnya	Introduction to MARS: Predictive Modeling with Nonlinear Automated Regression Tools
10:00 a.m.–11:45 a.m.	CE_32T	Damir Spisic	Complex Samples in SPSS
1:00 p.m.–2:45 p.m.	CE_33T	Colin (Lin) Chen/Ying Wei	Robust Regression and Quantile Regression Using SAS/STAT Software
1:00 p.m.–2:45 p.m.	CE_34T	Dan Steinberg/Mikhael Golovnya	Advances in Data Mining: Jerome Friedman's MART and Leo Breiman's Random Forests
1:00 p.m.–2:45 p.m.	CE_35T	Michael Borenstein/Hannah R. Rothstein	Metaanalysis—New Software for Computing Treatment Effects, Running Analyses, and Creating Forest Plots
3:00 p.m.–4:45 p.m.	CE_36T	Sharad Prabhu	Design and Analysis of Experiments Using the ADX Interface in SAS Software
3:00 p.m.–4:45 p.m.	CE_37T	Shawn Harahush	From Software to Solutions in Statistics and Risk Analysis
3:00 p.m.–4:45 p.m.	CE_38T	William F. Finzer/Robin H. Lock	How the Dynamic Manipulation Capabilities of Fathom 2 Can Improve Students' Learning Experiences in Intro Stats and Stats II Courses

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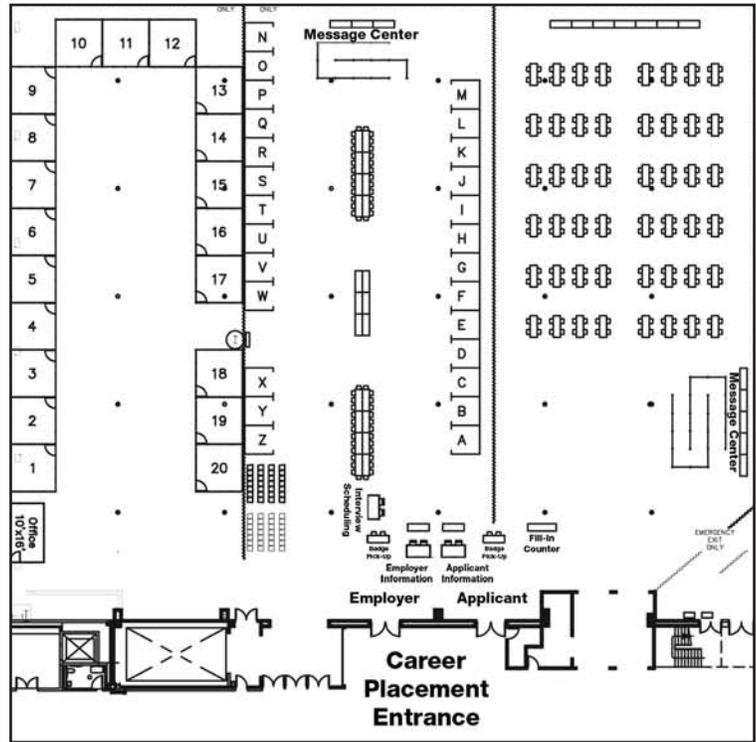
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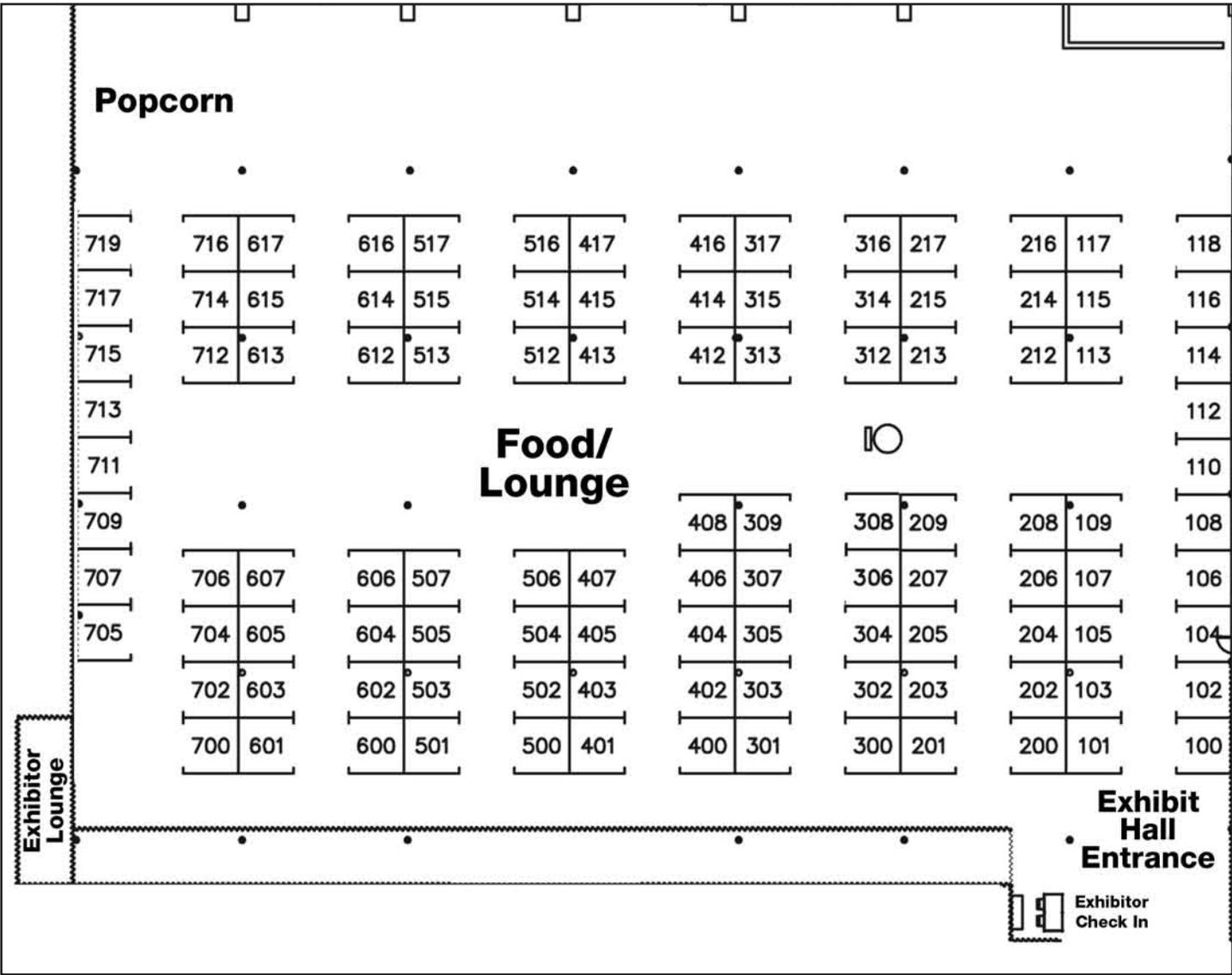
- ACNielsen ◆
- Amgen Inc. ◆
- The ASA
- Australian Graduate School of Management
- Baruch College, City University of New York
- Battelle ◆
- Boston Scientific ◆
- Bristol-Myers Squibb ◆
- Bureau of Labor Statistics
- Capital One ◆
- Case Western Reserve University, MetroHealth Medical Center
- D&B
- Dupont
- Eisai Global Clinical Development
- Eli Lilly and Company ◆
- GE Consumer Finance ◆
- Genentech ◆
- HHS/FDA/CVM/ONADE, HFV-105
- IBM T. J. Watson Research Center
- Insightful Corporation
- Internal Revenue Service, Statistics of Income Division
- Johnson & Johnson Family of Companies
- Kennesaw State University
- Lawrence Livermore National Laboratory
- Maritz Research
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- U.S. Census Bureau
- U.S. Consumer Product Safety Commission
- U.S. Food and Drug Administration/Center for Devices and Radiological Health ◆
- U.S. Food and Drug Administration/Center for Drug Evaluation & Research ◆
- University of Denver, Department of Statistics & Operations Tech
- University of Florida, Division of Biostatistics ◆
- University of Kentucky
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- USDA Center for Veterinary Biologics
- Vanderbilt University
- W. L. Gore & Associates
- Washington University in St. Louis—Biostatistics
- Westat
- Wyeth ◆
- Wyeth Pharmaceuticals

# LISTING OF EXHIBITORS (by booth number)

<b>Booth</b>	<b>Exhibitor Name</b>
100, 102	JMP, a business unit of SAS
101, 103, 105	SAS Institute
104, 106, 108	SAS Publications
107, 109	Minitab Inc.
110	SAS Education
112, 114	Cytel Software Corporation
113	Project Euclid/Cornell University Library
115	Institute of Mathematical Statistics (IMS)
116	Resampling Stats, Inc.
117	Systat Software, Inc.
118	Johnson & Johnson
200, 202	RTI International
201	NCSS
203, 205	Oxford University Press
204	Visual Numerics, Inc.
206	General Electric
207, 209	StatPoint, Inc.
208	Salford Systems
212	U.S. Centers for Disease Control and Prevention
213, 215, 217	Duxbury, Thomson Learning
214	Statistical Society of Canada (SSC)
216	South-Western, Thomson Learning
300, 302	Elsevier/Academic Press
301	Eli Lilly and Company
303, 305	W.H. Freeman & Company
304	IRS, Statistics of Income
306, 308	Insightful Corporation
307	Hawkes Learning Systems
309	Smith Hanley
312	MacKichan Software
313	Sage Publications
314	Battelle Memorial Institute
315	ASG, Inc.
316	Palisade Corporation
317	Aptech Systems, Inc.
400	USDA/NASS
401, 403, 405, 500, 502	CRC Press-Taylor & Francis
402	Stat-Ease, Inc.
404	MedFocus
406	Data Description, Inc.
407	COMSYS
408	Addison-Wesley
412	Blackwell Publishing
413, 512	SPSS Inc.
414	Amgen Inc.
415	EQUBITS
416	Kforce Clinical Research Staffing
417	Novartis Pharmaceuticals
501, 503	Cambridge University Press
504, 505, 506, 507	Springer
513	U.S. Department of Education—Institute of Education Sciences (IES)
514, 516	U.S. Census Bureau
515	Minnesota Population Center
517	Bureau of Labor Statistics (BLS)
600	National Center for Health Statistics (NCHS)
601, 603	Prentice Hall
602, 604	Pfizer Global Research and Development
605, 607	StatSoft, Inc.
606	Key College Publishing
612	The Cambridge Group Ltd.
613, 615	Biostat, Inc.
614	ASA-SIAM Series
616	SIAM-Society for Industrial and Applied Mathematics
617	McGraw-Hill/Irwin
700	American Statistical Association
702	Publishers' Book Display
704	JSM 2006 Seattle
705	Allergan
706	Kelly Scientific Resources
707	ASPE—Assistant Secretary of Planning and Evaluation
709, 711, 713, 715	Wiley
712	Placemart Personnel Service
714	Capital One
716	Math Alive and Applied
717	Statistical Solutions
719	Intelligent Results, Inc.



**Minneapolis Convention Center  
Exhibit Hall C**

# LISTING OF EXHIBITORS (in alphabetical order)

<b>Exhibitor Name</b>	<b>Booth</b>
ASA-SIAM Series . . . . .	614
ASG, Inc. . . . .	315
ASPE—Assistant Secretary for Planning and Evaluation . . . . .	707
Addison-Wesley . . . . .	408
Allergan . . . . .	705
American Statistical Association . . . . .	700
Amgen Inc. . . . .	414
Aptech Systems, Inc. . . . .	317
Battelle Memorial Institute . . . . .	314
Biostat, Inc. . . . .	613, 615
Blackwell Publishing . . . . .	412
Bureau of Labor Statistics (BLS) . . . . .	517
COMSYS . . . . .	407
CRC Press-Taylor & Francis . . . . .	401, 403, 405, 500, 502
Cambridge University Press . . . . .	501, 503
Capital One . . . . .	714
Cytel Software Corporation . . . . .	112, 114
Data Description, Inc. . . . .	406
Duxbury, Thomson Learning . . . . .	213, 215, 217
EQUBITS . . . . .	415
Eli Lilly and Company . . . . .	301
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Hawkes Learning Systems . . . . .	307
IRS, Statistics of Income . . . . .	304
Insightful Corporation . . . . .	306, 308
Institute of Mathematical Statistics (IMS) . . . . .	115
Intelligent Results, Inc. . . . .	719
JMP, a business unit of SAS . . . . .	100, 102
JSM 2006 Seattle . . . . .	704
Johnson & Johnson . . . . .	118
Kelly Scientific Resources . . . . .	706
Key College Publishing . . . . .	606
Kforce Clinical Research Staffing . . . . .	416
MacKichan Software . . . . .	312
Math Alive and Applied . . . . .	716
McGraw-Hill/Irwin . . . . .	617
MedFocus . . . . .	404
Minitab Inc. . . . .	107, 109
Minnesota Population Center . . . . .	515
NCSS . . . . .	201
National Center for Health Statistics (NCHS) . . . . .	600
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Palisade Corporation . . . . .	316
Pfizer Global Research and Development . . . . .	602, 604
Placemart Personnel Service . . . . .	712
Prentice Hall . . . . .	601, 603
Project Euclid/Cornell University Library . . . . .	113
Publishers' Book Display . . . . .	702
RTI International . . . . .	200, 202
Resampling Stats, Inc. . . . .	116
SAS Education . . . . .	110
SAS Institute . . . . .	101, 103, 105
SAS Publications . . . . .	104, 106, 108
SIAM-Society for Industrial and Applied Mathematics . . . . .	616
SPSS Inc. . . . .	413, 512
Sage Publications . . . . .	313
Salford Systems . . . . .	208
Smith Hanley . . . . .	309
South-Western, Thomson Learning . . . . .	216
Springer . . . . .	504, 505, 506, 507
Stat-Ease, Inc. . . . .	402
StatPoint, Inc. . . . .	207, 209
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U.S. Centers for Disease Control and Prevention . . . . .	212
U.S. Department of Education—Institute of Education Sciences (IES) . . . . .	513
USDA/NASS . . . . .	400
Visual Numerics, Inc. . . . .	204
W.H. Freeman & Company . . . . .	303, 305
Wiley . . . . .	709, 711, 713, 715

**ASA-SIAM Series**, Alexandria, VA **614**

The *ASA-SIAM Series on Statistics and Applied Probability* is jointly published by the American Statistical Association and the Society for Industrial and Applied Mathematics. These books present state-of-the-art approaches, novel methods to implement known techniques, comprehensive tutorials or surveys on applications of wide interest, interdisciplinary practices, or applications in emerging disciplines.

**ASG, Inc.**, Cary, NC **315**

ASG, Inc., is a growing national company with five offices dedicated to providing experienced professionals to staff positions in clinical research, SAS programming, data management, regulatory affairs and statistical analysis for customers capturing, analyzing, and producing data in the pharmaceutical, biotech, health care, and financial industries.

**ASPE—Assistant Secretary for Planning and Evaluation**, Washington, DC **707**

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) is the principal policy advisor to the Secretary of the Department of Health and Human Services. ASPE works directly with the Secretary, providing advice on a range of issues—from human services and aging to health and science policy.

**Addison-Wesley**, Upper Saddle River, NJ **408**

Please visit Addison-Wesley in Booth 408. Come explore a full display of statistics titles, including the new second edition of DeVeaux/Velleman/Bock's *Intro Stats*, and meet authors. Try out some of the new and exciting technology, including MyMathLab and ActivStats—come see what the buzz is about!

**Allergan**, Irvine, CA **705****American Statistical Association**, Alexandria, VA **700**

Since 1839, the ASA has been the world's leading professional association for statisticians. The ASA serves as a forum for sharing ideas, experiences, innovations, and accomplishments. Members are involved in areas of statistics including medicine, computer applications, quality management, analytical research, setting standards for statistics, and promoting statistical education.

○ **Amgen Inc.**, Thousand Oaks, CA **414**

Amgen Inc. is the world's largest biotechnology company. Its mission is to serve patients. For nearly 25 years, the company has used scientific discovery and innovation to dramatically improve people's lives. Visit them at [www.amgen.com](http://www.amgen.com). As an EEO/AA employer M/F/D/V, Amgen Inc. values and encourages diversity in the workplace.

**Aptech Systems, Inc.**, Maple Valley, WA **317**

GAUSSplot™ Professional Graphics combines the power/speed of GAUSS™, a complete numerical/data-analysis package, with

state-of-the-art graphics to quickly/efficiently meet the complex visualization needs of today's demanding work environment. GAUSSplot™ supports a wide variety of plot-types/file export formats with a fully-functional GUI.

**Battelle**, Columbus, OH **314**

Battelle is a science and technology enterprise that develops and commercializes technology and manages laboratories. Headquartered in Columbus, Ohio, they have been technology innovators for 75 years. Battelle, with the national labs it manages or co-manages, oversees 19,000 staff members and conducts \$2.9 billion year in R&D at more than 100 locations.

**Biostat, Inc.**, Englewood, NJ **613, 615**

Comprehensive Meta Analysis—A computer program for meta-analysis and systematic reviews ([www.Meta-Analysis.com](http://www.Meta-Analysis.com)). Power And Precision—A computer program for power analysis and sample size ([www.Power-Analysis.com](http://www.Power-Analysis.com)).

**Blackwell Publishing**, Malden, MA **412**

Blackwell publishes academic journals and general scholarly college and reference texts with an emphasis on the humanities, social sciences, and business. For more information on any of their books and journals, visit [www.blackwellpublishing.com](http://www.blackwellpublishing.com).

**Bureau of Labor Statistics**, Washington, DC **517**

The Bureau of Labor Statistics is the principal fact-finding agency for the federal government. It provides statistical data online at [www.bls.gov](http://www.bls.gov) and in various publications.

**COMSYS**, Portage, MI **407**

COMSYS (formerly Trilogy Consulting) is the leading provider of SAS, statistics and clinical services to companies nationwide. They help statisticians and programmers support their customers faster and more efficiently with analytical applications. COMSYS is a SAS Alliance Gold Partner with more than 80 offices in the United States and Canada.

★ **CRC Press-Taylor & Francis**  
Boca Raton, FL **401, 403, 405, 500, 502**

Chapman & Hall/CRC and Taylor & Francis, members of the Taylor & Francis group, are premier publishers of scientific books, journals, and databases. Please visit their booth to pick up a journal sample copy or to browse their latest statistics books at a conference discount of up to 50%.

**Cambridge University Press**, New York, NY **501, 503**

Cambridge's new offerings in statistics, biostatistics, econometrics, mathematical finance, and more are available at a 20% discount at Booths 501 and 503. New titles in the Cambridge Series in Statistical and Probabilistic Mathematics include *Essentials of Statistical Inference*, by G. A. Young and R. L. Smith, and *Elements of Distribution Theory*, by Thomas A. Severini.

○ **Capital One**, Richmond, VA **714**

Capital One® Financial Corporation is a publicly held bank-holding company based in McLean, Virginia. Its principal subsidiaries, Capital One Bank and Capital One, F.S.B., offer consumer lending products and are among the largest providers of MasterCard and Visa credit cards in the world.

○ **Cytel Software Corporation**, Cambridge, MA **112, 114**

Cytel Software provides computer technology for solving your toughest statistical problems. East software is for the design, simulation, and interim monitoring of group sequential and adaptive flexible clinical trials. StatXact® and LogXact® software is for exact statistical inference. Cytel provides software, training, and consulting.

**Data Description, Inc.**, Ithaca, NY **406**

Data Description is demonstrating Data Desk 7. This version supports direct attachment to databases, offers tools for customization, provides a cleaner interface, and offers new tools for exploring and modeling data. The company also is demonstrating all of its multimedia courses including, ActivStats, ActivEpi, and ProgramLive.

○ **Duxbury, Thomson Learning**, Belmont, CA **13, 215, 217**

Visit Duxbury-Thomson Learning Publishers at Booth 213. View their latest publications and technology innovations. With more than 30 years experience publishing in the field of statistics, Duxbury is the source for complete solutions for all teaching needs from introductory to advanced statistics courses. Duxbury: a Tradition of Quality and Innovation.

**EQUBITS**, Palo Alto, CA **415**

EQUBITS is a market leader in providing easy-to-use, accurate, interpretable, and automated Support Vector Machine (SVM) based software for modelers world-wide. EQUBITS Foresight is an easy-to-use desktop and enterprise software built on SVM technology that provides high predictive accuracy, interpretation, and discovery.

◆ **Eli Lilly and Company**, Indianapolis, IN **301**

Eli Lilly and Company is a leading, innovation-driven corporation committed to developing a growing portfolio of best-in-class and first-in-class pharmaceutical products that help people live longer, healthier, and more active lives. They are committed to providing answers that matter.

**Elsevier/Academic Press**, Burlington, MA **300,302**

Elsevier/Academic Press is a worldwide leader in scientific and technical publishing. See their latest titles, *Introductory Statistics, 2E*, *Introduction to Probability and Statistics for Engineers and Scientists, 3E*, *Statistics in Medicine, 2E*, and more. Pick up instructor copies, 10-30% savings, and sample

journals, including *Statistical Methodology*. Visit [www.elsevier.com](http://www.elsevier.com) or [books.elsevier.com/apmath](http://books.elsevier.com/apmath).

**General Electric**, Stamford, CT **206**

GE is a diversified company dedicated to creating products that make life better. GE operates in more than 100 countries and employs more than 300,000 people worldwide across 11 businesses. For more than 125 years, they have been admired for their performance and imaginative spirit.

**Hawkes Learning Systems**, Charleston, SC **307**

For 20 years, Hawkes Learning Systems has specialized in math courseware. Their courseware is based on mastery-level learning and offers unlimited practice problems, tutorials, and intelligent feedback. On its own or as a supplement, their courseware improves student performance and provides instructors with an online gradebook and state-of-the-art test generator.

**IRS, Statistics of Income**, Washington, DC **304**

The Statistics of Income (SOI) Division produces data files compiled from tax and information returns filed with the Internal Revenue Service. There is a wealth of information about the financial composition of individuals, business taxpayers, tax-exempt organizations, and more, available through publications, electronic databases, and the IRS web site.

**Insightful Corporation**, Seattle, WA **306, 308**

Insightful Corporation is a leading provider of scalable data and text analysis solutions that drive better decisions faster by integrating statistics into business processes. The S-PLUS® product family, including the recently released S-PLUS 7—which supports analysis of very large datasets, delivers leading solutions for exploratory data analysis and statistical modeling.

**Institute of Mathematical Statistics**, Beachwood, OH **115**

Institute of Mathematical Statistics (IMS) is an international professional society devoted to the development and dissemination of the theory and applications of statistics and probability. Its activities include sponsorship of journals and other scientific publications, organization of scientific meetings, and cooperation with other scientific organizations.

**Intelligent Results, Inc.**, Bellevue, WA **719**

Intelligent Results, Inc., provides customer analytics that maximize profits and generate unprecedented insight for organizations spanning industries. By integrating all customer interactions and data, applying advanced data mining, and providing the power to build more accurate, timely, and relevant models, Intelligent Results, Inc., drives businesses to new levels of analytic performance.

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- Johnson & Johnson Family of Companies**, New Brunswick, NJ **118**  
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Kelly Scientific Resources is a leading clinical research solutions provider and part of the Kelly Services global service network. They specialize in delivering the highest quality support to their customers. Their specialty services include clinical research work-force augmentation, direct placement, project solutions, and outplacement at all levels.
- Key College Publishing**, Emeryville, CA **606**  
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Kforce Clinical Research Staffing provides functional outsourcing alternatives and traditional staffing services for the bio-pharma industries, including monitoring, clinical trial management, project management, drug safety, data management, SAS™ programming, biostats, and data entry for Phases I-IV.
- MacKichan Software**, Poulsbo, WA **312**  
*New! Scientific Workplace 5.5* simplifies writing, sharing, and doing mathematics. A click of a button allows you to typeset in LaTeX. The integrated computer algebra system lets you solve and plot equations; animate 2D and 3D plots; rotate, move, and fly through 3D plots; create 3D implicit plots; and more.
- Math Alive and Applied**, DeWitt, NY **716**  
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- McGraw-Hill/Irwin**, Burr Ridge, FL **617**  
McGraw-Hill is the leading provider of textbooks and technology applications in higher education. Offering a wide range of high-quality and carefully reviewed materials to support your courses. McGraw-Hill is your best resource for student success. Start smart. Start with McGraw-Hill.
- MedFocus, LLC.**, Des Plaines, IL **404**  
MedFocus offers clinical and scientific research contract outsourcing and staffing specifically to the pharmaceutical, biotechnology, and medical device industries. They specialize in the nationwide recruitment of clinical trials personnel and scientific/laboratory personnel. Please email requirements or résumés to [dhands@medfocus.com](mailto:dhands@medfocus.com).
- ★ Minitab Inc.**, State College, PA **107, 109**  
MINITAB® Release 14 is the leading statistical software package used in education. Instructors at more than 4,000 colleges, universities, and high schools around the world use MINITAB because it contains all the statistical methods students need and is powerful, reliable, and easy-to-use. Free demo: [www.minitab.com/minitab14](http://www.minitab.com/minitab14).
- Minnesota Population Center**, Minneapolis, MN **515**  
The Minnesota Population Center ([www.pop.umn.edu/index.shtml](http://www.pop.umn.edu/index.shtml)) is an inter-disciplinary cooperative for demographic research and a leading developer and disseminator of demographic data. The following datasets are available (or in production): IPUMS-USA, IPUMS-International, IPUMS-CPS, the National Historical Geographic Information System (NHGIS), the North Atlantic Population Project, and the Integrated Health Interview Survey.
- NCSS**, Kaysville, UT **201**  
PASS 2005—a new power analysis and sample size program with more than 60 new routines—will be shown. NCSS 2004 for statistical analysis and graphics. Come by and pick up a free demo.
- National Center for Health Statistics**, Hyattsville, MD **600**  
The NCHS exhibit will showcase the various NCHS programmatic areas with an emphasis on statistical research and methodology. The exhibit will allow attendees to view and acquire a host of publications, electronic products, and other promotional products.

The 16th Annual

# Gertrude Cox Scholarship Race

## 5K Race and 2.5K Fun Run/Walk Tuesday, August 9

The Caucus for Women in Statistics, in conjunction with the ASA, presents the 16th annual Gertrude Cox Scholarship Race at the Joint Statistical Meetings in Minneapolis, Minnesota. All proceeds will benefit the Gertrude M. Cox Scholarship in Statistics.

**The Race:** There will be two races running concurrently—a competitive 5K race and a 2.5K fun run/walk.

**When:** Tuesday, August 9, at 7:00 a.m.

**Where:** Location and logistical information will be posted at the caucus table on Level One of the Minneapolis Convention Center.

**How Much:** The entry fee is **\$20.00**.

**Registration:** Those interested in participating are encouraged to register early. You may register during JSM at the hospitality table for the Caucus for Women in Statistics on Level One of the Minneapolis Convention Center, in the registration area. All participants must sign a registration form and waiver. T-shirts for all preregistered runners will be distributed at the race. If you have questions, please contact Lori Thombs at [thombsl@missouri.edu](mailto:thombsl@missouri.edu) or (573) 882-3844.

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### REGISTRATION FORM *(each participant must complete and sign form)*

Name \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_ Phone \_\_\_\_\_

Sex  M  F Age \_\_\_\_\_

Event  5K Race  2.5K Fun Run/Walk

T-shirt size  S  M  L  XL

**The fine print.** I understand that running a road race is a potentially hazardous activity. I will not enter and run unless I am medically able and properly trained. I agree to abide by any decision of a race official relative to my ability to complete the run safely. I assume all risks associated with running in this event, including, but not limited to, falls; contact with other participants; and effects of weather, traffic, and course conditions. All such risks are known and appreciated by me. Having read this waiver, knowing these facts, and in consideration of your accepting my entry, I, for myself and anyone entitled to act on my behalf, waive and release the race directors, the race committee, and all sponsors from all claims of liabilities of any kind arising out of my participation in this event, even though such liability may arise as a result of negligence or carelessness on the part of the persons named in this waiver.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Parent or guardian (if under 18) \_\_\_\_\_

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**Novartis Pharmaceuticals Corporation**, East Hanover, NJ **417**

Novartis Pharmaceuticals Corporation researches, develops, manufactures, and markets leading innovative prescription drugs used to treat a number of diseases and conditions, including central nervous system disorders, organ transplantation, cardiovascular diseases, dermatological diseases, respiratory disorders, cancer, and arthritis. The company's mission is to improve people's lives by pioneering novel health care solutions.

**Oxford University Press**, New York, NY **203, 205**

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**Palisade Corporation**, Ithaca, NY **316**

Palisade Corporation has been a leading provider of risk analysis, decision analysis, optimization, and data analysis software since 1984. In 2003, Palisade released StatTools—a statistical analysis add-in for Microsoft Excel. StatTools replaces Excel's statistics functions with a robust and accurate set of statistical analysis procedures and routines.

**Pfizer Global Research and Development**, New London, CT **602, 604**

Pfizer Global Research and Development's discovery and development division is one of the finest pharmaceutical research institutions in the world. Pfizer discovers and delivers medicines to enhance the health of people and animals. Their search for new treatments spans research projects across multiple therapeutics areas—more than any other.

**Placemart Personnel Service**, Tinton Falls, NJ **712**

Placemart Personnel Service specializes in executive search services in clinical drug and medical product R&D. For more than 39 years, they have been matching jobs and job candidates in Biostatistics. Typical positions include directors, managers, project managers, group leaders, biostatisticians, data analysts, and statistical programmers. For additional details, visit [www.placemart.com](http://www.placemart.com).

**Prentice Hall**, Upper Saddle River, NJ **601, 603**

Prentice Hall will display statistics textbooks ranging from the introductory level, such as Agresti/Franklin's *Statistics (preliminary edition)* and McClave/Sincich's *Statistics, 10E*, to more advanced and specialized course texts, such as Epstein's *Medical Image Processing*, and Hogg/Tanis' *Probability and Statistical Inference, 7E*.

**Project Euclid/Cornell University Library**, Ithaca, NY **113**

Project Euclid is a user-centered online publishing service designed specifically for the effective and affordable distribution of serial literature in mathematics and statistics. Project Euclid addresses

the unique needs of independent and society journals through a collaborative partnership with scholarly publishers, professional societies, and academic libraries.

**Publishers' Book Display**, Alexandria, VA **702**

Visit the Publishers' Book Display booth to review books and literature from publishers unable to attend this year's JSM. Discounted order forms will be available.

**RTI International**, RTP, NC **200, 202**

For 46 years, RTI statisticians have developed and applied scientifically-accepted statistical methodologies to address national and global public policy issues. One of the tools developed and distributed by RTI is the internationally recognized SUDAAN statistical software package, which provides various procedures for analyzing survey and other cluster-correlated data.

**Resampling Stats, Inc.**, Arlington, VA **116**

Software for resampling and data mining: Resampling Stats (standalone and Excel add-in) XLMiner (data mining add-in for Excel with classification and regression trees, neural nets, clustering, k-nearest-neighbor classifier, Bayesian classifier, logistic regression, multiple regression, discriminant analysis, association rules, principal components, automatic partitioning into training, validation, and test data).

**SAS Education**, Cary, NC **110**

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**▲ SAS Institute**, Cary, NC **101, 103, 105**

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**SAS Publishing**, Cary, NC **104, 106, 108**

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**SIAM-Society for Industrial & Applied Mathematics,** **616**  
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**◆ SPSS Inc.,** Chicago, IL **413, 512**

SPSS Inc. is a provider of predictive analytics technology and services. The company's predictive analytics technology connects data to effective action by drawing reliable conclusions about current conditions and future events. More than 250,000 customers rely on SPSS technology to help increase revenue, reduce costs, improve processes, and detect and prevent fraud.

**Sage Publications,** Thousand Oaks, CA **313**

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**Salford Systems,** San Diego, CA **208**

Salford Systems develops advanced statistical and data mining software, including the CART® decision tree, MARS® non-linear automated regression, TreeNet™ boosted decision trees, and Random Forests™. Salford Systems strives to make the best academic research easily usable by the practicing data analyst and has recently won several distinguished international honors.

**○ Smith Hanley,** New York, NY **309**

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**South-Western, Thomson Learning,** Belmont, CA **216**

Thomson Learning/South-Western strives to provide the material needed to make statistics relevant and interesting to students as they prepare for the world of work. As the top business publisher they can help with the highest quality print and technology offerings for undergraduate and graduate statistics and management science courses.

**○ Springer,** New York, NY **504, 505, 506, 507**

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**Stat-Ease, Inc.,** Minneapolis, MN **402**

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**★ StatPoint, Inc.,** Orlean, VA **207, 209**

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**StatSoft, Inc.,** Tulsa, OK **605, 607**

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**Statistical Society of Canada,** Ottawa, ON **214**

The Statistical Society of Canada's mission is to encourage the development and use of statistics and probability in Canada. It is the Canadian equivalent of the American Statistical Association. The Statistical Society of Canada also offers two levels of accreditation, the Professional Statistician (P.Stat.) and the Associate Statistician (A.Stat.).

**Statistical Solutions,** Saugus, MA **717**

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**Systat Software, Inc.**, Richmond, CA **117**  
Systat Software, Inc., provides specialized scientific software products and services for the environment sciences, life sciences, behavioral sciences, medical research, and engineering. Their products are used by the world's top companies, research centers, and universities and now include SigmaPlot, SigmaStat, SigmaScan, SYSTAT, TableCurve2D, TableCurve3D, PeakFit, and AutoSignal.

**The Cambridge Group Ltd.**, Westport, CT **612**  
The Cambridge Group Ltd. focuses on careers in biostatistics, clinical data management, clinical systems, SAS programmers and more. Opportunities range from entry level through senior and executive levels for both permanent and contract positions in the pharmaceutical and biotechnology industries. The Cambridge Group Ltd., 1175 Post Road East, Westport, CT 06880; email: [biostat@cambridgegroup.com](mailto:biostat@cambridgegroup.com); phone: (800) 525-3396.

**U.S. Census Bureau**, Washington, DC **514, 516**  
For more than 100 years, the U.S. Census Bureau has been the preeminent collector and provider of quality data for the United States. Materials include print, CD/DVDs, and [www.census.gov](http://www.census.gov) which contains the American FactFinder data access tool; the Statistical Abstract; and links to Census Bureau programs, products, and more.

**U.S. Centers for Disease Control and Prevention**, Atlanta, GA **212**  
The U.S. Centers for Disease Control and Prevention is one of the 13 major operating components of the U.S. Department of Health and Human Services, which is the principal agency in the United States government for protecting the health and safety of all Americans and for providing essential human services.

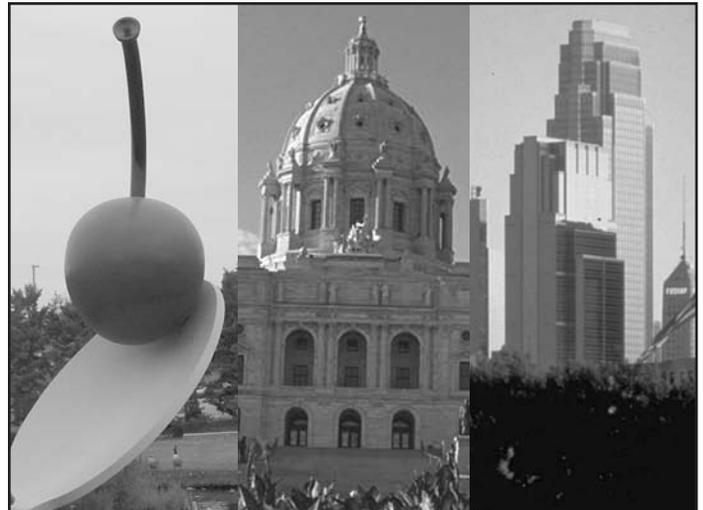
**U.S. Department of Education—Institute of Education Sciences (IES)**, Washington, DC **513**  
IES is the research evaluation and statistics-gathering arm of the U.S. Department of Education.

**USDA/NASS**, Washington, DC **400**  
The National Agricultural Statistics Service is a world leader in sampling, data collection, and estimation procedures for economic, environmental, and agricultural surveys and censuses. The agency also creates a number of remote sensing and geographic information system statistical products and conducts ongoing applied research on statistical methodology and estimation approaches.

**Visual Numerics, Inc.**, San Ramon, CA **204**  
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**W.H. Freeman & Company**, New York, NY **303, 305**  
W.H. Freeman & Company is noted for their outstanding publications and software in statistics. Visit their booth to peruse their texts for general statistics, business statistics, probability and statistics, design of experiments, and Advance Placement.

○ **Wiley**, Hoboken, NJ **709, 711, 713, 715**  
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## Session Tag Descriptions

We expect both Theme and Applied sessions to draw a diverse audience.

### THEME ☆

JSM Theme sessions are directly relevant to the 2005 JSM theme, "Using our discipline to enhance human welfare." These sessions highlight presentations and discussions on forward-looking topics that could impact the future of statistics. Theme sessions are designed to expand the frontiers of statistical thought, emphasize new directions, and promote interdisciplinary collaborations and partnerships.

### APPLIED ●

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



## THURSDAY, AUGUST 4

Committee/Business Meetings & Other Activities

5:00 p.m.–6:15 p.m. H-Director's Row 1  
**The ASA Management Review Committee (closed)**  
*Chair(s): Fritz J. Scheuren, The University of Chicago*

6:30 p.m.–9:30 p.m. H-Director's Row 1  
**The ASA Joint Budget and Planning Committees Working Dinner (closed)**  
*Chair(s): Fritz J. Scheuren, The University of Chicago*

## FRIDAY, AUGUST 5

Committee/Business Meetings & Other Activities

7:30 a.m.–10:45 a.m. HY-Skyway Suite A  
**The ASA Executive Committee (closed)**  
*Chair(s): Fritz J. Scheuren, The University of Chicago*

11:00 a.m.–6:30 p.m. HY-Mirage Room  
**The ASA Board of Directors (closed)**  
*Chair(s): Fritz J. Scheuren, The University of Chicago*

12:00 p.m.–1:30 p.m. HY-Skyway Suite B  
**The ASA Board of Directors Lunch (closed)**  
*Chair(s): Fritz J. Scheuren, The University of Chicago*

6:30 p.m.–7:30 p.m. H-Imperial Suite  
**JSM Staff and the ASA Board Reception (closed)**  
*Chair(s): Fritz J. Scheuren, The University of Chicago; William B. Smith, The ASA*

## SATURDAY, AUGUST 6

Tours

6:00 p.m. Off Property-Hubert H. Humphrey Metrodome  
**TR01 - Minnesota Twins Baseball Game**

# GENERAL PROGRAM SCHEDULE

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

## Committee/Business Meetings & Other Activities

7:00 a.m.–6:00 p.m.   **MCC-Level 1, Registration Lobby**  
**JSM Main Registration**  
**The ASA Communities Booth**  
**Special Assistance and Press Desk**

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

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

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

7:45 a.m.–9:00 a.m.   **HY-Skyway Suite B**  
**The ASA Board of Directors Breakfast (closed)**  
*Chair(s): Fritz J. Scheuren, The University of Chicago*

8:00 a.m.–4:00 p.m.   **HY-Mirage Room**  
**The ASA Board of Directors (closed)**

8:00 a.m.–5:00 p.m.   **MCC-Exhibit Hall C**  
**Exhibitor Move in and Lounge**

9:00 a.m.–5:00 p.m.   **MCC-Exhibit Hall C**  
**Career Placement Service**  
**(electronic registration Only)**

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

11:30 a.m.–12:30 p.m.   **H-Director's Row 4**  
**Association of GCRC Statisticians Lunch (closed)**  
*Organizer(s): Curtis A. Parvin, Washington University School of Medicine*

12:00 p.m.–1:00 p.m.   **HY-Skyway Suite B**  
**The ASA Board of Directors Lunch (closed)**  
*Chair(s): Fritz J. Scheuren, The University of Chicago*

12:00 p.m.–5:00 p.m.   **MCC-Level 1, Registration Lobby**  
**The ASA Marketplace**

12:00 p.m.–5:00 p.m.   **HY-Lake of the Isles**  
**IMS Executive Committee Meeting (closed)**  
*Organizer(s): Elyse Gustafson, Institute of Mathematical Statistics*

12:30 p.m.–5:30 p.m.   **H-Duluth**  
**Association of GCRC Statisticians Meeting (closed)**  
*Organizer(s): Curtis A. Parvin, Washington University School of Medicine*

## Continuing Education (Fee Events)

**CE\_01C**   **MCC-101 I**  
8:00 a.m.–4:00 p.m.  
**Analysis of Gene Expression Data—2 Day Course**  
**The ASA**  
*Instructor(s): Terence P. Speed, University of California, Berkeley; Benjamin M. Bolstad, University of California, Berkeley; Yee Hwa Jean Yang, University of California, San Francisco; James Wettenhall, Walter and Eliza Hall Institute of Medical Research*

**CE\_02C**   **MCC-101 G**  
8:00 a.m.–4:00 p.m.  
**Bayesian Clinical Trial Design—Approaches and Implementation**  
**The ASA, Section on Bayesian Statistical Science, Biopharmaceutical Section**  
*Instructor(s): Peter Mueller, The University of Texas M. D. Anderson Cancer Center; J. Jack Lee, The University of Texas M. D. Anderson Cancer Center*

**CE\_03C**   **MCC-101 F**  
8:00 a.m.–4:00 p.m.  
**Bayesian Methods for Multivariate Regression: Variable Selection and Covariance Selection Models**  
**The ASA, Section on Bayesian Statistical Science**  
*Instructor(s): Robert Kohn, University of New South Wales; Christopher K. Carter, CSIRO*

**CE\_04C**   **MCC-101 J**  
8:00 a.m.–4:00 p.m.  
**Introduction to Statistical Methods in Human Genetics**  
**The ASA, Biometrics Section**  
*Instructor(s): Hongyu Zhao, Yale University*

**CE\_05C**   **MCC-101 A**  
8:15 a.m.–4:15 p.m.  
**Extending the Cox Model**  
**The ASA**  
*Instructor(s): Terry M. Therneau, Mayo Clinic*

**CE\_06C**   **MCC-101 C**  
8:15 a.m.–4:15 p.m.  
**Adaptive Sampling**  
**The ASA, Section on Survey Research Methods**  
*Instructor(s): Steven K. Thompson, The Pennsylvania State University*







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## 2 **MCC-200 ABC** NIH Biostatistical Method and Training Grant Applications, Reviews, and Funding Opportunities—Invited Biometrics Section, ENAR, WNAR

Organizer(s): Xihong Lin, Harvard University

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

- 2:05 p.m.** The Grant Review Process at NIH—◆ Ann M. Hardy, Center for Scientific Review, NIH
- 2:30 p.m.** NIH Support for Predoctoral Training and Research in Biostatistics—◆ John Whitmarsh, National Institutes of Health
- 2:55 p.m.** NIH Funding Mechanisms and Biostatistics Grants Portfolio of NCI—◆ Ram C. Tiwari, National Cancer Institute
- 3:20 p.m.** Winning an NIH Grant: a Reviewer's Perspective—◆ Louise Ryan, Harvard University
- 3:45 p.m.** Floor Discussion

## 3 **MCC-200 DE** Review Paper Highlights—Invited JASA, Reviews

Organizer(s): Russell V. Lenth, The University of Iowa

Chair(s): Russell V. Lenth, The University of Iowa

- 2:05 p.m.** Membership Functions and Probability Measures of Fuzzy Sets—◆ Nozer D. Singpurwalla, George Washington University
- 2:50 p.m.** The Price of Kaplan-Meier—Theodore G. Karrison, The University of Chicago; ◆ Paul Meier, Columbia University; Rick Chappell, University of Wisconsin, Madison; Hui Xie, Boston University
- 3:35 p.m.** Floor Discussion

## 4 **MCC-208 D** Statistical Methods for Gene-environmental Interaction Studies—Invited Section on Statistics in Epidemiology, ENAR, WNAR, Biometrics Section

Organizer(s): Colin Wu, National Heart, Lung, and Blood Institute; Gang Zheng, National Heart, Lung, and Blood Institute

Chair(s): Colin Wu, National Heart, Lung, and Blood Institute

- 2:05 p.m.** A Statistical Method for Adjusting Covariates in Linkage Analysis with Sib Pairs—◆ Gang Zheng, National Heart, Lung, and Blood Institute; Colin Wu, National Heart, Lung, and Blood Institute; Eric Lelfer, National Heart, Lung, and Blood Institute; Dean Follmann, National Institute of Allergy and Infectious Diseases; Jing-Ping Lin, National Heart, Lung, and Blood Institute

- 2:30 p.m.** Sequential Multiple Decision Procedures (SMDP) To Screen and Validate Signals in Genome-wide Association Scans—◆ Michael A. Province, Washington University School of Medicine; Qunyuan Zhang, Washington University School of Medicine

- 2:55 p.m.** Regional Admixture Mapping (RAM) and Structured Association Testing (SAT): a Unified Framework—◆ David B. Allison, University of Alabama at Birmingham; David T. Redden, University of Alabama at Birmingham; T. Mark Beasley, University of Alabama at Birmingham; José R. Fernández, University of Alabama at Birmingham; Hemant Tiwari, University of Alabama at Birmingham; Jasmin Divers, University of Alabama at Birmingham; Robert P. Kimberly, University of Alabama at Birmingham

- 3:20 p.m.** Strategies for Gene-by-intervention Association Analysis of SNP Data—M. Daniele Fallin, Johns Hopkins University; ◆ Rasika Mathias, National Human Genome Research Institute; Alexander Wilson, National Human Genome Research Institute; Enrique Herrera, Johns Hopkins School of Medicine; Lisa Yanek, Johns Hopkins School of Medicine; Diane Becker, Johns Hopkins School of Medicine; Nauder Faraday, Johns Hopkins School of Medicine; Lew Becker, Johns Hopkins School of Medicine

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

## 5 **MCC-200 G** ★ ☆ Statistical Analysis for Brain Imaging—Invited International Chinese Statistical Association, Statistical Sinica, Section on Statistical Graphics

Organizer(s): John A. D. Aston, Institute of Statistical Science, Academia Sinica; Hwai-Chung Ho, Institute of Statistical Science, Academia Sinica; Michelle Liou, Institute of Statistical Science, Academia Sinica

Chair(s): Philip Cheng, Institute of Statistical Science, Academia Sinica

- 2:05 p.m.** Kernel Smoothing on Brain Manifolds—◆ Moo K. Chung, University of Wisconsin, Madison
- 2:30 p.m.** Bayesian Analysis of fMRI Data with Spatial Priors—◆ William D. Penny, University College London
- 2:55 p.m.** Wavelet Statistics for PET and fMRI—◆ John A. D. Aston, Institute of Statistical Science, Academia Sinica; Roger N. Gunn, GlaxoSmithKline; Rainer Hinz, IRSL; Federico E. Turkheimer, Imperial College
- 3:20 p.m.** Disc: Keith J. Worsley, McGill University
- 3:40 p.m.** Floor Discussion

# GENERAL PROGRAM SCHEDULE

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

## 6 **MCC-210 AB** **Measurement Issues in Statistical Education—Invited** **Section on Statistical Education**

Organizer(s): Jerome Reiter, Duke University

Chair(s): Christine Kohnen, Duke University

- 2:05 p.m.** Assessing Effectiveness at the Program Level: Undergraduate Statistics Program Evaluation—  
◆ Roxy Peck, California Polytechnic State University;  
Beth Chance, California Polytechnic State University
- 2:35 p.m.** Assessing and Fostering Transferable Knowledge—  
◆ Marsha Lovett, Carnegie Mellon University
- 3:05 p.m.** What Do Students Remember from Statistics Class?—  
◆ Leanna House, Duke University; Jerome Reiter, Duke University; Dalene Stangl, Duke University; David Banks, Duke University
- 3:05 p.m.** Disc: Dalene Stangl, Duke University
- 3:35 p.m.** Floor Discussion

## 7 **MCC-103 D** \* ☆ **Enhancing Human Welfare through Large-scale Surveys: The Canadian Story—Invited**

**SSC, Business and Economics Statistics Section, Section on Survey Research Methods, Social Statistics Section**

Organizer(s): Changbao Wu, University of Waterloo

Chair(s): Changbao Wu, University of Waterloo

- 2:05 p.m.** Uses of the NPHS in Examining Health Behavior Changes—◆ Mary E. Thompson, University of Waterloo
- 2:30 p.m.** The Longitudinal Survey of Immigrants to Canada—  
◆ Michelle Simard, Statistics Canada
- 2:55 p.m.** National Longitudinal Study of Children and Youth (NLSCY): Advancing the Life Quality of Children through Developmental Research in the General Population—  
◆ Michael H. Boyle, McMaster University
- 3:20 p.m.** The Canadian Community Health Survey: Building on the Success from the Past—◆ Yves Beland, Statistics Canada; Johane Dufour, Statistics Canada; Marc Hamel, Statistics Canada
- 3:45 p.m.** Floor Discussion

## 8 **MCC-200 H** \* ☆ **Visualization Methods in Homeland Security Applications—Invited**

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

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

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

- 2:05 p.m.** Visualizing Login Sessions To Detect Masqueraders—  
◆ David Marchette, Naval Surface Warfare Center, Dahlgren Division
- 2:35 p.m.** Challenges and Opportunities Raised by the Expert Panel for the National Visualization and Analytics Center—◆ Daniel B. Carr, George Mason University
- 3:05 p.m.** Visual Analysis of Text Document Collections—  
◆ Paul Whitney, Pacific Northwest National Laboratory
- 3:35 p.m.** Floor Discussion

## 9 **MCC-103 E** **Medallion Lecture 1—Invited** **IMS**

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

Chair(s): Andrew Nobel, The University of North Carolina at Chapel Hill

- 2:05 p.m.** Information Theory and Risk Analysis for (nearly) Bayes Regression, Prediction, Density Estimation, and Machine Learning—◆ Andrew Barron, Yale University
- 3:30 p.m.** Floor Discussion

## 10 **MCC-208 C** \* ☆ **Statistical Development in Cancer Screening and Early Detection—Invited**

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

Organizer(s): Yu Shen, The University of Texas M. D. Anderson Cancer Center

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

- 2:05 p.m.** A Natural History Model for Prostate Cancer: Implications on Prevention and Screening Policies—  
◆ Lurdes Y. T. Inoue, University of Washington; Ruth Etzioni, Fred Hutchinson Cancer Research Center; Christopher Morrell, Loyola College in Maryland; Peter Müller, The University of Texas M. D. Anderson Cancer Center
- 2:30 p.m.** Screening Studies and Natural History Models of Cancer—◆ Paul Pinsky, National Cancer Institute
- 2:55 p.m.** Modeling and Estimation of Trends in Cancer Incidence and Mortality with Application to Prostate Cancer—  
◆ Alex Tsodikov, University of California, Davis
- 3:20 p.m.** Forward and Backward Recurrence Times and Length-biased Sampling: Age-specific Models—◆ Marvin Zelen, Harvard University
- 3:45 p.m.** Floor Discussion



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**3:05 p.m.** Local Modeling of Global Interactome Networks—  
◆ Denise Scholtens, Northwestern University

**3:25 p.m.** Genomic Convergence: Using Genomic Clues in the Search for Genes for Complex Traits—◆ Elizabeth Hauser, Duke University

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

## 15 **MCC-205 C**

### \* ☆ **Statistical Issues in the Evaluation of Therapeutic Cardiovascular Devices—Topic Contributed** Biopharmaceutical Section, WNAR

*Organizer(s): Lilly Yue, U.S. Food and Drug Administration; Steve Boch, Medtronic, Inc.*

*Chair(s): Yao Huang, U.S. Food and Drug Administration*

**2:05 p.m.** A Comparison of Two Multiple Imputation Methods for Missing Outcome Data in Clinical Trials—◆ Elizabeth Galle, Guidant Corporation; Lei Peng, Guidant Corporation

**2:25 p.m.** Assessing Consistency of Marginal and Individual Treatment Effects in a Clinical Study—◆ Zengri Wang, Medtronic, Inc.

**2:45 p.m.** Case Example of the Use of Multiple Logistical Regression Model with Correlated Predictors—  
◆ Peter Lam, Boston Scientific Corporation; Hong Wang, Boston Scientific Corporation; Joerg Koglin, Boston Scientific Corporation; Mary Russell, Boston Scientific Corporation

**3:05 p.m.** The Effects of Multiple Testing on Operating Characteristics When All Tests Must Be Passed—  
◆ Jeng Mah, Guidant Corporation; Peter L. Chen, Guidant Corporation; Dong Li, Guidant Corporation

**3:25 p.m.** Disc: Lilly Yue, U.S. Food and Drug Administration

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

## 16 **MCC-211 A**

### \* ☆ **Bayesian Computation—Topic Contributed** Section on Bayesian Statistical Science

*Organizer(s): Samantha R. Cook, Columbia University*

*Chair(s): Elizabeth A. Stuart, Mathematica Policy Research, Inc.*

**2:05 p.m.** Validation of Software for Bayesian Models Using Posterior Quantiles—◆ Samantha R. Cook, Columbia University; Andrew Gelman, Columbia University; Donald B. Rubin, Harvard University

**2:25 p.m.** Moving beyond Compatibility: the Future of the Gibbs Sampler?—◆ David A. van Dyk, University of California, Irvine; Xiao-Li Meng, Harvard University

**2:45 p.m.** Calibration of Mass Spectra—◆ Cavan Reilly, University of Minnesota

**3:05 p.m.** A Bayesian Approach to Modeling an Inhomogeneous Poisson Process with Applications to Call Center Data—◆ Jonathan Weinberg, University of Pennsylvania

**3:25 p.m.** Regression Model Search and Uncertainty with Many Predictors—◆ Chris Hans, Duke University; Mike West, Duke University

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

## 17 **MCC-209 AB**

### \* ☆ **Bayesian Methods in Environmental and Ecological Sciences and Global Sea Level Study—Topic Contributed** Section on Bayesian Statistical Science

*Organizer(s): Keying Ye, Virginia Polytechnic Institute and State University; Dongchu Sun, University of Missouri, Columbia*

*Chair(s): Dongchu Sun, University of Missouri, Columbia*

**2:05 p.m.** Power Prior Approach to the Binomial Test in Water Quality Assessment—◆ Yuyan Duan, Virginia Polytechnic Institute and State University; Keying Ye, Virginia Polytechnic Institute and State University; Eric P. Smith, Virginia Polytechnic Institute and State University

**2:25 p.m.** Bayesian Hierarchical Threshold Models for Categorizing Heterogenous Ecological Habitat Preferences—◆ Penelope Pooler, Virginia Polytechnic Institute and State University

**2:45 p.m.** Bayesian Hierarchical Models for Response Rates in Hunter Attitude Surveys—◆ Xiaoming Gao, Missouri Department of Conservation; Zhuoqiong He, University of Missouri, Columbia; Dongchu Sun, University of Missouri, Columbia

**3:05 p.m.** Bayesian Analysis of Trends in Response Waves for Deer Hunter Attitude Surveys—◆ Jillian Lane, University of Missouri, Columbia; Dongchu Sun, University of Missouri, Columbia

**3:25 p.m.** Physical-statistical Modeling of Ice-stream Dynamics—◆ Chen Quin Lam, The Ohio State University; Mark Berliner, The Ohio State University; Yongku Kim, The Ohio State University; Noel Cressie, The Ohio State University; Kenneth Jezek, The Ohio State University

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

## 18 **MCC-102 E**

### \* **Exploration, Impact, and Adjustment for Item and Unit Nonresponse in Demographic Surveys and Censuses—Topic Contributed**

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

*Organizer(s): Nancy A. Bates, U.S. Census Bureau*

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

- 2:05 p.m.** Item Nonresponse Error for the 100% Data Items on the Census 2000 Long Form Questionnaire—◆ Thomas Chesnut, U.S. Census Bureau
- 2:25 p.m.** Survey Comparison of Item Nonresponse and Unit Nonresponse in Household Surveys—◆ John S. Dixon, Bureau of Labor Statistics
- 2:45 p.m.** Introducing Income Imputation: Improving Data Quality in the Consumer Expenditure Survey—◆ Geoffrey Paulin, Bureau of Labor Statistics
- 3:05 p.m.** Assessing the Impact of High-effort Interviews on Health Estimates—◆ Catherine Simile, National Center for Health Statistics; James Dahlhamer, National Center for Health Statistics; Pei-Lu Chiu, National Center for Health Statistics; Gulnur Scott, National Center for Health Statistics
- 3:25 p.m.** Disc: Jane Gentleman, National Center for Health Statistics
- 3:45 p.m.** Floor Discussion

## 19 **MCC-103 F** Experiments on the Earth: Statistics for Geophysical Models and Data—Topic Contributed

### Section on Statistics and the Environment, WNAR

Chair(s): Jan Hannig, Colorado State University

- 2:05 p.m.** Fitting Climate Models and Observed Climate Data—◆ Dorin Drignei, National Center for Atmospheric Research
- 2:25 p.m.** Statistical Downscaling Climate—◆ Mathieu Vrac, The University of Chicago; Michael Stein, The University of Chicago
- 2:45 p.m.** Combining Climate Model Output for Assessments of Climate Change—◆ Stephan Sain, University of Colorado, DHSC; Reinhard Furrer, National Center for Atmospheric Research; Douglas Nychka, National Center for Atmospheric Research
- 3:05 p.m.** Spatial Prediction of Extreme Value Return Levels—◆ Daniel Cooley, University of Colorado at Boulder; Philippe Naveau, University of Colorado at Boulder; Douglas Nychka, National Center for Atmospheric Research
- 3:25 p.m.** A 2-D Model Diagnostic and Correction for the Prediction of Total Column Ozone—◆ Serge Guillas, Georgia Institute of Technology; George Tiao, The University of Chicago; Donald J. Wuebbles, University of Illinois, Urbana-Champaign; Alexis Zubrow, The University of Chicago
- 3:45 p.m.** Floor Discussion

## 20 **MCC-211 B** ★ ☆ Statistical Issues in Biometric Authentication—Topic Contributed

### Section on Statisticians in Defense and National Security

Organizer(s): Michael Schuckers, St. Lawrence University

Chair(s): Jennifer Schumi, Harvard School of Public Health

- 2:05 p.m.** An Introduction to Some Statistical Issues in Biometric Authentication—◆ Michael Schuckers, St. Lawrence University
- 2:25 p.m.** Generalized Linear Mixed Model Evaluation of Face Verification Algorithms Emphasizing Human Subject Characteristics—◆ Geof Givens, Colorado State University; Ross Beveridge, Colorado State University; Bruce Draper, Colorado State University
- 2:45 p.m.** Improved Face Authentication Based on Statistical Models: a Frequency Domain Approach—◆ Sinjini Mitra, Carnegie Mellon University
- 3:05 p.m.** Challenges for Statistical Scaling of Biometric Authentication—◆ Edwin P. Rood, Independent Consultant
- 3:25 p.m.** Bio in the Statistics of Biometric Authentication?—◆ Peter Imrey, Cleveland Clinic Foundation
- 3:45 p.m.** Floor Discussion

## 21 **MCC-103 C** ★ The Census 2000 Master Trace Sample Database: an Overview and Illustration of Its Research Potential—Topic Contributed<sup>1</sup>

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

Organizer(s): Jennifer Tancreto, U.S. Census Bureau

Chair(s): James Treat, U.S. Census Bureau

- 2:05 p.m.** Master Trace Sample Database: a Unique Opportunity for Census 2000 Research—◆ Joan M. Hill, U.S. Census Bureau; Jason D. Machowski, U.S. Census Bureau
- 2:25 p.m.** Determining the Effectiveness of Multiple Nonresponse Followup Contact Attempts on Response and Data Quality—◆ Jennifer Tancreto, U.S. Census Bureau; Michael Bentley, U.S. Census Bureau
- 2:45 p.m.** Census 2000 Nonresponse Followup: Discrepancies in Enumerator-assigned Housing Unit Status—◆ Michael Bentley, U.S. Census Bureau; Jennifer Tancreto, U.S. Census Bureau
- 3:05 p.m.** Did Proxy Respondents Cause Age Heaping in Census 2000?—◆ Kirsten West, U.S. Census Bureau
- 3:25 p.m.** Disc: Susan Schechter, U.S. Office of Management and Budget
- 3:45 p.m.** Floor Discussion

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## 22 **MCC-103 A**

### ● **Models of Customer Response and Value—Topic Contributed**

#### Section on Statistics and Marketing

Organizer(s): Wendy Moe, University of Maryland

Chair(s): Wendy Moe, University of Maryland

**2:05 p.m.** Self-modeling Functional Data Analysis in Consumer Research—◆ Terry Elrod, University of Alberta; Xin Ge, University of Alberta

**2:25 p.m.** Experimental Design on the Front Lines of Marketing: Testing New Ideas To Increase Direct Mail Sales—◆ Johannes Ledolter, The University of Iowa

**2:45 p.m.** SURF: Structural Unduplicated Reach and Frequency—◆ Kristen O'Donnell, GfK Custom Research, Inc.; Stan Lipovetsky, GfK Custom Research, Inc.

**3:05 p.m.** A Model of the Purchase Quantity and Timing—◆ Enping (Shirley) Mai, Syracuse University; Raja Velu, Syracuse University

**3:25 p.m.** Issues in Modeling Retention within and across Cohorts—◆ Eric Bradlow, The Wharton School; Peter Fader, University of Pennsylvania; David Schweidel, The Wharton School

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

## 23 **MCC-102 F**

### ● **Issues in Transportation Statistics—Topic Contributed**

#### Section on Government Statistics

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

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

**2:05 p.m.** Are We Better off Accepting Proxy Responses?—◆ Promod Chandhok, Bureau of Transportation Statistics

**2:25 p.m.** How Are Business Cycle Shocks Propagated?—◆ Brian Sloboda, U.S. Department of Transportation; Vincent W. Yao, University of Arkansas, Little Rock

**2:45 p.m.** The Effect of Optimal Arterial Cycle Length on Intersection Delays in a Coordinated Arterial System—◆ Mohammad Qureshi, University of Missouri, Rolla; Gary Gadbury, University of Missouri, Rolla; Navin Sugathan, KCI Technologies

**3:05 p.m.** Comparison of Queue Clearance Models for Multilane Approach Opposing Permissive Left Turns—◆ V. A. Samaranyake, University of Missouri, Rolla; Mohammad Qureshi, University of Missouri, Rolla; Rohit Lasod, Johnson Engineering

**3:25 p.m.** Ensuring Data Quality in the Annual Department of Transportation (DoT) Performance and Accountability Report—◆ Alan K. Jeeves, Bureau of Transportation Statistics

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

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

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## 24 **MCC-205 D**

### ● **Reaching the MBA Audience—Topic Contributed**

#### Business and Economics Statistics Section, Section on Statistical Education

Organizer(s): Keith Ord, Georgetown University

Chair(s): Stephen Pollard, California State University, Los Angeles

**Panelists:** ◆ Raja Velu, Syracuse University  
◆ Douglas Zahn, G & G Associates  
◆ Dawn Porter, Georgetown University  
◆ William Parr, University of Tennessee  
◆ Sandy Balkin, Pfizer, Inc.

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

## 25 **MCC-208 A**

### ☆ **Costs and Benefits of ASA Membership—Topic Contributed**

#### Section on Risk Analysis

Organizer(s): David Banks, Duke University

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

**Panelists:** ◆ Jimmy Doi, California Polytechnic State University  
◆ Angela Patterson, GE Global Research  
◆ Mary Batcher, Ernst & Young LLP  
◆ Paul M. Johansen, Tibotec, Inc.  
◆ Stephen Porzio, The American Statistical Association

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

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

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## 26 **MCC-103 B**

### ● ☆ **Applying Ourselves to Social and Environmental Issues—Contributed**

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

Chair(s): Johnny Blair, Abt Associates, Inc.

**2:05 p.m.** Designing a Sampling Method for a Survey of Iowa High School Seniors—◆ Kyle Hewitt, Lawrence University; Michael D. Larsen, Iowa State University

- 2:20 p.m.** Origins of the Estate and Personal Wealth Sample Design—◆ Paul McMahon, U.S. Internal Revenue Service
- 2:35 p.m.** Teleworking at the U.S. Census Bureau—◆ Jason D. Machowski, U.S. Census Bureau; Julie A. Bouffard, U.S. Census Bureau; Joan M. Hill, U.S. Census Bureau; Jennifer Tancreto, U.S. Census Bureau
- 2:50 p.m.** Survey of Boaters and Marinas—◆ Marla Smith, U.S. Environmental Protection Agency; Elizabeth Kim, U.S. Environmental Protection Agency
- 3:05 p.m.** Variation in Survey Estimates of Children with Disabilities in Federal Education Data—◆ Jennifer Park, National Center for Education Statistics; Elvira Hausken, National Center for Education Statistics; Stacey Bielick, American Institutes for Research
- 3:20 p.m.** A Mixture Model for Catch-effort Experiments—◆ Changxuan Mao, University of California, Riverside
- 3:35 p.m.** Ten Million Children Are Dying in the Poor World—◆ David Fitch, Universidad del Valle de Guatemala

## 27 **MCC-200 I** Interdisciplinary Approaches to Statistics Education—Contributed

### Section on Statistical Education

Chair(s): Jessica Kohlschmidt, The Ohio State University

- 2:05 p.m.** A Collaboration: Statistics Class and Human Physiology Lab—◆ Diane Fisher, Louisiana State University; S. Renee Robichaux, Louisiana State University
- 2:20 p.m.** Interdisciplinary Undergraduate Research: Habitat Suitability Models of the Missouri Bladder-pod—◆ Hyun-joo Kim, Truman State University
- 2:35 p.m.** Phased Project Sequences To Reinforce DOE and Statistical Quality Methods Education—◆ David Zeitler, Grand Valley State University; Paul Stephenson, Grand Valley State University
- 2:50 p.m.** Undergraduate Summer Research Doing Statistical Bioassessment: Training Students in Data Analysis within an Interdisciplinary Program—◆ Dean Nelson, University of Pittsburgh, Greensburg; Cynthia Walter, Saint Vincent College
- 3:05 p.m.** Integrating the Teaching of Statistics and Computer Literacy Courses as a Foundation for Business Research—◆ Bodapati V. R. Gandhi, University of Puerto Rico
- 3:20 p.m.** One Dataset, Six Projects—◆ Brian E. Smith, McGill University
- 3:35 p.m.** Floor Discussion

## 28 **MCC-102 A** Design of Experiments I—Contributed Section on Physical and Engineering Sciences, Section on Quality and Productivity

Chair(s): Shelly Melroe, General Mills, Inc.

- 2:05 p.m.** Fraction of Design Space Plots for Examining Mixture Design Robustness to Measurement Errors—◆ Ayca Ozol-Godfrey, Wyeth; Christine Anderson-Cook, Los Alamos National Laboratory
- 2:20 p.m.** Efficient Experimental Designs for the Estimation of Hyperparameters in Hierarchical Bayes Models—◆ Qing Liu, The Ohio State University
- 2:35 p.m.** Optimal Three-level Designs for Response Surfaces—◆ Robert Mee, University of Tennessee
- 2:50 p.m.** Statistical Properties of Rechtschaffner Designs—◆ Xianggui Qu, Oakland University
- 3:05 p.m.** Optimal Nonregular Designs as Alternatives to the 16-Run and 32-Run Regular Fractional Factorials—◆ Debra K. Ingram, Arkansas State University; Steffany Novosad, Arkansas State University
- 3:20 p.m.** Average Correlations in Projections Designs with Quantitative Factors—◆ Cheryl Dingus, The Ohio State University; Angela Dean, The Ohio State University
- 3:35 p.m.** Design Efficiency under Model Uncertainty for Nonregular Fractions of General Factorials—◆ Abhyuday Mandal, Georgia Institute of Technology; Rahul Mukerjee, Indian Institute of Management, Calcutta

## 29 **MCC-102 C** \* New Research in Quality Control and Monitoring—Contributed Section on Quality and Productivity

Chair(s): Li Wang, Virginia Polytechnic Institute and State University

- 2:05 p.m.** A Destructive Sampling Method Designed for High-quality Production Processes (DSM-HQ)—◆ Ronald Bremer, Texas Tech University; Francisco Delgadillo, Texas Tech University
- 2:20 p.m.** Efficient Sampling Plans for Control Charts for Monitoring the Mean and Variance of an Autocorrelated Process—◆ Xin Zhong, Virginia Polytechnic Institute and State University; Marion R. Reynolds, Jr., Virginia Polytechnic Institute and State University
- 2:35 p.m.** A Nonparametric Statistic for Joint Mean-variance Quality Control—◆ J.D. Opdyke, DataMinelt
- 2:50 p.m.** Losses from Use of Individual Control Charts—◆ Joyce Orsini, Fordham University

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- 3:05 p.m.** A Bayesian Use of the EWMA To Detect Jumps at the Startup Phase of a Process—◆ Panagiotis Tsiamirtzis, Athens University of Economics and Business; Douglas M. Hawkins, University of Minnesota
- 3:20 p.m.** Optimal Two-sided CUSUM Stopping Rules for Change-point Detection in the Brownian Motion Model with Two-sided Alternatives—◆ Olympia Hadjiliadis, Columbia University
- 3:35 p.m.** Floor Discussion

## **30** **MCC-102 B** \* **Multiple Testing and Bias Reduction—Contributed** Section on Statistical Computing, Section on Nonparametric Statistics

*Chair(s): Aiyou Chen, Bell Labs, Lucent Technologies*

- 2:05 p.m.** Posterior Inference for Computer Adaptive Ability Estimation—◆ Kelly Rulison, The Pennsylvania State University; Eric Loken, The Pennsylvania State University
- 2:20 p.m.** An Upper Confidence Bound of the False Discovery Proportion—◆ Yongchao Ge, Mount Sinai School of Medicine
- 2:35 p.m.** Power of Pairwise Comparisons in the Equal Variance and Unequal Sample Size Case—◆ Philip Ramsey, Queens College, CUNY; Patricia P. Ramsey, Fordham University
- 2:50 p.m.** A Permutation Test To Compare Aggregate Matrices of Frequency Data: Young Differ from Older Mexicans on Emotion Labels—◆ Ramon Durazo-Arvizu, Northwestern University; Robert W. Schrauf, Pennsylvania State University
- 3:05 p.m.** Power of ANOM for Poisson and Binomial Data—◆ Peter Wludyka, University of North Florida; Sannah Irion, University of North Florida; Dawn Bullock, University of North Florida; LaTrecia Taylor, University of North Florida; Damon Ogilvie, University of North Florida
- 3:20 p.m.** Bias Reduction with Generalized Jackknife Data Sharpening—◆ Ennis D. McCune, Stephen F. Austin State University; Sandra L. McCune, Stephen F. Austin State University
- 3:35 p.m.** A New Resampling Method To Reduce Small Sample Bias—◆ Haiyan Bai, University of Cincinnati; Wei Pan, University of Cincinnati; LihShing Wang, University of Cincinnati

## **31** **MCC-202 AB** **A New Look at Old Tests—Contributed** Biometrics Section, WNAAR

*Chair(s): B. M. Golam Kibria, Florida International University*

- 2:05 p.m.** A Multivariate, Two-sample Mean Test for Small Sample Size and Missing Data—◆ Yujun Wu, University of

Medicine and Dentistry of New Jersey; Marc G. Genton, Texas A&M University; Leonard A. Stefanski, North Carolina State University

- 2:20 p.m.** Exact Tests for Negligible Interaction in Two-way Linear Models—◆ Bin Cheng, Columbia University; Jun Shao, University of Wisconsin, Madison
- 2:35 p.m.** Two-sample T-test under General Conditions—◆ Jin Xu, University of California, Riverside; Arjun K. Gupta, Bowling Green State University; Xinping Cui, University of California, Riverside
- 2:50 p.m.** The ANCOVA Model for the Binary Response Variable—◆ Yi-Ting Hwang, National Taipei University
- 3:05 p.m.** Adaptive Tests and Confidence Intervals—◆ Thomas O'Gorman, Northern Illinois University
- 3:20 p.m.** Minimal Assumption, Scale-adjusted, Mantel-Haenszel Tests—◆ Stuart A. Gansky, University of California, San Francisco
- 3:35 p.m.** Dependency Measures under Bivariate Homogeneous Shock Models—◆ Yingfu Li, University of Houston, Clear Lake

## **32** **MCC-205 B** \* ☆ **Specificity, Sensitivity, and ROC Curves—Contributed** Biometrics Section, WNAAR

*Chair(s): Yuxiao Tang, Rush University Medical Center*

- 2:05 p.m.** Detecting and Assessing Multiple Correlated Diagnostic Tests with Receiver Operating Characteristic Curves—◆ Feng Gao, Washington University in St. Louis; Chengjie Xiong, Washington University in St. Louis; Yan Yan, Washington University in St. Louis; Kai Yu, Washington University in St. Louis; Zhengjun Zhang, Washington University in St. Louis
- 2:20 p.m.** Estimation and Comparison of Diagnostic Accuracy with Survival Diagnostic Tests—Application to the Diagnosis of Early-stage Alzheimer's Disease—◆ Chengjie Xiong, Washington University in St. Louis
- 2:35 p.m.** Empirical Likelihood-based Inference for the Area Under the ROC Curve—◆ Gengsheng Qin, Georgia State University; Xiao-Hua (Andrew) Zhou, University of Washington
- 2:50 p.m.** Bayesian Nonparametric Estimation of ROC Curves When the True Disease State Is Unknown—◆ Chong Wang, Cornell University; Bruce Turnbull, Cornell University; Yrjö Gröhn, Cornell University
- 3:05 p.m.** Statistical Comparison of Antimicrobial Susceptible Test Methods—◆ Shailendra N. Banerjee, U.S. Centers for Disease Control and Prevention
- 3:20 p.m.** Assessment on Agreement Studies Using Adjusted Kappa and Yule's Index—◆ Jun-mo Nam, National Cancer Institute



You are invited to the JSM

# FIRST-TIME ATTENDEE

orientation and reception

Sunday, August 7

6:00 p.m.–7:30 p.m.

MCC-L100 F

## OPEN TO ALL

(Dinner groups will form after the reception.)

*Learn more about how to get the most out of your 1st JSM experience, meet new people, and network.*

AGENDA:

**Introduction**, Julia L. Bienias, President,  
The Caucus for Women in Statistics

**“Cosmic Connections: Networking at the JSM,”**  
Sandra Stinnett, Duke University Medical Center

**Reception** (*light hors d'oeuvres to be served*)

This reception is sponsored by:  
ASA, ENAR, IMS, SSC, WNAR, The Caucus for Women in Statistics

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**3:35 p.m.** Comparison of Predictive Values of Two Diagnostic Tests from the Same Sample of Subjects Using Weighted Least Squares—◆ Wenquan Wang, University of Alabama at Birmingham

## **33** **Statistical Genetics—Contributed** **Biometrics Section, WNAR**

*Chair(s): Ruzong Fan, Texas A&M University*

- 2:05 p.m.** Genealogical Theory for a Random Mating Population with Two Sexes and an Autosomal Locus—  
◆ Edward Pollak, Iowa State University
- 2:20 p.m.** Incorporating Missing Data Methods for Familial Genetic Data—◆ Hemant Tiwari, University of Alabama at Birmingham; Solomon K. Musani, University of Alabama at Birmingham; Varghese George, University of Alabama at Birmingham; T. Mark Beasley, University of Alabama at Birmingham
- 2:35 p.m.** A Flexible Monte Carlo Approach to Multipoint Linkage Analysis—◆ Wen-Chang Wang, National Health Research Institutes; I-Shou Chang, National Health Research Institutes; Yuan-Chuan Chuang, Ming Chuan University; Chao A. Hsiung, National Health Research Institutes
- 2:50 p.m.** Joint Localization of Two Linked Disease Susceptibility Genes Using Affected Relative Pairs—◆ Wan-Yu Lin, Graduate Institute of Epidemiology
- 3:05 p.m.** A Score Test for Linkage Analysis Allowing for Missing Parental Information—◆ Jing Han, New York University; Yongzhao Shao, New York University
- 3:20 p.m.** Parametric Approach to Genomic Imprinting Analysis with Applications to Angelman's Syndrome—◆ Sanjay Shete, The University of Texas M. D. Anderson Cancer Center
- 3:35 p.m.** Genome Scans with Gene-covariate Interaction—  
◆ Jie Peng, University of California, Davis; Hsiu-Khuern Tang, Hewlett-Packard Company; David Siegmund, Stanford University

## **34** **Microarray and Genomics—Contributed** **Biopharmaceutical Section, ENAR, Section on** **Statistical Graphics, Biometrics Section**

*Chair(s): Fred Djang, Bristol-Myers Squibb Company*

- 2:05 p.m.** RNA Interference HTS: a New Biotechnology for Discovering a Novel Class of Drugs—◆ Xiaohua Zhang, Merck Research Laboratories
- 2:20 p.m.** Power Comparison of Statistical Methods for Identifying Differential Expression Genes in Microarray Experiments—◆ Xiaohua Shu, Temple University; Xiaohua

Zhang, Merck Research Laboratories; Jianjun Li, Merck Research Laboratories; Wei Nan, Merck & Co., Inc.; Benjamin I. Sun, Merck & Co., Inc.

**2:35 p.m.** Simple Statistical and Graphical Methods in Evaluating Adequacy of Linear Amplification of RNA—Yongzheng Ding, Northwestern University; Li Xu, Northwestern University; Shan Chen, Northwestern University; Irene B. Helenowski, Northwestern University; Raymond Bergan, Northwestern University; ◆ Borko Jovanovic, Northwestern University

**2:50 p.m.** Generating Forests of Tree-based Models by Permuting the Model-building Process—◆ Bret Musser, Merck Research Laboratories

**3:05 p.m.** Cosmetics in Microarray: a Program for Automatically Masking Blemishes in Affymetrix Chips—  
◆ Mayte Suarez Farinas, The Rockefeller University; Maurizio Pellegrino, The Rockefeller University; Knut M. Wittkowski, The Rockefeller University; Marcelo O. Magnasco, The Rockefeller University

**3:20 p.m.** Zyomyx Protein Biochip: Normalization and Analysis—  
◆ Lisa Ying, Merck & Co., Inc.; Chidambaram Ramachandran, Merck & Co., Inc.; Ellen Rohde, BiogenIdec; Linda Kochanski, Merck & Co., Inc.; Dita Rasper, Merck & Co., Inc.; Stephanie Tuck, Merck & Co., Inc.; Vladimir Svetnik, Merck & Co., Inc.

**3:35 p.m.** Using Statistical Growth-curve Models To Quantify the Information in Phenotype Microarray Experiments—  
◆ Imola Fodor, Lawrence Livermore National Laboratory; David O. Nelson, Lawrence Livermore National Laboratory; Ann E. Holtz, Lawrence Livermore National Laboratory; Sandra L. McCutchen-Maloney, Lawrence Livermore National Laboratory

## **35** **Topics in Multivariate Analysis—Contributed** **General Methodology, Social Statistics Section,** **Section on Nonparametric Statistics**

*Chair(s): Mary Putt, University of Pennsylvania*

- 2:05 p.m.** Robust BACON Principle Component Analysis for High-dimensional Data—◆ Nedret Billor, Auburn University; Gulsen Kiral, Cukurova University
- 2:20 p.m.** Comparison of the Performance of Simple Structure Indices: the DETECT R-ratio, Bentler's Simplicity Index, and the Loading Simplicity Index—◆ Holmes Finch, Ball State University; Kirk Stage, Ball State University
- 2:35 p.m.** Interpretation of Principal Components: Methodological Aspect—◆ Lev Sverdlov, Health Dialog Data Services
- 2:50 p.m.** Relative Importance and Proportional Marginal Variance Decomposition (PMVD)—◆ Barry Feldman, Prism Analytics/DePaul University

- 3:05 p.m.** Penalized Likelihood Principal Component Rotation—  
◆ Trevor Park, University of Florida
- 3:20 p.m.** Variance-covariance Estimation with Application to Intercellular Signaling—◆ Scott Holan, University of Missouri, Columbia
- 3:35 p.m.** Stability of the Principal Components—◆ Abdul-Hamid Al-Ibrahim, Kuwait University

- 4:55 p.m.** GGobi Meets R: Interactive High-dimensional Data Visualization as Part of a Complete Data Analysis—  
◆ Deborah Swayne, AT&T Labs-Research
- 5:45 p.m.** Floor Discussion

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Invited Sessions 4:00 p.m.–5:50 p.m.

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## 36 **MCC-213 AB**

### Nonparametric Methods—Contributed Section on Nonparametric Statistics

Chair(s): Marten H. Wegkamp, Florida State University

- 2:05 p.m.** Three-dimensional Assessment of Image-guided Therapy—◆ Kelly Zou, Harvard Medical School
- 2:20 p.m.** Kurtosis Orderings for Multivariate Distributions and Their Applications—◆ Jin Wang, Northern Arizona University
- 2:35 p.m.** A Weighted Estimation Method for the Pareto Variance—◆ Mei Ling Huang, Brock University; Percy Brill, University of Windsor; Donald Gross, George Mason University
- 2:50 p.m.** On the Link between Smooth and EDF Tests for Goodness-of-fit—◆ Olivier Thas, Ghent University; John Rayner, University of Wollongong
- 3:05 p.m.** Restricted Estimation of the Cumulative Incidence Functions Corresponding to k Competing Risks—  
◆ Hammou Elbarmi, Baruch College, CUNY; Hari Mukerjee, Wichita State University
- 3:20 p.m.** A Better Boxplot—◆ Dennis Boos, North Carolina State University; Jacqueline M. Hughes-Oliver, North Carolina State University
- 3:35 p.m.** Comparison of Curves Utilizing a New Method of Small-sample Smoothing with Forestry Application—  
◆ Kathryn Prewitt, Arizona State University

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

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## 37 **MCC-200 ABC**

### Introductory Overview Lecture on Visual Data Mining ASA, ENAR, IMS, SSC, WNAR, Section on Statisticians in Defense and National Security, Biometrics Section

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

Chair(s): Daniel J. Rope, SPSS Inc.

- 4:05 p.m.** Visual Data Mining—◆ Edward J. Wegman, George Mason University

## 38 **MCC-200 I**

### Graphical Markov Models—Invited IMS, Section on Statistical Graphics

Organizer(s): Michael Perlman, University of Washington

Chair(s): Michael Perlman, University of Washington

- 4:05 p.m.** Inferring Parameters and Structure of Markov Random Field Models—◆ Max Welling, University of California, Irvine
- 4:30 p.m.** Convex Surrogates and Stable Message-passing in Markov Random Fields: Combined Approximation of Marginals and Parameters—◆ Martin J. Wainwright, University of California, Berkeley
- 4:55 p.m.** Bidirected Models for Binary Data—◆ Thomas S. Richardson, University of Washington; Mathias Drton, University of California, Berkeley
- 5:20 p.m.** ARMA Time-series Modeling with Graphical Models—  
◆ Bo Thiesson, Microsoft Research; David M. Chickering, Microsoft Research; David Heckerman, Microsoft Research; Christopher Meek, Microsoft Research
- 5:45 p.m.** Floor Discussion

## 39 **MCC-200 J**

### Neyman Lecture—Invited IMS

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

Chair(s): Peter Guttorp, University of Washington

- 4:05 p.m.** Dynamic Indeterminism in Science—◆ David R. Brillinger, University of California, Berkeley
- 5:35 p.m.** Floor Discussion

## 40 **MCC-200 G**

### Semiparametric Modeling in Longitudinal Data Analysis—Invited

ENAR, Section on Nonparametric Statistics, Business and Economics Statistics Section, Social Statistics Section, Section on Survey Research Methods, Section on Statistics in Epidemiology, WNAR, Biometrics Section

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

Chair(s): Annie Qu, Oregon State University

# GENERAL PROGRAM SCHEDULE

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

- 4:05 p.m.** A Change-point, Mixed-effects Approach for the Analysis of Intervention Effects in Longitudinal Studies—◆ Colin Wu, National Heart, Lung, and Blood Institute; Xin Tian, National Heart, Lung, and Blood Institute; Heejung Bang, Cornell University
- 4:30 p.m.** Wavelet-based Functional Mixed Models—◆ Jeffrey S. Morris, The University of Texas M. D. Anderson Cancer Center
- 4:55 p.m.** Variable Selection and Empirical-likelihood-based Inference for Measurement Error Data—◆ Hua Liang, St. Jude Children's Research Hospital
- 5:20 p.m.** Semiparametric Time-varying Coefficients Regression Model for Longitudinal Data—◆ Yanqing Sun, University of North Carolina, Charlotte; Hulin Wu, University of Rochester
- 5:45 p.m.** Floor Discussion

## **41** **MCC-102 B**

### \* ☆ **Human Improvements through Quality—Invited** Section on Quality and Productivity, Section on Physical and Engineering Sciences, Business and Economics Statistics Section

*Organizer(s): John D. Barrett, University of Northern Alabama*  
*Chair(s): Angela Patterson, GE Global Research*

- 4:05 p.m.** The Impact of Quality on the Human Condition—◆ Roger W. Hoerl, GE Global Research
- 4:35 p.m.** Human Improvement through Quality: Economic and Other—◆ John D. Barrett, University of Northern Alabama
- 5:05 p.m.** Statistical Tools and the Quality of Life—◆ Lynne Hare, Kraft Foods
- 5:35 p.m.** Floor Discussion

## **42** **MCC-205 C**

### \* **Integrating Multiple Sources of Genomic Data—Invited** Biometrics Section, ENAR, Biopharmaceutical Section, WNAR

*Organizer(s): Marina Vannucci, Texas A&M University*  
*Chair(s): Marina Vannucci, Texas A&M University*

- 4:05 p.m.** Identifying Chromosome Clusters and Over-represented Functions of Differentially Expressed Genes in Complementary cDNA Microarray Experiments—◆ Erin Conlon, University of Massachusetts; Patrick Eichenberger, Harvard University; Jun S. Liu, Harvard University
- 4:30 p.m.** Characterizing and Finding Short DNA-binding Motifs in an Evolutionary Context—◆ Haiyan Huang, University of California, Berkeley
- 4:55 p.m.** Integrating Pathway Information in DNA Microarray Data Analysis—◆ Mahlet G. Tadesse, University of Pennsylvania
- 5:20 p.m.** Disc: Jun S. Liu, Harvard University
- 5:40 p.m.** Floor Discussion

## **43** **MCC-211 D**

### \* ☆ **Improving the Measurement of Disability—Invited** Social Statistics Section, Section on Health Policy Statistics, Section on Government Statistics, Section on Survey Research Methods

*Organizer(s): Susan Schechter, Office of Management and Budget*  
*Chair(s): David Keer, U.S. Department of Education*

- 4:05 p.m.** Disability Data in the Decennial Census and the American Community Survey: Review of Recent Design and Operations—◆ Sharon M. Stern, U.S. Census Bureau
- 4:30 p.m.** Development, Testing, and Recommendations for Questions on Disability for the American Community Survey—◆ Barbara M. Altman, National Center for Health Statistics; Theresa J. DeMaio, U.S. Census Bureau; Kristen S. Miller, National Center for Health Statistics
- 4:55 p.m.** Designing Questions To Identify People with Disabilities in Labor Force Surveys: a History of the Work of BLS to Measure the Employment Level of Adults with Disabilities—◆ Terence M. McMenamin, Bureau of Labor Statistics; Douglas L. Kruse, Rutgers, The State University of New Jersey; Tom Hale, Social Security Administration; Haejin Kim, California State University, Dominguez Hills
- 5:20 p.m.** The Washington Group on Disability Statistics: International Efforts toward Comparable General Disability Measures—◆ Jennifer Madans, National Center for Health Statistics
- 5:45 p.m.** Floor Discussion

## **44** **MCC-102 A**

### \* **Case Studies in the Physical and Engineering Sciences—Invited**

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

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

- 4:05 p.m.** Statistics for New Products: Concept to Market in 10 Minutes—Fred Hulting, General Mills, Inc.; ◆ Jon Coltz, General Mills, Inc.
- 4:15 p.m.** Computer Experiments: Some Knee-jerk Applications—◆ William I. Notz, The Ohio State University
- 4:25 p.m.** Designing an Aging Study—◆ Joanne Wendelberger, Los Alamos National Laboratory
- 4:35 p.m.** Seven Error Terms! Are You Kidding?—◆ Thomas Loughin, Kansas State University
- 4:45 p.m.** Repeated Measures, Split Plots, and Missing Data: a Mobile Computing Field Study—◆ Daniel T. Voss, Wright State University; Mary M. Wesler, University of Dayton; Jennie J. Gallimore, Wright State University

**4:55 p.m.** Designing and Identifying Multistage Experiments—

◆ Derek Bingham, Simon Fraser University

**5:05 p.m.** Statistical Modeling of a Chemical Reaction—◆ Martha

Gardner, GE Global Research

**5:15 p.m.** The Crossover Design: 2-D or Not 2-D—◆ Reid D.

Landes, University of Arkansas for Medical Sciences; John VanDyk, Iowa State University

**5:25 p.m.** The BHH Tomato Example Revisited—◆ Robert

Easterling, Itinerant Professor

**5:35 p.m.** Disc: Russell V. Lenth, The University of Iowa

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

## 45 **MCC-102 E**

### ● ☆ Bayesian Methods in Federal Statistics—Invited

#### Section on Bayesian Statistical Science

Organizer(s): Malay Ghosh, University of Florida

Chair(s): Malay Ghosh, University of Florida

**4:05 p.m.** A Bayesian Analysis of Two-way Categorical Data from

Small Areas Incorporating Intraclass Correlation—

◆ Balgobin Nandram, Worcester Polytechnic Institute; Jai W. Choi, National Center for Health Statistics

**4:30 p.m.** A Hierarchical Bayesian Nonresponse Model for Two-

way Categorical Data from Small Areas with Uncertainty about Ignorability—◆ Myron Katzoff, National Center for Health Statistics; Balgobin Nandram, Worcester Polytechnic Institute

**4:55 p.m.** Empirical and Hierarchical Bayes Estimation for Binary

Response in Small Areas—◆ Karabi Sinha, University of

Illinois, Chicago; Malay Ghosh, University of Florida

**5:20 p.m.** Selection-bias-corrected Models for Evaluating

Weighting Class and Multiple Imputation Methods of Adjusting for Partial Response When Missing Data Are Not Missing at Random—◆ Philip J. Smith, U.S. Centers for Disease Control and Prevention; Lawrence Marsh, University of Notre Dame

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

## 46 **MCC-102 F**

### ☆ Statistical Methods for Monitoring Our Aquatic Resources—Invited

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

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

Chair(s): Don Stevens, Jr., Oregon State University

**4:05 p.m.** Nonparametric Small-area Estimation Using Penalized

Spline Regression—◆ Jean D. Opsomer, Iowa State University; Jay Breidt, Colorado State University; Gerda

Claeskens, Katholieke Universiteit Leuven; Goeran Kauermann, Universitaet Bielefeld; Giovanna Ranalli, Universita di Perugia

**4:35 p.m.** Some New Spatial Statistical Models for Stream Networks—◆ Jay Ver Hoef, Alaska Department of Fish and Game

**5:05 p.m.** Bayesian Models for a Multivariate Discrete Response: Comparing Impacted and Nonimpacted Streams—

◆ Jennifer A. Hoeting, Colorado State University; Devin S. Johnson, University of Alaska Fairbanks; Megan Dailey, Colorado State University

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

## 47 **MCC-211 B**

### ● ☆ Statistical Analysis of Functional Neuroimaging Data—Invited

#### Section on Statistical Computing, WNAR, Section on Statistical Graphics, Biometrics Section

Organizer(s): Jonathan Taylor, Stanford University

Chair(s): Jonathan Taylor, Stanford University

**4:05 p.m.** Spatial Smoothing To Control Degrees of Freedom in fMRI Analysis—◆ Keith J. Worsley, McGill University

**4:35 p.m.** Sensitivity and Specificity of FDR Methods in Neuroimaging—◆ Thomas Nichols, University of Michigan

**5:05 p.m.** Wavelet-based Statistical Analysis of fMRI Data—◆ Ivo D. Dinov, University of California, Los Angeles; John Boscardin, University of California, Los Angeles; Michael S. Mega, Neural-Net Research; Arthur W. Toga, University of California, Los Angeles

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

## 48 **MCC-202 AB**

### ● ☆ Statistical Methods for Spatial Data—Invited

#### WNAR, Section on Bayesian Statistical Science, Section on Nonparametric Statistics, ENAR, Section on Statistics and the Environment, Section on Statistical Graphics, Biometrics Section

Organizer(s): Francesca Dominici, Johns Hopkins University

Chair(s): Tyson Rogers, University of Minnesota

**4:05 p.m.** Bayesian Models for Spatial Extremes—Uli Schneider, Geophysical Statistics Project, NCAR; Douglas Nychka, National Center for Atmospheric Research; Daniel Cooley, University of Colorado at Boulder; ◆ Eric Gilleland, National Center for Atmospheric Research

**4:35 p.m.** Spatial Modeling of Environmental Exposures, Diseases, and Confounders from National Databases—◆ Roger D. Peng, Johns Hopkins University

# GENERAL PROGRAM SCHEDULE

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

**5:05 p.m.** Bayesian Spatial Boundary Analysis for Areal Health Outcome Data—◆ Bradley P. Carlin, University of Minnesota; Haijun Ma, University of Minnesota

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

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Invited Panels 4:00 p.m.–5:50 p.m.

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## **49** **MCC-208 B**

### ● **Total Survey Error: Past, Present, and Future—Invited Section on Survey Research Methods, Social Statistics Section**

*Organizer(s): Paul Biemer, RTI International, The University of North Carolina at Chapel Hill*

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

**Panelists:** ◆ Paul Biemer, RTI International, University of North Carolina at Chapel Hill  
◆ Robert Groves, University of Michigan  
◆ Alan Zaslavsky, Harvard University  
◆ William D. Kalsbeek, University of North Carolina at Chapel Hill

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

## **50** **MCC-103 D**

### ● **The History of Regression and Correlation—Invited The American Statistician, Social Statistics Section, Section on Statistical Education**

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

*Chair(s): John Walker, California Polytechnic State University*

**Panelists:** ◆ James Hanley, McGill University  
◆ Lee Wilkinson, Northwestern University  
◆ Michael J. Rovine, The Pennsylvania State University  
◆ Fritz J. Scheuren, University of Chicago

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

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Invited Poster Sessions 4:00 p.m.–5:50 p.m.

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## **51** **MCC-Level Two Lobby B**

### **Invited Poster Session—Invited**

#### **Biometrics Section, Section on Statistical Computing, General Methodology, Section on Statistics and the Environment, Section on Survey Research Methods**

*Organizer(s): Ying Kuen Cheung, Columbia University*

*Chair(s): Ying Kuen Cheung, Columbia University*

### **Probability, Mathematical Statistics, Stochastic Processes**

**01** Saddlepoint Approximations to Distribution Functions—  
◆ John Kolassa, Rutgers, The State University of New Jersey

### **Data Mining and Knowledge Discovery, Machine Learning**

**02** The Dating of Historical Documents—◆ Gelila Tilahun, University of Toronto; Andrey Feuerverger, University of Toronto

**03** L1-norm Multicategory Support Vector Machine and Its Solution Path—◆ Lifeng Wang, University of Minnesota; Xiaotong Shen, University of Minnesota

### **Reliability and Survival Modeling**

**04** Sample-size Formula for Clustered Survival Data Using Weighted Log-rank Statistics—◆ Ronald Gangnon, University of Wisconsin, Madison; Michael Kosorok, University of Wisconsin, Madison

### **Spatial Statistics, Time Series, Spatio-temporal Modeling**

**05** Predicting Exceedance Regions for Geostatistical Processes—  
◆ Jian Zhang, The Ohio State University; Noel Cressie, The Ohio State University; Peter F. Craigmille, The Ohio State University

### **Sampling and Survey Methodology**

**06** Estimation of Prevalence of Overweight in Small Areas: a Robust Extension of Fay-Herriot Model—◆ Dawei Xie, University of Pennsylvania

### **Genetics, Bioinformatics, Computational Biology**

**07** Robust Estimation and Testing of Haplotype Effects in Case-control Studies—◆ Andrew S. Allen, Duke University; Glen A. Satten, U.S. Centers for Disease Control and Prevention

### **Biometrics, Biostatistics, Epidemiology**

**08** Categorizing Continuous Explanatory Variables Using Nonparametric Regression—◆ Sean M. O'Brien, Duke University

**09** Testing Equality of Ordered Means in the General Linear Model—◆ Michael P. McDermott, University of Rochester

**10** Variance Estimation of Crossvalidation Estimators of the Generalization Error—◆ Hong Tian, Columbia University; Marianthi Markatou, Columbia University; Shameek Biswas, Columbia University; George Hripcsak, Columbia University

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

**52** **MCC-103 A**

✱ **Evaluation of Statistical Consulting Programs in an Academic Setting—Topic Contributed**

**Section on Statistical Consulting, Section on Statistical Education**

*Organizer(s): Manuela Huso, Oregon State University*

*Chair(s): Manuela Huso, Oregon State University*

- 4:05 p.m.** Metrics Used To Evaluate Purdue University's Statistical Consulting Service—◆ Bruce Craig, Purdue University
- 4:25 p.m.** An Example of a Consulting Center Program Assessment—◆ K. B. Boomer, The Pennsylvania State University; Andrea M. Piccinin, The Pennsylvania State University
- 4:45 p.m.** Evaluation of Consultants: Hiring, Progress, and Promotion—◆ Edward Rothman, University of Michigan
- 5:05 p.m.** Disc: H. Dean Johnson, University of Idaho/Washington State University
- 5:25 p.m.** Disc: M. Bridget Zimmerman, The University of Iowa
- 5:45 p.m.** Floor Discussion

**53** **MCC-200 H**

**ROC Methods in Diagnostic Device Evaluation—Topic Contributed**

**Section on Statistics in Epidemiology, Biopharmaceutical Section, WNAR**

*Organizer(s): Michael Lu, Edwards Lifesciences; Peter Lam, Boston Scientific Corporation*

*Chair(s): Hollington Lu, U.S. Food and Drug Administration*

- 4:05 p.m.** Receiver Operating Characteristic (ROC) Curve for Demographic Variable Dependent Diagnostic Method—◆ Michael Lu, Edwards Lifesciences; Victoria Petrides, Abbott Laboratories
- 4:25 p.m.** Analysis of Multireader, Multitest Receiver Operating Characteristic (ROC) Curves—◆ Xiao-Hua (Andrew) Zhou, University of Washington; Xiao Song, University of Washington
- 4:45 p.m.** Receiver Operation Characteristic Curve Method for Surrogate Endpoints for Predicting Target Revascularization in TAXUS Stent Clinical Trials—◆ Hong Wang, Boston Scientific Corporation; Peter Lam, Boston Scientific Corporation; Joerg Koglin, Boston Scientific Corporation; Mary Russell, Boston Scientific Corporation

**5:05 p.m.** The Role of Late Loss in Predicting Target Lesion Revascularization (TLR) in TAXUS Stented Coronary Lesions—◆ Zheng (Frank) Zhou, Boston Scientific Corporation; Yongyi Yu, Boston Scientific Corporation; Peter Lam, Boston Scientific Corporation

**5:25 p.m.** Establishment of a Surrogate Marker Application to Cardiovascular Drug Eluting Stent Trial—◆ Roseann White, Guidant Corporation

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

**54** **MCC-213 AB**

✱ **Administrative Records: Input/Output—Topic Contributed**

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

*Organizer(s): Wendy Alvey, U.S. Census Bureau; Lisa Blumerman, U.S. Census Bureau*

*Chair(s): Thomas Petska, Internal Revenue Service*

- 4:05 p.m.** Acquisition and Protection of Administrative Records: a U.S. Census Bureau Perspective—◆ Patricia Melvin, U.S. Census Bureau; Lisa Blumerman, U.S. Census Bureau
- 4:25 p.m.** Development of Population Estimates Using Administrative Records—◆ Signe Wetrogan, U.S. Census Bureau; Sally M. Obenski, U.S. Census Bureau; Rodger V. Johnson, U.S. Census Bureau
- 4:45 p.m.** Internal Revenue Service Area-to-area Migration Data: Strengths, Limitations, and Current Uses—◆ Emily Gross, U.S. Internal Revenue Service
- 5:05 p.m.** Statistical Uses of Social Security Administrative Data—◆ Dawn E. Haines, Social Security Administration; Brian Greenberg, Social Security Administration
- 5:25 p.m.** National Center for Health Statistics: Administrative Record Linkage Practices and Products—◆ Christine Cox, National Center for Health Statistics
- 5:45 p.m.** Floor Discussion

**55** **MCC-211 C**

✱ **Multiple Imputation in Mental Health Services Research—Topic Contributed**

**Section on Health Policy Statistics, ENAR, Section on Survey Research Methods, Social Statistics Section, WNAR, Biometrics Section**

*Organizer(s): Juned Siddique, University of California, Los Angeles*

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

- 4:05 p.m.** Multiple Imputation of a Depression Treatment Trial Using an Iterative Predictive Mean Matching Hot-deck—◆ Juned Siddique, University of California, Los Angeles; Thomas R. Belin, University of California, Los Angeles

# GENERAL PROGRAM SCHEDULE

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

**4:25 p.m.** Multiple Imputation To Adjust for Under-reporting in the National Latino and Asian American Survey—

◆ Bonnie Ghosh-Dastidar, RAND Statistics Group; Chih-nan Chen, Cambridge Health Alliance; Naihua Duan, University of California, Los Angeles; Margarita Alegria, Cambridge Health Alliance

**4:45 p.m.** Sequential Predictive Mean Matching Method of Multiple Imputation—◆ Trivellore Raghunathan, University of Michigan; Florian Koller, GfK Custom Research, Inc.; Nathaniel Schenker, National Center for Health Statistics; Susanne Raessler, University of Erlangen-Nuremberg

**5:05 p.m.** Disc: Naihua Duan, University of California, Los Angeles

**5:25 p.m.** Disc: James O'Malley, Harvard Medical School

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

## 56 **MCC-102 D**

### ☆ ☆ Bayesian Selection in Random Effects and Covariance Structure Models—Topic Contributed

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

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

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

**4:05 p.m.** Bayesian Correlation Estimation and Applications—  
◆ Merrill Liechty, Drexel University; John Liechty, The Pennsylvania State University; Peter Mueller, The University of Texas M. D. Anderson Cancer Center

**4:25 p.m.** Variable Selection in Semiparametric Mixed Effects Models—◆ Bo Cai, National Institute of Environmental Health Sciences; David Dunson, National Institute of Environmental Health Sciences

**4:45 p.m.** Bayesian Covariance Selection—◆ Adrian Dobra, Duke University

**5:05 p.m.** Joint Models for Longitudinal Binary and Continuous Processes—◆ Xuefeng Liu, University of Florida

**5:25 p.m.** An Empirical Bayes Method for Fitting Semiparametric Random-effect Models to Large Datasets—◆ Michael Pennell, The University of North Carolina at Chapel Hill/NIEHS; David Dunson, National Institute of Environmental Health Sciences

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

## 57 **MCC-212 AB**

### ● Testing Multiple and/or Secondary Hypotheses in Clinical Trials—Topic Contributed Biopharmaceutical Section, WNAR

*Organizer(s): Abdul J. Sankoh, Aventis Pharmaceuticals*

*Chair(s): Wayne Weng, Novo Nordisk, Inc.*

**4:05 p.m.** Non-inferiority Testing for Multiple Binary Endpoints—  
◆ Isaac Nuamah, Johnson & Johnson

**4:25 p.m.** Issues with Cross-trial Estimation of Active-control Effect in the Traditional Two-arm, Active-control Trial Design—◆ Abdul J. Sankoh, Aventis Pharmaceuticals

**4:45 p.m.** Estimations of Treatment Effects on Multiple Endpoints for Clinical Trials with Interim Analyses—◆ Michael Lee, Merck Research Laboratories; Hui Quan, Merck Research Laboratories

**5:05 p.m.** Secondary Endpoints and Triaged Analyses in Clinical Trials—◆ Lemuel Moye, The University of Texas Health Science Center at Houston

**5:25 p.m.** Disc: Mohammad Huque, U.S. Food and Drug Administration

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

## 58 **MCC-103 B**

### Business Register Quality Practices of Various Agencies—Topic Contributed

Business and Economics Statistics Section, Section on Survey Research Methods

*Organizer(s): Shirin Ahmed, U.S. Census Bureau; Franklin Winters, U.S. Census Bureau*

*Chair(s): Howard R. Hogan, U.S. Census Bureau*

**4:05 p.m.** A Comparison for the Business Registers Used by the Bureau of Labor Statistics and the U.S. Census Bureau—◆ Lucia Foster, U.S. Census Bureau; Joel Elvery, Bureau of Labor Statistics; Randy Becker, U.S. Census Bureau; Cornell Krizan, U.S. Census Bureau; Sang Nguyen, U.S. Census Bureau; David Talan, Bureau of Labor Statistics

**4:25 p.m.** Business Register Quality Metrics—◆ Sheryl Konigsberg, Bureau of Labor Statistics; David Talan, Bureau of Labor Statistics; Richard Clayton, Bureau of Labor Statistics

**4:45 p.m.** Analytical Bias Reduction for Small Samples in the U.S. Consumer Price Index—◆ Ralph Bradley, Bureau of Labor Statistics

**5:05 p.m.** Analyzing the JOLTS Hires and Separations Data—  
◆ Jason Faberman, Bureau of Labor Statistics

**5:25 p.m.** An Automated Industry Coding Application for New U.S. Business Establishments—◆ Anne T. Kearney, U.S. Census Bureau; Michael E. Kornbau, U.S. Census Bureau

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

## 59 **MCC-210 AB**

### ● Recent Advances in Psychological and Educational Measurement—Topic Contributed

#### Social Statistics Section, Section on Survey Research Methods, Section on Bayesian Statistical Science

Organizer(s): Sandip Sinharay, Educational Testing Service

Chair(s): Carolyn Shettle, Westat

**4:05 p.m.** Detecting Differential Item Functioning for Small Samples—◆ Sandip Sinharay, Educational Testing Service

**4:25 p.m.** Estimating Variance in Highly Clustered Survey Samples—◆ Jiahe Qian, Educational Testing Service

**4:45 p.m.** A Bayesian IRT Model for Comparative Item Performance under Dual Modes of Survey Administration or Educational Assessment—  
◆ Louis T. Mariano, RAND Corporation; Maria Orlando, RAND Corporation; Bonnie Ghosh-Dastidar, RAND Statistics Group

**5:05 p.m.** An Item Response Model for Multidimensional Unfolding Preferential Choice Data—◆ Jimmy de la Torre, Rutgers, The State University of New Jersey

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

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

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## 60 **MCC-208 A**

### ● ☆ Counting Out Loud: Data Collection Issues Essential for Improving the Welfare of Sexual Minorities—Topic Contributed

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

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

Chair(s): Arthur Kennickell, Federal Reserve Board

**Panelists:** ◆ Randall Sell, Columbia University  
◆ Susan Cochran, University of California, Los Angeles  
◆ Gary Gates, The Williams Project  
◆ Lee Badgett, University of Massachusetts

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

## 61 **MCC-205 D**

### NCI and the Cancer Biomedical Informatics Grid (caBIG)—Current and Future Roles for Biostatisticians—Topic Contributed

#### Biometrics Section, WNAR

Organizer(s): Terry Hyslop, Thomas Jefferson University

Chair(s): Zhezhen Jin, Columbia University

**Panelists:** ◆ Terry Hyslop, Thomas Jefferson University  
◆ Shannon McWeeny, Oregon Health and Science University  
◆ Joyce Niland, City of Hope National Medical Center  
◆ Christine McLaren, University of California, Irvine  
◆ Leslie Derr, National Cancer Institute

**5:35 pm** Floor Discussion

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

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## 62 **MCC-205 B**

### ● DNA Data and Microarray Measurements—Contributed Biometrics Section, WNAR

Chair(s): Hongmei Zhang, University of West Florida

**4:05 p.m.** Simplified Sequential Multiple Decision Procedures (SSMDP) for Genome Scans—◆ Qunyuan Zhang, Washington University School of Medicine; Michael A. Province, Washington University School of Medicine

**4:20 p.m.** Why Does Shrinking the Variance Estimates Help the Multiple Testing for a Large Number of Populations Such as Genes?—◆ Peng Liu, Cornell University; J. T. Gene Hwang, Cornell University

**4:35 p.m.** Detecting Peaks in a High-resolution Map of Active Promoters in the Human Genome Using Double-regression Model—◆ Ming Zheng, University of California, Los Angeles; Yingnian Wu, University of California, Los Angeles; Tae Hoon Kim, Ludwig Institute for Cancer Research, UCSD; Leah Barrera, University of California, San Diego; Chunxu Qu, Ludwig Institute for Cancer Research, UCSD; Michael Singer, Nimblegen Systems, Inc.; Todd Richmand, Nimblegen Systems, Inc.; Roland Green, Nimblegen Systems, Inc.; Bing Ren, University of California, San Diego

**4:50 p.m.** A Mixture Model in Nucleosome Core DNA Sequence Alignment—◆ Ji-Ping Wang, Northwestern University; Jonathan Widom, BMBCB, Northwestern University

**5:05 p.m.** A Likelihood-based Approach to Modeling Real-time RT-PCR Data with Right Censoring—◆ Yi He, University of Minnesota; Bonnie LaFleur, Vanderbilt University

**5:20 p.m.** Comparison of Links between Quantitative Trait Loci and Gene Expression Data—◆ Bing Han, The Pennsylvania State University

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

# GENERAL PROGRAM SCHEDULE

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

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**MCC-205 A**

● **Genetic Association and Complex Traits—Contributed**  
**Biometrics Section, Social Statistics Section, WNAR**

*Chair(s): Saunak Sen, University of California, San Francisco*

- 4:05 p.m.** Guidelines for Genome-wide, Haplotype-based Association Studies Using SNPs—◆ Chun Zhang, Affymetrix, Inc.
- 4:20 p.m.** Multilocus LD Measure and Tagging SNP Selection with Generalized Mutual Information—◆ Zhenqiu Liu, The Ohio State University; Shili Lin, The Ohio State University
- 4:35 p.m.** Powerful Statistics for Testing the Null Hypothesis of No Association versus the Alternative of One Associated Category in 2-by-m Tables ( $m > 4$ )—◆ Jeanine Houwing-Duistermaat, Leiden University Medical Center; Rachid el Galta, Leiden University Medical Center; Hans van Houwelingen, Leiden University Medical Center
- 4:50 p.m.** A Modified Quasi-likelihood Score Test for Evaluating Candidate Genes in Case-control Studies—  
◆ Timothy Thornton, The University of Chicago; Mary Sara McPeck, The University of Chicago
- 5:05 p.m.** Microarray Multidisciplinary Research Team Overview—  
◆ Laura L. Johnson, National Center for Alternative and Complimentary Medicine
- 5:20 p.m.** Floor Discussion

**64**

**MCC-103 C**

☆ **Bayesian Asymptotic, Semiparametric, and Nonparametric Inference—Contributed**

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

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

- 4:05 p.m.** Saddlepoint Approximations for Matched Case-control Problems—◆ Upasana Santra, University of Florida; Malay Ghosh, University of Florida
- 4:20 p.m.** A Generalized Maximum Likelihood Prior—  
◆ Anna Nicolaou, University of Macedonia; Mihaela Aslan, Yale University
- 4:35 p.m.** Semiparametric Bayesian Inference for Multilevel Repeated Measurement Data—◆ Gary Rosner, The University of Texas M. D. Anderson Cancer Center; Peter Mueller, The University of Texas M. D. Anderson Cancer Center; Fernando A. Quintana, Pontificia Universidad Catolica de Chile
- 4:50 p.m.** Bayesian Semiparametric Inference Based on Ranks in Linear Models—◆ Xiaojiang Zhan, Merck & Co., Inc.

- 5:05 p.m.** Posterior Consistency in Nonparametric Problems under Gaussian Process Priors—◆ Taeryon Choi, Carnegie Mellon University; Mark J. Schervish, Carnegie Mellon University

- 5:20 p.m.** Applications of Levy Processes in Bayesian Nonparametric Modeling—◆ Chong Tu, Duke University; Merlise Clyde, Duke University; Robert L. Wolpert, Duke University

- 5:35 p.m.** Generalized Spatial Dirichlet Process Model—  
◆ J. A. Duan, Duke University; Michele Guindani, Bocconi University; Alan E. Gelfand, Duke University

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**MCC-208 C**

● **Robustness—Contributed**

**General Methodology, Section on Nonparametric Statistics**

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

- 4:05 p.m.** Higher-order Asymptotics for the Mixed-effects Linear Model—◆ Sigfrido Iglesias-Gonzalez, University of Toronto
- 4:20 p.m.** Robust and Efficient Estimation under Data Grouping—◆ Nan Lin, Washington University in St. Louis; Xuming He, University of Illinois, Urbana-Champaign
- 4:35 p.m.** Determining the Number of Clusters in Data via the Weighted Gap Statistic—◆ Mingjin Yan, Virginia Polytechnic Institute and State University
- 4:50 p.m.** Exact Bounded Risk Two-stage Estimation under Dependent Terminal Sample Size and Estimator—  
◆ William Pepe, University of Connecticut; Nitish Mukhopadhyay, University of Connecticut
- 5:05 p.m.** Exact Test Size in the General Univariate Linear Model under Violation of Homogeneity of Variance with Cluster Samples of Unequal Size—◆ Jacqueline Johnson, The University of North Carolina at Chapel Hill; Keith E. Muller, The University of North Carolina at Chapel Hill
- 5:20 p.m.** Robust Estimation to Location-scale Models—  
◆ Wang Qiong, North Carolina State University
- 5:35 p.m.** Walk-trimmed Means—◆ Mingxin Wu, Michigan State University

**66**

**MCC-201 AB**

● **Analysis of Truncated/Censored Observations and Survival Outcomes—Contributed**

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

*Chair(s): David Dahl, Texas A&M University*

- 4:05 p.m.** Some Thoughts on the Relative Survival Rate—  
◆ Christiana Drake, University of California, Davis

- 4:20 p.m.** Tests of the Equality of Two Cumulative Incidence Functions—◆ Ruta Bajorunaite, Marquette University
- 4:35 p.m.** Median Regression Analysis Using Left- and Right-censored Observations—◆ Sundar Subramanian, University of Maine
- 4:50 p.m.** Likelihood-based Approach for Left-censored Covariates—◆ Gina D'Angelo, University of Pittsburgh; Lisa Weissfeld, University of Pittsburgh
- 5:05 p.m.** Flexible Cure Rate Modeling under Latent Activation Schemes—◆ Freda Cooner, University of Minnesota; Sudipto Banerjee, University of Minnesota; Bradley P. Carlin, University of Minnesota; Debajyoti Sinha, Medical University of South Carolina
- 5:20 p.m.** Joint Modeling of Longitudinal Data and Informative Followup Process—◆ Yu Liang, Columbia University; Wenbin Lu, North Carolina State University
- 5:35 p.m.** A Weighted Empirical Estimation of a Distribution Function with Interval-censored and Truncated Observations—  
◆ Hsiao-Chuan Tien, The University of North Carolina at Chapel Hill; Pai-Lien Chen, Family Health International

**67** **MCC-200 DE**  
**General Methodology—Contributed**  
**Biopharmaceutical Section, WNAR**

*Chair(s): Rajagopalan Srinivasan, INC Research, Dataspectrum*

- 4:05 p.m.** A Test for Monotonicity of Normal Means with Unequal Variances—◆ Arthur Roth, Pfizer, Inc.
- 4:20 p.m.** Use of the Fieller-Hinkley Distribution of the Ratio of Random Variables in Testing for Noninferiority and Equivalence—◆ Kallappa Koti, U.S. Food and Drug Administration
- 4:35 p.m.** Fitting Polyexponentials and Quasipolynomials to HIV Viral Load Data—◆ Les Huson, GNB Limited; Jain Chung, F. Hoffman-La Roche; Mickey Salgo, F. Hoffman-La Roche
- 4:50 p.m.** Detecting Epistasis among the Quantitative Trait Loci—◆ Wei Ning, Syracuse University; Hyune-Ju Kim, Syracuse University
- 5:05 p.m.** A Tolerance Interval-based, Two-stage Sequential Quality Assurance Test on Content Uniformity of Drug—  
◆ Meiyu Shen, U.S. Food and Drug Administration; Yi Tsong, U.S. Food and Drug Administration
- 5:20 p.m.** Some Improved Tests Using Pilot Study Information—  
◆ Samuel Wu, University of Florida; Mark Yang, University of Florida
- 5:35 p.m.** Weighted Nonparametric Maximum Likelihood Estimation of a Mixing Distribution—◆ Ying Zhang, Virginia Polytechnic Institute and State University; Chaofeng

Liu, Eli Lilly and Company

**68** **MCC-208 D**  
**Financial Risk Analysis—Contributed**  
**Section on Risk Analysis**

*Chair(s): Edward Melnick, New York University*

- 4:05 p.m.** Nonparametric Inference of Value at Risk for Dependent Financial Returns—Song Xi Chen, Iowa State University; ◆ Chengyong Tang, Iowa State University
- 4:20 p.m.** Modeling of Operational Risk Losses—◆ Emmanuel Yashchin, IBM
- 4:35 p.m.** Tail Index Estimation for Partitioned Insurance Loss Data—◆ Ping-Hung Hsieh, Oregon State University; John Henry, Oregon State University
- 4:50 p.m.** Risk Modeling under Segmentation—◆ Qun Xie, Tsinghua University
- 5:05 p.m.** On the Application of Survival Analysis To Predict Business Failure—Edgar Ortiz, Dun & Bradstreet; ◆ Wei Zhou, Dun & Bradstreet
- 5:20 p.m.** On the Application of Zero Inflated Count Models to Business Delinquency Prediction—◆ Edgar Ortiz, Dun & Bradstreet; Paul Chin, Dun & Bradstreet Global Decision Sciences
- 5:35 p.m.** Floor Discussion

**69** **MCC-103 E**  
**Splines and Time Series—Contributed**  
**Section on Nonparametric Statistics**

*Chair(s): Kaisheng Song, Florida State University*

- 4:05 p.m.** Smoothing Spline Models with Stationary Time-series Errors—◆ Ming Dai, University of North Carolina, Charlotte; Wensheng Guo, University of Pennsylvania
- 4:20 p.m.** Generalized Varying Coefficient Models for Longitudinal Data—◆ Damla Senturk, The Pennsylvania State University; Hans-Georg Mueller, University of California, Davis
- 4:35 p.m.** Testing for Superiority among Two Time Series—  
◆ Fang Li, Indiana University-Purdue University, Indianapolis; Hira L. Koul, Michigan State University
- 4:50 p.m.** Penalized Spline Models for Functional Data—  
◆ Fang Yao, Colorado State University; Thomas Lee, Colorado State University
- 5:05 p.m.** Random-effects Selection in a Nonlinear Mixed Model with Many Parameters—◆ Karen Chiswell, North Carolina State University; John F. Monahan, North Carolina State University

**Thurs-Sun**

# GENERAL PROGRAM SCHEDULE

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

**5:20 p.m.** The Effect of Serial Correlation on the Shapiro-Wilk and Wilcoxon Tests—◆ Yulia Gel, University of Waterloo; Weiwen Miao, Macalester College; Joseph L. Gastwirth, George Washington University

**5:35 p.m.** Penalized Spline Estimation for Generalized Partially Linear Single-index Models—◆ Yan Yu, University of Cincinnati

## **70** **MCC-211 A** \* **Mixtures, Missing Data, and EM—Contributed** Section on Statistical Computing

*Chair(s): Robert Shumway, University of California, Davis*

**4:05 p.m.** Efficient Computational Strategies for Normal Mixture Models with Missing Information—◆ Tsung-I Lin, Tunghai University; Jack C. Lee, National Chiao-Tung University

**4:20 p.m.** On Lassoing Mixtures—◆ Guan Xing, Case Western Reserve University; J. Sunil Rao, Case Western Reserve University

**4:35 p.m.** Analyzing the Model Fit of Finite Mixture Models—◆ Bettina Gruen, Vienna University of Technology; Friedrich Leisch, Vienna University of Technology

**4:50 p.m.** Estimating Mixtures of Normals Using UNMIX—◆ Hasan Hamdan, James Madison University

**5:05 p.m.** Gaussianization-based Quasi-imputation strategies for Longitudinal Binary Responses—◆ Hakan Demirtas, University of Illinois, Chicago

**5:20 p.m.** Accelerating the EM Algorithm without Much Fuss: Squared Extrapolation Methods (SQUAREM)—◆ Ravi Varadhan, Johns Hopkins University; Christophe Roland, Université des Sciences et Technologies de Lille

**5:35 p.m.** MLE of Multivariate Normal Parameters in the Presence of Left-censored and Missing Values—◆ Heather Hoffman, Virginia Commonwealth University; Robert E. Johnson, Virginia Commonwealth University

## **71** **MCC-103 F** **Assessments of Students' Learning and Attitudes in Introductory Statistics—Contributed** Section on Statistical Education

*Chair(s): Ann Cannon, Cornell College*

**4:05 p.m.** Assessment of Materials for Engaging Students in Statistical Discovery—◆ Amy G. Froelich, Iowa State University; W. Robert Stephenson, Iowa State University; William M. Duckworth, Iowa State University

# Power

## **Statistics: The Art and Science of Learning from Data**

Alan Agresti, University of Florida

Christine Franklin, University of Georgia



Alan Agresti and Christine Franklin bring their extensive real-world and teaching experience to a new introductory statistics text that addresses the needs and realities of today's students.

Challenging the established organization and structure of the introductory statistics text, they offer a book that makes statistics a central science in modern life—accessible and engaging without compromising rigor.

**To learn more about Agresti/Franklin and our other statistics offerings, please visit Prentice Hall at booths 601 and 603!**

# Clarity

PEARSON

Prentice  
Hall

- 4:20 p.m.** Applying an Action-research Model To Assess Student Understanding of the Central Limit Theorem in Postcalculus Probability and Statistics Courses—  
◆ Myrtis L. Lunsford, Longwood University; Ginger Holmes Rowell, Middle Tennessee State University; Tracy Goodson-Espy, Appalachian State University
- 4:35 p.m.** Brigham Young University TestBank: an Automated System for Unique Test Generation and Correction—  
◆ David G. Whiting, Brigham Young University; Del T. Scott, Brigham Young University
- 4:50 p.m.** Evaluation of Classification Accuracy and Consistency in Educational Testing—Lisue Chen, CTB/McGraw-Hill;  
◆ Matthew Finkelman, CTB/McGraw-Hill; David Rogosa, Stanford University
- 5:05 p.m.** An Example of Utilizing Data Analysis for Assessing a Math General Education Curriculum—◆ Charles Todd, Montana Tech, The University of Montana
- 5:20 p.m.** Getting Students Involved in Learning Introductory Statistics in a Large Lecture Setting—◆ Jackie Miller, The Ohio State University
- 5:35 p.m.** Floor Discussion

## 72 **MCC-200 F** **Recurrent Events, Competing Risks, and Other Challenges in Survival Analysis—Contributed** Section on Statistics in Epidemiology, ENAR, WNAR, Biometrics Section

Chair(s): Ying Guo, Emory University

- 4:05 p.m.** Choice of Time Scale and Its Effect on Significance of Predictors in Longitudinal Studies—◆ Michael Pencina, Boston University; Martin G. Larson, Boston University; Ralph D'Agostino, Boston University
- 4:20 p.m.** A Novel Application of Survival Analysis to the Study of Infant Birth Weight—◆ Katherine Hoggatt, University of California, Los Angeles; Sander Greenland, University of California, Los Angeles; Beate Ritz, University of California, Los Angeles
- 4:35 p.m.** Markovian Multistate Regression Models for Cardiovascular Diseases—◆ Somesh Chattopadhyay, Florida State University
- 4:50 p.m.** Analysis of Competing Risks with Frequent Tied-event Times—◆ Robert Glynn, Brigham and Women's Hospital; Bernard Rosner, Harvard Medical School; William G. Christen, Brigham and Women's Hospital
- 5:05 p.m.** Attributable Risk Estimation in Longitudinal Studies with Censoring—◆ Cynthia S. Crowson, Mayo Clinic; Terry

M. Therneau, Mayo Clinic; Sherine E. Gabriel, Mayo Clinic; W. Michael O'Fallon, Mayo Clinic

- 5:20 p.m.** Comparing Smoothing Techniques for Modeling Exposure-response Curves in Cox Models—  
Donna Spiegelman, Harvard School of Public Health;  
◆ Usha S. Govindarajulu, Harvard School of Public Health; Ellen Eisen, Harvard School of Public Health
- 5:35 p.m.** Recurrent Event Models in the Presence of a Terminal Event: Comparison, Inference, and Data Analysis—  
◆ Xianghua Luo, Johns Hopkins University; Mei-Cheng Wang, Johns Hopkins University

## 73 **MCC-209 AB** ★ ☆ **Survey Data in Health and Epidemiological Applications—Contributed** Section on Survey Research Methods

Chair(s): Christopher H. Johnson, U.S. Centers for Disease Control and Prevention

- 4:05 p.m.** Uses of the Medicare Current Beneficiary Survey for Analysis across Time—◆ David Ferraro, Westat; Hongji Liu, Westat; Ravi Sharma, Westat
- 4:20 p.m.** Using Repeated Measures Techniques To Analyze Cluster-correlated Survey Responses—  
◆ Celia Eicheldinger, RTI International; G. Gordon Brown, RTI International; James Chromy, RTI International
- 4:35 p.m.** Application of Confidence Interval Methods for Small Proportions in the Health Care Survey of DoD Beneficiaries—◆ Amang Sukasih, Mathematica Policy Research, Inc.; Donsig Jang, Mathematica Policy Research, Inc.; Michael Hartzell, U.S. Department of Defense
- 4:50 p.m.** Incorporating Multiple Observations into Logistic Regression Models of Incident Disease—◆ Julia Bienias, Rush University Medical Center; Phillip S. Kott, National Agricultural Statistics Service; Todd L. Beck, Rush University Medical Center; Denis A. Evans, Rush University Medical Center
- 5:05 p.m.** Basic Models for Mapping Prescription Drug Distributions—◆ Kennon Copeland, IMS Health, Inc.; Elizabeth Allen, IMS Health, Inc.
- 5:20 p.m.** Improving Population Surveys of Health Care Utilization—◆ Monroe Sirken, National Center for Health Statistics
- 5:35 p.m.** Adjusting for Nonresponse in the Health Care Survey of DoD Beneficiaries—◆ Nancy Clusen, Mathematica Policy Research, Inc.; Haixia Xu, Mathematica Policy Research, Inc.; Michael Hartzell, U.S. Department of Defense

Contributed Posters 8:00 p.m.–9:50 p.m.

## 74 **MCC-Level Two Lobby B** **Contributed Poster Session 1—Contributed**

**Business and Economics Statistics Section, Biometrics Section, Biopharmaceutical Section, General Methodology, Section on Government Statistics, Section on Nonparametric Statistics, Section on Statistical Education, Section on Statistics and the Environment, Section on Statistics in Epidemiology, Section on Teaching Statistics in the Health Sciences, ENAR**

*Organizer(s): Ying Kuen Cheung, Columbia University*

*Chair(s): Ying Kuen Cheung, Columbia University*

### **Biometrics, Biostatistics, Epidemiology**

- 01** Sigmoidally-transformed Cosine Curves: Mathematical Model for Circadian Rhythms with Nonsinusoidal Shapes—◆ Matthew Marler, University of California, San Diego; Philip Gehrman, Pennsylvania Center for Sleep and Respiratory Physiology; Jennifer Martin, University of California, Los Angeles
- 02** Statistical Analysis of Bioassays of Environmental Toxicants Using the Nematode *Caenorhabditis Elegans*—◆ Sandra McBride, Duke University; Grace E. Kissling, National Institute of Environmental Health Sciences; Windy Boyd, Duke University; Jon Freedman, Duke University
- 03** Predicting Time-to-clinical Stability and Length of Hospital Stay in Patients with Community-acquired Pneumonia—◆ Andrew S. LaJoie, University of Louisville; Rafeal De La Cruz, University of Louisville; Douglas J. Lorenz, University of Louisville; Julio A. Ramirez, University of Louisville
- 04** Utilizing Propensity Scores To Test Treatment Effects in Survival Data—◆ Jingxia Liu, Medical College of Wisconsin; Meijie Zhang, Medical College of Wisconsin
- 05** Clinical vs. Statistical View of the Association of Waist vs. Body Mass Index with Incident Diabetes: a Literature-based Metaanalysis—◆ Gabriela Vazquez, University of Minnesota; Sue Duval, University of Minnesota; David Jacobs, University of Minnesota
- 06** Analyzing the National Longitudinal Survey of Youth: a Comparison of Statistical Methods—◆ Jonathan Mahnken, University of Kansas Medical Center; Chaoyang Li, University of Kansas Medical Center; Niaman Nazir, University of Kansas Medical Center; Joseph So, University of Kansas Medical Center; Harsohena Kaur, University of Kansas Medical Center; Jasjit Ahluwalia, University of Kansas Medical Center

### **Business, Financial, and Marketing Statistics**

- 07** The Financial Impact of Global Events on the Home Improvement Industry—Norean Sharpe, Babson College; ◆ Andrew Mullin, Babson College

### **Data Mining and Knowledge Discovery, Machine Learning**

- 08** Nonlinearity in a Large Dataset for an Urban Development Study—◆ Wei-hong Wang, The College of New Jersey; Pin-Shuo Liu, William Paterson University

### **Economics, Game Theory**

- 09** Stationary ARMA Processes with Relative Error—◆ Key-Il Shin, Hankuk University of Foreign Studies; Heungsun Park, Hankuk University of Foreign Studies

### **Genetics, Bioinformatics, Computational Biology**

- 10** The Application of Block Wavelet Shrinkage Principal Components Model on DNA Microarray Data—◆ Jack Lee, Chinese University of Hong Kong; Benny C. Zee, Chinese University of Hong Kong
- 11** Constructing Gene Expression-based Diagnostic Rules for Understanding Individualized Etiology of Complex Diseases—◆ Zhong Gao, Johns Hopkins University
- 12** Genetic Linkage Analysis of Bivariate Traits Using Identity by Descent Data from Sib-pairs—◆ Jian Han, Bristol-Myers Squibb Company
- 13** Joint Tests for Quantitative Trait Loci in Transmission Disequilibrium Testing—◆ Jasmin Divers, University of Alabama at Birmingham; T. Mark Beasley, University of Alabama at Birmingham; Hemant Tiwari, University of Alabama at Birmingham; David B. Allison, University of Alabama at Birmingham

### **Health Policy, Public Health**

- 14** Combining Information from Multiple Surveys To Improve on Analyses of Self-reported Data in Estimating Measures of Health Disparities—◆ Nathaniel Schenker, National Center for Health Statistics; Trivellore Raghunathan, University of Michigan
- 15** Analysis of Short-term Influences of Ambient Aeroallergens on Pediatric Asthma Hospital Visits in the Cincinnati Area—◆ Wei Zhong, University of Cincinnati; Linda Levin, University of Cincinnati; Atin Adhikari, University of Cincinnati; Tiina Reponen, University of Cincinnati; Rakesh Shukla, University of Cincinnati; Gurjit K. Khurana Hershey, Cincinnati Children's Hospital Medical Center; Grace LeMasters, University of Cincinnati
- 16** Examples of Student Projects Using Historical Health Statistics—◆ S. David Kriska, Restat Systems, Inc.; Marcia M. Sass, UMDNJ School of Public Health; Mark C. Fulcomer, Richard Stockton College of New Jersey; Ann E. Jones, UMDNJ School of Public Health; Brian T. Little, UMDNJ School of Public Health; Michael W. Holton, Harvard School of Public Health; Jallah M. Kennedy, UMDNJ School of Public Health

### **Incomplete Data Analysis, Imputation Methods**

- 17** A Pattern-mixture Model for Censored Binary Longitudinal Data—◆ Yuting Zhang, MedFocus; Brent J. Shelton, University of Kentucky

**Logitudinal Data, Repeated Measurements, and Cluster Data**

- 18** Using Conditional Residuals To Assess Goodness-of-Fit in Hidden Markov Models—◆ Theodore Lystig, AstraZeneca
- 19** Analytic Alternatives in Assessing Sustained Clinical Response Based on Repeated Continuous Outcomes: a Clinical Trial Example—◆ Ilya Lipkovich, Eli Lilly and Company; Shuyi Shen, Eli Lilly and Company; Craig Mallinckrodt, Eli Lilly and Company
- 20** Analysis of Longitudinal Data in Presence of Informative Observation Process with Application to Pediatric Cancer Study—◆ Shesh Rai, St. Jude Children's Research Hospital; Sean Phipps, St. Jude Children's Research Hospital; Deo K. Srivastava, St. Jude Children's Research Hospital; James M. Boyett, St. Jude Children's Research Hospital; Jianguo (Tony) Sun, University of Missouri, Columbia

**Neuroscience, Brain Imaging**

- 21** Undercoverage of Wavelet-based Resampling Confidence Intervals—◆ Liansheng Tang, Southern Methodist University; William R. Schucany, Southern Methodist University; Wayne Woodward, Southern Methodist University

**Semiparametric, Nonparametric Methods**

- 22** Nonparametric Estimation of Risk Measures—◆ Kee-Hoon Kang, Hankuk University of Foreign Studies; Seok-Oh Jeong, Hankuk University of Foreign Studies

**Spatial Statistics, Time Series, Spatio-temporal Modeling**

- 23** Bayesian Areal Wombling for Geographical Boundary—Bradley P. Carlin, University of Minnesota; ◆ Haolan Lu, University of Minnesota
- 24** On the Relationship between Wind Speeds at Neighboring Locations—◆ John Rogers, Westat; Anthony Rogers, University of Massachusetts

**Teaching, Training, Consulting**

- 25** Using Asymptotic Results and Smoothing To Obtain a Confidence Interval for the Population Median—◆ Mojgan Khatoonabadi, California State University, Fullerton; Mortaza Jamshidian, California State University, Fullerton
- 26** Interactive Statistics Tutorials Using JAVA Applets—◆ Dale Berger, Claremont Graduate University; Christopher L. Aberson, Humboldt State University; Michael R. Healy, Claremont Graduate University; Victoria L. Romero, Claremont Graduate University; Amanda T. Saw, Claremont Graduate University
- 27** Active Learning Using Real-time, Online, Hands-on Activities—◆ Carl Lee, Central Michigan University; Felix Famoye, Central Michigan University
- 28** Classroom Simulation: the Margin of Error in a Public Opinion Poll—◆ Bruce E. Trumbo, California State University, East Bay (Hayward Hills Campus); Eric Suess, California State University, East

Bay (Hayward Hills Campus); Shuhei Okumura, California State University, Hayward

- 29** Understanding the One-way, Random-effect ANOVA—◆ Eric Suess, California State University, East Bay (Hayward Hills Campus); Bruce E. Trumbo, California State University, East Bay (Hayward Hills Campus); Antonio P. Curtis, California State University, Hayward
- 30** Choosing a Career as a Statistician in a Liberal Arts College—◆ Shonda Kuiper, Grinnell College; Julie Legler, St. Olaf College; Carolyn Morgan, Hampton University
- 31** A Survey of Clinician Attitudes toward Biostatistics in Medicine—◆ Colin P. West, Mayo Clinic College of Medicine; Robert D. Ficalora, Mayo Clinic College of Medicine

Thurs-Sun



**OPENING MIXER**

*and Contributed Poster Session*

**Sunday, August 7**

**8:00 p.m.–10:30 p.m.**

Minneapolis Convention Center  
Level 2, Lobby B, Seasons, and Bridge

JSM 2005

IMS



# Presidential Address

**August 8, 2005**

**8:00p.m.**

**Location:**

Minneapolis  
Convention  
Center, 200 A-C

**Reception:**

9:15-11:00 p.m.  
MCC-Seasons

IMS President 2004-05, Louis H.Y. Chen, will deliver the 2005 Presidential Address on "*The Poisson Paradigm.*"

Also this evening:

- Presentation of the 2005 H C Carver Award Medal
- Presentation of New IMS Fellows
- Announcement of 2006 Special Invited Lectures
- Announcement of Laha Award Recipients



*Louis H Y Chen*

*Reception immediately following: everyone is welcome*

JSM 2005

IMS



# Student Mixer

**August 9, 2005**

**5:15-6:45p.m.**

**Location:**

Hyatt Regency  
Room: Mirage

## 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 where we will have applications available, or you can join online at [www.imstat.org](http://www.imstat.org).

IMS Membership is *free* for students.



*Last year's reception in Barcelona, Spain*

## MONDAY, AUGUST 8

### Tours

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

### Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m.   **H**-Conrad B  
**Section on Teaching of Statistics in the Health Sciences Executive Committee Meeting**

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

7:00 a.m.–8:30 a.m.   **H**-Redwing Room  
**Section on Government Statistics Executive Committee Meeting (closed)**

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

7:00 a.m.–8:30 a.m.   **H**-Director's Row 4  
**Section on Health Policy Statistics Executive Committee Meeting (closed)**

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

7:00 a.m.–8:30 a.m.   **H**-Nicollet  
**Survey Review Committee**

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

7:00 a.m.–8:30 a.m.   **H**-Marquette  
**ASA SIAM Series Editorial Board (closed)**

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

7:00 a.m.–8:30 a.m.   **H**-Conrad A  
**JABES Management Committee (closed)**

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

7:00 a.m.–8:30 a.m.   **H**-Board Room 2  
**Committee on Minorities in Statistics (closed)**

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

7:00 a.m.–8:30 a.m.   **H**-Director's Row 2  
**Technometrics Management Committee (closed)**

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

7:00 a.m.–8:30 a.m.   **H**-Director's Row 1  
**Section on Statistical Graphics Executive Committee (closed)**

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

7:00 a.m.–8:30 a.m.   **H**-Rochester  
**Committee on the ASA Archives and Historical Materials**

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

7:00 a.m.–8:30 a.m.   **H**-Ramsey  
**The ASA Task Force on Accreditation (closed)**

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

7:00 a.m.–9:00 a.m.   **MCC**-206 AB  
**Committee on Membership Retention and Recruitment (closed)**

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

7:00 a.m.–9:00 a.m.   **H**-Conrad C  
**Social Statistics Section Executive Committee Meeting (closed)**

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

7:00 a.m.–10:00 a.m.   **H**-Conrad D  
**Committee on Professional Ethics (closed)**

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

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

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

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

7:30 a.m.–9:00 a.m.   **H**-Director's Row 3  
**Committee on Nominations (closed)**

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

7:30 a.m.–9:00 a.m.   **H**-LaSalle  
**Carnegie Mellon Alumni and Faculty Breakfast (closed)**

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

7:30 a.m.–6:00 p.m.   **MCC**-Level 1, Registration Lobby  
**JSM Main Registration  
The ASA Communities Booth  
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# GENERAL PROGRAM SCHEDULE

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

**CE\_19C** **MCC-L100 F**  
1:00 p.m.–5:00 p.m.

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

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

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

**CE\_20C** **MCC-L100 J**  
1:00 p.m.–5:00 p.m.

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

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

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Invited Sessions 8:30 a.m.–10:20 a.m.

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**75** **MCC-211 A**  
\* **Practical Guidance for Collaborators and Their Clients—Invited**

**Section on Statistical Consulting**

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

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

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

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

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

**76** **MCC-201 AB**  
\* **Recent Advances in Multiple Testing—Invited**

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

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

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

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

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

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

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

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

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

**77** **MCC-200 H**  
☆ **Publishing in Statistics Education Journals: Views from the Editors—Invited**

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

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

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

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

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

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

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

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

**78** **MCC-102 F**  
\* **Assessment of the Uncertainties of Small-area Estimators—Invited**

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

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

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

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

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

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

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

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

## 79 MCC-200 G

### ☆ Direct and Indirect Effects—Invited

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

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

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

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

## 80 MCC-103 B

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

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

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

Chair(s): Justine Shults, University of Pennsylvania

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

## 81 MCC-212 AB

### New Latent Space Models for Social Science—Invited IMS, Social Statistics Section

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

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

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

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

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

## 82 MCC-200 ABC

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

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

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

Chair(s): Scott Kowalski, Minitab Inc.

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

## 83 MCC-213 AB

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

#### Section on Statistical Education

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

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

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

# GENERAL PROGRAM SCHEDULE

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

## 84 **MCC-200 DE**

### ☆ ☆ **Pharmacogenomics—Invited**

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

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

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

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

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

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

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

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

## 85 **MCC-200 F**

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

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

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

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

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

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

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

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

## 86 **MCC-211 D**

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

**Business and Economics Statistics Section**

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

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

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

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

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

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

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

## 87 **MCC-209 AB**

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

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

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

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

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

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

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

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

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



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MCC-Level 1, Registration Lobby

Invited Panels 8:30 a.m.–10:20 a.m.

## 88 MCC-103 D

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

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

Organizer(s): Peter Hoff, University of Washington

Chair(s): Peter Hoff, University of Washington

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

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

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

## 89 MCC-202 AB

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

#### Biometrics Section, WNAR

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

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

- 8:35 a.m.** The Generalized Estimating Equations for Transformation Models—◆ Kani Chen, Hong Kong University of Science and Technology
- 8:55 a.m.** Combining Markers for Predicting Event Times with Nonparametric Transformation Model—◆ Tianxi Cai, Harvard University
- 9:15 a.m.** Marginal Regression of Multivariate Event Based on Linear Transformation Models—◆ Wenbin Lu, North Carolina State University
- 9:35 a.m.** On the Accelerated Failure Time Model for Current Status and Interval-censored Data—◆ Lu Tian, Northwestern University; Tianxi Cai, Harvard University
- 9:55 a.m.** Floor Discussion

## 90 MCC-200 J

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

#### Biopharmaceutical Section, WNAR

Organizer(s): Rosalie Dominik, Family Health International

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

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

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

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

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

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

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

## 91 MCC-103 F

### \* Optimal Experimental Design—Topic Contributed

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

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

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

- 8:35 a.m.** Selecting Drug Combinations: Adaptive Approach—◆ Vladimir Dragalin, GlaxoSmithKline; Valerii Fedorov, GlaxoSmithKline
- 8:55 a.m.** Optimal Design of Pharmacokinetic Studies Described by Stochastic Differential Equations—◆ Sergei Leonov, GlaxoSmithKline; Valerii Fedorov, GlaxoSmithKline; Vladimir Anisimov, GlaxoSmithKline
- 9:15 a.m.** Some Issues of Optimality in the Design of Interrater Agreement Studies—◆ Mekibib Altaye, Cincinnati Children's Hospital Medical Center; Allan Donner, The University of Western Ontario
- 9:35 a.m.** Optimality of Nested Designs with Equal and Unequal Cluster Sizes—◆ Martijn Berger, Maastricht University
- 9:55 a.m.** Item Calibration in Computerized Adaptive Testing Using Minimal Information Loss—◆ Steven Buyske, Rutgers, The State University of New Jersey
- 10:15 a.m.** Floor Discussion

## 92 MCC-208 C

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

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

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

Chair(s): *Joseph Hogan, Brown University*

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

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

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

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

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

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

## 93 MCC-208 D

### ☆ Bayesian Spatial and Functional Modeling—Topic Contributed

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

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

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

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

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

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

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

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

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

## 94 MCC-102 B

### Nonparametric Statistics in Biomedical Research—Topic Contributed

Section on Nonparametric Statistics, ENAR, Biometrics Section

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

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

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

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

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

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

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

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

## 95 MCC-205 A

### ☆ Recent Statistical Contributions to Genetics and Epidemiology—Topic Contributed

Biometrics Section, WNAR

Organizer(s): *Tian Zheng, Columbia University*

Chair(s): *Cavan Reilly, University of Minnesota*

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

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

- 9:15 a.m.** Nonparametric Estimation of Genotype-specific, Age-at-onset Distributions from Censored Kin-cohort Studies—◆ Yuanjia Wang, Columbia University
- 9:35 a.m.** Final Outcome of an Endemic Infection—◆ Regina Dolgoarshinnykh, Columbia University
- 9:55 a.m.** A Nonparametric Multipoint Screening Method for QTL Mapping—◆ Tian Zheng, Columbia University; Hui Wang, Columbia University; Shaw-Hwa Lo, Columbia University
- 10:05 a.m.** Floor Discussion

**96** **MCC-102 E**  
**Statistical Methods Research in the Medical Expenditure Survey—Topic Contributed Section on Survey Research Methods**

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

Chair(s): Leyla Mohadjer, Westat

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

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

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

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

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

Monday



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# GENERAL PROGRAM SCHEDULE

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

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

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

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

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## **97** **MCC-205 D**

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

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

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

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

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

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

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

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## **98** **MCC-205 B**

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

Chair(s): Thomas Nichols, University of Michigan

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

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

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

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

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

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

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

## **99** **MCC-208 B**

### \* ☆ **Biomedical Nonlinear Models—Contributed** **Biometrics Section, WNAAR**

Chair(s): Jeff Qin, Georgia State University

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

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

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

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

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

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

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

## 100

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

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

**8:35 a.m.** Estimating the Mixing Proportion in a Semiparametric Mixture Model from Censored Time-to-event Data—  
◆ Xi Zhang, Columbia University

**8:50 a.m.** Using Kaplan-Meier Method To Predict Clinical Response Rate by Baseline Drug Resistance—  
◆ Jen-Fue Maa, Bristol-Myers Squibb Company; Daniel Seekins, Bristol-Myers Squibb Company

**9:05 a.m.** A Censored Data Solution for Crossover Studies—  
◆ David Burt, Abbott Laboratories

**9:20 a.m.** Analysis of Time-to-event Data with Application to HIV Clinical Trials—◆ Qiming Liao, GlaxoSmithKline

**9:35 a.m.** On Asymptotic Normality of the Randomization-based Logrank Test—◆ Yanqiong Zhang, Merck & Co., Inc.; William Rosenberger, University of Maryland Baltimore County

**9:50 a.m.** Efficiencies and Challenges of Two-stage Randomization Designs—◆ Jeffrey Helderbrand, Genentech, Inc.

**10:05 a.m.** Hypothesis Testing for Current Leukemia-free Survival—◆ Leiyan Lu, Medical College of Wisconsin; John P. Klein, Medical College of Wisconsin

## MCC-200 I

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

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

## 102

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

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

Chair(s): Seongho Song, University of Connecticut

**8:35 a.m.** Bayesian Inference of Hepatotoxicity—◆ Qianqiu Li, The Ohio State University; Xiaotong Shen, University of Minnesota; Dennis Pearl, The Ohio State University

**8:50 a.m.** Bayesian Sensitivity Analyses of Confounded Treatment Effects—◆ Xuemei Wang, The University of Texas M. D. Anderson Cancer Center; Peter F. Thall, The University of Texas M. D. Anderson Cancer Center

**9:05 a.m.** Bayesian Hierarchical Model in Estimating Ordinal Data Nested in Categorical Data—◆ Xian Zhou, The University of Texas M. D. Anderson Cancer Center; Peter Mueller, The University of Texas M. D. Anderson Cancer Center; Benjamin Neby Bekele, The University of Texas M. D. Anderson Cancer Center

**9:20 a.m.** Hierarchical Bayesian Approach to Location Estimation of Seismic Events—◆ William G. Hanley, Lawrence Livermore National Laboratory; Gardar Johannesson, Lawrence Livermore National Laboratory; Stephen C. Myers, Lawrence Livermore National Laboratory

**9:35 a.m.** A Bayesian Hierarchical Modeling Approach to Glacier Dynamics—◆ Rajib Paul, The Ohio State University; Mark Berliner, The Ohio State University; Noel Cressie, The Ohio State University; Kenneth Jezek, The Ohio State University

**9:50 a.m.** Bayesian Inference on Multiresolutional State Space Model with a Climate Data Example—◆ Yongku Kim, The Ohio State University; Mark Berliner, The Ohio State University

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

## 103

### New Developments in Robust Estimation—Contributed IMS

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

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

## 101

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

Chair(s): Jeffrey Racine, McMaster University

**8:35 a.m.** Aspects of the Exact Finite Sample Distribution of the Bootstrap—◆ Lawrence Marsh, University of Notre Dame

**8:50 a.m.** Bayesian Model Averaging with Instrumental Variables: an Application to Aid and Growth—◆ Roberto Leon Gonzalez, University of Leicester; Daniel Montolio, Universitat de Barcelona; Paul Mosley, University of Sheffield

**9:05 a.m.** Robust- and Misspecification-resistant Multivariate Regression Models Hybridized with Genetic Algorithms and Information Complexity—◆ Yan Liu, University of Tennessee; Hamparsum Bozdogan, University of Tennessee

**9:20 a.m.** Numerical Approximations for Singular Stochastic Control Problems—◆ Kevin Ross, The The University of North Carolina at Chapel Hill

**9:35 a.m.** Sizes of Two Bootstrap-based Nonparametric Specification Tests for the Drift Function in Continuous Time Models—◆ Myung Suk Kim, Texas A&M University; Suojin Wang, Texas A&M University

## MCC-211 C

## MCC-211 B

Monday

# GENERAL PROGRAM SCHEDULE

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

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

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

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

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

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

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

## 104

## MCC-102 D

### \* Weighting Issues—Contributed

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

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

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

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

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

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

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

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

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

## 105

## MCC-103 C

### \* Questionnaire Cognitive Issues II—Contributed

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

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

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

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

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

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

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

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

## 106

## MCC-205 C

### \* Spatial Statistics and Disease Clustering—Contributed

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

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

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

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

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

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

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

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

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

## **107** **MCC-208 A** ☆ **Environmental Sampling, Standards, and Risk Analysis—Contributed**

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

*Chair(s): Philip Dixon, Iowa State University*

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

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

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

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

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

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

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

## **108** **MCC-102 C** ● **Modeling for Nonstandard Systems—Contributed** **Section on Statistical Computing**

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

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

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

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

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

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

## **109** **MCC-103 E** **Degradation Modeling and Crack Propagation—Contributed**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

JASA, Theory and Methods

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

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

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

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

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

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

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

Section on Nonparametric Statistics, Business and  
Economics Statistics Section

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

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

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

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

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

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

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

Organizer(s): Susan Holmes, Stanford University

Chair(s): Samuel Kou, Harvard University

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

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

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

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

Organizer(s): Florentina Bunea, Florida State University

Chair(s): Florentina Bunea, Florida State University

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

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

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

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

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

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

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

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

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

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

- 11:00 a.m.** **Striving for Data Quality: Pat Doyle's Legacy at the U.S. Census Bureau**—◆ Jeffrey Moore, U.S. Census Bureau; Chester Bowie, Government Foundation & Academic Research Market Strategies, Inc.

- 11:25 a.m.** **Potential Solutions to Meeting Data User Needs**—  
◆ Julia Lane, National Science Foundation

- 11:50 a.m.** Disc: Stephanie Shipp, National Institute of Standards and Technology

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

**116** **MCC-208 B**  
**Medallion Lecture 2—Invited**  
IMS

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

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

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

- 12:00 p.m.** Floor Discussion

**117** **MCC-103 C**  
**Statistical Phylogenetics—Invited**  
WNAR, ENAR, Biometrics Section

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

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

- 10:35 a.m.** **Prospects and Pitfalls of Whole-genome Phylogeny Based on DNA Sequences**—◆ Laura Salter Kubatko, The University of New Mexico; James Degnan, The University of New Mexico

- 11:00 a.m.** **Detection of Extensive Recombination in Whole-genome Alignments of *E. Coli***—◆ Bob Mau, University of Wisconsin, Madison

- 11:25 a.m.** **Applications of Distances between Phylogenetic Trees**—◆ Susan Holmes, Stanford University

- 11:50 a.m.** Disc: Cecile Ane, University of Wisconsin, Madison

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

**118** **MCC-208 C**  
**Bayesian Techniques in Functional Genomics—Invited**

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

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

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

- 10:35 a.m.** **Posterior Inference on the Stem Cell Population of the Human Colon through Analysis of Methylation Patterns**—◆ Simon Tavaré, University of Southern California; P. Nicolas, University of Southern California; D. Shibata, University of Southern California

- 11:05 a.m.** **Boltzman Weighted Ensembles of RNA Secondary Structures**—◆ Charles Lawrence, Brown University

- 11:35 a.m.** **Bayesian Haplotype Inference via the Dirichlet Process**—◆ Eric P. Xing, Carnegie Mellon University; Roded Sharan, ICSI, Berkeley

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

**119** **MCC-103 B**  
**Bayes and Empirical Bayes Approaches for Large-scale Simultaneous Hypothesis Testing—Invited**  
ENAR, Section on Bayesian Statistical Science, Business and Economics Statistics Section, WNAR, Biometrics Section

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

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

- 10:35 a.m.** **Incorporating Biological Information in Hierarchical Modeling of Many Genetic Disease Markers and Safety Data in Drug Studies**—◆ Donald A. Berry, The University of Texas M. D. Anderson Cancer Center

- 11:10 a.m.** **Local False-discovery Rates**—◆ Bradley Efron, Stanford University

- 11:45 a.m.** Disc: Chiara Sabatti, University of California, Los Angeles

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

**120** **MCC-102 C**  
**Importance of 'P-values' in the Drug Approval Process—Pros and Cons—Invited**  
Biopharmaceutical Section, Section on Statistical Education, WNAR

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

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

- 10:35 a.m.** **What Would Fisher or Neyman Say?**—◆ David Salsburg, Statistical Consultant

- 11:00 a.m.** **Assess the Strength of Statistical Evidence, Not the P-value**—◆ Jeffrey D. Blume, Brown University

- 11:25 a.m.** **Can We Do More Than P-values in Drug Evaluation?**—  
◆ Lee-Jen Wei, Harvard University

- 11:50 a.m.** Disc: Robert O'Neill, U.S. Food and Drug Administration

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

# GENERAL PROGRAM SCHEDULE

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

**121**

**MCC-200 H**

## ● Communicating Information to Students and Teachers—Invited

### Social Statistics Section

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

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

**10:35 a.m.** Evolution of the EIA Energy Kid's Page—◆ Robert H. Rutchik, U.S. Department of Energy; Howard Bradsher-Fredrick, Energy Information Administration; Colleen Blessing, Energy Information Administration; Herbert Miller, Energy Information Administration; Renee Miller, Energy Information Administration

**11:00 a.m.** Hennepin County Library: Online Services to Youth—◆ Marilyn Turner, Hennepin County Library; Margaret Canada, Hennepin County Library; Ann Melrose, Hennepin County Library

**11:25 a.m.** The American Statistical Association Guidelines for Instruction in Statistics Education (GAISE) for Pre K-12: What Does This Mean for Students and Teachers?—◆ Christine A. Franklin, University of Georgia

**11:50 a.m.** Disc: Richard Omanson, User Centric, Inc.

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

Invited Panels 10:30 a.m.–12:20 p.m.

**122**

**MCC-103 D**

## ● Statistics and the College Football Championship—Invited

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

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

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

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

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

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

**123**

**MCC-200 I**

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

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

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

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

**10:35 a.m.** A Hierarchical, Multivariate, Two-part Model for Profiling Providers' Effects on Health Care Charges—◆ John Robinson, Johns Hopkins University; Scott Zeger, Johns Hopkins University; Christopher Forrest, Johns Hopkins University

**10:55 a.m.** Do Antidepressants Cause Suicide in Children? A Bayesian Metaanalysis—◆ Eloise Kaizar, Carnegie Mellon University; Joel Greenhouse, Carnegie Mellon University; Howard Seltman, Carnegie Mellon University

**11:15 a.m.** A Comparison of Estimators of Population Slope under Informative Dropout—◆ Hai (Kevin) Lin, The University of Texas M. D. Anderson Cancer Center; Elizabeth Slate, Medical University of South Carolina

**11:35 a.m.** On the Utility of Stochastic Models of Chronic Obstructive Pulmonary Disease—◆ Rebecca Boehm, Medical University of South Carolina; Kristin Highland, Medical University of South Carolina; Kit Simpson, Medical University of South Carolina; Robert Woolson, Medical University of South Carolina

American Statistical Association

# MARKET PLACE

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

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

see page 21 for hours of operation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

# GENERAL PROGRAM SCHEDULE

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**131** **MCC-102 D**

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

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

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

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

**132** **MCC-201 AB**

● **Issues in Quantifying Measurement Error—Topic Contributed**

**Section on Survey Research Methods**

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

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

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

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

**133** **MCC-205 D**

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

**Section on Statistical Education**

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

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

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

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

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

**134** **MCC-102 E**

☆ **Nucleotides, Genes, and Chromosomes—Contributed Biometrics Section, WNAR**

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

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

# GENERAL PROGRAM SCHEDULE

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

**11:50 a.m.** Statistical Methods for the Identification of Microdeletions of Chromosome Segments—

♦ Yan Li, The University of Chicago

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

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

**IMS**

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

**10:35 a.m.** A Union-intersection Censored Data Test for the Equality of Exponential Distribution Location Parameters—

♦ Jeffrey Green, Ball State University; Roger Nelson, Ball State University

**10:50 a.m.** A Characterization of Multivariate Normal Distribution with Special Covariance Structure—♦ Dhanuja

Kasturiranta, Bowling Green State University; Truc T. Nguyen, Bowling Green State University; Arjun K. Gupta, Bowling Green State University

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

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

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

**11:50 a.m.** Data Integration Method for High-throughput Data—

♦ Joseph Beyene, University of Toronto; Pingzhao Hu, University of Toronto, Hospital for Sick Children; Celia C. M. Greenwood, University of Toronto, Hospital for Sick Children

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

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

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

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

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

**10:50 a.m.** Bayesian Analysis of High-throughput Data with Ordinal Outcomes To Identify Prostate Cancer Biomarkers—

♦ Deukwoo Kwon, Texas A&M University; Mahlet G. Tadesse,

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

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

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

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

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

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

## **137** **MCC-213 AB** **Bootstrapping and Simulation—Contributed**

**Section on Nonparametric Statistics**

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

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

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

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

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

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

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

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

**138** **MCC-102 A**

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

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

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

**139** **MCC-211 A**

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

Chair(s): *Wanli Min, IBM*

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

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

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

**140** **MCC-205 A**

● **Issues in Study Design—Contributed**  
**General Methodology, Biopharmaceutical Section, Section on Bayesian Statistical Science**

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

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

**141** **MCC-212 AB**

● **Time Series—Contributed**  
**General Methodology**

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

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

Monday



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# GENERAL PROGRAM SCHEDULE

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

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

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## Design of Experiments II—Contributed

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

Chair(s): Robert Easterling, Itinerant Professor

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

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## Algorithms and Software—Contributed

Section on Statistical Computing

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

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

**MCC-103 F**

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

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

Section on Statistics in Epidemiology, WNAR

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

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

**MCC-102 F**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

*Organizer(s): Ying Kuen Cheung, Columbia University*

*Chair(s): Ying Kuen Cheung, Columbia University*

**General**

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

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

## Health Policy, Public Health

- 03** Arkansas Act 1220 Evaluation: Multistage Stratified Surveys with PPS Sampling—◆ C. Heath Gauss, University of Arkansas for Medical Sciences; Zoran Bursac, University of Arkansas for Medical Sciences; Martha Phillips, University of Arkansas for Medical Sciences; LeaVonne Pulley, University of Arkansas for Medical Sciences; Delia West, University of Arkansas for Medical Sciences; James Raczynski, University of Arkansas for Medical Sciences
- 04** Evaluation of Smoothing Methods for Estimating Mortality Dynamics over Age and Time with Application to U.S. Mortality—◆ Kirill Andreev, Queen's University
- 05** Integration of Computed Patient Anatomic and Case Data with Clinical Insight: an Ontology for 'Case Type,' Combining Computed Statistics with Clinician-provided Text, and Diagnoses—Christopher Overton, Align Technology; ◆ Michael Zakharevich, Align Technology

## Sampling and Survey Methodology

- 06** The Construction of Confidence Intervals for Extreme Percentiles—◆ Margaret Carroll, National Center for Health Statistics
- 07** Sampling Excluding Units in Species Diversity Study—◆ Kyoungah See, Miami University; A. John Bailer, Miami University; Tom Crist, Miami University
- 08** An Empirical Comparison of Multivariate Sample Allocation Methods—Kimberly Henry, U.S. Internal Revenue Service; ◆ Yahia Ahmed, U.S. Internal Revenue Service
- 09** Use of a Web-based Sample Replacement Software Application for Data Collectors in the Field—◆ Andrey Vinokurov, ORC Macro International, Inc.; Daniel Geller, ORC Macro International, Inc.; Pedro J. Saavedra, ORC Macro International, Inc.; Tamara Martin, U.S. Department of State
- 10** Mode Effects in a Safety and Health Survey of Health Care Workers: Findings from a Pilot Test at a Regional Medical Center—◆ Karl Sieber, National Institute of Occupational Safety and Health; James M. Boiano, National Institute of Occupational Safety and Health; Gregory M. Piacitelli, National Institute of Occupational Safety and Health; James D. Catalano, Battelle Centers for Public Health Research and Evaluation; Nicholas J. Heyer, Battelle Centers for Public Health Research and Evaluation; Payn Betsy, Battelle Centers for Public Health Research and Evaluation

## Social and Behavioral Science

- 11** Estimating and Testing Parameters in the Presence of Measurement Error: a Comparison of Approaches—◆ Todd Bodner, Portland State University
- 12** A Measurement of Missouri School Board Member Training—◆ Angela Walmsley, St. Louis University; Carol Lupardus, St. Louis Community College
- 13** Clinical Ethics Consultation—◆ Terry Tomazic, St. Louis University; Emily Anderson, St. Louis University; Valerie Badro, St. Louis University; Barry Katz, St. Louis University

- 14** Transitioning the Equal Employment Opportunity (EEO) File from the Decennial Census to the American Community Survey (ACS)—◆ Katharine Earle, U.S. Census Bureau
- 15** A Multivariate Statistical Analysis of Crime Rate in U.S. Cities—◆ Ralph Gedeon, University of Florida; Kendall Williams, Howard University

## Sports, Art, Entertainment

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

## Teaching, Training, Consulting

- 17** Rapid-feedback Quizzing and Methods of Implementation: a Case Study in Classroom Research—◆ Dexter C. Whittinghill, Rowan University; John Chen, Rowan University; Jennifer Kadlowec, Rowan University
- 18** Assessment of Introductory Statistics and Statistics Programs—◆ Julia Norton, California State University, East Bay; Jean C. Ellis, California State University, East Bay; Jaimyoung Kwon, California State University, East Bay
- 19** Using Standard Statistical Software Packages To Make Statistical Inferences about a Linear Combination of Regression Parameters—◆ J. Burdeane Orris, Butler University; Bruce Bowerman, Miami University of Ohio
- 20** Educating the States: a Multivariate Statistical Analysis of Education—◆ Sara Blight, University of Arizona; Nick Imholte, Xavier University
- 21** A Biostatistics Workbook for Medical Students—◆ L. Jane Goldsmith, University of Louisville; Elizabeth S. Goldsmith
- 22** The Statistics Concept Inventory: a Tool for Measuring Learning in Introductory Statistics—◆ Kirk Allen, University of Oklahoma; Andrea Stone, University of Oklahoma; Maria Cohenour, University of Oklahoma; Teri Reed Rhoads, University of Oklahoma; Teri J. Murphy, University of Oklahoma; Robert Terry, University of Oklahoma

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Speaker Luncheon 12:30 p.m.–1:50 p.m.

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**MCC-206 AB**

## Statistics in Sports Section Speaker Luncheon (fee event)—Luncheons

### Section on Statistics in Sports

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

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

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

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

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

**ML01** Issues in the Use and Interpretation of Subgroup Analyses in Clinical Trials—◆ *Cristiana Gassmann-Mayer, Johnson & Johnson*

**ML02** Data Mining Clinical Trial Data: Dredging or Innovative Exploration?—◆ *Mani Lakshminarayanan, Pfizer, Inc.; Jose Alvir, Pfizer, Inc.*

**ML03** Sample Size Reestimation and Other Innovative Adaptive Designs in Clinical Trials—◆ *Jeff Maca, Novartis Pharmaceuticals*

**ML04** Data-intensive Strategies in Drug Discovery: Opportunities for Statisticians—◆ *Keith Soper, Merck & Co., Inc.*

**ML05** Statistical Issues Related to Development of Prevention Drugs—◆ *James T. Symanowski, Eli Lilly and Company*

**ML06** Last-observation-carried-forward: Primary, Secondary, or Unnecessary Analysis?—◆ *Bruce Binkowitz, Merck Research Laboratories*

**ML07** Metaanalyses: Past, Present, and Future—◆ *Charles Anello, U.S. Food and Drug Administration*

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

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

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

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

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

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

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

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

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

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

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

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

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

Organizer(s): *Thomas Loughin, Kansas State University*

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

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

Organizer(s): *Martha Gardner, GE Global Research*

**ML15** Successful Strategies for Screening DOEs—◆ *Shari Kraber, Stat-Ease, Inc.*

**ML16** Statistics in Nanotechnology—◆ *J. C. Lu, Georgia Institute of Technology*

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

Organizer(s): *Juergen Symanzik, Utah State University*

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

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

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

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

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

Organizer(s): *Lisa Sullivan, Boston University*

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

# GENERAL PROGRAM SCHEDULE

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

## 158 **MCC-Ballroom B**

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

Organizer(s): David R. Judkins, Westat

**ML20** The American Community Survey (ACS) Challenges for Replacing the Census Long Form—◆ Rajenda P. Singh, U.S. Census Bureau

**ML21** Sample Design Challenges in International Surveys—◆ Sheila A. Krawchuk, Westat

## 159 **MCC-Ballroom B**

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

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

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

## 160 **MCC-Ballroom B**

### Section on Teaching of Statistics in the Health Sciences Roundtable Luncheon (fee event)—Luncheons

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

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

## 161 **MCC-Ballroom B**

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

**ML24** The Statistical Preparation of Preservice Teachers—◆ John Gabrosek, Grand Valley State University

**ML25** Inquiry-based Learning in the Introductory Statistics Classroom—◆ Deborah Rumsey, The Ohio State University

**ML26** 'How-squared' to Implement Writing Assignments in a Statistics Classroom—◆ Amy Phelps, Duquesne University

## 162 **MCC-Ballroom B**

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

Organizer(s): Ingo Ruczinski, Johns Hopkins University

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

## 163 **MCC-Ballroom B**

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

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

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

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

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## 164 **MCC-200 ABC**

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

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

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

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

**2:05 p.m.** Exit Poll Bias in the 2004 U.S. General Election—◆ Warren Mitofsky, Mitofsky International

**2:25 p.m.** Ohio Election Analysis—◆ Mary Batchler, Ernst & Young LLP

**2:45 p.m.** Exit Polls in the Ukraine—◆ Anna Andreenkova, CESSI, Ltd.

**3:05 p.m.** Investigating Causes of within-Precinct Error in Exit Polls: Confounds and Controversies—Elizabeth Liddle, University Nottingham; ◆ Mark Lindeman, Bard College

**3:25 p.m.** Searching for Errors in Exit Polls: Interviewer-respondent Interactions—◆ Kathleen Frankovic, CBS News

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

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Invited Sessions 2:00 p.m.–3:50 p.m.

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## 165 **MCC-200 F**

### Medallion Lecture 3—Invited

#### IMS

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

Chair(s): Jonathan Taylor, Stanford University

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

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

## 166 **MCC-200 DE**

### \* Inference and Prediction under Kullback-Leibler Loss—Invited

#### IMS, Section on Bayesian Statistical Science

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

Chair(s): Xinyi Xu, University of Pennsylvania

**2:05 p.m.** Bayesian Prediction under Relative Entropy Regret—◆ Trevor J. Sweeting, University College London

**2:35 p.m.** Asymptotic Admissibility of Parametric Density Estimators—◆ John A. Hartigan, Yale University; Mihaela Aslan, Yale University

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

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

## 167 MCC-102 A

### ☆ The Pollution Blame Game: Quantifying the Impact and Composition of Pollution Sources—Invited

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

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

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

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

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

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

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

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

## 168 MCC-102 B

### \* Statistical Issues in High-throughput Chemistry—Invited

#### Section on Physical and Engineering Sciences

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

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

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

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

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

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

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

## 169 MCC-200 G

### Mapping Data—Invited

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

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

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

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

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

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

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

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

## 170 MCC-212 AB

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

#### SSC, Section on Survey Research Methods

Organizer(s): Lei Sun, University of Toronto

Chair(s): Lei Sun, University of Toronto

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

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

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

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

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

**171**

● **Streaming Graphics—Invited**

**Section on Statistical Graphics**

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

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

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

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

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

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

**MCC-211 D**

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

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

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

**172**

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

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

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

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

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

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

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

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

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

**MCC-205 C**

**174**

● ☆ **Sample Surveys in Unsettled Situations—Invited**  
**Section on Survey Research Methods, Social Statistics  
Section**

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

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

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

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

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

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

**173**

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

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

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

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

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

**MCC-102 D**

**175**

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

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

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

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

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

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

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

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

**MCC-103 C**

**MCC-102 E**

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

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

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

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## 176 MCC-211 B

### ★ ☆ **ICH-E5 Application: to Date and the Future—Topic Contributed**

#### Biopharmaceutical Section, WNAR

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

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

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

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

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

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

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

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

## 177 MCC-201 AB

### ★ **Business Consulting and Services Modeling—Topic Contributed**

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

Organizer(s): Yasuo Amemiya, IBM

Chair(s): Yasuo Amemiya, IBM

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

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

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

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

**3:25 p.m.** Discovery, Visualization, and Performance Analysis of Enterprise Workflow—◆ Ping Zhang, Avaya Labs Research; Patrick H. Tendick, Avaya Labs Research

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

## 178 MCC-202 AB

### ★ ☆ **Savage Award 2004 Winners—Topic Contributed Section on Bayesian Statistical Science**

Organizer(s): Merlise Clyde, Duke University

Chair(s): Merlise Clyde, Duke University

**2:05 p.m.** Bayesian Models for Regulatory Motif Discovery and Clustering—◆ Shane Jensen, University of Pennsylvania

**2:25 p.m.** Bayesian Inference for Matched Case-control Studies—◆ Samiran Sinha, Texas A&M University

**2:45 p.m.** Bayesian Methods in Bidding Processes—◆ Jesus Palomo, SAMS/Duke University

**3:05 p.m.** Decision Models for Data Disclosure Limitation Problems—◆ Trottni Mario, University of Alicante

**3:25 p.m.** Stationary Models via a Bayesian Approach—◆ Ramsés H. Mena, IIMAS-UNAM

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

## 179 MCC-205 A

### ★ **Statistical Literacy 2005—Topic Contributed**

#### Section on Statistical Education, Social Statistics Section

Organizer(s): Milo Schield, Augsburg College

Chair(s): Milo Schield, Augsburg College

**2:05 p.m.** Epidemiology as a Context for Teaching Confounding in Elementary Statistics—◆ Chris Olsen, Cedar Rapids Community Schools

**2:25 p.m.** Toys, Tales, and a Journalist's View of Statistics—◆ Lewis Cope, *Minneapolis Star & Tribune* (Retired)

**2:45 p.m.** What Can 'CSI' Teach Us about Statistical Literacy?—◆ Jane Miller, Rutgers, The State University of New Jersey

**3:05 p.m.** Statistical Literacy Online at Capella University—◆ Marc Isaacson, Augsburg College

**3:25 p.m.** A Grammar-parsing Program for Descriptions and Comparisons of Percentages and Rates—◆ Tom Burnham, Cognitive Consulting; Milo Schield, Augsburg College

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

# GENERAL PROGRAM SCHEDULE

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

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**MCC-102 C**

## ● ☆ **Quality Management in Statistical Organizations I—Topic Contributed**

Section on Quality and Productivity, Section on Survey Research Methods, Social Statistics Section

Organizer(s): John M. Bushery, U.S. Census Bureau

Chair(s): John M. Bushery, U.S. Census Bureau

- 2:05 p.m.** Quality Procedures in Statistical Sampling—◆ Wendy Rotz, Ernst & Young LLP; Mary Batcher, Ernst & Young LLP
- 2:25 p.m.** Quality and the Product Development Cycle—◆ Eugene Burns, Bureau of Transportation Statistics
- 2:45 p.m.** Quality Audits at Statistics Sweden—◆ GunLög Eiderbrant-Nilsson, Statistics Sweden
- 3:05 p.m.** Disc: Nancy Kirkendall, Energy Information Administration
- 3:25 p.m.** Disc: Cynthia Z. F. Clark, Office for National Statistics
- 3:45 p.m.** Floor Discussion

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**MCC-205 B**

## ● ☆ **Time Series: a Bayesian Gaze at the Past, Present, and Future—Topic Contributed**

Section on Bayesian Statistical Science

Organizer(s): Nalini Ravishanker, University of Connecticut

Chair(s): Nalini Ravishanker, University of Connecticut

- 2:05 p.m.** Adaptive Simulation Methods for Time-series Models—◆ Robert Kohn, University of New South Wales; Paolo Giordani, University of New South Wales
- 2:25 p.m.** Time-varying Covariances: a Cholesky Decomposition Approach—◆ Hedibert F. Lopes, The University of Chicago; Robert McCulloch, The University of Chicago; Ruey Tsay, The University of Chicago
- 2:45 p.m.** Bayesian Time Series Analyses of International Conflicts—◆ John Freeman, University of Minnesota
- 3:05 p.m.** Sequential Parameter Estimation in Stochastic Volatility Models with Jumps—◆ Jonathan Stroud, University of Pennsylvania; Michael Johannes, Columbia University; Nicholas Polson, The University of Chicago
- 3:25 p.m.** KFC: a Kalman Filtering Approach To Monitor Massive Contingency Tables—◆ Deepak Agarwal, AT&T Labs-Research; Colin Goodall, AT&T Labs-Research; William DuMouchel, Lincoln Technologies
- 3:45 p.m.** Floor Discussion

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**MCC-103 E**

## ● ☆ **Monitoring Data Quality in a Federal Statistical Agency: NCES—Topic Contributed**

Section on Government Statistics, Social Statistics Section

Organizer(s): Marilyn Seastrom, National Center for Education Statistics

Chair(s): Brian A. Harris-Kojetin, Office of Management and Budget

- 2:05 p.m.** Monitoring Data Quality in a Federal Statistical Agency: NCES—◆ Marilyn Seastrom, National Center for Education Statistics
- 2:25 p.m.** Monitoring Data Quality at a Federal Agency—◆ Susan Lapham, Education Statistics Services Institute
- 2:45 p.m.** Reports from NCES on the Use of Incentives in Data Collection and the Timeliness of Data Collection and Reporting—◆ Pia Peltola, Education Statistics Services Institute
- 3:05 p.m.** Monitoring Data Quality at a Federal Agency—◆ Deven Carlson, American Institutes for Research
- 3:25 p.m.** Quality Profiles: a Tool To Monitor the Quality of Survey Programs—◆ Sameena M. Salvucci, Mathematica Policy Research, Inc.; Nancy Clusen, Mathematica Policy Research, Inc.; Tiffany Waits, Mathematica Policy Research, Inc.; Marilyn Seastrom, National Center for Education Statistics
- 3:45 p.m.** Floor Discussion

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**MCC-205 D**

## ● ☆ **Statistical Advances in Human Brain Mapping—Topic Contributed**

Biometrics Section, WNAR

Organizer(s): Martina Pavlicova, Columbia University

Chair(s): Martina Pavlicova, Columbia University

- 2:05 p.m.** Mining Huge-p, Small-n Data and New Image Registration Procedures—◆ Xiaofeng Wang, Case Western Reserve University; Jiayang Sun, Case Western Reserve University; Kath Bogie, The Cleveland FES Center
- 2:25 p.m.** Magnitude and Phase Modeling for fMRI Brain Activation—◆ Daniel B. Rowe, Medical College of Wisconsin
- 2:45 p.m.** Block Kriging in SPECT/PET Brain Images: Defining Blocks—◆ Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas; Patrick Carmack, The University of Texas Southwestern Medical Center at Dallas; Richard Gunst, Southern Methodist University; William R. Schucany, Southern Methodist University; Qihua Lin, Southern Methodist University
- 3:05 p.m.** Making Group Inferences with Functional Magnetic Resonance Imaging Data Using Spatiotemporal Models—◆ Qihua Lin, Southern Methodist University;

Patrick Carmack, The University of Texas Southwestern Medical Center at Dallas; Richard Gunst, Southern Methodist University; William R. Schucany, Southern Methodist University; Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas

- 3:25 p.m.** Time-frequency Functional Linear Models—◆ Li Qin, Fred Hutchinson Cancer Research Center; Wensheng Guo, University of Pennsylvania; Brian Litt, University of Pennsylvania
- 3:45 a.m.** Floor Discussion

## 184 **MCC-209 AB** Multiple Analyses and Multiple Assays in Diagnostic Medicine—Topic Contributed

Section on Statistics in Epidemiology, Biopharmaceutical Section, WNAR

Organizer(s): Michael Lu, Edwards Lifesciences; Estelle Russek-Cohen, U.S. Food and Drug Administration

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

- 2:05 p.m.** Functional Sensitivity: Definition, Theory, and Evaluation Method—◆ Patrick Meyers, Abbott Laboratories; Suha Sari, Abbott Laboratories
- 2:25 p.m.** Multiple Assay Methods Comparison—◆ Abha Sharma, Roche
- 2:45 p.m.** Statistical Methods in Genetic Risk Assessment for Venous Thrombosis by a 25 Plex PCR Assay—  
◆ Shiahong Ran, Abbott Laboratories
- 3:05 p.m.** Microarray Gene Expression Using Resonance Light Scattering Nanoparticles—◆ Samir Lababidi, U.S. Food and Drug Administration; Daya G. Ranamukhaarachchi, U.S. Food and Drug Administration
- 3:25 p.m.** Disc: Arthur Devault, Roche Molecular Systems
- 3:45 p.m.** Floor Discussion

## 185 **MCC-103 B** \* Coverage Improvement Research for the Decennial Census—Topic Contributed

Section on Survey Research Methods, Social Statistics Section

Organizer(s): Danny R. Childers, U.S. Census Bureau

Chair(s): Dave Sheppard, U.S. Census Bureau

- 2:05 p.m.** Within Household Coverage Improvement in the 2004 National Census Test—◆ Kyra Linse, U.S. Census Bureau; Dave Sheppard, U.S. Census Bureau
- 2:25 p.m.** Operational Assessment of the 2004 Coverage Research Followup—Lisa Knight, U.S. Census Bureau; Jeff Behler, U.S. Census Bureau; ◆ Frank Vitrano, U.S. Census Bureau

- 2:45 p.m.** Results of Coverage Followup in the 2004 Census Test—◆ Elizabeth Krejsa, U.S. Census Bureau; Dave Sheppard, U.S. Census Bureau
- 3:05 p.m.** Design of the Census 2004 Coverage Research Followup Questionnaire—◆ Leann Karl, U.S. Census Bureau; Ashley Landreth, U.S. Census Bureau
- 3:25 p.m.** Unduplication of Persons and Housing Units in the 2004 Census Test—◆ Robin Pennington, U.S. Census Bureau
- 3:45 p.m.** Floor Discussion

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

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## 186 **MCC-103 D** Designing Products for the American Community Survey—Topic Contributed

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

Organizer(s): Patricia Becker, APB Associates/SEMCC

Chair(s): Edward Spar, COPAFS

- Panelists:** ◆ Preston J. Waite, U.S. Census Bureau  
◆ Patricia Becker, APB Associates/SEMCC  
◆ Ken Hodges, Claritas  
◆ Leonard Gaines, Empire State Development  
◆ Lisa Neidert, University of Michigan

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

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

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## 187 **MCC-208 B** Topics in Clustering and Heterogeneity—Contributed

Biometrics Section, WNAR

Chair(s): Ronald Gangnon, University of Wisconsin, Madison

- 2:05 p.m.** Kernel Principal Component Analysis and Dimension Reduction Using Kernel Regularization—◆ Fan Lu, University of Wisconsin, Madison; Grace Wahba, University of Wisconsin, Madison; Stephen Wright, University of Wisconsin, Madison; Sunduz Keles, University of Wisconsin, Madison
- 2:20 p.m.** Penalized and Weighted K-means—◆ George C. Tseng, University of Pittsburgh
- 2:35 p.m.** A Criterion To Find the Optimal Size in Tight Clustering—  
◆ Lung-An Li, Institute of Statistical Science, Academia Sinica; Feng-Chang Lin, University of Wisconsin, Madison; George C. Tseng, University of Pittsburgh

# GENERAL PROGRAM SCHEDULE

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- 2:50 p.m.** Variance Estimation for GEE Estimator—◆ Shenghai Zhang, Centre for Infectious Disease Prevention and Control
- 3:05 p.m.** Stratification on Baseline Measure: the Variance Effect—◆ Misook Park, Virginia Commonwealth University; Robert E. Johnson, Virginia Commonwealth University
- 3:20 p.m.** A Cost-effective Design for Longitudinal or Cluster Studies—◆ Yajun Mei, Fred Hutchinson Cancer Research Center; Sarah Holte, Fred Hutchinson Cancer Research Center
- 3:35 p.m.** Comparing Confidence Interval Methods Based on the Horvitz-Thompson Estimator under Adaptive Cluster Sampling—◆ Timothy Perez, Monsanto; Jeffrey S. Pontius, Kansas State University

## **188** **MCC-208 A** **Detecting Differential Gene Expression—Contributed Biometrics Section, WNAR**

*Chair(s): Charalampos Papachristou, The Ohio State University*

- 2:05 p.m.** Statistically Designing Microarray Experiments and Analyzing Gene Expression Data—◆ Jane Chang, Bowling Green State University; Jason Hsu, The Ohio State University; Tao Wang, The Ohio State University

- 2:20 p.m.** Using Weighted Permutation Scores To Detect Differential Gene Expression with Microarray Data—◆ Xu Guo, Affymetrix, Inc.; Wei Pan, University of Minnesota
- 2:35 p.m.** A New Efficient Statistical Method for Detecting Differentially Expressed Genes—◆ Sunil Mathur, The University of Mississippi
- 2:50 p.m.** Power and Type I Error in a Global Test of Differential Genetic Expression—◆ Gary Gadbury, University of Missouri, Rolla; Wanrong Yin, University of Missouri, Rolla; V. A. Samaranayake, University of Missouri, Rolla
- 3:05 p.m.** Use of Hadamard Matrices in Identifying Differentially Expressed Genes—◆ Yu Ding, Temple University; Damaraju Raghavarao, Temple University
- 3:20 p.m.** Sample Size Calculation for Multiple Testing in Microarray Data Analysis—◆ Heejung Bang, Cornell University; Sin-Ho Jung, Duke University; S. Stanley Young, National Institute of Statistical Sciences
- 3:35 p.m.** Probabilities of Spurious Connections in Gene Networks: Application to Expression Time Series—◆ David Bickel, Pioneer Hi-Bred International

## *Longtime Member Reception*

by invitation only

**Monday, August 8, 6:30 p.m. to 7:30 p.m.**

If you joined the ASA 35 or more years ago, the American Statistical Association would like to thank you for your longtime support.

Please join us for a reception in your honor.

*Sponsored by the ASA Membership Committee.*

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**MCC-208 D**

● ☆ **Survival Analysis and Risk Assessment—Contributed Biometrics Section, Biopharmaceutical Section, WNAR**

Chair(s): Alex Tsodikov, University of California, Davis

- 2:05 p.m.** Estimating and Testing Random Coefficients in a Proportional Hazard Frailty Model—◆ Shibao Feng, Georgetown University Medical Center; Robert A. Wolfe, University of Michigan
- 2:20 p.m.** Marginal Analysis of Clustered Survival Data When Cluster Size Is Informative—◆ Xiuyu Cong, Rice University; Guosheng Yin, The University of Texas M. D. Anderson Cancer Center; Yu Shen, The University of Texas M. D. Anderson Cancer Center
- 2:35 p.m.** Estimation of Center Effects in Survival Analysis—◆ Douglas E. Schaebel, University of Michigan
- 2:50 p.m.** A Self-consistent Estimator in the Competing Risk Model with One Arm Subject to Interval Censoring—◆ Xiaodong Luo, Columbia University; Wei-Yann Tsai, Columbia University; Louise Kuhn, Columbia University
- 3:05 p.m.** A Novel Approach to Testing Equality of Survival Distributions When the Group Memberships Are Censored—◆ Dipankar Bandyopadhyay, University of Georgia; Somnath Datta, University of Georgia
- 3:20 p.m.** Multiplicity-adjusted Inferences in Risk Assessment: Benchmark Analysis with Quantal Response Data—◆ Daniela Nitcheva, South Carolina Cancer Center; Walter W. Piegorsch, University of South Carolina; Webster West, University of South Carolina; Ralph Kodell, National Center for Toxicological Research
- 3:35 p.m.** Confidence Regions for Jointly Measuring Benefit and Risk—◆ Michele L. Shaffer, Pennsylvania State College of Medicine; Kristi L. Watterberg, The University of New Mexico

**190**

**MCC-200 I**

● **Coarsened, Mismeasured, or Missing Data—Contributed General Methodology, Social Statistics Section, Section on Survey Research Methods, ENAR, Section on Statistics in Epidemiology, Section on Statistical Education, Biometrics Section**

Chair(s): Dawei Xie, University of Pennsylvania

- 2:05 p.m.** Parameter Estimation in the Presence of Coarsened Data—◆ Sergey S. Tarima, University of Kentucky; Richard Kryscio, University of Kentucky; Yuriy Dmitriev, Tomsk State University
- 2:20 p.m.** Extension of Penalized Spline Propensity Prediction Method—◆ Guangyu Zhang, University of Michigan; Roderick J. Little, University of Michigan

- 2:35 p.m.** Robust Model-based Analysis of General Pattern Missing Data—◆ Hyonggin An, The University of Iowa; Roderick J. Little, University of Michigan
- 2:50 p.m.** Estimation of Missing Values Using Multivariate Normal Copula—◆ Rahul Parsa, Drake University; Alain Desgagne, Drake University
- 3:05 p.m.** Partial Linear Logistic Model with Measurement Error Using Sufficiency Scores—◆ Lian Liu, Texas A&M University
- 3:20 p.m.** Model Misspecification and Goodness-of-fit in Latent Variable and Structural Equations Models—◆ Brisa N. Sanchez, Harvard School of Public Health; Louise Ryan, Harvard University
- 3:35 p.m.** Full Matching with Propensity Scores—◆ Ben B. Hansen, University of Michigan

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**MCC-200 J**

● **Statistical Applications—Contributed General Methodology**

Chair(s): Minge Xie, Rutgers, The State University of New Jersey

- 2:05 p.m.** Effect of Spatial Scale on Modeling and Predicting Mean Cavity Tree Density—◆ Stephen S. Lee, University of Idaho; Zhaofei Fan, University of Missouri, Columbia; Stephen Shifley, USDA Forest Service
- 2:20 p.m.** Statistical Methods for Evaluating Clinical Teaching—◆ Jay Mandrekar, Mayo Clinic; Thomas J. Beckman, Mayo Clinic
- 2:35 p.m.** The Role of Viral Load Measures in the Cost-effectiveness Analysis of ART—◆ Martha Lee, Georgetown University; Juwon Song, The University of Texas Health Science Center at Houston
- 2:50 p.m.** A Comparison Study of Models for the Human Sex Ratio—◆ Sibabrata Banerjee, New Jersey Institute of Technology; Wonsuk Yoo, New Jersey Institute of Technology
- 3:05 p.m.** Estimating the Effect of a Disease Outbreak: an Application of Generalized Additive Models—◆ Garrick L. Wallstrom, University of Pittsburgh; William R. Hogan, University of Pittsburgh; Michael M. Wagner, University of Pittsburgh
- 3:20 p.m.** Predicting Session Attendance at the 2005 JSM—◆ Ye Zhong, University of Pennsylvania; Michael R. Elliott, University of Pennsylvania; John Kolassa, Rutgers, The State University of New Jersey; Daniel Heitjan, University of Pennsylvania
- 3:35 p.m.** Floor Discussion

Monday

# GENERAL PROGRAM SCHEDULE

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

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● **Issues in Clinical Trials—Contributed**  
**WNAR, Biopharmaceutical Section**

Chair(s): *Jing Zhao, Merck & Co., Inc.*

- 2:05 p.m.** The Construction of Composite Scores in Analgesia Studies—◆ David Bristol, Purdue Pharma LP; Genming Shi, Schering-Plough
- 2:20 p.m.** Analysis of Repeated Measures Analgesic Studies—◆ Guoyong Jiang, Cephalon, Inc.; Lilliam Kingsbury, Cephalon, Inc.
- 2:35 p.m.** Propensity Score Comparison of Antibiotic Therapy from Inpatient Data—◆ Michael A. O'Connell, Waratah Corp.
- 2:50 p.m.** Simulation Comparison of SAS Proc Multitest Permutation Adjustment Option for the Analysis of Multiple Measurements in the Two-period Crossover Design—◆ Mark Burgert, GlaxoSmithKline
- 3:05 p.m.** Robust Estimate of Confidence Interval of Treatment Effect—◆ Kao-Tai Tsai, Aventis Pharmaceuticals
- 3:20 p.m.** Bootstrap Confidence Intervals for Probability of Better Outcome—◆ Haitao Gao, Eli Lilly and Company
- 3:35 p.m.** Issues in Mega Clinical Trials—◆ Lu Cui, Aventis Pharmaceuticals

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● **Classification and Genomics—Contributed**  
**Section on Nonparametric Statistics, ENAR, WNAR, Biometrics Section**

Chair(s): *Hui Xie, Boston University*

- 2:05 p.m.** Adaptive Control and Significance Threshold: Extension of False Discovery Rate Control—◆ Cheng Cheng, St. Jude Children's Research Hospital; Stanley Pounds, St. Jude Children's Research Hospital
- 2:20 p.m.** Choice of Neighbor Order in Nearest-neighbor Classification and a Comparison with Bagged Nearest-neighbor Methods—◆ Richard Samworth, Centre for Mathematical Sciences
- 2:35 p.m.** Multicategory Psi-learning—◆ Yufeng Liu, The University of North Carolina at Chapel Hill
- 2:50 p.m.** Determining the Copy Number States from Array CGH Data—◆ E. Venkatraman, Memorial Sloan-Kettering Cancer Center; Adam Olshen, Memorial Sloan-Kettering Cancer Center
- 3:05 p.m.** Stochastic Linear Hypotheses for Nonparametric Inference of High-dimensional Data—◆ Jeanne Kowalski, Johns Hopkins University

**MCC-211 A**

- 3:20 p.m.** Discrimination and Clustering Based on Nonparametric Hypothesis Testing—◆ George von Borries, Kansas State University; Haiyan Wang, Kansas State University

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

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● **Multilevel Modeling—Contributed**  
**Section on Health Policy Statistics, Section on Bayesian Statistical Science, Social Statistics Section, WNAR**

Chair(s): *James O'Malley, Harvard Medical School*

- 2:05 p.m.** A Hierarchical Model for Multiple Binary Process Measures—◆ Robert B. Gerzoff, U.S. Centers for Disease Control and Prevention; Theodore J. Thompson, U.S. Centers for Disease Control and Prevention
- 2:20 p.m.** A Bayesian Logistic-mixture of Normal Distributions Hierarchical Model for Hospital Mortality—◆ Peter Austin, Institute for Clinical Evaluative Sciences
- 2:35 p.m.** GEE Diagnostics for Marginal Association Models—◆ John S. Preisser, The University of North Carolina at Chapel Hill
- 2:50 p.m.** Repeated Events Survival Models: the Conditional Frailty Model—◆ Janet Box-Steffensmeier, The Ohio State University; Suzanna DeBoef, The Pennsylvania State University
- 3:05 p.m.** Modeling Onset and Recovery of Posttraumatic Stress Disorder for Longitudinal Data with Dropouts—◆ Haekyung Jeon-Slaughter, University of Oklahoma Health Sciences Center; Carol S. North, Washington University School of Medicine; Betty Pfefferbaum, University of Oklahoma Health Sciences Center
- 3:20 p.m.** Different from the Start: Profiling Minnesota Kindergarten Students in Six Kindergarten Program Types—◆ Theresa J. Gromala, University of Minnesota
- 3:35 p.m.** Floor Discussion

**MCC-102 F**

**195**

● **Inference, Applied Probability, and Stochastic Models—Contributed**  
**IMS, Section on Statistical Education**

Chair(s): *Michael Fugate, Los Alamos National Laboratory*

- 2:05 p.m.** A Comparison of Automated Investment Strategies—◆ Alexander White, American University; Fotios Kokkotos, American University
- 2:20 p.m.** The Lifetime of a Random Set—◆ Peter Kiessler, Clemson University
- 2:35 p.m.** Method of Gambling Teams and Waiting Times for Patterns—◆ Vladimir Pozdnyakov, University of Connecticut; Joseph Glaz, University of Connecticut; Martin Kuldorff,

**MCC-200 H**

Harvard Medical School/Harvard Pilgrim Hospital; Michael Steele, University of Pennsylvania

- 2:50 p.m.** Occupation Times for a Class of Nonstationary Markov Chains—◆ Zachariah Dietz, Tulane University; Sunder Sethuraman, Iowa State University
- 3:05 p.m.** Two Computational Algorithms with Applications in Order Statistics and Nonparametrics—◆ Jesse Frey, The Ohio State University
- 3:20 p.m.** Fiducial Generalized Confidence Intervals—◆ Jan Hannig, Colorado State University
- 3:35 p.m.** Optimal Controls for Stochastic Networks in Heavy Traffic—◆ Arka Ghosh, The University of North Carolina at Chapel Hill

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## MCC-103 F

### ● Statistics in the Public Arena: Politics, the Media, and Public Policy—Contributed Social Statistics Section

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

- 2:05 p.m.** Could Kerry Have Won? Optimal Political Platform Design: a Special Case of the Share-of-choices Problem—◆ James J. Cochran, Louisiana Tech University; Jeffrey D. Camm, Dartmouth University; David J. Curry, University of Cincinnati; Jon Pinnell, MarketVision Research; Rajesh Radhakrishnan, Transfreight LLC
- 2:20 p.m.** Mediaphysics: Statistical Physics of Media Processes—◆ Dmitri Kuznetsov, Media Planning Group; Igor Mandel, Media Planning Group
- 2:35 p.m.** Modeling Change in Municipal Fiscal Policy Using Mayoral Expenditure Data—◆ Lori Thombs, University of Missouri, Columbia; Charles Sampson, University of Missouri, Columbia
- 2:50 p.m.** The Effect of Welfare Reform on Low-income Single Mother's Use of Income Packaging: Paid Work, Program Participation, and Network Support—◆ Katherine Walker, U.S. Census Bureau
- 3:05 p.m.** Hierarchical Models for a Time Series on Marijuana Abuse among Hospital Emergency Room Admissions—◆ Li Zhu, Texas A&M University; Dennis Gorman, Texas A&M University; Scott Horel, Texas A&M University
- 3:20 p.m.** School Accountability via Hierarchical Linear Models—◆ Stephen Ponisciak, Consortium on Chicago School Research; Anthony S. Bryk, Stanford University; Stephen Raudenbush, University of Michigan
- 3:35 p.m.** Floor Discussion

## 197

## MCC-103 A

### ● Questionnaires and Cognitive Issues I—Contributed Section on Survey Research Methods, Social Statistics Section

Chair(s): Kara Norman, Energy Information Administration

- 2:05 p.m.** Modeling Context Effects in the National Survey on Drug Use and Health (NSDUH)—◆ Kevin Wang, RTI International; Rodney Baxter, RTI International; Dicy Painter, Substance Abuse and Mental Health Services Administration
- 2:20 p.m.** An Overview of the Respondent-generated Intervals (RGI) Approach to Sample Surveys—S. James Press, University of California, Riverside; ◆ Judith Tanur, SUNY, Stony Brook
- 2:35 p.m.** Conceptual vs. Visual Midpoints of Response Scales—◆ Mirta Galesic, Joint Program in Survey Methodology; Roger Tourangeau, Joint Program in Survey Methodology; Mick Couper, University of Michigan; Fred Conrad, Institute for Social Research
- 2:50 p.m.** Negatively Worded Questions Cause Respondent Confusion—◆ Robert Colosi, U.S. Census Bureau
- 3:05 p.m.** When More Is Less: a Study on the Effects of Providing Definitions to Everyday Terms on Data Quality—◆ Ting Yan, University of Maryland
- 3:20 p.m.** Using Professionally Designed Questionnaires: Do They Collect Better Data?—◆ Kathleen Ott, National Agricultural Statistics Service; Chadd Crouse, National Agricultural Statistics Service
- 3:35 p.m.** Floor Discussion

## 198

## MCC-210 AB

### Missing Data, Imputation, and Measurement Error Adjustment—Contributed

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

Chair(s): Robert Lyles, Emory University

- 2:05 p.m.** Associations of LDL Cholesterol in the Presence of Lipid-lowering Medications: an Imputation Approach—◆ Robyn McClelland, University of Washington; Richard A. Kronmal, University of Washington
- 2:20 p.m.** Analysis of Missing Covariate Data in Individually-matched Case-control Studies—◆ Mulugeta Gebregziabher, University of Southern California; Bryan Langholz, University of Southern California
- 2:35 p.m.** To Impute or Weight: Handling Missing Data in Complex Epidemiologic Survey—◆ Hoang T. Nguyen, The University of Texas Medical Branch

- 2:50 p.m.** Utilizing Race Data in an Active Public Health Surveillance System—◆ Elizabeth Zell, U.S. Centers for Disease Control and Prevention
- 3:05 p.m.** Regression with Error in Both Variables: Adjustment via Nonlinear Transformation of Replicates—◆ Peter Holck, University of Hawaii; John Grove, University of Hawaii, Manoa
- 3:20 p.m.** Modeling Association between Menstrual Length Characteristics and Reproductive Outcomes—  
◆ Amita K. Manatunga, Emory University; Robert Lyles, Emory University; Ying Guo, Emory University; Chanley Small, Emory University; Michele Marcus, Emory University
- 3:35 p.m.** Measurement Error Correction for Nutritional Exposures with Correlated Measurement Error: Use of the Method of Triads in a Longitudinal Setting—◆ Bernard Rosner, Harvard Medical School

## 199

### Multivariate Methods—Contributed Section on Statistical Computing

Chair(s): Jing Wang, Louisiana State University

- 2:05 p.m.** Finding Effective Points by Basis Representation Methodology—◆ Ray-Bing Chen, National University of Kaohsiung; Weichung Wang, National University of Kaohsiung; Fuhung Tsai, National University of Kaohsiung
- 2:20 p.m.** A Fast Kernel Density Estimation Algorithm for Independent Component Analysis—◆ Aiyu Chen, Bell Labs, Lucent Technologies; Peter J. Bickel, University of California, Berkeley
- 2:35 p.m.** Extreme Multidimensional Scaling—◆ Michael W. Trosset, College of William & Mary; Patrick J. F. Groenen, Erasmus University Rotterdam
- 2:50 p.m.** Image Reconstruction: an Information-theoretic Approach—◆ Amos Golan, American University; Avinash Bhati, The Urban Institute; Bahattin Buyuksahin, World Bank
- 3:05 p.m.** Componentwise Iterative Optimization for Large Data—◆ Yachen Lin, Certegy
- 3:20 p.m.** New Approaches for Finding the Minimum Volume Ellipsoid—◆ J. Brian Gray, The University of Alabama; Eric B. Howington, Coastal Carolina University
- 3:35 p.m.** Enhanced Probability Plots for Testing for Multivariate Normality—◆ Jeff Szychowski, The University of Alabama; Michael Conerly, The University of Alabama; Bruce Barrett, The University of Alabama

## MCC-211 C

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

## 200

### MCC-Level Two Lobby B Contributed Poster Session 3—Contributed

**Business and Economics Statistics Section, Biometrics Section, Biopharmaceutical Section, ENAR, Section on Statistics in Epidemiology, Section on Statistics and the Environment, General Methodology**

Organizer(s): Ying Kuen Cheung, Columbia University

Chair(s): Ying Kuen Cheung, Columbia University

### Biometrics, Biostatistics, Epidemiology

- 01** Group Testing Model Estimation and Inference—  
◆ Christopher R. Bilder, University of Nebraska
- 02** Latent Class Models for Medical Studies with Replicate Observations: Alternative Latent Structures for Observer Agreement and Diagnostic Accuracy—◆ Andrew Baughman, U.S. Centers for Disease Control and Prevention; Michael Haber, Emory University; Huiman X. Barnhart, Duke University
- 03** Modeling Reporting Delays and Corrections in Cancer Registry Data—◆ Limin Clegg, National Cancer Institute; Eric Feuer, National Cancer Institute; Douglas Midthune, National Cancer Institute; Michael Fay, National Institutes of Health; Benjamin Hankey, National Cancer Institute; Brenda Edwards, National Cancer Institute
- 04** Does It Fit? Comparing Different Measures of Model Adequacy in Logistic Regression—◆ Leann Myers, Tulane University; Hui-yi Lin, Louisiana State University
- 05** Two-part Models for Longitudinal Data: Comparing GEE and Random-effects Approaches—Leann Myers, Tulane University; ◆ Yeonjoo Yi, Tulane University
- 06** Nonparametric Tests for a Common Risk Factor—◆ Fanesca Young, Columbia University
- 07** The Summary Density: a Graphical Tool for Metaanalytic Diagnostics—◆ David Svendsgaard, National Center & Caucus on Black Aged, Inc.
- 08** The Distribution of the Product of Correlated P-values and Its Application to Sequence Homology Searches—◆ Yan Xie, University of Kentucky; Richard Kryscio, University of Kentucky

### Business, Financial, and Marketing Statistics

- 09** Outliers and Time Series Data Mining—Lon-Mu Liu, University of Illinois, Chicago; ◆ William J. Lattyak, Scientific Computing Associates Corp.; John L. Harris, Progress Energy, Inc.

### Clinical Trials, Drug Discovery

- 10** A Randomization Design Software for Clinical Trial—  
◆ Chunshen Pan, Biovail Contract Research; Juan He, Biovail Contract Research; Corinne Campanella, Biovail Contract Research; Tat Chan, Biovail Corporation

- 11** Improved Methods for Establishing Noninferiority in Clinical Trials—◆ Farid Kianifard, Novartis Pharmaceuticals; Michael Chen, Novartis Pharmaceuticals; Sunil K. Dhar, New Jersey Institute of Technology
- 12** BANOVA for Repeated Measurements of Binary Data: Exact Inference for Parallel Group Design—◆ Dar Shong Hwang, B.R.S.I.; James S. Lee, Sankyo Pharma Development
- 13** Noninferiority Hypothesis with Binary Endpoints—◆ Tie-Hua Ng, U.S. Food and Drug Administration

**Environmetrics, Ecology, Agriculture, Wildlife Management**

- 14** Model-based Tests for Evaluation of Water Quality—  
◆ Zhengrong Li, Virginia Polytechnic Institute and State University; Eric P. Smith, Virginia Polytechnic Institute and State University
- 15** Nonlinear Stochastic Modeling of Aphid Population Growth—  
◆ James Matis, Texas A&M University; Thomas R. Kiffe, Texas A&M University; Tim I. Matis, New Mexico State University
- 16** Expedient Methods in Environmental Indexing—◆ Kobi Abayomi, Columbia University
- 17** On Transformations of Count Data for Tests of Interaction in Factorial and Split-plot Experiments—◆ Mark Payton, Oklahoma State University; Scott J. Richter, University of North Carolina, Greensboro

**Neuroscience, Brain Imaging**

- 18** Bedside Analysis of Cerebral Autoregulation in Very-low-birth weight Infants—◆ Keith Williams, University of Arkansas for Medical Sciences; C. Heath Gauss, University of Arkansas for Medical Sciences; Jeff Kaiser, University of Arkansas for Medical Sciences

**Spatial Statistics, Time Series, Spatio-temporal Modeling**

- 19** Compact Output for Quickly Analyzing Seasonal Adjustment Diagnostics—◆ Thomas Evans, Bureau of Labor Statistics
- 20** Space-time Models on Spheres and Their Application to Total Column Ozone Levels—◆ Mikyoung Jun, The University of Chicago; Michael Stein, The University of Chicago

Invited Sessions 4:00 p.m.–5:50 p.m.

**201 MCC-Ballroom A President's Invited Address—Invited**

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

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

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

**4:05 p.m.** A Bayes/Frequentist Roadmap—◆ Roderick J. Little, University of Michigan

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

Invited Sessions 8:00 p.m.–9:15 p.m.

**202 MCC-200 ABC IMS Presidential Address and Awards—Invited IMS**

*Organizer(s): Terence P. Speed, University of California, Berkeley*

*Chair(s): Terence P. Speed, University of California, Berkeley*

**8:05 p.m.** The Poisson Paradigm—◆ Louis H. Y. Chen, National University of Singapore

**9:00 p.m.** Floor Discussion



*American Statistical Association's*  
**STUDENT MIXER**

**Monday, August 8**

6:00 p.m.–7:00 p.m.

Hilton-Conrad A Room

**Sponsored by:** Novartis Pharmaceuticals, IBM T. J. Watson Research Center, and The ASA Membership and Recruitment Committee

Monday



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## TUESDAY, AUGUST 9

### Tours

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

### Committee/Business Meetings & Other Activities

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Tuesday



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

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

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

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

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

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

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

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

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

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



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**Tuesday**

## Continuing Education (Fee Events)

CE\_21C MCC-L100 I

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

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

CE\_22C MCC-L100 F

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

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

CE\_23C MCC-L100 G

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

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

CE\_24C MCC-L100 A

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

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

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CE\_25C MCC-L100 C

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

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

CE\_26C MCC-L100 E

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

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

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

**203** **MCC-200 ABC**

**Introductory Overview Lecture on Data Confidentiality**

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

*Organizer(s): Jerome Reiter, Duke University*

*Chair(s): Jerome Reiter, Duke University*

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

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

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

Invited Sessions 8:30 a.m.–10:20 a.m.

**204** **MCC-211 B**

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

*Organizer(s): Andrew Gelman, Columbia University*

*Chair(s): Tian Zheng, Columbia University*

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

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

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

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

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

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

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

**IMS, Section on Nonparametric Statistics**

*Organizer(s): Jon Wellner, University of Washington*

*Chair(s): Jon Wellner, University of Washington*

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

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

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

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

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

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

*Organizer(s): Wendy Lou, University of Toronto*

*Chair(s): Wendy Lou, University of Toronto*

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

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

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

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

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

## **207** **MCC-200 DE**

● **JBES Invited Session—Invited**

**Journal of Business and Economic Statistics (JBES)**

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

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

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

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

## **208** **MCC-211 C** **● The Federal Committee on Statistical Methodology (FCSM): Responding to the Needs of the Federal Statistical Community, 1975 to Present—Invited**

**Section on Government Statistics, Social Statistics Section**

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

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

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

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

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

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

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

## **209** **MCC-103 E** **● ☆ Data and the Digital Arts—Invited**

**Section on Statistical Graphics**

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

*Chair(s): Dianne Cook, Iowa State University*

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

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

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

**10:05 a.m.** Floor Discussion

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## 210

## MCC-200 G

### ☆ Statistical Issues and Methodologies for the New Biomolecular Technology Age—Invited Biopharmaceutical Section, WNAR

Organizer(s): Amit Bhattacharyya, GlaxoSmithKline

Chair(s): Raymond L. Lam, Centacor

- 8:35 a.m.** Dimensionality Reduction and Bias in the Estimation of Misclassification Rates—◆ Doris Damian, BG Medicine, Inc.; Amir Handzel, BG Medicine, Inc.; Raji Balasubramanian, BG Medicine, Inc.
- 8:55 a.m.** Statistical Design and Analysis in Systems Biology—◆ Lei Zhu, GlaxoSmithKline; Raymond L. Lam, Centacor; Amit Bhattacharyya, GlaxoSmithKline; Kwan R. Lee, GlaxoSmithKline
- 9:15 a.m.** Statistical Mining of Biomarkers: Applications in the Preclinical and Clinical Environment—◆ Peter Grass, Novartis Pharmaceuticals
- 9:35 a.m.** Phenotype Characterization Using Systems Biology—◆ Matej Oresic, VTT Biotechnology
- 9:55 a.m.** Joint Optimization of Continuous and Discrete Parameters and an Application to Biological Classification Without Selection Bias—◆ James A. Garrett, Becton Dickinson
- 10:15 a.m.** Floor Discussion

## 211

## MCC-208 D

### ☆ Applications of Mixture Models—Invited

#### IMS, Section on Bayesian Statistical Science, Section on Statistical Graphics

Organizer(s): Robert Kohn, University of New South Wales

Chair(s): Robert Kohn, University of New South Wales

- 8:35 a.m.** A New Class of Conjugate Priors for Decomposable Graphical Gaussian Models—◆ Helene M. Massam, York University; Gerald Letac, Universite Paul Sabatier
- 9:00 a.m.** Methods for Constructing Priors for Bayesian Covariance Matrix Estimation—◆ Christopher K. Carter, CSIRO
- 9:25 a.m.** Variable Selection and Model Averaging in Heteroscedastic and Overdispersed Generalized Linear Models—◆ Remy Cottet, University of New South Wales; Robert Kohn, University of New South Wales; David Nott, University of New South Wales
- 9:50 a.m.** Spatially Adaptive Nonparametric Binary Regression—◆ Sally A. Wood, Australian Graduate School of Management; Robert Kohn, University of New South Wales; Martin Tanner, Northwestern University; Wenxin Jiang, Northwestern University
- 10:15 a.m.** Floor Discussion

## 212

## MCC-103 A

### Service Learning in Undergraduate and Graduate Statistics Education—Invited Section on Statistical Education

Organizer(s): Thomas H. Short, Indiana University of Pennsylvania

Chair(s): Thomas H. Short, Indiana University of Pennsylvania

- 8:35 a.m.** Service Learning through a Student-run Consulting Program—Nilupa S. Gunaratna, Purdue University; ◆ Craig A. Johnson, Brigham Young University, Idaho; John R. Stevens, Purdue University
- 9:00 a.m.** Community Service Learning in Statistics: Course Design and Assessment—◆ Debra L. Hydorn, University of Mary Washington
- 9:25 a.m.** Service Learning with Undergraduates—◆ Brian Jersky, Sonoma State University
- 9:50 a.m.** Disc: K. B. Boomer, The Pennsylvania State University
- 10:15 a.m.** Floor Discussion

## 213

## MCC-200 J

### ● Topics in the Analysis of Longitudinal Data—Invited WNAR, Section on Nonparametric Statistics, Social Statistics Section, Section on Survey Research Methods, Section on Statistics in Epidemiology, Biopharmaceutical Section, Biometrics Section

Organizer(s): Michael Daniels, University of Florida

Chair(s): Jason Roy, University of Rochester

- 8:35 a.m.** Marginalized Models for Multivariate Longitudinal Binary Data—◆ Michael Daniels, University of Florida
- 9:05 a.m.** Informative Priors, Sensitivity Analysis, and the Role of Bayesian Inference for Handling Dropout—◆ Joseph Hogan, Brown University; Joo Yeon Lee, Brown University
- 9:35 a.m.** Semiparametric Regression for Longitudinal Data Using Mixed Likelihood—◆ Daowen Zhang, North Carolina State University
- 10:05 a.m.** Floor Discussion

## 214

## MCC-200 F

### ● Recent Advances in Causal Inference—Invited Biometrics Section, ENAR, Section on Health Policy Statistics, Section on Statistics in Epidemiology

Organizer(s): Mark van der Laan, University of California, Berkeley

Chair(s): Mark van der Laan, University of California, Berkeley

- 8:35 a.m.** History-adjusted Marginal Structural Models for the Estimation of Causal Effect Modification by Time-dependent Covariates—◆ Maya L. Petersen, University of California, Berkeley; Mark van der Laan, University of California, Berkeley

**9:05 a.m.** Estimation of Treatment Effects in Randomized Trials with Noncompliance and a Binary Outcome—

◆ Nicholas Jewell, University of California, Berkeley

**9:35 a.m.** Experiments and Dynamic Treatment Regimes—

◆ Susan Murphy, University of Michigan; Derek Bingham, Simon Fraser University; Linda Collins, The Pennsylvania State University

**10:05 a.m.** Floor Discussion

## **215** **MCC-103 C**

### \* ☆ **SAMSI Session on Latent Variables in Science and Statistics—Invited**

#### **Statistical and Applied Mathematical Sciences Institute**

*Organizer(s): James Berger, Duke University*

*Chair(s): James Berger, Duke University*

**8:50 a.m.** Latent Variables in the Social Sciences: a Multidisciplinary Program of SAMSI—◆ Kenneth Bollen, SAMSI/The University of North Carolina at Chapel Hill

**9:15 a.m.** Multiple Scales and Hidden Variables in Immunological Modeling—◆ Thomas B. Kepler, Duke University

**9:40 a.m.** A General Framework for Adaptive Observations in Geophysical Prediction—◆ Shree P. Khare, Statistical and Applied Mathematical Sciences Institute; Chris Jones, The University of North Carolina at Chapel Hill

**10:05 a.m.** Floor Discussion

## **216** **MCC-102 F**

### \* ☆ **Recent Developments in Bayesian Survival Analysis—Invited**

#### **Section on Bayesian Statistical Science, Biopharmaceutical Section**

*Organizer(s): Joseph G. Ibrahim, The University of North Carolina at Chapel Hill*

*Chair(s): Dipak Dey, University of Connecticut*

**9:35 a.m.** Issues of Robustness and Model Flexibility in Bayesian Survival Analysis—◆ Paul Gustafson, University of British Columbia

**9:00 a.m.** Theory and Inference for the Cox Model with Missing Covariates—◆ Joseph G. Ibrahim, University of North Carolina at Chapel Hill; Ming-Hui Chen, University of Connecticut; Qi-Man Shao, University of Oregon

**9:25 a.m.** Disc: Steven N. MacEachern, The Ohio State University

**9:50 a.m.** Floor Discussion

Topic Contributed Sessions 8:30 a.m.–10:20 a.m.

## **217** **MCC-205 C**

### **Statistical Methods for HIV/AIDS Surveillance and Research Data—Topic Contributed**

#### **Section on Statistics in Epidemiology, WNAR**

*Organizer(s): Timothy Green, U.S. Centers for Disease Control and Prevention*

*Chair(s): Lillian S. Lin, U.S. Centers for Disease Control and Prevention*

**8:35 a.m.** Uncertainties Associated with Incidence Estimates of HIV/AIDS Diagnoses Adjusted for Reporting Delay and Risk Redistribution—◆ Ruiguang Song, U.S. Centers for Disease Control and Prevention; H. Irene Hall, U.S. Centers for Disease Control and Prevention; Robert Frey, U.S. Centers for Disease Control and Prevention

**8:55 a.m.** Handling Missing Data in HIV Research—◆ Ramses Sadek, U.S. Centers for Disease Control and Prevention; Roman Gvetadze, Northrop Grumman

**9:15 a.m.** Using Occupancy Models To Estimate the Number of Duplicate Cases in a Surveillance System Without Unique Identifiers—◆ Timothy Green, U.S. Centers for Disease Control and Prevention; Ruiguang Song, U.S. Centers for Disease Control and Prevention; Matthew McKenna, U.S. Centers for Disease Control and Prevention; M. Kathleen Glynn, U.S. Centers for Disease Control and Prevention

**9:35 a.m.** Evaluating Racial Disparities in the Clinical Course of HIV Infection as Time-to-event Data Using Standardized Kaplan-Meier Estimation—◆ Felicia Hardnett, U.S. Centers for Disease Control and Prevention; John Karon, Emergint Corporation; Lorena Espinoza, U.S. Centers for Disease Control and Prevention

**9:55 a.m.** New Methods for Back-calculating the Number of HIV Infections in the United States—◆ Phillip Rhodes, U.S. Centers for Disease Control and Prevention; M. Kathleen Glynn, U.S. Centers for Disease Control and Prevention

**10:15 a.m.** Floor Discussion

## **218** **MCC-201 AB**

### \* ☆ **Innovative Designs and Analysis in Clinical Trials—Topic Contributed**

#### **Biometrics Section, Section on Bayesian Statistical Science, Biopharmaceutical Section, WNAR**

*Organizer(s): Yi Cheng, Indiana University, South Bend*

*Chair(s): Heejung Bang, Cornell University*

**8:30 a.m.** Innovative Designs and Analysis of Clinical Trials—◆ Yu Shen, The University of Texas M. D. Anderson Cancer Center

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**8:55 a.m.** The Importance of Assessing Discordance Probabilities of Interim Analysis Procedures for Clinical Trials—  
◆ Ming Tan, University of Maryland; Xiaoping Xiong, St. Jude Children's Research Hospital

**9:15 a.m.** Adjusted Estimates for Time-to-event Endpoints—  
◆ Ted Gooley, Fred Hutchinson Cancer Research Center

**9:35 a.m.** Optimal Bayesian Randomized Designs for Clinical Trials—◆ Yi Cheng, Indiana University, South Bend; Donald A. Berry, The University of Texas M. D. Anderson Cancer Center

**9:55 a.m.** When Is Statistics Not the Answer: Allowing for Flexibility in Phase II Clinical Trial Design—◆ Daniel Sargent, Mayo Clinic; Susan Geyer, Mayo Clinic

**10:15 a.m.** Floor Discussion

## 219 **MCC-102 A**

### Response Surfaces and Related Issues—Topic Contributed

#### Section on Physical and Engineering Sciences, Section on Quality and Productivity

Organizer(s): Sudhir C. Gupta, Northern Illinois University

Chair(s): André I. Khuri, University of Florida

**8:35 a.m.** Quantile Dispersion Graphs for Comparing Designs for Multivariate Generalized Linear Models—  
◆ Siuli Mukhopadhyay, University of Florida; André I. Khuri, University of Florida

**8:55 a.m.** Space-filling Mixture Designs for Highly Constrained Mixture Experiments—◆ John Borkowski, Montana State University

**9:15 a.m.** Efficient Control of Experiments: Models and Algorithms—  
◆ Anatoly Naumov, Novosibirsk State Technical University

**9:35 a.m.** Design Assessment for Split-plot Designs Incorporating Cost—◆ Christine Anderson-Cook, Los Alamos National Laboratory; Li Liang, Virginia Polytechnic Institute and State University; Timothy J. Robinson, University of Wyoming

**9:55 a.m.** Disc: Sudhir C. Gupta, Northern Illinois University

**10:15 a.m.** Floor Discussion

## 220 **MCC-211 A**

### \* Ongoing Enhancements of Estimation and Analytical Strategies To Support Health Policy Research—Topic Contributed

#### Section on Health Policy Statistics, WNAR

Organizer(s): Trena M. Ezzati-Rice, Agency for Healthcare Research and Quality

Chair(s): Steven B. Cohen, Agency for Healthcare Research and Quality

**8:35 a.m.** Using the Medical Expenditure Panel Survey To Estimate Injuries and Associated Health Care Expenses in the United States—◆ Steven Machlin, Agency for Healthcare Research and Quality

**8:55 a.m.** Investigation of the Capacity for State-level Estimates in the Medical Expenditure Panel Survey—◆ John Sommers, Agency for Healthcare Research and Quality; Steven Machlin, Agency for Healthcare Research and Quality

**9:15 a.m.** Evaluation of Panel In-time Effects on Utilization Estimates—◆ Janet Greenblatt, Agency for Healthcare Research and Quality; Lap-Ming Wun, Agency for Healthcare Research and Quality

**9:35 a.m.** Examination of Alternative Nonresponse Adjustments: an Application to Expenditure Data in the Household Component of the Medical Expenditure Panel Survey (MEPS-HC)—◆ David Kashihara, Agency for Healthcare Research and Quality; John Sommers, Agency for Healthcare Research and Quality

**9:55 a.m.** Predicting Medical Expenditures Using the SF-12 and Prior Expenditures—◆ Joel Cohen, Agency for Healthcare Research and Quality; John Fleishman, Agency for Healthcare Research and Quality

**10:15 a.m.** Floor Discussion

## 221 **MCC-209 AB**

### \* Nonparametric Function Estimation—Topic Contributed

#### IMS, Section on Bayesian Statistical Science

Organizer(s): Moulinath Banerjee, University of Michigan

Chair(s): Jayanta Pal, University of Michigan

**8:35 a.m.** A Bayesian Approach to Shape-restricted Inference—  
◆ Mary Meyer, University of Georgia

**8:55 a.m.** Testing under a General Convex Cone Alternative for Correlated Data—◆ Ramani S. Pilla, Case Western Reserve University

**9:15 a.m.** Two-sided Brownian Motion with Quadratic Drift and Its Least Concave Majorant—◆ Christopher Carolan, East Carolina University

**9:35 a.m.** Inference for Conditionally Parametric Response Models—◆ Moulinath Banerjee, University of Michigan

**9:55 a.m.** Disc: Nick Hengartner, Los Alamos National Laboratory

**10:15 a.m.** Floor Discussion

## 222 **MCC-200 H**

### ● **Noninferiority: Paving the Way to the Future—Topic Contributed**

#### Biopharmaceutical Section, WNAR

Organizer(s): Sofia Paul, Eli Lilly and Company

Chair(s): Scott M. Berry, Berry Consultants LLC

- 8:35 a.m.** Intent-to-treat Analyses of Noninferiority Studies—  
◆ Brian Wiens, Amgen Inc.; William Zhao, Fujisawa Healthcare, Inc.
- 8:55 a.m.** Issues To Consider When Constructing a Noninferiority Analysis—◆ Mark Rothmann, U.S. Food and Drug Administration
- 9:15 a.m.** Arbitrary Noninferiority Margins for Active-controlled Trials—◆ Patrick Peterson, Eli Lilly and Company
- 9:35 a.m.** Measuring Risk-benefit as Primary Endpoint To Assess Two Noninferior Drugs in Cancer Patients—◆ Sofia Paul, Eli Lilly and Company
- 9:55 a.m.** Disc: Clet Niyikiza, GlaxoSmithKline
- 10:15 a.m.** Floor Discussion

## 223 **MCC-202 AB**

### Imputation and Sensitivity Analysis for Missing Data—Topic Contributed

#### Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Hui Xie, Boston University

Chair(s): Yajun Mei, Fred Hutchinson Cancer Research Center

- 8:35 a.m.** Approximation to Locally Semiparametric Efficient Scores in Missing Data Problems through Likelihood Robustification—◆ Hua Yun Chen, University of Illinois, Chicago
- 8:50 a.m.** Dependence of Local Sensitivity to Nonignorability on the Assumed Dropout Mechanism—◆ Hui Xie, Boston University; Daniel Heitjan, University of Pennsylvania
- 9:15 a.m.** Use of Multiple Imputation and Other Techniques To Assess Impact of Censoring by Loss to Followup in Clinical Trials—◆ Barry Davis, The University of Texas Health Science Center at Houston
- 9:35 a.m.** Multiple Imputation and Semiparametric Estimators for the Regression Coefficients in the Linear Transformation Competing Risks Model with Missing Cause of Failure—◆ Guozhi Gao, North Carolina State University; Anastasios A. Tsiatis, North Carolina State University
- 9:55 a.m.** Imputation for Nonmonotone, Nonignorable Missing Values—◆ Lin Wang, University of Wisconsin, Madison; Mari Palta, University of Wisconsin, Madison; Jun Shao, University of Wisconsin, Madison
- 10:15 a.m.** Floor Discussion

## 224 **MCC-213 AB**

### ● **Developing, Implementing, and Using Transportation Surveys—Topic Contributed**

#### Section on Survey Research Methods

Organizer(s): Julie Trepanier, Statistics Canada

Chair(s): Julie Trepanier, Statistics Canada

- 8:35 a.m.** Developing a Sustainable and Flexible Long-distance Travel Survey—◆ Lee Giesbrecht, Bureau of Transportation Statistics; Jonaki Bose, Bureau of Transportation Statistics
- 8:55 a.m.** Incorporating Past Methodological Lessons into the 2007 Commodity Flow Survey—◆ Joy Sharp, Bureau of Transportation Statistics; Jock R. Black, U.S. Census Bureau
- 9:15 a.m.** Editing and Imputation Strategy for a Fuel Consumption Supplement to the Canadian Vehicle Survey—  
◆ Sebastien Landry, Statistics Canada
- 9:35 a.m.** The Estimation Methodology of the Redesigned Canadian Vehicle Survey—◆ Martin Beaulieu, Statistics Canada
- 9:55 a.m.** Measuring the Risk of Road Crashes—◆ Aline Chouinard, Transport Canada; James Kelley, Transport Canada
- 10:15 a.m.** Floor Discussion

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Regular Contributed Sessions 8:30 a.m.–10:20 a.m.

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## 225 **MCC-205 B**

### Survivor Analysis—Contributed

#### Biometrics Section, Section on Bayesian Statistical Science, Biopharmaceutical Section, WNAR

Chair(s): Jay Mandrekar, Mayo Clinic

- 8:35 a.m.** Stochastic Characterization of Compliance Indices—  
◆ Junfeng Sun, The Ohio State University; Haikady Nagaraja, The Ohio State University; Nancy R. Reynolds, The Ohio State University
- 8:50 a.m.** Bayesian Cure Rate Models: a Unified Approach—  
◆ Guosheng Yin, The University of Texas M. D. Anderson Cancer Center; Joseph G. Ibrahim, The The University of North Carolina at Chapel Hill
- 9:05 a.m.** Bayesian Survival Analysis Based on Imperfect Diagnostic Tests—◆ Peng Zhang, Harvard University; Stephen W. Lagakos, Harvard University
- 9:20 a.m.** Bayesian Analysis of Recurrent Event Data with Informative Censoring—◆ Nibedita Bandyopadhyay, GlaxoSmithKline; Ananda Sen, University of Michigan
- 9:35 a.m.** Threshold Regression Models and Applications in Environmental Research—◆ Mei-Ling T. Lee, Harvard University; George A. Whitmore, McGill University

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**9:50 a.m.** A New Approach to Testing for Sufficient Followup in Cure-rate Analysis—Lev Klebanov, Charls University;  
◆ Andrei Yakovlev, University of Rochester

**10:05 a.m.** Smooth Inference for Survival Functions with Arbitrarily Censored Data—◆ Kirsten Doehler, North Carolina State University; Marie Davidian, North Carolina State University

## 226

## MCC-205 A

### \* ☆ Classification in Microarray Analysis—Contributed Biometrics Section, WNAR

*Chair(s): George C. Tseng, University of Pittsburgh*

**8:35 a.m.** CLASSIX: a New Classification Method Based on a Separation Index with Applications in Genomics—  
◆ Weiliang Qiu, Harvard Medical School; Mei-Ling T. Lee, Harvard University

**8:50 a.m.** Gene Discovery and Pattern Recognition for Microarray Time-course Experiments Using Regression Models—  
◆ Hua Liu, University of Kentucky; Aaron S. Borders, University of Kentucky; Thomas V. Getchell, University of Kentucky; Sergey S. Tarima, University of Kentucky; Marilyn L. Getchell, University of Kentucky; Arnold J. Stromberg, University of Kentucky

**9:05 a.m.** Clustering Posterior Distributions: Application to Somatic Embryogenesis in Maize—◆ Tanzy Love, Iowa State University; Alicia Carriquiry, Iowa State University

**9:20 a.m.** Eigenanalysis-based Method for Gene Subset Selection and Cancer Classification Using Microarray Data—  
◆ Simin Hu, Case Western Reserve University; J. Sunil Rao, Case Western Reserve University

**9:35 a.m.** Genome Sequence Analysis Using Mixture Trees—  
◆ Shu-Chuan Chen, Arizona State University; Bruce G. Lindsay, The Pennsylvania State University

**9:50 a.m.** Searching Solution Space for SELDI-TOF Cancer Classifiers—◆ Eric Siegel, University of Arkansas for Medical Sciences

**10:05 a.m.** Prediction Error Estimation: a Comparison of Resampling Methods—◆ Ruth Pfeiffer, National Cancer Institute; Annette Molinaro, NCI/Yale University; Richard Simon, National Institutes of Health

## 227

## MCC-102 E

### \* ☆ Data Augmentation, EM, and Bayesian Methods with Missing Data—Contributed

#### Section on Bayesian Statistical Science, Section on Statistics in Epidemiology, Biopharmaceutical Section

*Chair(s): Qingxia Chen, The University of North Carolina at Chapel Hill*

**8:35 a.m.** Flexible and Efficient Data Augmentation Schemes—  
◆ Taeyoung Park, Harvard University

**8:50 a.m.** A Bayesian Model for Clustered Longitudinal Ordinal Data Subject to Nonignorable Missing Data Mechanism—◆ Niko Kaciroti, University of Michigan; Trivellore Raghunathan, University of Michigan

**9:05 a.m.** A Flexible Bayesian Generalized Linear Model for Dichotomous Response Data with an Application to Text Categorization—◆ David Madigan, Rutgers, The State University of New Jersey; Susana Eyeramendy, Oxford University

**9:20 a.m.** Alternative Strategies for Variable Selection in Logistic Regression Models with Missing Covariates—  
◆ Gang Liu, University of California, Los Angeles; Xiaowei Yang, BayesSoft, Inc.; Thomas R. Belin, University of California, Los Angeles

**9:35 a.m.** Modeling Bivariate Nonlinear Tar Processes in the Presence of Missing Data—◆ Fabio Nieto, Universidad Nacional de Colombia

**9:50 a.m.** Floor Discussion

## 228

## MCC-211 D

### \* Poverty and Income—Contributed

#### Section on Government Statistics, Social Statistics Section, Section on Survey Research Methods

*Chair(s): Leonard Gaines, Empire State Development*

**8:35 a.m.** Can the Survey of Income and Program Participation Be Used for State-level Analysis Even Though It Is Not Designed To Be State-representative?—◆ Arthur Jones, Jr., U.S. Census Bureau; Michael Davern, University of Minnesota; Gestur Davidson, University of Minnesota

**8:50 a.m.** Using Medicaid Participant Data in the Estimation of County Poverty Levels—◆ David S. Powers, U.S. Census Bureau

**9:05 a.m.** Evaluation of School District Poverty Estimates: Predictive Models Using IRS Income Tax Data—  
◆ Jerry Maples, U.S. Census Bureau

**9:20 a.m.** Assessment of Resources and Strategies for Obtaining Basic Living Necessities by Individuals Near the Poverty Guideline—◆ JoAnn Kuchak, ORC Macro International, Inc.; George Fitzelle, U.S. Department of Veterans Affairs; Andrey Vinokurov, ORC Macro International, Inc.

**9:35 a.m.** Dominance in Income Distribution in Terms of Location and Dispersion—◆ Subir Ghosh, University of California, Riverside

**9:50 a.m.** Ecological Correlates of Family Income Nonresponse: an Analysis of the National Health Interview Survey (NHIS)—◆ John Pleis, National Center for Health Statistics; James Dahlhamer, National Center for Health Statistics

**10:05 a.m.** Floor Discussion

**229** **MCC-103 F**  
**Nonparametric Regression and Density Estimation—Contributed**

**Section on Nonparametric Statistics**

*Chair(s): Somesh Chattopadhyay, Florida State University*

- 8:35 a.m.** Nonparametric Regression Subject to a Monotonicity Constraint—◆ Matthew Schipper, University of Michigan; Jeremy Taylor, University of Michigan; Xihong Lin, Harvard University
- 8:50 a.m.** Nonparametric Regression with Heteroscedastic Long Memory Errors—◆ Hongwen Guo, Michigan State University
- 9:05 a.m.** Minimum Distance Errors in Variables Regression Model Fitting—◆ Weixing Song, Michigan State University
- 9:20 a.m.** Nonparametric Confidence Sets for Densities—◆ Woncheol Jang, Duke University
- 9:35 a.m.** Nonparametric Estimation of Levy Densities Based on Continuous and Discrete Data—◆ Jose E. Figueroa-Lopez, Purdue University; Christian Houdre, Georgia Institute of Technology
- 9:50 a.m.** Method of Local Moments for Parametric Likelihood Inference—◆ Masahiko Sagae, Gifu University; Atsuyuki Kogure, Keio University
- 10:05 a.m.** Pattern Recognition Using Nonparametric Kernel Density Estimation Techniques—◆ Abhishek Lall, Sam Houston State University; Cecil Hallum, Sam Houston State University

**230** **MCC-200 I**  
**Analysis of Binary Data—Contributed**  
**Biopharmaceutical Section, WNAR**

*Chair(s): Steven Watts, Eli Lilly and Company*

- 8:35 a.m.** The Estimation of Sensitivity and Specificity of Clustered Binary Data: as Applied to Contrast-enhanced Multidetector Row Spiral Computed Tomography Coronary Angiography—◆ William McCarthy, Maryland Medical Research Institute; Douglas Thompson, Maryland Medical Research Institute; Bruce Barton, Maryland Medical Research Institute; Julie Miller, Johns Hopkins Hospital; Joao Lima, Johns Hopkins Hospital
- 8:50 a.m.** Three Approaches to Modeling Binary Outcomes in Multicenter Clinical Trials with Clustering Due to Clinical Sites—◆ Douglas Thompson, Maryland Medical Research Institute; William McCarthy, Maryland Medical Research Institute; Bruce Barton, Maryland Medical Research Institute
- 9:05 a.m.** Use of Inverse Binomial Sampling in Exact Test of Relative Risk for Rare Events in Clinical Trials—◆ Xinwei D. Jia, Forest Research Institute; Dar Shong Hwang, B.R.S.I.

- 9:20 a.m.** Multivariate Regression in Mixed Data Setting—Daniel C. Bonzo, Serono, Inc.; ◆ Welfredo R. Patungan, University of the Philippines Diliman
- 9:35 a.m.** A Simple Method for Constructing Binomial Confidence Intervals with Near-nominal Coverage by Adding a Single, Imaginary Failure or Success—◆ Craig Borkowf, Centers for Disease Control and Prevention
- 9:50 a.m.** A Multivariate Extension of McNemar's Test—◆ Bernhard Klingenberg, Williams College; Alan Agresti, University of Florida
- 10:05 p.m.** Floor Discussion

**231** **MCC-102 D**  
**Econometric Time-series Models—Contributed**  
**Business and Economics Statistics Section**

*Chair(s): Yanqin Fan, Vanderbilt University*

- 8:35 a.m.** Optimality of GLS Estimates of Misspecified Regression Mean Functions of RegARIMA Time-series Models—◆ David Findley, U.S. Census Bureau
- 8:50 a.m.** Short- and Long-run Causality Measures—◆ Abderrahim Taamouti, University of Montréal; Jean-Marie Dufour, University of Montréal
- 9:05 a.m.** Business Cycle Asymmetries in Univariate Macroeconomic Forecasting—◆ Jose R. Cancelo, Universidade da Coruna
- 9:20 a.m.** Simplified Order Selection and Efficient Linear Estimation for VARMA Models—◆ Tarek Jouini, University of Montréal
- 9:35 a.m.** Time Reversibility of Stationary, Regular, Finite-state Markov Chains—◆ William McCausland, University of Montréal
- 9:50 a.m.** Random Coefficient Transfer Function Model—◆ Hyunyoung Choi, University of Illinois, Urbana-Champaign; Jeff Douglas, University of Illinois, Urbana-Champaign; Bonnie Ray, IBM
- 10:05 a.m.** Using Quantile Regression for Prediction Purposes—◆ Subhash C. Narula, Virginia Commonwealth University; John F. Wellington, Indiana University-Purdue University, Fort Wayne

**232** **MCC-208 B**  
**Classical Inference—Contributed**  
**General Methodology, IMS**

*Chair(s): Wensheng Guo, University of Pennsylvania*

- 8:35 a.m.** Extreme Values of Skew-symmetric Distributions—◆ Sheng-Mao Chang, North Carolina State University; Marc G. Genton, Texas A&M University

Tuesday

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

- 8:50 a.m.** Simple Estimators of the Three-parameter, Skew-normal Distribution—◆ Jose Almer T. Sanqui, Appalachian State University; Arjun K. Gupta, Bowling Green State University; Truc T. Nguyen, Bowling Green State University
- 9:05 a.m.** Fisher Information in Concomitants of Bivariate FGM Distribution—◆ Mohammad Ahsanullah, Rider University; Sana Buhadra, Kuwait University
- 9:20 a.m.** Minimax Asymptotic Mean-squared-error of M-estimators of Scale—◆ Daniela Szatmari-Voicu, University of Calgary
- 9:35 a.m.** On the Difference between Two Distribution Functions—◆ Charles Dunn, Miami University of Ohio
- 9:50 a.m.** L<sup>2</sup>-based Homogeneity Tests for Mixtures with Structural Parameters—◆ Hongying Dai, University of Kentucky; Richard Charnigo, University of Kentucky
- 10:05 a.m.** Likelihood Inference under the General Response Transformation Model with Heteroscedastic Errors—◆ Chih-Rung Chen, National Chiao-Tung University

## 233 **MCC-208 A** Categorical Data Analysis—Contributed General Methodology, Section on Statistics in Epidemiology, Biometrics Section

Chair(s): Igor Mandel, Media Planning Group

- 8:35 a.m.** Sequential Identification in Multinomial Models—◆ Hokwon A. Cho, University of Nevada, Las Vegas
- 8:50 a.m.** Dirichlet-multinomial Regression—◆ Paulo Guimaraes, Medical University of South Carolina; Richard Lindrooth, Medical University of South Carolina
- 9:05 a.m.** Combining Averages and Single Measurements in a Lognormal Model—Nagraj Neerchal, University of Maryland Baltimore County; ◆ Bhramori Banerjee, Educational Testing Service
- 9:20 a.m.** Profile Confidence Intervals for Contingency Table Parameters—◆ Joseph B. Lang, The University of Iowa
- 9:35 a.m.** Combining Loglinear Models—◆ Lihua Chen, Iowa State University; Yuhong Yang, University of Minnesota
- 9:50 a.m.** Parameter Estimation in Poisson Regression via Modified Maximum Likelihood Method—◆ Evrim Oral, Middle East Technical University
- 10:05 a.m.** Floor Discussion

## 234 **MCC-102 B** \* Current Research in Multivariate Quality Control—Contributed

Section on Quality and Productivity

Chair(s): Philip R. Scinto, The Lubrizol Corporation

- 8:35 a.m.** Multivariate Process Control for Improving Detection and Cause Identification—◆ Amit Mitra, Auburn University
- 8:50 a.m.** Statistical Monitoring of Dose-response Quality Profiles from High-throughput Screening—◆ James Williams, GE Company; Jeffrey B. Birch, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University; Nancy Ferry, DuPont Crop Protection
- 9:05 a.m.** High Breakdown Estimation Methods for Phase I Multivariate Control Charts—◆ Willis Jensen, Virginia Polytechnic Institute and State University; Jeffrey B. Birch, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University
- 9:20 a.m.** A Self-starting, Multivariate, Exponentially-weighted Moving Average Chart—◆ Edgard M. Maboudou-Tchao, University of Minnesota; Douglas M. Hawkins, University of Minnesota
- 9:35 a.m.** A Multivariate Change Point Model for Statistical Process Control—◆ Kokou Zamba, The University of Iowa

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**9:50 a.m.** Comparison of Multivariate Control Charts for Process Dispersion—◆ Jose A. Vargas, National University of Colombia

**10:05 a.m.** Statistical Process Control Using Multivariate Exponentially Weighted Moving Average and MATLAB®-to-Excel® Software Interface—  
◆ Jerry Lewis, Wyeth; Alagappan Annamalai, Wyeth

## **235** **MCC-103 B** **General Topics in Statistics Education—Contributed** Section on Statistical Education

Chair(s): Jimmy Doi, California Polytechnic State University

**8:35 a.m.** Writing To Learn in Elementary Statistics—◆ Ananda A. Jayawardhana, Pittsburg State University; Cynthia Woodburn, Pittsburg State University

**8:50 a.m.** Critical Values: Connecting Ethics, Statistics, and Social Justice To Lift Our World—◆ Lawrence M. Lesser, The University of Texas at El Paso

**9:05 a.m.** Designing a Statistical Literacy Textbook—◆ Milo Schield, Augsburg College

**9:20 a.m.** Analytic Excellence—◆ Michael Round, Theory of Constraints for Education

**9:35 a.m.** Preparing the Undergraduate Education Major To Teach Advanced Placement Statistics—◆ Gwendolyn Applebaugh, University of Wisconsin, Eau Claire

**9:50 a.m.** I Got It. This Is So Cool. I Like This.—◆ Rossi Hassad, Mercy College

**10:05 a.m.** Statistical Modeling as an Introductory Course—  
◆ Daniel Kaplan, Macalester College

## **236** **MCC-102 C** **Bayesian Models for Environmental Data—Contributed** Section on Statistics and the Environment, ENAR, Section on Bayesian Statistical Science

Chair(s): Brian Gray, U.S. Geological Survey

**8:35 a.m.** A Bayesian Pathways Analysis of Personal Exposure to Arsenic—◆ Xiaoyi Dong, The Ohio State University

**8:50 a.m.** Measurement Error in Spatial Modeling of Environmental Exposures—◆ Christopher Paciorek, Harvard School of Public Health; Alexandros Gryparis, Harvard School of Public Health; Brent Coull, Harvard School of Public Health

**9:05 a.m.** Deriving Tree Diameter Distributions Using Bayesian Model Averaging—◆ Bronson Bullock, North Carolina State University; Edward Boone, University of North Carolina, Wilmington

**9:20 a.m.** Calibration Model for Floodplain Modeling—◆ John Grego, University of South Carolina

**9:35 a.m.** Approximate Likelihood and Bayesian Methods for Combining Multiple Data Sources—◆ Darryl Cooney, North Carolina State University; Montserrat Fuentes, North Carolina State University

**9:50 a.m.** Floor Discussion

## **237** **MCC-205 D** **Genetic Association, Familial Aggregation, and Gene-environmental Studies—Contributed** Section on Statistics in Epidemiology, ENAR, WNAR, Biometrics Section

Chair(s): Andrew S. Allen, Duke University

**8:35 a.m.** An Alternative Approach for Haplotype-based Association Analysis Using Genotype Data from Unrelated Individuals—◆ Jinbo Chen, National Cancer Institute

**8:50 a.m.** Genetic Misclassification and Gene-environment Interactions in Case-control Studies—◆ Christine Spinka, University of Missouri, Columbia; Raymond J. Carroll, Texas A&M University; Nilanjan Chatterjee, National Cancer Institute

**9:05 a.m.** An Approach to Adjustment of the Penetrance Obtained from Case Proband Studies—◆ Ilya Novikov, Gertner Institute for Epidemiology and Health Policy Research

**9:20 a.m.** A Novel Case-control Design: the GEM Study Experience—◆ Amanda Hummer, Memorial Sloan-Kettering Cancer Center; Colin B. Begg, Memorial Sloan-Kettering Cancer Center; Marianne Berwick, The University of New Mexico

**9:35 a.m.** Evolutionary-based Grouping of Haplotypes in Association Analysis—◆ Jung-Ying Tzeng, North Carolina State University

**9:50 a.m.** Comprehensive Evaluation of Breast and Ovarian Cancer Risks—◆ Sining Chen, Johns Hopkins School of Medicine

**10:05 a.m.** Comparison of Three Statistical Methods To Estimate Genetic Ancestry and Control for Stratification in Genetic Association Studies among Admixed Populations—◆ Hui-Ju Tsai, University of California, San Francisco

## **238** **MCC-212 AB** **Variance Estimation for Surveys I—Contributed** Section on Survey Research Methods, Social Statistics Section

Chair(s): Xiaoxi Li, Iowa State University

**8:35 a.m.** Generalized Variance Functions for Radio-schedule Gross Rating Point Estimators—◆ Richard Griffiths, Arbitron

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

- 8:50 a.m.** Variance Estimation and Components of Variance for the Medicare Current Beneficiary Survey—◆ Annie Y. Lo, Westat; Adam Chu, Westat
- 9:05 a.m.** Mean Square Error Analysis of Health Estimates from the Behavioral Risk Factor Surveillance System for Counties along the United States/Mexico Border Region—◆ Joe Fred Gonzalez, Jr., National Center for Health Statistics; Machell Town, National Center for Chronic Diseases Prevention and Health Promotion; Jay J. Kim, National Center for Health Statistics
- 9:20 a.m.** Analysis of Census 2000 Long Form Variances—◆ Eric L. Schindler, U.S. Census Bureau
- 9:35 a.m.** Optimal Pairing for Stratum Collapse Methods with Interviewer-level Measurement Error Shared across Strata—◆ Moon J. Cho, Bureau of Labor Statistics; John L. Eltinge, Bureau of Labor Statistics
- 9:50 a.m.** Investigation of Alternative Variance Estimators for the Quarterly Financial Report—◆ Andromache Howe, U.S. Census Bureau; Katherine J. Thompson, U.S. Census Bureau
- 10:05 a.m.** Floor Discussion

## 239

## MCC-210 AB

### \* Data Quality Issues—Contributed

#### Section on Survey Research Methods, Social Statistics Section

Chair(s): Limin Clegg, National Cancer Institute

- 8:35 a.m.** Sufficient Quality for Official Statistics: the Swedish Approach—◆ Eva Elvers, Statistics Sweden
- 8:50 a.m.** Templates for Evaluating Survey Programs—◆ Brenda G. Cox, Battelle; Nancy Kirkendall, Energy Information Administration
- 9:05 a.m.** Statistical Methods Used To Detect Cell-level and Respondent-level Outliers in the 2002 Economic Census of the Services Sector—◆ Richard Sigman, U.S. Census Bureau
- 9:20 a.m.** Darkness Made Visible: Field Management and Nonresponse in the 2004 SCF—◆ Arthur Kennickell, Federal Reserve Board
- 9:35 a.m.** Detecting Falsified Cases in SCF 2004 Using Benford's Law—◆ Yongyi Wang, NORC at the University of Chicago; Steven Pedlow, NORC at the University of Chicago
- 9:50 a.m.** Benford's Law and Validating Interviewer Data—◆ Javier Porras, NORC at the University of Chicago
- 10:05 a.m.** Floor Discussion

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Special Presentation 10:30 a.m.–12:20 p.m.

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## 240

## MCC-205 A

### The ASA Stat Bowl Session 1

#### The ASA, ENAR, WNAR, IMS, SSC

Organizer(s): Mark Payton, Oklahoma State University

Chair(s): Mark Payton, Oklahoma State University

- 10:35 a.m.** Game 1—◆ Ananya Roy, University of Florida; ◆ Landon Sego, Virginia Polytechnic Institute and State University; ◆ Satrajit Roychoudhury, New Jersey Institute of Technology; ◆ Alicia Graziosi, Temple University
- 11:00 a.m.** Game 2—◆ Siuli Mukhopadhyay, University of Florida; ◆ Dipankar Bandyopadhyay, University of Georgia; ◆ Yuping Wu, University of South Carolina; ◆ Sourav Santra, Northern Illinois University
- 11:25 a.m.** Game 3—◆ Jesse Frey, The Ohio State University; ◆ Abhyuday Mandal, Georgia Institute of Technology; ◆ Soumi Lahiri, New Jersey Institute of Technology; ◆ Susanta Tewari, University of Georgia
- 11:50 a.m.** Game 4—◆ Willis Jensen, Virginia Polytechnic Institute and State University; ◆ Tirthankar Dasgupta, Georgia Institute of Technology; ◆ Samiran Ghosh, University of Connecticut; ◆ Pang Du, Purdue University

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Invited Sessions 10:30 a.m.–12:20 p.m.

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## 241

## MCC-102 D

### \* Recent Work in Power and Sample Size—Invited

#### Section on Statistical Consulting, Business and Economics Statistics Section, Section on Survey Research Methods

Organizer(s): John Castelleo, SAS Institute, Inc.

Chair(s): John Castelleo, SAS Institute, Inc.

- 10:35 a.m.** Accounting for Alignment, Uncertainty, and Bias in Choosing a Sample Size—◆ Michael R. Jirutek, Salix Pharmaceuticals, Inc.; Keith E. Muller, The University of North Carolina at Chapel Hill
- 11:00 a.m.** Using Internal Pilot Designs with Repeated Measures—◆ Christopher S. Coffey, University of Alabama at Birmingham; Keith E. Muller, The University of North Carolina at Chapel Hill
- 11:25 a.m.** Exploiting the Link between the Wilcoxon-Mann-Whitney Test and a Simple Odds Parameter—◆ Ralph O'Brien, Cleveland Clinic Foundation; John Castelleo, SAS Institute, Inc.
- 11:50 a.m.** Sample Size for Mixed Models—◆ Russell V. Lenth, The University of Iowa
- 12:15 p.m.** Floor Discussion

## 242 MCC-211 C

### ☆ **Model Building via Mixtures: Recent Developments and Future Directions—Invited**

**IMS, Section on Statisticians in Defense and National Security, Business and Economics Statistics Section**

*Organizer(s): Ramani S. Pilla, Case Western Reserve University*

*Chair(s): Ramani S. Pilla, Case Western Reserve University*

**10:35 a.m.** Perturbation Theory and Mixture Models: Application to High-energy Physics—◆ Cyrus C. Taylor, Case Western Reserve University; Catherine Loader, Case Western Reserve University; Ramani S. Pilla, Case Western Reserve University

**11:05 a.m.** On a Flexible Information Criterion for Order Selection in Semiparametric Mixture Models—◆ Richard Charnigo, University of Kentucky; Ramani S. Pilla, Case Western Reserve University

**11:35 a.m.** Local Likelihood and Mixture Modeling—◆ Catherine Loader, Case Western Reserve University; Ramani S. Pilla, Case Western Reserve University

**12:05 p.m.** Floor Discussion

## 243 MCC-200 ABC

### ● **Biometrics Editor Invited Session—Invited**

**ENAR, WNAR, International Biometric Society, Biometrics Section**

*Organizer(s): Xihong Lin, Harvard University*

*Chair(s): Xihong Lin, Harvard University*

**10:35 a.m.** Statistical Issues Arising in the Women's Health Initiative—◆ Ross Prentice, Fred Hutchinson Cancer Research Center

**11:05 a.m.** Disc: James M. Robins, Harvard University

**11:25 a.m.** Disc: Dave Demets, University of Wisconsin, Madison

**11:35 a.m.** Disc: David Freedman, University of California, Berkeley

**11:45 a.m.** Disc: Sander Greenland, University of California, Los Angeles

**12:05 p.m.** Floor Discussion

## 244 MCC-213 AB

### **Medallion Lecture 4—Invited**

**IMS**

*Organizer(s): David Madigan, Rutgers, The State University of New Jersey*

*Chair(s): Tilmann Gneiting, University of Washington*

**10:35 a.m.** Inference for Deterministic Models in the Environmental Sciences—◆ Adrian E. Raftery, University of Washington

**12:00 p.m.** Floor Discussion

## 245 MCC-103 C

### ● **Robustness of Inferences to Bifurcation—Invited** **Business and Economics Statistics Section**

*Organizer(s): Esfandiar Maasoumi, Southern Methodist University*

*Chair(s): Esfandiar Maasoumi, Southern Methodist University*

**10:35 a.m.** Robustness of Inferences to Singularity Bifurcations—◆ William A. Barnett, University of Kansas; Yijun He, Washington State University

**11:20 a.m.** A Time-frequency Analysis of the U.S. and European Business Cycles—◆ Andrew Hughes Hallett, Vanderbilt University; Christian Richter, Loughborough University

**12:05 p.m.** Floor Discussion

## 246 MCC-200 J

### ☆ **Statistical Methods for Cancer Research Data—Invited**

**WNAR, Section on Health Policy Statistics, Biopharmaceutical Section, Biometrics Section**

*Organizer(s): Jeremy Taylor, University of Michigan*

*Chair(s): Jeremy Taylor, University of Michigan*

**10:35 a.m.** Comparing Expression Responses in a Model System to Natural Covariation in Gene Expression—◆ Kerby Shedden, University of Michigan

**11:05 a.m.** Gene Expression and the Detection of Viral Contributions to Cancer—◆ Michael Newton, University of Wisconsin, Madison

**11:35 a.m.** Statistical Methods for Inferring Epigenetic Phenomena Using Gene-expression Data—◆ Debashis Ghosh, University of Michigan

**12:05 p.m.** Floor Discussion

## 247 MCC-200 G

### ● **How Sports Can Help Teach Students and the Public about Statistics—Invited**

**Section on Statistics in Sports, Section on Statistical Education**

*Organizer(s): Jerome Reiter, Duke University*

*Chair(s): Shane Jensen, University of Pennsylvania*

**10:35 a.m.** An Honors Seminar on Statistics and Sports—◆ James Albert, Bowling Green State University

**11:05 a.m.** Baseball's Highest Honor: Teaching Statistical Thinking Using the Baseball Hall of Fame—◆ Steve C. Wang, Swarthmore College

**11:35 a.m.** Muscle Memory: Statistical Reasoning through Sports—◆ Scott M. Berry, Berry Consultants, LLC

**12:05 p.m.** Floor Discussion

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**248**

**MCC-200 DE**

● ☆ **Dimensions of Health Care Quality—Invited**  
Section on Health Policy Statistics, WNAR

Organizer(s): Bonnie Ghosh-Dastidar, RAND Statistics Group

Chair(s): Bonnie Ghosh-Dastidar, RAND Statistics Group

**10:35 a.m.** Dissatisfied Beneficiaries in a Satisfied World: Problem-oriented Reporting in Medicare CAHPS—◆ Marc Elliott, RAND Corporation

**11:00 a.m.** Quality Assessment Using Flexible Prior Distributions and Triple-goal Estimates in Hierarchical Models—  
◆ Susan M. Paddock, RAND Corporation; Greg Ridgeway, RAND Corporation; Rongheng Lin, Johns Hopkins University; Thomas A. Louis, Johns Hopkins University

**11:25 a.m.** Measuring the Process-outcome Link in Health Services Research—◆ John Adams, RAND Corporation; Katherine Kahn, RAND Corporation; Diana Tisnado, University of California, Los Angeles; Honghu Liu, University of California, Los Angeles; Wen-Pin Chen, University of California, Los Angeles; Ashlee Hu, University of California, Los Angeles; Ron D. Hays, University of California, Los Angeles; Carol M. Mangione, University of California, Los Angeles; Cheryl L. Damberg, RAND Corporation

**11:50 a.m.** Disc: Dan McCaffrey, RAND Corporation

**12:10 p.m.** Floor Discussion

**249**

**MCC-211 B**

**Discrete Choice and Conjoint Experiments—Invited**  
Section on Physical and Engineering Sciences,  
Section on Statistics and Marketing

Organizer(s): Angela Dean, The Ohio State University

Chair(s): Daniel T. Voss, Wright State University

**10:35 a.m.** The Design of Stated Choice Experiments—◆ Warren F. Kuhfeld, SAS Institute, Inc.; Randall D. Tobias, SAS Institute, Inc.

**11:00 a.m.** Efficient Designs for Conjoint Analysis and Discrete Choice Experiments—◆ Rainer Schwabe, Otto von Guericke University

**11:25 a.m.** An Integrated Model of Choice and Response Time with Applications to Conjoint Analysis—Greg M. Allenby, The Ohio State University; ◆ Thomas Otter, The Ohio State University

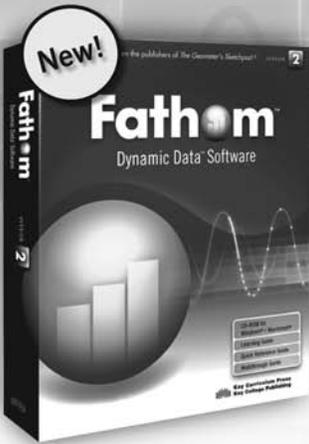
**11:50 a.m.** Disc: Stephen Jones, The Boeing Company

**12:15 p.m.** Floor Discussion


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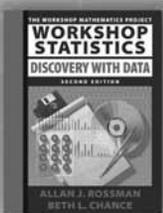
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**250** **MCC-103 F**

● ☆ **Topics in Automotive Risk Analysis—Invited**  
**Section on Risk Analysis, Section on Government Statistics**

Organizer(s): Duane Steffey, Exponent, Inc.

Chair(s): David Banks, Duke University

- 10:35 a.m.** Assessing Speed as a Factor in Individual Road Accidents: Bayesian Accident Reconstruction and Case-control Analysis—◆ Gary A. Davis, University of Minnesota
- 11:00 a.m.** Developing Exposure Measures To Evaluate Vehicle Accident Risk—◆ Michael P. Cohen, Bureau of Transportation Statistics; Lee Giesbrecht, Bureau of Transportation Statistics; Jonaki Bose, Bureau of Transportation Statistics
- 11:25 a.m.** Bayesian Multivariate Spatial Models for Roadway Traffic Crash Mapping—◆ Joon Jin Song, University of Massachusetts; Malay Ghosh, University of Florida; Shaw-Pin Miaou, Texas Transportation Institute; Bani Mallick, Texas A&M University
- 11:50 a.m.** Vehicle Rollover Risk Analysis: Metrics and Methods—◆ Duane Steffey, Exponent, Inc.; Alan Donelson, Consultant; Helene Grossman, Exponent, Inc.; Ke Zhao, Exponent, Inc.
- 12:15 p.m.** Floor Discussion

**251** **MCC-102 C**

● ☆ **Stratification on Post-treatment Variables in Causal Inference—Invited**

**General Methodology, Section on Health Policy Statistics, WNAR, Biometrics Section**

Organizer(s): Dylan Small, The University of Pennsylvania

Chair(s): Dylan Small, The University of Pennsylvania

- 10:35 a.m.** Causal Effects in Fetal Toxicology—◆ Michael R. Elliott, University of Pennsylvania
- 11:00 a.m.** Designs in Partially Controlled Studies: Messages from a Review and a New Direction—Fan Li, Johns Hopkins University; ◆ Constantine Frangakis, Johns Hopkins University
- 11:25 a.m.** Defining and Estimating Intervention Effects for Groups Who Will Develop an Auxiliary Outcome—◆ Marshall M. Joffe, University of Pennsylvania
- 11:50 a.m.** Sensitivity Analysis Comparing Outcomes Measured Only in a Subset Selected Post-randomization with Application to HIV Vaccine Trials—◆ Peter Gilbert, Fred Hutchinson Cancer Research Center; Bryan Shepherd, University of Washington; Yannis Jemai, Harvard School of Public Health; Andrea Rotnitzky, Harvard School of Public Health
- 12:15 p.m.** Floor Discussion

**252** **MCC-200 F**

● ☆ **Semiparametric Latent Variable Methods with Biomedical Applications—Invited**

**Biometrics Section, Section on Bayesian Statistical Science, ENAR, Section on Statistics in Epidemiology, WNAR**

Organizer(s): David Dunson, National Institute of Environmental Health Sciences

Chair(s): Bo Cai, National Institute of Environmental Health Sciences

- 10:35 a.m.** Bayesian Nonparametric Regression Analysis when Covariates Are Subject-specific Parameters in a Random-effects Model for Longitudinal Measurements—◆ Bani Mallick, Texas A&M University
- 11:00 a.m.** Clustering Based on Dirichlet Mixtures of Attribute Subsets—◆ Peter Hoff, University of Washington
- 11:25 a.m.** Joint Modeling of Accelerated Failure Time and Longitudinal Data—◆ Jane-Ling Wang, University of California, Davis; Fushing Hsieh, University of California, Davis; Yi-Kuan Tseng, University of California, Davis
- 11:50 a.m.** Bayesian Latent Variable Density Regression with Applications in Molecular Epidemiology—◆ David Dunson, National Institute of Environmental Health Sciences
- 12:15 p.m.** Floor Discussion

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Invited Panels 10:30 a.m.–12:20 p.m.

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**253** **MCC-208 A**

● ☆ **Education Research Meets the Gold Standard: Statistics, Education, and Research Methods after ‘No Child Left Behind’—Invited**

**Section on Survey Research Methods, Social Statistics Section**

Organizer(s): Mack C. Shelley, II, Iowa State University

Chair(s): Donsig Jang, Mathematica Policy Research, Inc.

- Panelists:** ◆ Mack C. Shelley, II, Iowa State University  
 ◆ Larry V. Hedges, University of Chicago  
 ◆ Brian M. Hand, Iowa State University

- 12:10 p.m.** Floor Discussion

Tuesday

**254**

**MCC-205 D**

● **Cross National Comparison of Classifications of Race and Ethnicity—Invited**

Social Statistics Section, Section on Survey Research Methods

Organizer(s): Mary Chamie, United Nations

Chair(s): Mary Chamie, United Nations

- Panelists:** ◆ Charles Louis Kincannon, U.S. Census Bureau  
 ◆ Douglas Norris, Statistics Canada  
 ◆ Tukufu Zuberi, University of Pennsylvania  
 ◆ Ann Morning, New York University  
 ◆ Dallas Welch, Statistics New Zealand

**12:10 p.m.** Floor Discussion

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Topic Contributed Sessions 10:30 a.m.–12:20 p.m.

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**255**

**MCC-201 AB**

**Advances in Mixed Model Selection—Topic Contributed**  
 Biometrics Section, WNAR

Organizer(s): Matthew J. Gurka, University of Virginia

Chair(s): Matthew J. Gurka, University of Virginia

**10:35 a.m.** Selecting the Best Linear Mixed Model: the State of the Art for Longitudinal Data—◆ Lloyd J. Edwards, The University of North Carolina at Chapel Hill; Keith E. Muller, The The University of North Carolina at Chapel Hill; Matthew J. Gurka, University of Virginia; Paul W. Stewart, The University of North Carolina at Chapel Hill

**10:55 a.m.** Goodness-of-fit in Generalized Linear and Nonlinear Mixed-effects Models—◆ Edward Vonesh, Baxter Healthcare Corporation

**11:15 a.m.** Healthy Akaike Information Criterion—◆ Eugene Demidenko, Dartmouth University

**11:35 a.m.** The Effect of Misspecified Baseline Characteristics on Inference for Longitudinal Trends in Linear Mixed Models—◆ Geert Verbeke, Katholieke Universiteit Leuven; Steffen Fieuws, Katholieke Universiteit Leuven

**11:55 a.m.** Formal and Informal Mixed Model Selection When Data Are Incomplete—◆ Geert Molenberghs, Limburgs Universitair Centrum

**12:15 p.m.** Floor Discussion

**256**

**MCC-102 A**

☆ **Student Paper Award Winners—Topic Contributed**

Section on Statistical Computing, Section on Bayesian Statistical Science, Section on Statistical Graphics

Organizer(s): Jose Pinheiro, Novartis Pharmaceuticals

Chair(s): Jose Pinheiro, Novartis Pharmaceuticals

**10:35 a.m.** Estimation of Antenna Sensitivities for Parallel MRI—◆ Mingyu Cao, Carnegie Mellon University; Victor A. Stenger, University of Pittsburgh; William F. Eddy, Carnegie Mellon University

**10:55 a.m.** Singular Value Decomposition and Its Visualization—◆ Lingsong Zhang, The University of North Carolina at Chapel Hill; James Marron, The University of North Carolina at Chapel Hill; Haipeng Shen, The University of North Carolina at Chapel Hill; Zhengyuan Zhu, The University of North Carolina at Chapel Hill

**11:15 a.m.** Fully Bayesian Computing—◆ Jouni Kerman, Columbia University; Andrew Gelman, Columbia University

**11:35 a.m.** Adaptive Exploration of Computer Experiment Parameter Spaces—◆ Robert B. Gramacy, University of California, Santa Cruz; Herbert Lee, University of California, Santa Cruz; William G. Macready, NASA Ames Research Center

**11:55 a.m.** Disc: Fei Chen, Fair Isaac Corporation

**12:10 p.m.** Floor Discussion

**257**

**MCC-200 I**

● ☆ **Statistical Issues in Medical Devices Studies—Topic Contributed**

Biopharmaceutical Section, WNAR

Organizer(s): Roseann White, Guidant Corporation; Gregory Campbell, U.S. Food and Drug Administration

Chair(s): Charles Rowland, Celera Diagnostics

**10:35 a.m.** The Design of the VA/NINDS Randomized Clinical Trial of Deep Brain Stimulation for Treatment of Parkinson's Disease—◆ Domenic Reda, U.S. Department of Veterans Affairs; Kwan Hur, U.S. Department of Veterans Affairs; Kenneth Follett, University of Nebraska Medical Center; Frances Weaver, VA Hospital; Matthew Stern, VA Medical Center; Crystal Harris, VA Medical Center

**10:55 a.m.** Normal Approximation to Binomial Distribution for Sample Size and Power Calculation in Equivalence Trials—◆ Bipasa Biswas, U.S. Food and Drug Administration

**11:15 a.m.** Comparison of Two Randomized Experimental Designs—◆ Kyunghee Song, U.S. Food and Drug Administration; Kyung Lee, U.S. Food and Drug Administration

**11:35 a.m.** Disc: Philip Lavin, Averion, Inc.

**11:55 a.m.** Floor Discussion

**258****MCC-103 A**

● ☆ **Bayesian Sample Size and Test—Topic Contributed**  
**Section on Bayesian Statistical Science, Biopharmaceutical Section**

Organizer(s): *Cyr Emile M'Lan, University of Connecticut*

Chair(s): *Feng Liang, Duke University*

**10:35 a.m.** Bayesian Sample Size Determination for Case-control Studies—◆ Cyr Emile M'Lan, University of Connecticut

**10:55 a.m.** Bayesian Sample Size Computations in Longitudinal Models—◆ Robert Weiss, University of California, Los Angeles; Wang Yan, Amylin Pharmaceuticals

**11:15 a.m.** A Simulation-based Approach to Bayesian Sample Size Determination: Examples and Issues—◆ Fei Wang, Boston University

**11:35 a.m.** Testing Equality of Two Functions Using BARS—◆ Sam Behseta, California State University, Bakersfield; Robert E. Kass, Carnegie Mellon University

**11:55 a.m.** Designing Studies Involving Nongold Standard Diagnostic Tests—◆ Nandini Dendukuri, McGill University; Elham Rahme, McGill University; Patrick Belisle, McGill University; Lawrence Joseph, McGill University

**12:15 p.m.** Floor Discussion

**259****MCC-102 E**

● ☆ **Bayesian Student Competition Papers (Biological Applications)—Topic Contributed**

**Section on Bayesian Statistical Science, WNAR, Biometrics Section**

Organizer(s): *Ming-Hui Chen, University of Connecticut*

Chair(s): *Hal Stern, University of California, Irvine*

**10:35 a.m.** Detecting Patterns of Natural Selection in DNA Sequences Using Bayesian Generalized Linear Models—◆ Daniel Merl, University of California, Santa Cruz; Raquel Prado, University of California, Santa Cruz

**10:55 a.m.** Exploratory Bayesian Model Selection for High-order SNP-phenotype Associations—◆ Jing Zhao, Merck & Co., Inc.; Andrea S. Foulkes, University of Massachusetts; Edward I. George, University of Pennsylvania; Muredach Reilly, University of Pennsylvania; Daniel J. Rader, University of Pennsylvania

**11:15 a.m.** Ranking USRDS Provider-specific SMRs from 1998–2001—◆ Rongheng Lin, Johns Hopkins University; Thomas A. Louis, Johns Hopkins University; Susan M. Paddock, RAND Corporation; Greg Ridgeway, RAND Corporation

**11:35 a.m.** Modeling Spatially Correlated Data for Individuals with Multiple Cancers—◆ Ulysses Diva, University of Connecticut; Sudipto Banerjee, University of Minnesota; Dipak Dey, University of Connecticut

**11:55 a.m.** Metropolis Algorithms for Finding Ecological/Environmental Relationships—◆ David Farrar, Virginia Polytechnic Institute and State University

**12:15 p.m.** Floor Discussion

**260****MCC-208 C**

**The Continual Maintenance of the U.S. Census Bureau's Address List—Topic Contributed**

**Section on Government Statistics, Social Statistics Section**

Organizer(s): *Maryann Chapin, U.S. Census Bureau*

Chair(s): *David L. Hubble, U.S. Census Bureau*

**10:35 a.m.** Evaluating Net Coverage on the Census Bureau's Master Address File Using Independent Housing Unit Estimates—◆ Christopher Johns, U.S. Census Bureau

**10:55 a.m.** Deciphering the DSF: Which Addresses from the Delivery Sequence File Should Be Included in the Sampling Frames for Demographic Surveys?—◆ Clifford L. Loudermilk, U.S. Census Bureau; Timothy Lynn Kennel, U.S. Census Bureau

**11:15 a.m.** Updating the Master Address File: Analysis of Adding Addresses via the Community Address Updating System—◆ Jared Dean, U.S. Census Bureau

**11:35 a.m.** Comparing the U.S. Census Bureau's Master Address File (MAF) to the Survey of Income and Program Participation Area Listings—◆ Timothy Lynn Kennel, U.S. Census Bureau; Marjorie M. Corlett, U.S. Census Bureau

**11:55 a.m.** Quality and Coverage of Listings for Area Sampling—◆ Jeffrey M. Pearson, U.S. Census Bureau

**12:15 p.m.** Floor Discussion

**261****MCC-202 AB**

● ☆ **Recent Development in Sufficient Dimension Reduction—Topic Contributed**

**Biometrics Section, WNAR**

Organizer(s): *Xiangrong Yin, University of Georgia*

Chair(s): *Lexin Li, University of California, Davis*

**10:35 a.m.** Hybrid Methods of Inverse Regression-based Algorithms—◆ Lixing Zhu, The University of Hong Kong

**10:50 a.m.** Shrinkage in Sufficient Dimension Reduction—◆ Liqiang Ni, University of Central Florida; R. D. Cook, University of Minnesota; Chih-Ling Tsai, University of California, Davis

**11:15 a.m.** K-means Inverse Regression—◆ Messan Setodji, RAND Corporation

**11:35 a.m.** Transformation Methods for Dimension Reduction—◆ Shaoli Wang, Yale University; Bing Li, The Pennsylvania State University

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**11:55 a.m.** **Mixed Factors Analysis with the Application to Clustering of DNA Microarray Experiments—**  
◆ Ryo Yoshida, Institute of Statistical Mathematics; Tomoyuki Higuchi, Institute of Statistical Mathematics; Seiya Imoto, University of Tokyo

**12:05 p.m.** Floor Discussion

## **262** **MCC-208 D** **\* Disclosure Techniques: Thirty Years to Today—Topic Contributed**

**Section on Government Statistics, Social Statistics Section, Section on Survey Research Methods**

*Organizer(s): Steve Cohen, Bureau of Labor Statistics*

*Chair(s): Arnold Reznak, U.S. Census Bureau*

**10:35 a.m.** **An Update on Statistical Disclosure Avoidance Methodologies for Tabular and Microdata Files—**  
◆ Jacob Bournazian, Energy Information Administration

**10:55 a.m.** **A Comparative Assessment of Methods for Protecting Confidentiality—**◆ David Wilson, RTI International

**11:15 a.m.** **Preserving Confidentiality While Sharing Vertically Partitioned Data—**◆ Christine Kohnen, Duke University; Jerome Reiter, Duke University

**11:35 a.m.** **Modeling and Quality of Masked Microdata—**◆ William Winkler, U.S. Census Bureau

**11:55 a.m.** **Procedures To Reduce the Risk of Disclosure in the Microdata Files from a Health Survey—**◆ Meena Khare, National Center for Health Statistics; Michael Battaglia, Abt Associates, Inc.

**12:15 p.m.** Floor Discussion

## **263** **MCC-208 B** **\* ☆ Statistical Methodological Developments in Natural Resources Surveys—Topic Contributed**

**Section on Survey Research Methods, Section on Statistics and the Environment**

*Organizer(s): Michael D. Larsen, Iowa State University*

*Chair(s): Jennifer A. Hoeting, Colorado State University*

**10:35 a.m.** **Estimating Trend in Oregon Coastal Coho Salmon Populations Using a Multipanel Sampling Design—**  
◆ Don Stevens, Jr., Oregon State University; William Gaeuman, Oregon State University

**10:55 a.m.** **County-level Estimates of Cover and Crop Management Factor for the National Resources Inventory—**◆ Pushpal Mukhopadhyay, Iowa State University; Tapabrata Maiti, Iowa State University; Wayne A. Fuller, Iowa State University

**11:15 a.m.** **Estimation for Longitudinal Surveys with Repeated Panels of Observations—**◆ Jason C. Legg, Iowa State

University; Wayne A. Fuller, Iowa State University; Sarah Nusser, Iowa State University

**11:35 a.m.** **Estimating the Number of Bald Eagle Breeding Pairs in Maine Using Dual Frames and Double Observers—**  
◆ Mark Otto, U.S. Fish and Wildlife Service; John R. Sauer, U.S. Geological Survey; Charlie Todd, Maine Department of Fisheries & Wildlife

**11:55 a.m.** **Challenges to Resolving Statistical Issues for an Upper Mississippi River Ecological Monitoring Program—**  
◆ Brian Gray, U.S. Geological Survey

**12:15 p.m.** Floor Discussion

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Topic Contributed Panels 10:30 a.m.–12:20 p.m.

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## **264** **MCC-103 D** **Nuts and Bolts of Classroom Assessment—Topic Contributed**

**Section on Statistical Education**

*Organizer(s): Joy Jordan, Lawrence University*

*Chair(s): Joy Jordan, Lawrence University*

**Panelists:** ◆ E. Jacquelin Dietz, Meredith College  
◆ Robert Gould, University of California, Los Angeles  
◆ Brad Hartlaub, Kenyon College  
◆ Allan J. Rossman, California Polytechnic State University

**12:15 p.m.** Floor Discussion

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Regular Contributed Sessions 10:30 a.m.–12:20 p.m.

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## **265** **MCC-212 AB** **Modeling, Inference, and Monte Carlo Methods—Contributed**

**IMS, Section on Bayesian Statistical Science**

*Chair(s): Patricia Carter, Naval Surface Warfare Center, Dahlgren Division*

**10:35 a.m.** **Filtering with a Marked Point Process Observation: Applications to the Econometrics of Ultra-high-frequency Data—**◆ Yong Zeng, University of Missouri, Kansas City

**10:50 a.m.** **Inference for Very Heavy-tailed Distributions Using Trimmed L-moments—**◆ J. R. M. Hosking, IBM

**11:05 a.m.** **Monte Carlo Methods for Maximizing Intractable Likelihood Functions—**◆ Ronald Neath, University of Minnesota; Galin Jones, University of Minnesota

**11:20 a.m.** **New Perfect Sampling Algorithms with Applications to Bayesian Computations, Engineering, and Finance**—  
◆ Jose Blanchet, Harvard University; Peter W. Glynn, Stanford University; Xiao-Li Meng, Harvard University

**11:35 a.m.** **Hierarchical Bayesian Analysis of Genetic Diversity in Geographically Structured Populations**—◆ Seongho Song, University of Connecticut; Dipak Dey, University of Connecticut; Kent E. Holsinger, University of Connecticut

**11:50 a.m.** **Online Learning of Dynamic Graphical Models via Particle Filters**—◆ Makram Talih, Hunter College, CUNY

**12:05 p.m.** Floor Discussion

## **266** **MCC-200 H**

### ● **PK, Bayesian, and Metaanalysis—Contributed**

**Biopharmaceutical Section, Section on Bayesian Statistical Science, WNAR**

*Chair(s): Robert A. Smith, Bristol-Myers Squibb Company*

**10:35 a.m.** **Statistical Evaluation of Two-compartment Mathematical Models for Prediction of Parasite Clearance in Cerebral Malaria**—◆ Wayne Chen, Minnesota State University Moorhead; Christine McLaren, University of California, Irvine; Wen-Pin Chen, Chao Family Comprehensive Cancer Center; Sornchai Looareesuwan, Mahidol University; Gary M. Brittenham, Columbia University

**10:50 a.m.** **Comparison of Models for Average Bioequivalence in Replicated Crossover Designs**—◆ Susan Willavize, Pfizer, Inc.; Elizabeth A. Morgenthien, The Quincunx Group

**11:05 a.m.** **Bayesian Inference for Nonlinear Models Involving ODEs**—◆ Lovely Goyal, North Carolina State University; Sujit K. Ghosh, North Carolina State University

**11:20 a.m.** **Use of Prior Distributions for Bayesian Evaluation of Bridging Studies**—◆ Chinfu Hsiao, National Health Research Institutes; Jen-Pei Liu, National Taiwan University; Yu-Yi Hsu, National Health Research Institutes

**11:35 a.m.** **A Range Test for Bioequivalence under Heteroscedasticity**—◆ Shun-Yi Chen, Tamkang University

**11:50 a.m.** **A Bayesian Pharmacokinetic Metaanalysis for Published Sample Mean Data: a Ketoconazole-Midazolam Example in Drug-drug Interaction Research**—◆ Lang Li, Indiana University; Menggang Yu, Indiana University; Aroonrut Luksiri, Indiana University; Stephen D. Hall, Indiana University

**12:05 p.m.** **New Advances in Metaanalysis**—◆ Ehsanes A. K. Saleh, Carleton University; Khatab Hassanein, University of Kansas Medical Center; Ruth Hassanein, University of Kansas Medical Center; H. M. Kim, University of Alberta

## **267** **MCC-103 B**

### **Financial Time-series Models—Contributed** **Business and Economics Statistics Section**

*Chair(s): Lawrence Marsh, University of Notre Dame*

**10:35 a.m.** **Semiparametric Estimation of a Multivariate Distribution Using Copulas When Each Variable Satisfies a Regression Model**—◆ Mervyn Silvapulle, Monash University; Gunky Kim, Monash University; Paramsothy Silvapulle, Monash University

**10:50 a.m.** **Nonparametric Estimation of Volatility Models with Serially Dependent Innovations**—◆ Michael Levine, Purdue University; Christian M. Dahl, Purdue University

**11:05 a.m.** **Gaussian Approximations of Option Prices in Stochastic Volatility Models**—◆ Yichao Wu, The The University of North Carolina at Chapel Hill; Chuanshu Ji, The The University of North Carolina at Chapel Hill

**11:20 a.m.** **The Dynamics of the London Gold Fix Volatility: an APARCH Analysis**—◆ Stephen Pollard, California State University, Los Angeles; Giorgio Canarella, California State University, Los Angeles

**11:35 a.m.** **Option Pricing and Hedging for Stock Prices with Discrete Jumps and Stochastic Intensity Rate**—  
◆ Rituparna Sen, University of California, Davis

**11:50 a.m.** **Modeling the Dynamic Dependence Structure in Multivariate Financial Time Series**—◆ Mihaela Serban, Carnegie Mellon University; John Lehoczky, Carnegie Mellon University; Anthony E. Brockwell, Carnegie Mellon University; Sanjay Srivastava, Carnegie Mellon University

**12:05 p.m.** Floor Discussion

## **268** **MCC-211 D**

### **Regression I—Contributed** **Section on Nonparametric Statistics**

*Chair(s): Ionut Florescu, Stevens Institute of Technology*

**10:35 a.m.** **Optimal Sufficient Dimension Reduction of Predictors and Responses for the Multivariate Conditional Mean**—◆ Jae Keun Yoo, University of Minnesota

**10:50 a.m.** **A Test for the Linear Single-index Model**—  
K. B. Kulasekera, Clemson University; ◆ Wei Lin, Clemson University

**11:05 a.m.** **A New Method for Partial Sufficient Dimension Reduction by Using Intraslice Information**—◆ Xuerong Wen, University of Minnesota

**11:20 a.m.** **Generalization of Cook's Distance to Nonlinear and Nonparametric Regressions**—◆ Yongwu Shao, University of Minnesota

**11:35 a.m.** Testing for Nonlinearity in Censored Median Regression Model When the Alternative Is Smooth—◆ Lan Wang, University of Minnesota

**11:50 a.m.** Dimension Estimation and Variable Selection via Sufficient Dimension Reduction—◆ Douglas Drake, University of Minnesota

**12:05 p.m.** Tutorial on Regression Splines—◆ Jill McCracken, Booz Allen Hamilton; Pier Bobys, Booz Allen Hamilton; Yasmin Said, George Mason University; Carlos Alzola

## 269 **MCC-209 AB**

### ● **Part I: Sample Allocation; Part II, NCS Redesign—Contributed**

#### Section on Survey Research Methods

*Chair(s): Yahia Ahmed, U.S. Internal Revenue Service*

**10:35 a.m.** Results of the Variance Component Analysis of Sample Allocation by Age in the National Survey of Drug Use and Health—◆ Susan Hunter, RTI International; Katherine Bowman, RTI International; James Chromy, RTI International

**10:50 a.m.** Alternative Sample Allocations for the U.S. Current Employment Statistics Survey—◆ Gregory Erkens, Bureau of Labor Statistics; Larry L. Huff, Bureau of Labor Statistics; Julie B. Gershunskaya, Bureau of Labor Statistics

**11:05 a.m.** Composite Stratum Variance Estimation for Agriculture Area Frame Sample Allocation—◆ Raj Chhikara, University of Houston, Clear Lake; Charles R. Perry, National Agricultural Statistics Service; Floyd M. Spears, Harding University

**11:20 a.m.** Efficient Sampling Design and Estimation in Audit Data (II)—◆ Yan Liu, Ernst & Young LLP; Mary Batchler, Ernst & Young LLP; Fritz J. Scheuren, The University of Chicago

**11:35 a.m.** Phase-in of the Redesign of the National Compensation Survey Area Sample—◆ Jason Tehonica, Bureau of Labor Statistics; Lawrence R. Ernst, Bureau of Labor Statistics; Chester H. Ponikowski, Bureau of Labor Statistics

**11:50 a.m.** Update on the Redesign of the National Compensation Survey—◆ Yoel Izsak, Bureau of Labor Statistics; Lawrence R. Ernst, Bureau of Labor Statistics; Erin McNulty, Bureau of Labor Statistics; Steven P. Paben, Bureau of Labor Statistics; Chester H. Ponikowski, Bureau of Labor Statistics; Glenn Springer, Bureau of Labor Statistics; Jason Tehonica, Bureau of Labor Statistics

**12:05 p.m.** Reducing Sample Sizes in the National Compensation Survey in Response to Budget Cuts—◆ Christopher J. Guciaro, Bureau of Labor Statistics; Lawrence R. Ernst, Bureau of Labor Statistics; Gwyn R. Ferguson, Bureau of Labor Statistics; Yoel Izsak, Bureau of Labor Statistics; Erin McNulty, Bureau of Labor Statistics

## 270 **MCC-102 B**

### **Nonparametrics/Robust Methods—Contributed**

#### General Methodology, Section on Nonparametric Statistics

*Chair(s): Jing Cheng, University of Pennsylvania*

**10:35 a.m.** Reweighting the Lasso—◆ Peter Radchenko, The University of Chicago

**10:50 a.m.** Lasso, MR-Lasso, and RA-Lasso—◆ Chih-Ling Tsai, University of California, Davis

**11:05 a.m.** Nonparametric Regression Using Kernel Estimating Equations for Correlated Failure Time Data—◆ Zhangsheng Yu, University of Michigan; Xihong Lin, Harvard University

**11:20 a.m.** ANOVA Boosting—◆ Yongdai Kim, Seoul National University; Jinseog Kim, Seoul National University

**11:35 a.m.** Resampling Spatial Processes Using Marks—◆ Ji Meng Loh, Columbia University

**11:50 a.m.** A Self-building System for Ranked Set Sampling—◆ Tao Yu, University of Cincinnati; Ran He, University of Cincinnati; Marepalli Rao, University of Cincinnati

**12:05 p.m.** Assessing Isotropy for Spatial Point Patterns—◆ Michael Sherman, Texas A&M University

## 271 **MCC-102 F**

### ● ☆ **Recent Development in Bayesian Model Checking, Comparison, and Selection—Contributed**

#### Section on Bayesian Statistical Science

*Chair(s): Lan Huang, National Cancer Institute*

**10:35 a.m.** IRT Model-checking Strategies from a Bayesian Perspective—◆ Sherwin Toribio, Bowling Green State University; James Albert, Bowling Green State University

**10:50 a.m.** Accuracy Comparison of State Estimation and Parameter Identification by Particle and Ensemble Kalman Filters for Nonlinear Observation System—◆ Kazuyuki Nakamura, The Institute of Statistical Mathematics; Tomoyuki Higuchi, Institute of Statistical Mathematics

**11:05 a.m.** A Partition Model for Bayesian Multiple Comparisons—◆ Jie Yang, The University of Chicago; Peter McCullagh, The University of Chicago

**11:20 a.m.** Estimation and Model Choice in Nonparametric Additive Regression—◆ Ivan Jeliazkov, University of California, Irvine; Siddhartha Chib, Washington University in St. Louis

**11:35 a.m.** A Bayesian Inference of Key Comparisons with Unstable Traveling Standards: with Applications to CCM.M-K1—◆ Hung-Kung Liu, National Institute of Standards and Technology; Zeina Jabbour, National Institute of Standards and Technology

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# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

- 11:50 a.m.** Bayesian Variable Selection for the Analysis of High-dimensional Censored Data—◆ Najjun Sha, The University of Texas at El Paso; Mahlet G. Tadesse, University of Pennsylvania; Marina Vannucci, Texas A&M University

**12:05 p.m.** Floor Discussion

## **272** **MCC-103 E**

### ● **Issues and Methods of Program and Course Development in Teaching Statistics for the Health Sciences—Contributed**

**Section on Teaching Statistics in the Health Sciences, Section on Statistical Education**

*Chair(s): Patrick G. Arbogast, Vanderbilt University*

- 10:35 a.m.** Using an Empirical Problem-solving Framework as a Basis for a Research Methods Short Course Curriculum—◆ Rhonda Rosychuk, University of Alberta
- 10:50 a.m.** Using Item Response Theory and an Anchor Item Test Design To Develop Local Test Score Norms and Content Evaluations for an Introductory Biostatistics Course—◆ Gerald Arnold, American College of Physicians
- 11:05 a.m.** Experience of Using Stata Software in Teaching an Introductory Biostatistics Course for MSc Nutrition Students from 2002–2004—◆ Novie Younger, University of the West Indies; Ian Hambleton, NIMR/AMREF/LSHTM Collaborative Projects; Kadene Clarke, University of the West Indies; Christine Powell, University of the West Indies
- 11:20 a.m.** Integration of Advanced Statistical Topics into the Graduate Dental Curriculum—◆ Deborah V. Dawson, The University of Iowa
- 11:35 a.m.** Transdisciplinary Approaches to the Teaching of 'Applied' Statistics: 'Similar Strokes for Different Folks'—◆ Mark C. Fulcomer, Richard Stockton College of New Jersey; Jennifer Lyke, Richard Stockton College of New Jersey; Merydawilda Colon, Richard Stockton College of New Jersey; Marcia M. Sass, UMDNJ School of Public Health; S. David Kriska, Restat Systems, Inc.
- 11:50 a.m.** Teaching the Teacher: an Active-learning Exercise To Train Biostatistics Teaching Assistants—◆ Felicity Boyd Enders, Mayo Clinic; Marie Diener-West, Johns Hopkins University
- 12:05 p.m.** Floor Discussion

## **273** **MCC-205 C**

### ● **Statistical Methodology Applied to the Study of Neighborhoods, Migration, and Immigration—Contributed**

**Social Statistics Section, Section on Survey Research Methods**

*Chair(s): Daniel Beckler, National Agricultural Statistics Service*

- 10:35 a.m.** Experimental Analysis of Neighborhood Effects on Youth—◆ Jeffrey Kling, Princeton University; Jeffrey Liebman, Harvard University
- 10:50 a.m.** Measurement Error of Group-level Means in Multilevel Modeling: Estimation and Study Design—◆ Jouni Kuha, London School of Economics
- 11:05 a.m.** Movers, Stayers, and Lifers: a Structural Equation Analysis of the Likelihood of Spending the Rest of Your Life in Your Current Home Community—Mack C. Shelley, II, Iowa State University; Sue Crull, Iowa State University; Christine Cook, Iowa State University; ◆ Qi Jiang, Iowa State University; Seongyeon Auh, Iowa State University
- 11:20 a.m.** The Migration Component in a Population Projections Model—◆ Charles D. Palit, University of Wisconsin, Madison; David Egan-Robertson, Wisconsin Department of Administration; Balkrishna Kale, University of Wisconsin, Madison; Paul Voss, University of Wisconsin, Madison
- 11:35 a.m.** Difficulties and Solutions for Surveying Refugees: Bosnian Refugees in St. Louis—◆ Hisako Matsuo, St. Louis University; Terry Tomazic, St. Louis University; Kevin McIntyre, St. Louis University
- 11:50 a.m.** Floor Discussion
- ## **274** **MCC-210 AB**
- ### ● **Nonresponse Bias—Contributed**
- Section on Survey Research Methods, Social Statistics Section**
- Chair(s): Inho Park, Westat*
- 10:35 a.m.** Identifying and Reducing Nonresponse Bias throughout the Survey Process—◆ Thomas R. Krenzke, Westat; Leyla Mohadjer, Westat; Wendy Van De Kerckhove, Westat
- 10:50 a.m.** Nonresponse Bias in Surveys of Low-income Households—◆ Karen Masken, U.S. Internal Revenue Service; Kerry Levin, Westat; Cynthia Helba, Westat
- 11:05 a.m.** Bayesian Adjustments for Nonignorable Nonresponse in an Incomplete Two-way Categorical Table—◆ Boseung Choi, Korea University; YouSung Park, Korea University
- 11:20 a.m.** An Analysis of Nonresponse Bias in the World Trade Center Health Registry—◆ Joe Murphy, RTI International; Robert Brackbill, New York City Department of Health and Mental Hygiene; James H. Sapp, II, Agency

for Toxic Substances and Disease Registry; Lisa Thalji, RTI International; Paul Pulliam, RTI International

**11:35 a.m.** Enhancement of the Nonresponse Undercoverage Adjustment Factors for New Home Sales—◆ Bonnie Kegan, U.S. Census Bureau

**11:50 a.m.** Spreading the Gain: How an Abbreviated Nonresponse Follows Up Can Improve Overall Survey Accuracy—  
◆ Vincent Iannacchione, RTI International; Jill Dever, Joint Program in Survey Methodology; Elizabeth Federman, RTI International; Lori Ebert, RTI International; Avinash C. Singh, Statistics Canada

**12:05 p.m.** Floor Discussion

## **275** **MCC-205 B** **Model Building, Model Assessment, and Propensity Score-based Methods—Contributed**

**Section on Statistics in Epidemiology, ENAR, Biometrics Section**

*Chair(s): Zheng Zhang, Emory University*

**10:35 a.m.** Hybrid Matching in Observational Studies: Combining Simple Matching with Propensity Score-based Matching Methods—◆ Daniel Parks, GlaxoSmithKline; Kwan R. Lee, GlaxoSmithKline; Bong Kim, Newmann College

**10:50 a.m.** Raking as a Form of Propensity Scoring—◆ David R. Judkins, Westat

**11:05 a.m.** Simplifying Measurement of Cardiovascular Risk in Urban Jamaica: the Role of Multivariate Methods—  
◆ Tamika Royal, University of the West Indies; Novie Younger, University of the West Indies; Terrence Forrester, University of the West Indies; Richard Cooper, Loyola University Medical Center; Rainford Wilks, University of the West Indies

**11:20 a.m.** Navigating around a Large Statistical Blindspot: Inferring Clinical Outcomes for Undersampled Populations of Orthodontics Cases from Results Sampled from Different Populations—Christopher Overton, Align Technology; ◆ Xiaorong Chen, Align Technology

**11:35 a.m.** Properties of R-square Statistics for Logistic Regression—◆ Bo Hu, University of Wisconsin, Madison; Mari Palta, University of Wisconsin, Madison; Jun Shao, University of Wisconsin, Madison

**11:50 a.m.** A Comparison of Two Models with Full Bayesian Framework for Early Detection of Prostate Cancer—  
◆ Wonsuk Yoo, New Jersey Institute of Technology; Elizabeth Slate, Medical University of South Carolina

**12:05 p.m.** Floor Discussion

## **276** **MCC-211 A**

**◆ Topics in Quality and Productivity—Contributed Section on Quality and Productivity, Section on Physical and Engineering Sciences**

*Chair(s): Sharad Prabhu, SAS Institute, Inc.*

**10:35 a.m.** Using Automation To Improve the Quality of the Nonresponse Followup Operation in the United States Decennial Census—◆ Broderick Oliver, U.S. Census Bureau

**10:50 a.m.** Belief Functions Applied to System Reliability—◆ Wai F. Chiu, Los Alamos National Laboratory; Arthur P. Dempster, Harvard University

**11:05 a.m.** Semiparametric Models with Estimating Equations for Accelerated Life Test Data—J. C. Lu, Georgia Institute of Technology; ◆ Ni Wang, Georgia Institute of Technology; Paul Kvam, Georgia Institute of Technology; Dion Chen, UCB Pharma, Inc.; Shu Chuan Lin, Georgia Institute of Technology

**11:20 a.m.** A Simulation Study To Test the Accuracy of Using Maximum Likelihood Predictive Density in Quality Control Assuming the Power Rule Model and the Exponential Distribution—◆ Adam Pintar, Iowa State University; Ananda A. Jayawardhana, Pittsburg State University

**11:35 a.m.** Analysis of Designs with a Strip-plot Structure—  
◆ Carla A. Vivacqua, Universidade Federal do Rio Grande do Norte; Soren Bisgaard, University of Massachusetts; Harold J. Steudel, University of Wisconsin, Madison

**11:50 a.m.** Floor Discussion

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Regular Contributed Posters 10:30 a.m.–12:20 p.m.

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## **277** **MCC-Level Two Lobby B** **Contributed Poster Session 4—Contributed**

**IMS, General Methodology, Section on Bayesian Statistical Science, Biometrics Section, Biopharmaceutical Section, Section on Statistical Computing, Section on Statistical Consulting, Section on Nonparametric Statistics, Section on Quality and Productivity**

*Organizer(s): Ying Kuen Cheung, Columbia University*

*Chair(s): Ying Kuen Cheung, Columbia University*

**Bayesian Statistics, Hierarchical Models**

**01** Analysis of DNA Repair Studies through Bayesian Hierarchical Models for Mixtures—◆ Abel Rodriguez, Duke University; Dunson David, National Institute of Environmental Health Sciences

**02** Discrete Time Unobserved Components Models—◆ Miguel Alamo, Bayes Inference, S. A.; Miguel Arranz, Bayes Inference, S. A.

## Biometrics, Biostatistics, Epidemiology

- 03** The Probability of Type I Error When Maximizing Multipoint Lod Scores over Model Parameters: a Simulation Study—◆ Chao Xing, Case Western Reserve University; Robert C. Elston, Case Western Reserve University
- 04** Behavior of Agreement Measures in the Presence of Zeroes in Cells and Biased Marginal Distributions—◆ Shankar Viswanathan, The The University of North Carolina at Chapel Hill; Shrikant Bangdiwala, The The University of North Carolina at Chapel Hill
- 05** Inter and Intralaboratory Reproducibility of In Vitro Toxicological Assays—◆ Christina Bromley, BioStat Solutions, Inc.; Nicola Richardson-Harman, BioStat Solutions, Inc.; Brigitte Beer, Southern Research Institute; James Cummins, Southern Research Institute; Carol Lackman-Smith, Southern Research Institute; Ron Bromley, BioStat Solutions, Inc.; Patricia Reichelderfer, National Institutes of Health

## Cognitive Science, Linguistics, Artificial Intelligence

- 06** Semisupervised Machine Learning Technique—◆ Morteza Marzjarani, Saginaw Valley State University

## Computational Statistics and Numerical Methods

- 07** Interval Estimation of a Finite Mixture Model: Modeling a Distribution of P-values—◆ Qinfang Xiang, University of Missouri, Rolla; Gary Gadbury, University of Missouri, Rolla; Jode Edwards, Iowa State University

## General

- 08** Density Power Divergence—◆ Ian Harris, Southern Methodist University

## Genetics, Bioinformatics, Computational Biology

- 09** Multiple Imputation Method for SNP Typing Data in Linkage Disequilibrium Mapping of Polygenic Traits—◆ Yasunori Sato, Tokyo University of Science; Hidekazu Ando, Tokyo University of Science; Akihiro Hirakawa, Tokyo University of Science; Hideki Suganami, Tokyo University of Science; Chikuma Hamada, Tokyo University of Science; Isao Yoshimura, Tokyo University of Science; Teruhiko Yoshida, National Cancer Center Research Institute; Kimio Yoshimura, National Cancer Center Research Institute
- 10** Comparative Heterogeneity by Comparative Correlations—◆ Amanda Blackford, Johns Hopkins University; Jeanne Kowalski, Johns Hopkins University; Jyoti Mehrotra, Johns Hopkins University; Marianna Zahurak, Johns Hopkins University; Saraswati Sukumar, Johns Hopkins University
- 11** Accelerating the EM Algorithm for Haplotype Reconstruction from Population Genotype Data—◆ Hormuzd Katki, National Cancer Institute; Ravi Varadhan, Johns Hopkins University; Christophe Roland, Université des Sciences et Technologies de Lille; Bingshu E. Chen, National Institutes of Health; Philip S. Rosenberg, National Cancer Institute
- 12** The Analysis of Oligonucleotide Microarray Data at the Raw Image Level—◆ Jeff Palmer, Carnegie Mellon University

- 13** Holding the Specified False Discovery Rate in Differential Expression Testing Using the Local Pooled Error Method—Michael O'Connell, Insightful Corp.; ◆ Stephen Kaluzny, Insightful Corp.
- 14** Hierarchical Bayesian Analysis for Temporal Microarray Gene Expression Data—◆ Xueya Cai, University at Buffalo; Yulan Liang, University at Buffalo; Yue Li, University of Rochester
- 15** Modeling Correlated Structures in Sequence Motif Problems—◆ Qing Zhou, Harvard University; Wing Hung Wong, Stanford University

## Linear Models, GLMs, Parametric Methods

- 16** Generalized Confidence Intervals for Variance Components in Mixed Linear Models—◆ Brent Burch, Northern Arizona University
- 17** The General Definition and Utility of Correlation Coefficients—◆ Rudy Gideon, University of Montana
- 18** Building Variance Models for Regression with Heteroscedasticity—◆ Fasil Nebebe, Concordia University; Tak K. Mak, Concordia University
- 19** Comparison between the Lasso and the Parametric Stepwise Selection Methods in the Context of Linear Regression—◆ Won Sun Chen, Clinical Research Center, Ministry of Health Malaysia; Jeremy Nadolski, Benedictine University

## Semiparametric, Nonparametric Methods

- 20** Multiple Comparisons of Medians Using Permutation Tests—◆ Scott J. Richter, University of North Carolina, Greensboro; Melinda McCann, Oklahoma State University
- 21** Sieve Maximum Likelihood in Survival Analysis—◆ Yonggang Zhao, i3 Statprobe; Xiaotong Shen, University of Minnesota; Dennis Pearl, The Ohio State University
- 22** Classification Based on Data Depth—◆ Asuman Turkmen, Auburn University; Sai V. Nudurupati, Auburn University; Asheber Abebe, Auburn University; Nedret Billor, Auburn University

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Speaker Luncheon 12:30 p.m.–1:50 p.m.

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## 278 **MCC-206 AB** Economic Outlook Speaker Luncheon (fee event)— Luncheons

### Business and Economics Statistics Section

Organizer(s): Margaret Land, Texas A&M University

- TL00** Rising Gas Consumption, Rising Temperatures: U.S. Global Warming Policy in the Age of the Sport Utility Vehicle—◆ Sarah E. West, Macalester College

Roundtable Luncheons 12:30 p.m.–1:50 p.m.

## 279 **MCC-Ballroom B** Biopharmaceutical Section Roundtable Luncheons (fee event)—Luncheons

Organizer(s): B. Christine Clark, ICON Clinical Research

- TL01** Longitudinal Data Analysis: Some Practical Recommendations—◆ Devan Mehrotra, Merck Research Laboratories
- TL02** Operational Aspects of Data Monitoring Committees: Industry Perspective—◆ Kannan Natarajan, Bristol-Myers Squibb Company
- TL03** Reliability: Intraclass Correlation between and within Readers in Clinical Trials—◆ Girish Aras, Amgen Inc.
- TL04** Significant Sequence Effect in a Crossover Design—◆ Anna Nevius, U.S. Food and Drug Administration
- TL05** Screening or Diagnostic Imaging Devices: Statistical Assessment of Effectiveness—◆ Harry Bushar, U.S. Food and Drug Administration
- TL06** Careers in Statistics—◆ Katherine Monti, Rho, Inc.
- TL07** Proof of Concept in Exploratory Development—◆ Alfred Balch, Novartis Pharmaceuticals

## 280 **MCC-Ballroom B** Section on Bayesian Statistical Science Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Steven N. MacEachern, The Ohio State University

- TL08** Bayesian Statistics and Marketing—◆ Greg M. Allenby, The Ohio State University

## 281 **MCC-Ballroom B** Section on Government Statistics Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Michael P. Cohen, Bureau of Transportation Statistics

- TL09** Statistical Issues Arising in Transportation—◆ Promod Chandhok, Bureau of Transportation Statistics

## 282 **MCC-Ballroom B** Section on Health Policy Statistics Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Chris Schmid, Tufts New England Medical Center

- TL10** Secondary Data Analysis: Major Health-related Datasets and How To Use Them—◆ Sarah E. Boslaugh, Washington University School of Medicine
- TL11** Statistics as Used in Physician Membership Associations—◆ Ronald Tolleson, American Academy of Family Physicians

- TL12** Longitudinal Data: Basic Concepts—◆ Joseph Cappelleri, Pfizer, Inc.

- TL13** Integrated Survey Designs: Improving Efficiency—◆ Marc Berk, NORC at the University of Chicago; Steven B. Cohen, Agency for Healthcare Research and Quality

## 283 **MCC-Ballroom B** Section on Physical and Engineering Sciences Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Thomas Loughin, Kansas State University

- TL14** The Role of Statistical Science in Understanding Climate Change—◆ Douglas Nychka, National Center for Atmospheric Research

## 284 **MCC-Ballroom B** Section on Quality and Productivity Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Martha Gardner, GE Global Research

- TL15** Coming to Terms with DOE Models—◆ Rob Kelly, Minitab Inc.

## 285 **MCC-Ballroom B** Section on Statistical Graphics Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Juergen Symanzik, Utah State University

- TL16** Data Visualization in GGobi—◆ Deborah Swayne, AT&T Labs-Research

## 286 **MCC-Ballroom B** Section on Statistics and the Environment Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Estelle Russek-Cohen, U.S. Food and Drug Administration

- TL17** International Studies in Environmental Health—◆ Estelle Russek-Cohen, U.S. Food and Drug Administration
- TL18** Setting Environmental Standards—◆ Peter Guttorp, University of Washington

## 287 **MCC-Ballroom B** Section on Survey Research Methods Roundtable Luncheons (fee event)—Luncheons

Organizer(s): David R. Judkins, Westat

- TL19** Bridging the Gap: Moving to the 1997 Standards for Collecting Data on Race and Ethnicity—◆ Jennifer Madans, National Center for Health Statistics
- TL20** Survey Methods in Biostatistics—◆ Julia Bienias, Rush University Medical Center
- TL21** The Second International Conference on Telephone Survey Methodology—◆ Clyde Tucker, Bureau of Labor Statistics

## 288 **MCC-Ballroom B** Social Statistics Section Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Juanita Tamayo Lott, U.S. Census Bureau

- TL22** A Multigenerational Conversation among Statisticians—  
♦ Gladys Reynolds, U.S. Centers for Disease Control and Prevention

## 289 **MCC-Ballroom B** Section on Teaching of Statistics in the Health Sciences Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Janet Tooze, Wake Forest University School of Medicine

- TL23** Integrating Statistical Software into Health Sciences Graduate Courses—♦ Jodi Lapidus, Oregon Health & Science University

## 290 **MCC-Ballroom B** ☆ Section on Statistics in Defense and National Security Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Wendy Martinez, Office of Naval Research

- TL24** Issues in Syndromic Surveillance for Homeland Security—  
♦ Ronald Fricker, Naval Postgraduate School

## 291 **MCC-Ballroom B** Section on Statistical Education Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Paul J. Roback, St. Olaf College

- TL25** Research on the Effect of Technology on Statistical Learning—♦ Monnie McGee, Southern Methodist University
- TL26** K-12 Statistics Is a Key to Career and Life Decisions—  
♦ Arnold Goodman, UCI Center for Statistical Consulting
- TL27** The Second Course in Statistics—♦ Laura Chihara, Carleton College

## 292 **MCC-Ballroom B** Section on Risk Analysis Roundtable Luncheon (fee event)—Luncheons

### Section on Risk Analysis

Organizer(s): Ingo Ruczinski, Johns Hopkins University

- TL28** Risk Assessment for Natural Disasters—♦ Sarah Michalak, Los Alamos National Laboratory

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Special Presentation 2:00 p.m.–3:50 p.m.

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## 293 **MCC-205 A** The ASA Stat Bowl Session 2

### The ASA, ENAR, WNAR, IMS, SSC

Organizer(s): Mark Payton, Oklahoma State University

Chair(s): Mark Payton, Oklahoma State University

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Invited Sessions 2:00 p.m.–3:50 p.m.

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## 294 **MCC-103 F** \* Building Historical Social Science Infrastructure: the Data Integration Projects of the Minnesota Population Center—Invited

### Census Advisory Committee, Business and Economics Statistics Section, Section on Government Statistics, Social Statistics Section

Organizer(s): Michael Davern, University of Minnesota

Chair(s): John Czajka, Mathematica Policy Research, Inc.

- 2:05 p.m.** Challenges of Census Data Harmonization: the Integrated Public Use Microdata Series—♦ Matthew Sobek, University of Minnesota
- 2:30 p.m.** Minnesota Population Center Data Integration Projects—  
♦ Steven Ruggles, University of Minnesota
- 2:55 p.m.** Creating New Historical Census Samples from Manuscript Records—♦ Ronald Goeken, University of Minnesota
- 3:20 p.m.** Bridging the Gaps: Dealing with Major Survey Changes in Dataset Harmonization—♦ Michael Davern, University of Minnesota; Miriam King, University of Minnesota
- 3:45 p.m.** Floor Discussion

## 295 **MCC-200 F** \* Recent Advances in Bayesian Reliability—Invited Section on Quality and Productivity, SPAIG Committee, Section on Bayesian Statistical Science, Section on Physical and Engineering Sciences

Organizer(s): Ramon V. Leon, University of Tennessee

Chair(s): William Q. Meeker, Iowa State University

- 2:05 p.m.** Bayesian Modeling of Accelerated Life Tests with Random Effects—♦ Ramon V. Leon, University of Tennessee; Avery J. Ashby, BlueCross BlueShield; Jayanth Thyagarajan, Comscore Networks, Inc.; Jun Ding, University of Tennessee

**2:30 p.m.** Bayesian Reliability Analysis for Complex Systems—  
◆ Alyson Wilson, Los Alamos National Laboratory;  
Gregory Wilson, Los Alamos National Laboratory; Laura  
McNamara, Sandia National Laboratories

**2:55 p.m.** A Hierarchical Model for the Reliability of an Antiaircraft  
Missile System Based on Lifetime Data—◆ C. Shane  
Reese, Brigham Young University

**3:20 p.m.** Disc: David Mease, University of California, Berkeley

**3:40 p.m.** Floor Discussion

## 296 MCC-103 E

### ☆ ☆ Women in Statistics: Working To Improve Human Well-being—Invited

Committee on Women in Statistics, Business and  
Economics Statistics Section, Social Statistics  
Section, The Caucus for Women in Statistics

Organizer(s): Elizabeth Margosches, U.S. Environmental Protection  
Agency

Chair(s): Amita K. Manatunga, Emory University

**2:05 p.m.** Delivering Societal Benefits: the Advanced  
Technology Program—◆ Stephanie Shipp, National  
Institute of Standards and Technology; Jeanne Powell, National  
Institute of Standards and Technology

**2:30 p.m.** Semiparametric Regression for High-dimensional Data  
with Applications in Microarrays: Least Square Kernel  
Machines and Linear Mixed Models—◆ Xihong Lin,  
Harvard University; Dawei Liu, University of Michigan; Debashis  
Ghosh, University of Michigan

**2:55 p.m.** The Changing Role of Statistics in Medical Research:  
Experiences from the Past and Directions for the  
Future—◆ Judith D. Goldberg, New York University School  
of Medicine

**3:20 p.m.** Methods for Validation Sets for Outcomes in Changing  
Temporal Conditions—◆ M. Elizabeth Halloran, Emory  
University

**3:45 p.m.** Floor Discussion

## 297 MCC-205 D

### Seymour Geisser Memorial Session—Invited Memorial, WNAR, Section on Bayesian Statistical Science, Biometrics Section

Organizer(s): Wes Johnson, University of California, Davis

Chair(s): Wes Johnson, University of California, Davis

**2:05 p.m.** The Life and Times of Seymour Geisser: a Subjective  
Interpretation—◆ Ronald Christensen, The University of  
New Mexico

**2:30 p.m.** The Limits of Prediction: Ontological Uncertainty and  
Action—◆ David A. Lane, University of Modena and Reggio  
Emilia

**2:55 p.m.** Some Recent Perspectives on a Classical Prediction  
Problem—◆ Morris L. Eaton, University of Minnesota

**3:20 p.m.** Seymour Geisser: a Multivariate Statistician (1929–  
2004)—◆ S. James Press, University of California, Riverside

**3:45 p.m.** Floor Discussion

## 298 MCC-201 AB

### Issues in Semisupervised Learning—Invited IMS

Organizer(s): Ji Zhu, University of Michigan

Chair(s): Ji Zhu, University of Michigan

**2:05 p.m.** Unlabeled Data in Statistical Language Processing—  
◆ David D. Lewis, David D. Lewis Consulting & Ornarose, Inc.

**2:35 p.m.** Learning Functional Structures from Multiple Tasks and  
Unlabeled Data—◆ Tong Zhang, IBM; Rie Ando, IBM

**3:05 p.m.** Inferring Label Sampling Mechanisms and Automatic  
Bayes Carpentry Using Unlabeled Data—◆ Hui Zou,  
Stanford University; Saharon Rosset, IBM; Ji Zhu, University of  
Michigan; Trevor Hastie, Stanford University

**3:35 p.m.** Floor Discussion

## 299 MCC-200 G

### Nonparametric Approaches to Learning in Computer Vision and Image Understanding—Invited Section on Nonparametric Statistics, Section on Statistical Graphics

Organizer(s): Eric Chicken, Florida State University

Chair(s): Anuj Srivastava, Florida State University

**2:05 p.m.** Algorithms for Nonparametric Inference on Shape  
Manifolds—◆ Victor Patrangenaru, Texas Tech University;  
Ananda Bandulasiri, Texas Tech University

**2:30 p.m.** Small Sample pmf Estimation and an Application to  
Language Modeling—◆ Bruno M. Jedynek, Johns  
Hopkins University

**2:55 p.m.** Lookup Table Decision Trees for Real-time Pattern  
Recognition—◆ Xiuwen Liu, Florida State University

**3:20 p.m.** Nonparametric and Information Theoretic Approaches  
for Sensor Resource Management—◆ John W. Fisher,  
Massachusetts Institute of Technology; Jason L. Williams,  
Massachusetts Institute of Technology; Alan S. Wilsky,  
Massachusetts Institute of Technology

**3:45 p.m.** Floor Discussion

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**300** **MCC-208 B**

**Sampling Issues in Risk Factor Studies—Invited**  
Section on Statistics in Epidemiology, Section on Survey Research Methods, WNAR

Organizer(s): *Jaya Satagopan, Memorial Sloan-Kettering Cancer Center*

Chair(s): *Jaya Satagopan, Memorial Sloan-Kettering Cancer Center*

- 2:05 p.m.** Quantitative Trait Mapping Study Design from an Information Perspective—◆ Saunak Sen, University of California, San Francisco; Jaya Satagopan, Memorial Sloan-Kettering Cancer Center; Gary Churchill, The Jackson Laboratory
- 2:30 p.m.** ‘Strata-matched Case Control Study’ or Just a ‘Stratified Analysis’: the Confusion of Naming—◆ Madhu Mazumdar, Weill Medical College of Cornell University
- 2:55 p.m.** Sampling Issues in Human Quantitative Trait Locus Mapping—◆ Eleanor Feingold, University of Pittsburgh
- 3:20 p.m.** Case-control Studies When Case Participants and Control Participants Have Different Numbers of Exposure Measurements—◆ Glen A. Satten, U.S. Centers for Disease Control and Prevention; Dana Flanders, Emory University
- 3:45 p.m.** Floor Discussion

**301** **MCC-205 C**

**Nearest Neighbor Estimation Techniques for Environmental Applications—Invited**  
Section on Statistics and the Environment, WNAR

Organizer(s): *Ronald E. McRoberts, USDA Forest Service*

Chair(s): *Ronald E. McRoberts, USDA Forest Service*

- 2:05 p.m.** Predictive Mapping of Forest Composition and Structure with Direct Gradient Analysis and Nearest-neighbor Imputation for Regional Policy Analysis and Ecological Research—◆ Janet L. Ohmann, USDA Forest Service
- 2:35 p.m.** Exact Bagging k-NN Predictors of Continuous Variables—◆ David Patterson, University of Montana; Brian Steele, University of Montana
- 3:05 p.m.** Use of Canonical Regression in Most Similar Neighbor Inference Evaluated by Partitioning Imputation Error—◆ Nicholas L. Crookston, Rocky Mountain Research Station; ◆ Albert R. Stage, Rocky Mountain Research Station
- 3:35 p.m.** Floor Discussion

**302** **MCC-102 D**

● **Geographic Information Systems and Survey Research—Invited**  
Section on Survey Research Methods, Social Statistics Section, Section on Statistical Graphics

Organizer(s): *Edward M. English, NORC at the University of Chicago*

Chair(s): *Andrea G. Johnson, U.S. Census Bureau*

- 2:05 p.m.** TIGER: a Resource for Survey Research—◆ Robert A. LaMacchia, U.S. Census Bureau
- 2:30 p.m.** Computer-assisted Methods for Collecting Geographic Data Using Photographic Backdrops—◆ Sarah Nusser, Iowa State University
- 2:55 p.m.** Using GIS To Improve Field Interviewing Efficiency: Enhanced Interviewer Selection and Sample Allocation—◆ Edward M. English, NORC at the University of Chicago; Steven Pedlow, NORC at the University of Chicago
- 3:20 p.m.** Disc: David Blough, University of Wisconsin, Madison
- 3:40 p.m.** Floor Discussion

**303** **MCC-205 B**

● ☆ **The Generalized Method of Moments, Estimating Functions, and Empirical Likelihoods—Invited**  
IMS, Section on Nonparametric Statistics, ENAR, Business and Economics Statistics Section, Biometrics Section

Organizer(s): *Annie Qu, Oregon State University*

Chair(s): *Runze Li, The Pennsylvania State University*

- 2:05 p.m.** GMM and Estimating Functions in Longitudinal Data—◆ Annie Qu, Oregon State University
- 2:35 p.m.** Estimating Equations for Marginal Regression Analysis of Longitudinal Data with Time-dependent Covariates—◆ Dylan Small, The University of Pennsylvania; Tze L. Lai, Stanford University
- 3:05 p.m.** Many Weak Moment Asymptotics for Generalized Empirical Likelihood Estimators—◆ Whitney Newey, Massachusetts Institute of Technology
- 3:35 p.m.** Floor Discussion

Tuesday

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**304**

**MCC-102 A**

● ☆ **Statistical Computation and Knowledge Distilling in Genomic Research—Invited**

**Section on Statistical Computing, WNAR, Biometrics Section**

*Organizer(s): Ker-Chau Li, University of California, Los Angeles*

*Chair(s): Ker-Chau Li, University of California, Los Angeles*

**2:05 p.m.** Equi-energy Sampling: Exploiting Energy-temperature Duality in Monte Carlo—◆ Wing Hung Wong, Stanford University; Samuel Kou, Harvard University; Qing Zhou, Harvard University

**2:35 p.m.** Statistical Problems in Protein Interaction Networks—◆ Fengzhu Sun, University of Southern California; Ting Chen, University of Southern California

**3:05 p.m.** An Online Integrated System for Genome-wide Coexpression Study by Liquid Association—◆ Shinsheng Yuan, University of California, Los Angeles

**3:35 p.m.** Floor Discussion

**305**

**MCC-200 ABC**

● **Assessing Information in Clinical Trials To Enable Better Development Decisions—Invited**

**Biopharmaceutical Section, WNAR**

*Organizer(s): Brenda L. Gaydos, Eli Lilly and Company*

*Chair(s): Stacy R. Lindborg, Eli Lilly and Company*

**2:05 p.m.** Defining, Evaluating, and Integrating Clinical Success Factors—◆ Brenda L. Gaydos, Eli Lilly and Company

**2:30 p.m.** Utilizing Decision Science to Optimize Clinical Development Plans—◆ David J. Swank, Bristol-Myers Squibb Company

**2:55 p.m.** Probability in Decisionmaking and Bayesian Inference—◆ John Seaman, Baylor University; Stacy R. Lindborg, Eli Lilly and Company

**3:20 p.m.** Disc: Frank C. Shen, Bristol-Myers Squibb Company

**3:40 p.m.** Floor Discussion

**306**

**MCC-212 AB**

☆ **National Systems for Biosurveillance—Invited**

**Section on Statisticians in Defense and National Security**

*Organizer(s): Colin Goodall, AT&T Labs-Research*

*Chair(s): Colin Goodall, AT&T Labs-Research*

**2:05 p.m.** BioSense and the Statistical Challenges of National Biosurveillance—◆ Henry Rolka, U.S. Centers for Disease Control and Prevention

**2:30 p.m.** National Biosurveillance with Electronic Lab Data—◆ Eileen Koski, Quest Diagnostics, Inc.; Colin Goodall, AT&T Labs-Research

**2:55 p.m.** Statistical Management Strategies for Monitoring Multiple Complex Data Sources in ESSENCE Biosurveillance Systems—◆ Howard Burkom, Johns Hopkins University

**3:20 p.m.** Disc: David Madigan, Rutgers, The State University of New Jersey

**3:40 p.m.** Floor Discussion

**307**

**MCC-200 J**

● ☆ **Technometrics Invited Paper Session—Invited**

**Technometrics, Section on Physical and Engineering Sciences, Section on Quality and Productivity**

*Organizer(s): Randy Sitter, Simon Fraser University*

*Chair(s): Randy Sitter, Simon Fraser University*

**2:05 p.m.** Some Simple Data Analytic Tools for Understanding Random Field Regression Models—◆ David M. Steinberg, Tel Aviv University; Dizza Bursztny, Ashkelon College

**2:55 p.m.** Computer Experiments Using Penalized Likelihood in Gaussian Kriging Models—◆ Agus Sudjianto, Bank of America; Runze Li, The Pennsylvania State University

**3:45 p.m.** Floor Discussion

**308**

**MCC-200 DE**

☆ **Survival Analysis in Genetics and Genomics—Invited**

**ENAR, Section on Nonparametric Statistics, Biopharmaceutical Section, WNAR, Biometrics Section**

*Organizer(s): Anastasios A. Tsiatis, North Carolina State University*

*Chair(s): Anastasios A. Tsiatis, North Carolina State University*

**2:30 p.m.** Semiparametric Estimation of Marginal Hazard Functions from Case-control Family Studies—◆ Li Hsu, Fred Hutchinson Cancer Research Center

**2:35 p.m.** Case-control and Case-only Designs with Genotype and Family History Data: Estimating Relative Risk, Cumulative Genotype-specific Risk, and Familial Aggregation—Nilanjan Chatterjee, National Cancer Institute; Zeynep Kalaylioglu, Information Management Services, Inc.; Joanna H. Shih, National Cancer Institute; ◆ Mitchell H. Gail, National Cancer Institute

**2:55 p.m.** Efficient Semiparametric Estimation of Haplotype-disease Associations in Cohort Studies—◆ Danyu Lin, The The University of North Carolina at Chapel Hill; Donglin Zeng, The The University of North Carolina at Chapel Hill

**3:20 p.m.** Disc: David Glidden, University of California, San Francisco

**3:40 p.m.** Floor Discussion

Topic Contributed Sessions 2:00 p.m.–3:50 p.m.

**309** **MCC-208 C**  
**Analyzing Quality-of-life Data in Clinical Trials—Topic Contributed**

Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Andrea B. Troxel, University of Pennsylvania

Chair(s): Daniel Sargent, Mayo Clinic

- 2:05 p.m. Parametric Frailty Models for Quality-of-life in Oncology—◆ Andrea B. Troxel, University of Pennsylvania
- 2:25 p.m. A Comparison of EuroQoL and SF-36 Utilities in End-stage Heart Failure Patients—◆ Huijing Li, Merck & Co., Inc.; Daniel Heitjan, University of Pennsylvania
- 2:45 p.m. Assessing Clinical Significance for Quality-of-life Measures—◆ Jeff Sloan, Mayo Clinic
- 3:05 p.m. Analyses of Short- and Long-term Treatment Effects on Longitudinal Quality of Life—◆ Donna Ankerst, Sylvia Lawry Centre for Multiple Sclerosis Research; Caroline Jiang, The Queen's Medical Center
- 3:25 p.m. Disc: Wayne Weng, Novo Nordisk, Inc.
- 3:45 p.m. Floor Discussion

**310** **MCC-208 D**  
**Verification and Missclassification in Statistics: Applications in Medicine, Meteorology, and Other Fields—Topic Contributed**

Biometrics Section, WNAR

Organizer(s): Matt Pocernich, National Center for Atmospheric Research

Chair(s): Matt Pocernich, National Center for Atmospheric Research

- 2:05 p.m. Skill Curves and ROC Curves for Diagnoses, or Why Skill Curves Are More Fun—◆ William Briggs, Cornell University; Russell Zaretzki, University of Tennessee; David Ruppert, Cornell University
- 2:25 p.m. Goodness-of-fit of Longitudinal Growth Charts—◆ Ying Wei, Columbia University
- 2:45 p.m. Diagnostic Evaluation of Spatial Weather Forecasts Using an Object-based Approach—◆ Barbara Brown, National Center for Atmospheric Research; Randy Bullock, National Center for Atmospheric Research; Christopher Davis, National Center for Atmospheric Research; Eric Gilleland, National Center for Atmospheric Research
- 3:05 p.m. Item Reduction in Screening Scales: a Nonparametric Approach—◆ Xinhua Liu, Columbia University; Zhezheng Jin, Columbia University

3:25 p.m. Disc: Harold Brooks, National Oceanic and Atmospheric Administration

3:45 p.m. Floor Discussion

**311** **MCC-103 B**  
**Quality Issues with Disclosure Techniques: Limitations on Protection, Limitations on Data Utility—Topic Contributed**

Section on Government Statistics, Social Statistics Section

Organizer(s): Steve Cohen, Bureau of Labor Statistics

Chair(s): Barry Johnson, U.S. Internal Revenue Service

- 2:05 p.m. Statistical Disclosure Control of Sensitive Tabular Data by Complementary Cell Suppression: Myth and Reality—◆ Ramesh A. Dandekar, Energy Information Administration
- 2:25 p.m. Comparing Ways of Using 'Protection Flow' To Protect Magnitude Data Tables from Disclosures—◆ Paul B. Massell, U.S. Census Bureau
- 2:45 p.m. Do Disclosure Controls To Protect Confidentiality Degrade the Quality of the Data? Data from the 2002 Trends in Mathematics and Science Study—◆ Steven Kaufman, National Center for Education Statistics; Marilyn Seastrom, National Center for Education Statistics; Shep Roey, Westat
- 3:05 p.m. Assessing Disclosure Risk for the California Health Interview Survey Public Use Files: Practical Considerations and Current Methods—◆ M. Leeann Habte, University of California, Los Angeles; Jenny Chia, University of California, Los Angeles; Hongjian Yu, University of California, Los Angeles; Brandon Traudt, University of California, Los Angeles
- 3:25 p.m. Disc: J. Neil Russell, Bureau of Transportation Statistics
- 3:45 p.m. Floor Discussion

**312** **MCC-211 C**  
**Bayesian Hierarchical Modeling in Biostatistics—Topic Contributed**

Section on Bayesian Statistical Science, Section on Statistics in Epidemiology, Biopharmaceutical Section, WNAR, Biometrics Section

Organizer(s): Catherine Crespi, University of California, Los Angeles

Chair(s): Daniel Gillen, University of California, Irvine

- 2:05 p.m. Hierarchical Density Regression Using the Grid Mixture Model with Spatial Smoothing—◆ Tyson Rogers, University of Minnesota; Robert Weiss, University of California, Los Angeles

Tuesday

**2:25 p.m.** Outlier Detection in Spatially Correlated Longitudinal Data with Application to Glaucoma Progression Identification—◆ Luohua Jiang, University of California, Los Angeles; Gang Li, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles

**2:45 p.m.** Periodontal Disease: a Two-way Random Effects Analysis—◆ Lei Qian, University of California, Los Angeles; Vladimir Spolsky, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles

**3:05 p.m.** A Bayesian Model Selection Approach for Clustering Treatment Groups—◆ Susan Alber, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles

**3:25 p.m.** Bayesian Spatial Hierarchical Modeling for Asthmatic Patients and Nonasthmatic Adults—◆ Hyun Kim, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles; Jonathan Goldin, University of California, Los Angeles

**3:45 p.m.** Floor Discussion

## **313** **MCC-211 D** ☆ **Bayesian Student Competition Papers (Methods)—** **Topic Contributed**

### **Section on Bayesian Statistical Science**

*Organizer(s):* Ming-Hui Chen, University of Connecticut

*Chair(s):* Steven N. MacEachern, The Ohio State University

**2:05 p.m.** Variable Selection in Clustering via Dirichlet Process Mixture Models—◆ Sinae Kim, Texas A&M University; Mahlet G. Tadesse, University of Pennsylvania; Marina Vannucci, Texas A&M University

**2:25 p.m.** Functional Clustering by Bayesian Wavelet Methods—Bani Mallick, Texas A&M University; ◆ Shubhankar Ray, Texas A&M University

**2:45 p.m.** Bayesian Regression in Longitudinal Studies with Outcome-dependent Followup—◆ Duchwan Ryu, Texas A&M University; Debajyoti Sinha, Medical University of South Carolina; Bani Mallick, Texas A&M University

**3:05 p.m.** Bayesian Applications on Budget Impact Analysis in Economic Evaluations—◆ Shu Han, Rice University; Ya-Chen Tina Shih, The University of Texas M. D. Anderson Cancer Center

**3:25 p.m.** Regularized Optimization: a Bayesian Perspective—◆ Bin Li, The Ohio State University; Prem Goel, The Ohio State University

**3:45 p.m.** Floor Discussion

## **314** **MCC-210 AB** ☆ **Bayesian Shrinkage and Prediction—Topic** **Contributed**

### **Section on Bayesian Statistical Science, Section on** **Statistics in Epidemiology**

*Organizer(s):* Feng Liang, Duke University

*Chair(s):* Woncheol Jang, Duke University

**2:05 p.m.** Minimax Predictive Priors—◆ Feng Liang, Duke University

**2:25 p.m.** High-dimensional Predictive Densities—◆ Xinyi Xu, University of Pennsylvania

**2:45 p.m.** Comparison of Bayesian and Bootstrap Prediction Techniques—◆ Snigdhasu Chatterjee, University of Minnesota

**3:05 p.m.** Shrinkage Estimation of Multivariate Normal Mean under Hellinger Loss—◆ Victor Mergel, University of Florida; Malay Ghosh, University of Florida

**3:25 p.m.** A Double-shrinkage Estimator and Its Implementation—◆ Dabao Zhang, University of Rochester

**3:45 p.m.** Floor Discussion

## **315** **MCC-200 I** ☆ **Statistical Approaches for Benefit Risk Analysis—** **Topic Contributed**

### **Biopharmaceutical Section, WNAR**

*Organizer(s):* Yili Pritchett, Eli Lilly and Company

*Chair(s):* Kannan Natarajan, Bristol-Myers Squibb Company

**2:05 p.m.** Benefit to Risk: Why, What, and How?—◆ Christy Chuang-Stein, Pfizer, Inc.

**2:25 p.m.** The Application of Global Benefit-risk Score in Clinical Trial Design and Some Statistical Considerations of the Method—◆ Yili Pritchett, Eli Lilly and Company; Roy Tamura, Eli Lilly and Company

**2:45 p.m.** Global Benefit-risk Measure as a Tool for Drug Assessment—◆ Richard Entsuah, Wyeth



Pick up Wednesday's  
**JSM Highlights**

for the  
**2005 Cox Race Results**

**3:05 p.m.** INB and WTP in the Benefit-risk Analysis of RCTs—

◆ Andrew Willan, Research Institute, Sick Kids

**3:25 p.m.** Disc: Rodney Sparapani, Medical College of Wisconsin

**3:45 p.m.** Floor Discussion

## 316

## MCC-211 A

### ● ☆ Test Power and Sample Size Determination for Microarray Studies—Topic Contributed ENAR, WNAR, Biometrics Section

Organizer(s): Wenjiang Fu, Michigan State University

Chair(s): Michael Speed, Texas A&M University

**2:05 p.m.** How Many Samples Are Needed To Build a Classifier? A General Sequential Approach—◆ Wenjiang Fu, Michigan State University; Edward Dougherty, Texas A&M University; Bani Mallick, Texas A&M University; Raymond J. Carroll, Texas A&M University

**2:25 p.m.** Using Clustering To Enhance Hypothesis Testing—

◆ David Dahl, Texas A&M University; Michael Newton, University of Wisconsin, Madison

**2:45 p.m.** Microarray Experimental Design: Power and Sample Size Considerations—◆ James J. Yang, Henry Ford Health Sciences Center

**3:05 p.m.** Sample Size Determination in High-dimensional Biology and the PowerAtlas—◆ Grier Page, University of Alabama at Birmingham

**3:25 p.m.** Disc: T. Mark Beasley, University of Alabama at Birmingham

**3:45 p.m.** Floor Discussion

## 317

## MCC-103 C

### ● ☆ Statistical Issues in Driving Studies—Topic Contributed

#### General Methodology, Social Statistics Section

Organizer(s): Jeffrey Dawson, The University of Iowa

Chair(s): Jeffrey Dawson, The University of Iowa

**2:05 p.m.** Epidemiologic Issues in Driving Research—  
◆ Gerald McGwin, University of Alabama at Birmingham

**2:25 p.m.** Sensitivity and Specificity of Setting Triggers To Evaluate Continuously-collected Data—◆ Jeremy Sudweeks, Virginia Polytechnic Institute and State University

**2:45 p.m.** Accounting for the Covariate Effects in Driving Simulator Studies—Linda N. Boyle, The University of Iowa; ◆ Birsan Donmez, The University of Iowa; David M. Neyens, The University of Iowa; John D. Lee, The University of Iowa

**3:05 p.m.** Defining and Assessing Endpoints in Driving Simulator Tasks—◆ Qian Shi, The University of Iowa; Laura Stierman, Northwestern University; Jeffrey Dawson, The University of Iowa; Matthew Rizzo, The University of Iowa

**3:25 p.m.** Research Challenges in Automotive Demand Sensing—◆ Lynn Truss, General Motors R&D; Peiling Wu, General Motors R&D

**3:45 p.m.** Floor Discussion

## 318

## MCC-102 E

### ● ☆ Collecting Data from Health Care Establishments in the Post HIPAA Era: Some CDC-RTI Experiences—Topic Contributed

#### Section on Survey Research Methods, Section on Statistics in Epidemiology

Organizer(s): Paul Levy, RTI International; Elizabeth Zell, U.S. Centers for Disease Control and Prevention

Chair(s): Elizabeth Zell, U.S. Centers for Disease Control and Prevention

**2:05 p.m.** Post-HIPAA Medical Charts Review To Assess Perinatal Testing Rates—◆ John Loft, RTI International; Stephanie Sansom, U.S. Centers for Disease Control and Prevention; Elizabeth Zell, U.S. Centers for Disease Control and Prevention; Paul Levy, RTI International

**2:25 p.m.** Surveys of Workers Possibly Exposed to Anthrax and Obtaining Medical Records from Their Health Care Providers before and after the Revised HIPAA Regulations—◆ Brian Burke, RTI International; Thomas Clark, U.S. Centers for Disease Control and Prevention; Brian Evans, RTI International; Sonal Pathak, U.S. Centers for Disease Control and Prevention; Elizabeth Zell, U.S. Centers for Disease Control and Prevention

**2:45 p.m.** Data Acquisition Issues in a Survey of Health Care Professionals in Hospitals and Local Health Departments Invited To Participate in the U.S. Smallpox Immunization Program—◆ Brian Evans, RTI International; Paul Levy, RTI International; Brian Burke, RTI International; Pascale Worthy, U.S. Centers for Disease Control and Prevention; Ben Schwartz, U.S. Centers for Disease Control and Prevention; Linda Quick, U.S. Centers for Disease Control and Prevention

**3:15 p.m.** Assessing the Accuracy of Parent Recall of the Hepatitis A Immunization Status of Their Children: Data Collection Issues in a Telephone Survey Combined with Provider Record Check—◆ Lisa Carley-Baxter, RTI International; Paul Levy, RTI International; Anthony Fiore, U.S. Centers for Disease Control and Prevention; Susan Twiddy, RTI International

**3:25 p.m.** Disc: Amy Ferketich, The Ohio State University

**3:45 p.m.** Floor Discussion

Topic Contributed Panels 2:00 p.m.–3:50 p.m.

## 319 MCC-208 A Implementing the GAISE Guidelines in College Statistics Courses—Topic Contributed

### Section on Statistical Education

Organizer(s): Joan Garfield, University of Minnesota

Chair(s): Joan Garfield, University of Minnesota

- Panelists:** ◆ Andrew Zieffler, University of Minnesota  
 ◆ Sharon Lane-Getaz, University of Minnesota  
 ◆ Michelle Everson, University of Minnesota  
 ◆ Ann Ooms, University of Minnesota  
 ◆ Robin Lock, St. Lawrence University

**3:45 p.m.** Floor Discussion

Regular Contributed Sessions 2:00 p.m.–3:50 p.m.

## 320 MCC-211 B \* ☆ Nonlinear Normal and Linear Nonnormal Longitudinal Models—Contributed

### Biometrics Section, WNAR

Chair(s): Qiu Yu, North Carolina State University

- 2:05 p.m.** A Random Longitudinal Spline Model of the Effects of Partial Reinforcement on Rats—◆ Wenhua Hu, University of California, Los Angeles
- 2:20 p.m.** Marginalized Transition Models for Longitudinal Categorical Data—◆ Keunbaik Lee, University of Florida; Michael Daniels, University of Florida
- 2:35 p.m.** Modeling of Runaway Trajectories of Adolescents Using Zero-inflated Count Data—◆ Hayrettin Okut, University of Yuzuncu Yil; Terry E. Duncan, Oregon Research Institute; Susan W. Duncan, Oregon Research Institute
- 2:50 p.m.** Assessing Carryover Effects from Multiple Crossover Trials—◆ Mary Putt, University of Pennsylvania
- 3:05 p.m.** GEE Diagnostics for Binomial and Count Response Models—◆ Yuxiao Tang, Rush University Medical Center; Julia Bienias, Rush University Medical Center; Carlos F. Mendes de Leon, Rush University Medical Center; Denis A. Evans, Rush University Medical Center
- 3:20 p.m.** Comparison of Wang-Carey Estimation Versus Quasi-least Squares—◆ Wenguang Sun, University of Pennsylvania; Justine Shults, University of Pennsylvania
- 3:35 p.m.** Nonparametric Quasi-likelihood in Longitudinal Data Analysis—◆ Xiaoping Jiang, U.S. Food and Drug Administration

## 321 MCC-102 F

### \* Sample Design Issues—Contributed Section on Survey Research Methods

Chair(s): Brenda G. Cox, Battelle

- 2:05 p.m.** Bayesian Methods for Estimating Sample Size in Surveys with Multiple Levels of Screening, Eligibility, and Nonresponse—◆ Kristen Olson, University of Michigan; Trivellore Raghunathan, University of Michigan
- 2:20 p.m.** On Reuse of Clusters from Master Sample in Repeated Studies—◆ Stanislav Kolenikov, The The University of North Carolina at Chapel Hill; Gustavo Angeles, The University of North Carolina at Chapel Hill
- 2:35 p.m.** Model-based Sampling Selection under an Anisotropic Population—◆ Chang-Tai Chao, National Cheng Kung University; Feng-Min Lin, National Cheng Kung University
- 2:50 p.m.** An Empirical Comparison of Efficiency between Optimization and Nonoptimization Probability Sampling of Two Units from a Stratum—◆ Sun-Woong Kim, Dongguk University; Steven G. Heeringa, University of Michigan; Peter S. Solenberger, University of Michigan
- 3:05 p.m.** Efficiency of Multiple Response Adaptive Estimators—◆ Paul Mosquin, RTI International
- 3:20 p.m.** Resampling—◆ Hong Xu, The Pennsylvania State University
- 3:35 p.m.** Floor Discussion

## 322 MCC-202 AB Estimation—Contributed Section on Nonparametric Statistics

Chair(s): Nels Grevstad, Metropolitan State College of Denver

- 2:05 p.m.** Multivariate Quantile Estimation with Convex Hull Peeling for Streaming Data—◆ Hyunsook Lee, The Pennsylvania State University; G. Jogesh Babu, The Pennsylvania State University
- 2:20 p.m.** Estimation of Shape-restricted Functions: Shape Modification via Constrained Uniform Approximation—◆ Johan Lim, Texas A&M University
- 2:35 p.m.** Nonparametric Survival Analysis on Time-dependent Covariate Effect—◆ Koji Fujiwara, North Dakota State University; Chunfeng Huang, North Dakota State University
- 2:50 p.m.** Confidence Balls for Nonparametric Function Estimation in Measurement Error Problems—◆ Julie McIntyre, Carnegie Mellon University
- 3:05 p.m.** A Hodges-Lehmann Estimator of Preferred Direction for Circular Data—◆ B. Sango Otieno, Grand Valley State University; Christine Anderson-Cook, Los Alamos National Laboratory

**3:20 p.m.** On Nelson-Aalen's Type Estimation in the Partial Koziol-Green Model—◆ Haimeng Zhang, Concordia College; Marepalli Rao, University of Cincinnati

**3:35 p.m.** Floor Discussion

## 323

## MCC-200 H

### Missing Data Issues—Contributed

#### Biopharmaceutical Section, WNAR

*Chair(s): Ivan S.F. Chan, Merck Research Laboratories*

**2:05 p.m.** A Comparison of Imputation Methods for Missing Data on Clinical Laboratory Assessments—◆ Kapildeb Sen, Bristol-Myers Squibb Company; Chen-Sheng Lin, Bristol-Myers Squibb Company; Kannan Natarajan, Bristol-Myers Squibb Company

**2:20 p.m.** Including Adverse Event Data in Multiple Imputation of Efficacy Outcomes—◆ Shuyi Shen, Eli Lilly and Company; Craig Mallinckrodt, Eli Lilly and Company; Xue Xin, Eli Lilly and Company; Hua Deng, Eli Lilly and Company; Ilya Lipkovich, Eli Lilly and Company; Geert Molenberghs, Limburgs Universitair Centrum

**2:35 p.m.** Does Imputation Help Your Power?—◆ John Johnson, Rho, Inc.

**2:50 p.m.** Missing Data in Longitudinal Controlled Clinical Trial: a Power Comparison for Intent-to-treat Analysis—◆ Hrishikesh Chakraborty, RTI International; Hong Gu, Dalhousie University

**3:05 p.m.** A Bias Correction in Testing Treatment Efficacy under Informative Drop-out in Clinical Trials—◆ Fanhui Kong, U.S. Food and Drug Administration; Yeh-Fong Chen, U.S. Food and Drug Administration; Kun Jin, U.S. Food and Drug Administration

**3:20 p.m.** Missing Data in Safety Evaluation: Analyses and Issues—◆ Satish Misra, U.S. Food and Drug Administration

**3:35 p.m.** Floor Discussion

## 324

## MCC-213 AB

### Financial Markets—Contributed

#### Business and Economics Statistics Section

*Chair(s): Mervyn Silvapulle, Monash University*

**2:05 p.m.** Detecting a Shift in Location in a Random Sequence: a Review and Applications—◆ Prem Talwar, University of Alberta

**2:20 p.m.** Fractal Analysis of Nonstationary Signals in Financial Markets—◆ Malhar Kale, Sam Houston State University; Ferry Butar Butar, Sam Houston State University

**2:35 p.m.** War Impact on Microstructure of U.S. Stock Market—◆ Lei Zhang, Syracuse University; Raja Velu, Syracuse University; Amber Anand, Syracuse University

**2:50 p.m.** Asymmetric Nonlinear Shrinkage Estimation in Optimal Portfolio Selection—◆ Andrew Siegel, University of Washington

**3:05 p.m.** Population Segmentation for Portfolio Strategies—◆ Timothy Lee, Credit Logistics

**3:20 p.m.** Floor Discussion

## 325

## MCC-102 B

### Monte Carlo Methods—Contributed

#### Section on Statistical Computing, Section on Bayesian Statistical Science

*Chair(s): Sandra Hall, University of Kansas Medical Center*

**2:05 p.m.** The Impact of Parameters Values and Sample Sizes on  $P(Y < X)$ : a Simulation Study, Part I—◆ Mohammed Shayib, Prairie View A&M University

**2:20 p.m.** A Method for Simulating Multivariate Nonnormal Distributions from the Generalized Lambda Distribution—◆ Todd C. Headrick, Southern Illinois University, Carbondale; Abdel Mugdadi, Southern Illinois University, Carbondale

**2:35 p.m.** An Approximation to Posterior Densities for Sample-based Inference—◆ Murali Haran, The Pennsylvania State University

**2:50 p.m.** Updating Autocovariance Estimates—◆ Patrick Gaffney, Imclone Systems

**3:05 p.m.** A Computationally Quick Bootstrap Procedure for Semiparametric Models—◆ John R. Dixon, Florida State University

**3:20 p.m.** Finding Important Covariates with Survival Forests—◆ Van Parsons, National Center for Health Statistics; Thu Hoang, Université René Descartes

**3:35 p.m.** Floor Discussion

## 326

## MCC-102 C

### Exploring, Clustering, and Presenting—Contributed

#### Section on Statistical Graphics

*Chair(s): Simon Urbanek, AT&T Labs-Research*

**2:05 p.m.** Exploring Data Structures Using Probability Plots, Animation, and Ternary Plots—Fred Spiring, University of Manitoba; ◆ Bartholomew Leung, Hong Kong Polytechnic University

**2:20 p.m.** Hexagon Binning and Smoothing for Visualizing Densities and Point Sets—◆ Nicholas Lewin-Koh, Eli Lilly and Company; Martin Maechler, Eidgenössische Technische Hochschule Zürich

**2:35 p.m.** Hexagonal Layouts for Interactive Views of Clustering—◆ Ru Sun, Ernst & Young LLP

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**2:50 p.m.** Cluster Detection and Visualization via Tomographic Methods—◆ Al Ozonoff, Boston University; Marcello Pagano, Harvard School of Public Health; Laura Forsberg, Harvard School of Public Health; Caroline Jeffery, Harvard School of Public Health

**3:05 p.m.** A Visualization System To Monitor Rater Reliability in Large-scale Computer- and Paper-based Systems—◆ Chris Chiu, Law School Admission Council

**3:20 p.m.** Improving Some Published Graphs—◆ Charles H. Goldsmith, McMaster University

**3:35 p.m.** Floor Discussion

## **327** **MCC-103 D**

● **Measuring Customer Preferences—Contributed**  
Section on Statistics and Marketing, Section on Physical and Engineering Sciences

*Chair(s): Bruce Hardie, London Business School*

**2:05 p.m.** Designing Conjoint Choice Experiments Using Confounded Factorial Designs—Chin Khian Yong, University of Nebraska; ◆ Kent Eskridge, University of Nebraska

**2:20 p.m.** Application of the Poisson Race Model to Conjoint Analysis in Marketing—◆ Shiling Ruan, The Ohio State University; Steven N. MacEachern, The Ohio State University; Angela Dean, The Ohio State University

**2:35 p.m.** Ordinal Regressions in Price Sensitivity Modeling—◆ Stan Lipovetsky, GfK Custom Research, Inc.; Michael Conklin, GfK Custom Research, Inc.

**2:50 p.m.** How Good Is My Top-of-mind Awareness Number?—◆ Michael Conklin, GfK Custom Research, Inc.; Stan Lipovetsky, GfK Custom Research, Inc.

**3:05 p.m.** A Two-stage, Distribution-free Method To Compare Relative Predictors of the Order of Brand Recall—◆ Nobuyuki Fukawa, University of Georgia; Sunil Erevelles, The University of North Carolina at Chapel Hill

**3:20 p.m.** Cumulative and Unfolding IRT Models and Consumer Attitude-behavior Consistency—◆ Lynd Bacon, Sighthound Solutions, Inc.; Peter J. Lenk, University of Michigan

**3:35 p.m.** Floor Discussion

## **328** **MCC-209 AB**

**Methodological Developments for Linkage Analysis—Contributed**

Section on Statistics in Epidemiology, ENAR, WNAR, Biometrics Section

*Chair(s): Rajan Patel, Emory University*

**2:05 p.m.** A Confident Set Procedure for the Localization of a Disease Gene with General Pedigree Data—◆ Shuyan Wan, The Ohio State University; Shili Lin, The Ohio State University

**2:20 p.m.** Multipoint Confidence Set Inference Procedures and Applications—◆ Charalampos Papachristou, The Ohio State University; Shili Lin, The Ohio State University

**2:35 p.m.** A Bayesian Approach for Incorporating Variable Rates of Heterogeneity in Linkage Analysis—◆ Swati Biswas, The University of Texas M. D. Anderson Cancer Center; Shili Lin, The Ohio State University

**2:50 p.m.** Exploring Positional Candidate Genes: Linkage Conditional on SNP Genotypes—◆ Yi-Chen Wu, University of Minnesota; Na Li, University of Minnesota

**3:05 p.m.** Parametric Linkage Analysis and Maximum Likelihood Principle—◆ Qimei He, Pacific Health Research Institute

**3:20 p.m.** Linkage Mapping of Multicenter Data Using Metaanalysis—◆ Weihua Guan, University of Michigan; Michael Boehnke, University of Michigan

**3:35 p.m.** Floor Discussion

## **329** **MCC-103 A**

● **Response Rates: Calculation and Response Improvement—Contributed**

Section on Survey Research Methods, Social Statistics Section

*Chair(s): Virginia Lesser, Oregon State University*

**2:05 p.m.** Comments on Weighted and Unweighted Response Rates—◆ Frank Potter, Mathematica Policy Research, Inc.

**2:20 p.m.** Survival Analysis Estimation of an Eligibility Rate of Samples Whose Eligibility Statuses Are Unknown: a Study of the Variance—◆ Hiroaki Minato, NORC at the University of Chicago

**2:35 p.m.** Respondents' Reasons for Participation in Telephone Surveys: 10-year Trends and Implications for Survey Design—◆ Nadra Garas, American University; Johnny Blair, Abt Associates, Inc.

**2:50 p.m.** The Value of the Increasing Effort To Maintain High Response Rates in Telephone Surveys—◆ Barbara L. Carlson, Mathematica Policy Research, Inc.; Richard Strouse, Mathematica Policy Research, Inc.

- 3:05 p.m.** Results from Recent Experiments on Improving Response Rates—◆ Ronald Fecso, National Science Foundation
- 3:20 p.m.** Efficacy of Prenotification Letters in Improving Response Rates in the Telephone Point-of-purchase Survey—◆ Cassandra Yocum, Bureau of Labor Statistics
- 3:35 p.m.** Longitudinal Attrition in an RDD Survey of Adolescents—◆ Thanh Le, Westat; Charles Carusi, Westat; Susan Swain, Westat

Regular Contributed Posters 2:00 p.m.–3:50 p.m.

**330 MCC-Level Two Lobby B  
Contributed Poster Session 5—Contributed  
Social Statistics Section, General Methodology,  
Biopharmaceutical Section, Section on Bayesian  
Statistical Science, Section on Quality and  
Productivity, Section on Physical and Engineering  
Sciences, Section on Statistical Computing, Business  
and Economics Statistics Section**

Organizer(s): Ying Kuen Cheung, Columbia University

Chair(s): Ying Kuen Cheung, Columbia University

**Biometrics, Biostatistics, Epidemiology**

- 01** Implementation and Performance of Exact Methods in Six Statistical Software Packages—◆ Robert Oster, University of Alabama at Birmingham; Joseph Hillbe, Arizona State University

**Computational Statistics and Numerical Methods**

- 02** A Simple, More General Boxplot Method for Identifying Outliers—◆ Neil Schwertman, California State University, Chico; Margaret A. Owens, California State University, Chico; Robiah Adnan, University of Technology, Malaysia

- 03** A Functional Language for Statistical Analysis—◆ Babubhai Shah, SAFAL Institute, Inc.

- 04** Java Applets for Data Mining Tools—Morteza Marzjarani, Saginaw Valley State University; ◆ Adam Marculewicz, Saginaw Valley State University

- 05** A Generalized Conjugate Gradient Accelerator for the EM Algorithm—◆ Mervyn G. Marasinghe, Iowa State University; Julio C. Alonso, Universidad Icesi

**Engineering and Physical Sciences, Chemometrics**

- 06** A Predictive Model for Tensile Strength of Alloy 7075-T6 after Retrogression and Re-aging—◆ Gerald Shaughnessy, University of Dayton

**Environmetrics, Ecology, Agriculture, Wildlife Management**

- 07** A Method for Analyzing Unreplicated Agricultural Experiments—◆ Jamis Perrett, University of Northern Colorado



JSM INFORMAL  
**DANCE PARTY**

featuring *THE SPACE HEATERS*  
with special guests **IMSI** and  
the **ASA All-Stars!**

August 9, 9:30 p.m.–Midnight  
Minneapolis Convention Center  
Ballroom B

Tuesday

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

## Experimental Design

- 08** 2<sup>(4-1)</sup> Factorials for the Rest of Us—◆ Albert J. Starshak, Dunwoody College of Technology
- 09** Honeycomb Designs and Analysis Software—◆ Andy Mauromoustakos, University of Arkansas; Kevin Thompson, University of Arkansas; Vasilias Fasoula, University of Georgia; D. P. Batzios, Cotton and Industrial Plants Institute; Dimitris Roupakias, Aristotle University of Thessaloniki

## QC, Operation Research, Risk Assessment

- 10** Optimization of Trivalent FluMist® Product Blending—◆ Harry Yang, MedImmune, Inc.; Ryan Yamagata, MedImmune Vaccines, Inc.; Iksung Cho, MedImmune, Inc.
- 11** Large Common-cause Variation in Multivariate SPC—◆ John Young, McNeese State University; Robert L. Mason, Southwest Research Institute; Youn-Min Chou, The University of Texas at San Antonio
- 12** Robust Control Charts Based on Absolute Deviations from the Mean and Median—◆ Canan Bilen-Green, North Dakota State University; Raghavendra D. Adharapurapu, North Dakota State University

## Reliability and Survival Modeling

- 13** Fitting Parametric Families of Quantile Functions to the Sample Quantile Function—Dean Fearn, California State University, Hayward; ◆ Elliott Nebenzahl, California State University, Hayward
- 14** Modeling of Hybrid Systems—◆ William Griffith, University of Kentucky

## Simulation and Monte Carlo Methods

- 15** Application of Monte Carlo Simulation Methods in Quality-control Areas—◆ Ryan Yamagata, MedImmune Vaccines, Inc.; Harry Yang, MedImmune, Inc.; Andrew Chen, MedImmune, Inc.; Iksung Cho, MedImmune, Inc.
- 16** Minimum Sample Size Requirements for Two-way MANOVA—◆ Daniel Mundfrom, University of Northern Colorado; John Young, III, University of Northern Colorado
- 17** Likelihoods from Summary Statistics: Recent Divergence between Species—◆ Scotland Leman, Duke University
- 18** Accelerated Simulation with Finitized Power Series Distributions—◆ Martin Levy, University of Cincinnati; Saeed Golnabi; James J. Cochran, Louisiana Tech University
- 19** Robustness in Metaanalysis: an Empirical Comparison of Point and Interval Estimates of Standardized Mean Differences and Cliff's Delta—Jeffrey Kromrey, University of South Florida; ◆ Kristine Hogarty, University of South Florida; John Ferron, University of South Florida; Constance Hines, University of South Florida; Melinda Hess, University of South Florida

## Actuarial Mathematics and Insurance

- 20** Modeling Heavy-tailed Distributions—◆ Annapurna Ravi, Sam Houston State University; Ferry Butar Butar, Sam Houston State University

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Invited Sessions 4:00 p.m.–5:50 p.m.

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## 331

### Wald I—Invited

#### IMS

*Organizer(s):* David Madigan, Rutgers, The State University of New Jersey

*Chair(s):* Steven Lalley, The University of Chicago

- 4:05 p.m.** Large Deviations in Different Contexts—◆ S.R. Srinivasa Varadhan, New York University

- 5:30 p.m.** Floor Discussion

## 332

### Deming Lecture—Invited

**The ASA, ENAR, WNAR, IMS, SSC, Deming Lectureship Committee, Section on Physical and Engineering Sciences, Biometrics Section**

*Organizer(s):* Randall K. Spoeri, Cerner Corporation

*Chair(s):* Randall K. Spoeri, Cerner Corporation

- 4:05 p.m.** Statistics, Quality, and Organizational Excellence—◆ A. Blanton Godfrey, North Carolina State University

- 5:35 p.m.** Floor Discussion

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Invited Sessions 8:00 p.m.–9:30 p.m.

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## 333

### ASA Presidential Address and Awards—Invited

#### The ASA

*Organizer(s):* Fritz J. Scheuren, The University of Chicago

*Chair(s):* Bradley Efron, Stanford University

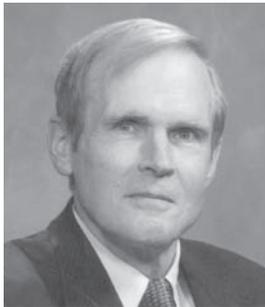
- 8:00 p.m.** Presentation of Awards—◆ Bradley Efron, Stanford University

- 8:30 p.m.** Presidential Address—Statistics: a Rights Discipline—◆ Fritz J. Scheuren, The University of Chicago

- 9:00 p.m.** Presentation of Founders Awards and New ASA Fellows—◆ Bradley Efron, Stanford University

*American Statistical Association*

# Presidential Address & Awards Session



**Fritz J. Scheuren, ASA President**

Tuesday, August 9, 2005, 8:00 p.m.

Minneapolis Convention Center  
Ballroom A

*Is your associate, professor, student, colleague, friend, or organization being recognized at the Joint Statistical Meetings in Minneapolis?*



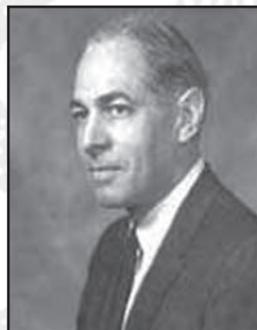
Samuel S. Wilks  
Memorial Award



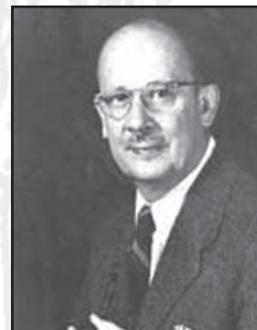
Edward C. Bryant  
Scholarship



Gertrude M. Cox  
Scholarship



Gottfried E. Noether  
Awards



W.J. Youden Award in  
Lab Testing

- ★ **Statistics in Chemistry Award**
- ★ **ASA Fellows**
- ★ **Founders Award**
- ★ **Outstanding Statistical Application Award**
- ★ **Statistical Partnerships Among Academe, Industry, and Government (SPAIG) Award**

*Plan to attend the ASA Presidential Address and Awards Session for the recognition of the ASA's most distinguished members.*



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For over 40 years, RTI statisticians have invented and applied scientifically accepted statistical methodologies to help our clients address major national and global public policy issues. We offer:

- industry-leading methods in survey design and management, research computing, sample design, and statistical analysis
- data warehousing and research analysis, including genomics and health care informatics
- expertise in information capture, processing, analysis, and dissemination, including new techniques to address data disclosure avoidance
- international expertise in health, governance, and education
- domain expertise in health, health security, economic and social development, education and training, and natural resources and the environment.

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RTI's internationally recognized SUDAAN statistical software package provides both descriptive and modeling procedures for analyzing survey and other cluster-correlated data encountered in epidemiological studies, clinical trials, experimental studies, and longitudinal studies. SUDAAN is an essential addition to your software library and a useful complement to SAS and SPSS. We offer:

- NEW IN 2005

  - SAS-Callable and Standalone versions of SUDAAN for Windows, Sun/Solaris, and DOS platforms (SAS-Callable SUDAAN allows SUDAAN procedures to work seamlessly within users' current SAS programs. SUDAAN is now available for Linux users.)
  - permanent and annual renewable licenses and short-term, fixed licenses (60 days and 4 months)
  - 2005 training courses in Research Triangle Park, NC; Washington, DC; Los Angeles, CA; and Chicago, IL
  - two new courses: a 3-day SUDAAN Descriptive Procedure Course and a 3-day SUDAAN Modeling Procedures Course
  - SUDAAN manuals at a reduced rate (ASA members receive an additional 10% off by using this promotional code: AMSTAT5)
  - SUDAAN T-shirts (see them at the 2005 JSM Meeting)

Additional information about SUDAAN can be found at [www.rti.org/sudaan](http://www.rti.org/sudaan) or by calling 919-541-6602.

## WEDNESDAY, AUGUST 10

### Tours

1:00 p.m.–4:30 p.m.   MCC-Main Entrance, 2nd Avenue  
**TR12 - Summit Avenue Walking Tour**

1:00 p.m.–5:00 p.m.   MCC-Main Entrance, 2nd Avenue  
**TR13 - Lake Minnetonka Cruise**

### Committee/Business Meetings & Other Activities

7:00 a.m.–8:15 a.m.   MCC-L100 G  
**The Caucus for Women in Statistics Roundtable Discussions/Breakfast**  
*Organizer(s): Julia Bienias, Rush University Medical Center*

7:00 a.m.–8:30 a.m.   MCC-207 A  
**Committee on Meetings (closed)**  
*Chair(s): Kim McGuigan, Pfizer, Inc.*

7:00 a.m.–8:30 a.m.   MCC-L100 J  
**Journal of Computational and Graphical Statistics (JCGS) Editorial Board (closed)**  
*Chair(s): Luke Tierney, The University of Iowa*

7:00 a.m.–8:30 a.m.   H-Board Room 2  
**Committee on Career Development (closed)**  
*Chair(s): Janice Lent, U.S. Department of Transportation*

7:00 a.m.–8:30 a.m.   H-Director's Row 1  
**The ASA/AMATYC Joint Committee Meeting**  
*Chair(s): Brian E. Smith, McGill University*

7:00 a.m.–9:00 a.m.   MCC-L100 I  
**Friends and Alumni of Brigham Young University Open House/Breakfast**  
*Organizer(s): Howard Christensen, Brigham Young University; Kathi Carter, Brigham Young University*

7:00 a.m.–6:00 p.m.   MCC-204 B  
**Speaker Work Room**

7:00 a.m.–6:00 p.m.   MCC-204 A  
**Speaker Work Room**

7:00 a.m.–11:00 p.m.   MCC-Level 1, Registration Lobby  
**Cyber Café and Message Center**

7:30 a.m.–8:30 a.m.   H-Director's Row 2  
**Mu Sigma Rho Executive Committee Meeting**  
*Organizer(s): Marcia Gumpertz, North Carolina State University*

7:30 a.m.–9:00 a.m.   MCC-207 B  
**Noether Award Committee (closed)**  
*Chair(s): Regina Liu, Rutgers, The State University of New Jersey*

7:30 a.m.–9:30 a.m.   H-Board Room 3  
**Sequential Analysis Journal's Editorial Board's Breakfast Meeting (closed)**  
*Organizer(s): Nitish Mukhopadhyay, University of Connecticut*

7:30 a.m.–4:30 p.m.   MCC-Level 1, Registration Lobby  
**JSM Main Registration The ASA Communities Booth Special Assistance and Press Desk**

8:00 a.m.–6:00 p.m.   MCC-Exhibit Hall C  
**Career Placement Service**

8:00 a.m.–6:00 p.m.   MCC-Exhibit Hall C  
**Exhibitor Lounge**

9:00 a.m.–10:30 a.m.   H-Director's Row 2  
**Council of Sections Publications and Editors (closed)**  
*Chair(s): E. Jacquelin Dietz, Meredith College*

9:00 a.m.–11:30 a.m.   MCC-207 A  
**Committee on Outreach Education (closed)**  
*Chair(s): Wendy Martinez, Office of Naval Research*

9:00 a.m.–2:00 p.m.   MCC-Exhibit Hall C  
**EXPO 2005**

9:00 a.m.–2:00 p.m.   MCC-Exhibit Hall C  
**ASA Membership Booth #700**

9:00 a.m.–5:00 p.m.   MCC-Level 1, Registration Lobby  
**Minneapolis Restaurant Reservations Desk**

9:00 a.m.–5:00 p.m.   MCC-Level 1, Registration Lobby  
**The ASA Marketplace**

10:00 a.m.–11:30 a.m.   H-Board Room 3  
**The ASA-MAA Joint Committee on Undergraduate Statistics**  
*Chair(s): Madhuri Mulekar, University of South Alabama*

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ♦ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

10:30 a.m.–12:00 p.m.   **MCC-L100 F**

## Organizational Meeting for Special Interest Group on Statistical Volunteerism

Chair(s): Jonathan L. Kurlander, JLK Consulting, Inc.

12:30 p.m.–2:00 p.m.   **H-Director's Row 1**

## Noether Award Committee Luncheon (closed)

Chair(s): Regina Liu, Rutgers, The State University of New Jersey

12:30 p.m.–2:30 p.m.   **MCC-207 B**

## ENAR 2006 Spring Meetings Planning Committee Meeting (closed—by invitation only)

Organizer(s): Kathy Hoskins, ENAR

2:00 p.m.–8:00 p.m.   **MCC-Exhibit Hall C**

## Exhibitor Move out

3:40 p.m.–4:00 p.m.   **MCC-103 A**

## Roger Herriot Award

5:00 p.m.–6:30 p.m.   **MCC-207 B**

## Committee on Statistics and Disability (closed)

Chair(s): Joan L. Turek, U.S. Department of Health and Human Services

5:30 p.m.–6:30 p.m.   **MCC-103 A**

## International Chinese Statistical Association (ICSA) Annual Members Meeting

Organizer(s): Ivan S.F. Chan, Merck Research Laboratories

5:30 p.m.–7:00 p.m.   **MCC-103 B**

## The Caucus for Women in Statistics Business Meeting

Organizer(s): Julia Bienias, Rush University Medical Center

5:30 p.m.–7:00 p.m.   **MCC-103 C**

## Section on Statistical Education Business Meeting

Chair(s): Robin Lock, St. Lawrence University

5:30 p.m.–7:00 p.m.   **MCC-103 D**

## Section on Survey Research Methods Business Meeting

Chair(s): Sarah Nusser, Iowa State University

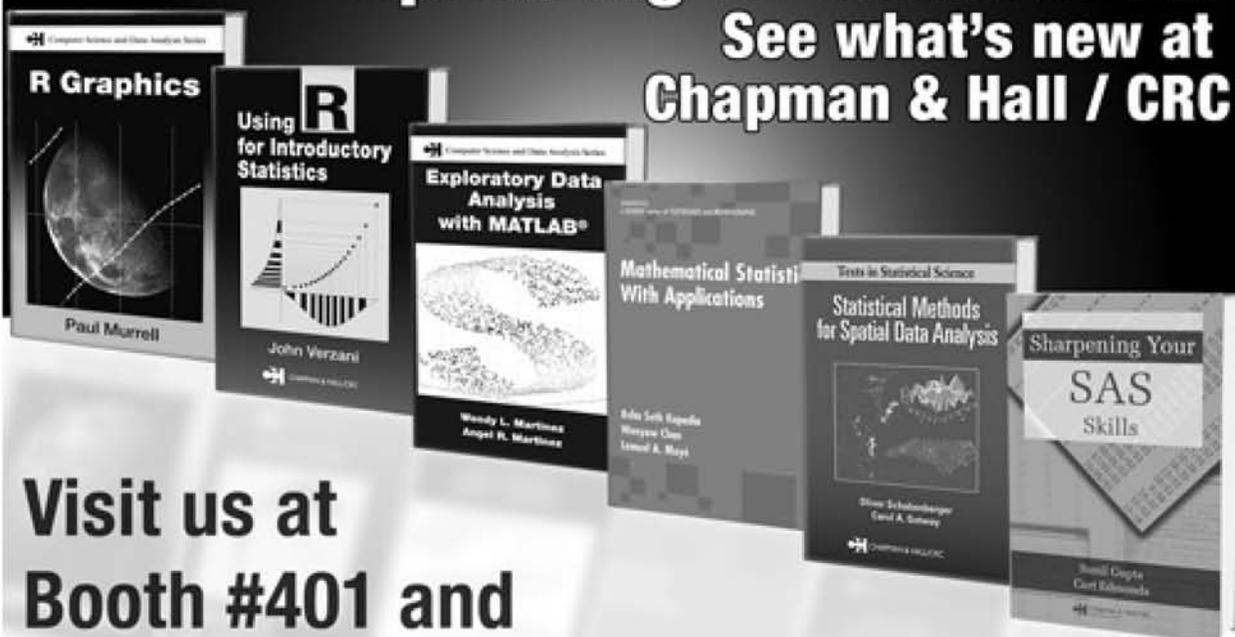
5:30 p.m.–7:30 p.m.   **MCC-207 A**

## Section on Statistics in Epidemiology Business Committee

Organizer(s): Maya Sternberg, U.S. Centers for Disease Control and Prevention

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# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ♦ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

CE\_38T

MCC-L100 E

3:00 p.m.–4:45 p.m.

## How the Dynamic Manipulation Capabilities of Fathom 2 Can Improve Students' Learning Experiences in Intro Stats and Stats II Courses—Continuing Education

The ASA

Instructor(s): William F. Finzer, KCP Technologies; Robin Lock, St. Lawrence University

Special Presentation 8:30 a.m.–10:20 a.m.

**334**

**MCC-200 ABC**

## Introductory Overview Lecture on Recurrent Events Data Analysis for Applications

ASA, ENAR, IMS, SSC, WNAR, Biometrics Section

Organizer(s): Wayne Nelson, Wayne Nelson Stat Consulting

Chair(s): Terry M. Therneau, Mayo Clinic

**8:35 a.m.** Graphical Analysis of Recurrent Events Data—

♦ Wayne Nelson, Wayne Nelson Stat Consulting; Jerry Lawless, University of Waterloo

**9:25 a.m.** Regression Analysis of Recurrent Events Data—

♦ Jerry Lawless, University of Waterloo; Wayne Nelson, Wayne Nelson Stat Consulting

**10:15 a.m.** Floor Discussion

Invited Sessions 8:30 a.m.–10:20 a.m.

**335**

**MCC-200 F**

\* ☆ **Semiparametric Modeling in Action—Invited**

IMS, Section on Nonparametric Statistics

Organizer(s): Su-Chun Cheng, University of California, San Francisco

Chair(s): Su-Chun Cheng, University of California, San Francisco

**8:35 a.m.** Partially Nonlinear Models and Their Applications—

♦ Runze Li, The Pennsylvania State University; Lei Nie, University of Maryland Baltimore County

**9:00 a.m.** Analyzing Generalized Longitudinal Data with Latent

Gaussian Processes and Functional Principal

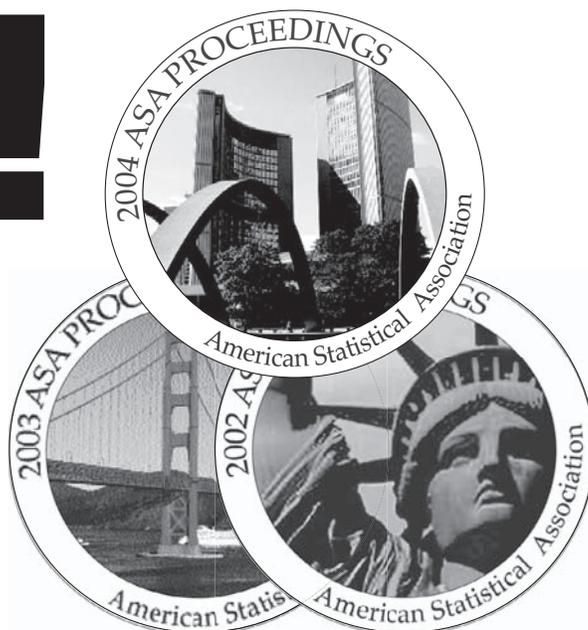
Components—♦ Hans-Georg Mueller, University of California, Davis; Peter Hall, Australian National University; Fang Yao, Colorado State University

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For more information, visit the ASA Communities Booth (MCC-Level 1, Registration Lobby), the ASA Membership Exhibit Booth (MCC-Hall E, Booth 700), or call 1 (888) 231-3473.



**9:25 a.m.** A Semiparametric Mixing Modeling Approach To Relate DNA Adduct Damage to bcl-2 Gene Expression Level—◆ Naisyin Wang, Texas A&M University; Zonghui Hu, Texas A&M University

**9:50 a.m.** Semiparametric Expectancy Regression—◆ Ying Q. Chen, Fred Hutchinson Cancer Research Center

**10:15 a.m.** Floor Discussion

## **336** **MCC-200 DE** **Statistics in High-frequency Data—Invited**

**IMS, Business and Economics Statistics Section, Section on Statistical Graphics**

*Organizer(s): Brani Vidakovic, Georgia Institute of Technology*

*Chair(s): Peter Mueller, The University of Texas M. D. Anderson Cancer Center*

**8:35 a.m.** Wavelet Sizer Analysis of Internet Traffic—◆ James Marron, The University of North Carolina at Chapel Hill

**9:00 a.m.** The SLEX Methods for Discriminating and Clustering Massive Nonstationary Signals—◆ Hernando Ombao, University of Illinois, Urbana-Champaign

**9:25 a.m.** Is Daily Temperature Data Overkill?—◆ Robert Lund, Clemson University

**9:50 a.m.** Wavelet-based Methods for the Analysis of Large-scale Data—◆ Marina Vannucci, Texas A&M University

**10:15 a.m.** Floor Discussion

## **337** **MCC-200 J** **★ The Use of Complex Models for Environmental Risk Assessment—Invited**

**ENAR, Section on Statistics and the Environment, WNAR**

*Organizer(s): Louise Ryan, Harvard University*

*Chair(s): Louise Ryan, Harvard University*

**8:35 a.m.** Combining Multimodel Numerical Experiments for Climate Change—◆ Douglas Nychka, National Center for Atmospheric Research; Reinhard Furrer, National Center for Atmospheric Research

**9:00 a.m.** Estimating Risk Probabilities for Wildland Fires—◆ Haiganoush K. Preisler, Pacific Southwest Research Station

**9:25 a.m.** Estimating Space-time Trends Combining Stochastic Models and Numerical Models—◆ Montserrat Fuentes, North Carolina State University

**9:50 a.m.** Disc: David R. Brillinger, University of California, Berkeley

**10:15 a.m.** Floor Discussion

## **338** **MCC-103 B** **★ ☆ Measuring Child Well-being: the Pros and Cons of Composite Indices—Invited**

**Social Statistics Section, Business and Economics Statistics Section**

*Organizer(s): Kenneth C. Land, Duke University*

*Chair(s): Susan Schechter, Office of Management and Budget*

**8:35 a.m.** Constructing Summary Indices of Social Well-being: a Model for the Effect of Heterogeneous Importance Weights—◆ Michael R. Hagerty, University of California, Davis; Kenneth C. Land, Duke University

**8:55 a.m.** An Evidence-based Approach to the Construction of Composite Child Well-being Indices—◆ Kenneth C. Land, Duke University

**9:15 a.m.** Ranking States Based on Improvements in Child Well-being during the 1990s—◆ William P. O'Hare, Annie E. Casey Foundation; Vicki L. Lamb, Duke University

**9:35 a.m.** An Index of the Condition of Children: the Ideal and a Less-than-ideal Example—◆ Kristin A. Moore, Child Trends, Inc.

**9:55 a.m.** Disc: Matthew W. Stagner, The Urban Institute

**10:15 a.m.** Floor Discussion

## **339** **MCC-102 D** **★ Using Survey Information in Seasonal Time Series—Invited**

**Section on Survey Research Methods, Section on Government Statistics**

*Organizer(s): Stuart Scott, Bureau of Labor Statistics*

*Chair(s): David Findley, U.S. Census Bureau*

**8:35 a.m.** Variance Measures for X-11 Seasonal Adjustment: a Summing Up of Empirical Research—◆ Stuart Scott, Bureau of Labor Statistics; Michael Sverchkov, Bureau of Labor Statistics; Daniel Pfeiffermann, Hebrew University & University of Southampton

**9:00 a.m.** Investigation of Variances for Model-based Seasonal Adjustments—◆ William Bell, U.S. Census Bureau

**9:25 a.m.** Model-based Seasonal Adjustment of Survey Series Subject To Benchmark Constraints with a State-space Smoothing Algorithm—◆ Richard Tiller, Bureau of Labor Statistics; Daniel Pfeiffermann, Hebrew University and University of Southampton

**9:50 a.m.** Disc: William P. Cleveland, Federal Reserve Board

**10:10 a.m.** Floor Discussion

**Wednesday**

Forthcoming!



### Celebrating Statistics

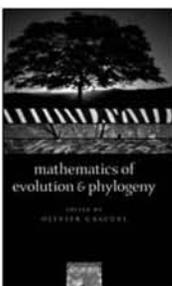
Papers in Honour of Sir David Cox on his 80<sup>th</sup> birthday

Edited by ANTHONY C. DAVISON, *Swiss Federal Institute of Technology, Lausanne*, YADOLAH DODGE, *Universite de Neuchâtel*, and NANNY WERMUTH, *Chalmers*

Originating from a meeting celebrating the 80th birthday of Sir David Cox, the eminent Oxford Scholar whose many important and penetrating contributions to modern statistics have had an extraordinary impact, this collection of papers by major statistical researchers provides an overview of current developments across a wide range of research areas.

(Oxford Statistical Science Series)

October 2005 350 pp.  
0-19-856654-9 ~~£74.50~~ / \$59.60

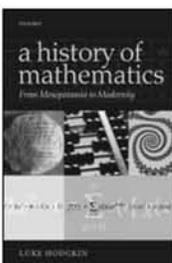


### Mathematics of Evolution and Phylogeny

Edited by OLIVIER GASCUEL, *Centre National de la Recherche Scientifique*

This book considers evolution at different scales: sequences, genes, gene families, organelles, genomes and species. The focus is on the mathematical and computational tools and concepts, which form an essential basis of evolutionary studies, indicate their limitations, and give them orientation. Aimed at graduates and researchers in phylogenetics, this book will be of interest to both mathematicians and biologists.

2005 448 pp.  
0-19-856610-7 ~~£89.50~~ / \$71.60



### A History of Mathematics

From Mesopotamia to Modernity  
LUKE HODGKIN, *King's College, London*

*A History of Mathematics* covers the evolution of mathematics through time and across the major Eastern and Western civilizations. Containing more than 100 illustrations and figures, this text, aimed at advanced undergraduates and postgraduates, addresses the methods and challenges associated with studying the history of mathematics.

July 2005 350 pp.  
0-19-852937-6 ~~£74.50~~ / \$59.60

Forthcoming!

### Stochastic Processes and Models

DAVID STIRZAKER, *Oxford University*

A concise and lucid introduction to simple stochastic processes and models. Including numerous exercises, problems and solutions, it is ideal for an undergraduate second course in probability.

November 2005 370 pp.  
0-19-856814-2 paper ~~£59.50~~ / \$47.60



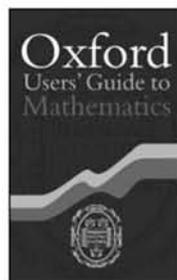
### Gene Genealogies, Variation and Evolution

A Primer in Coalescent Theory

JOTUN HEIN, *University of Oxford*, MIKKEL H. SCHIERUP and CARSTEN WIUF, both at the *University of Aarhus, Denmark*

The aim of this book is provide an accessible introduction to Coalescent Theory with a view towards data analysis. This textbook, rich in examples and illustrations, is suitable for a graduate course in statistics, population, molecular, and medical genetics.

2005 296 pp.; 140 line illus.  
0-19-852995-3 cloth ~~£44.50~~ / \$99.60  
0-19-852996-1 paper ~~£39.50~~ / \$47.60



### Oxford Users' Guide to Mathematics

Edited by EBERHARD ZEIDLER, *Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany*

Translated and typeset by BRUCE HUNT

*The Oxford Users' Guide to Mathematics* represents a comprehensive handbook on mathematics. It emphasizes the relations between the different branches of mathematics and the applications of mathematics in engineering and the natural sciences. The book addresses students in engineering, mathematics, computer science, natural sciences, high-school teachers, as well as a broad spectrum of practitioners in industry and professional researchers.

2004 1308 pp.; 316 line illus.  
0-19-850763-1 flexicover ~~£49.95~~ / \$39.96

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### Theory of Neural Information Processing Systems

A. C. C. COOLEN, R. KUEHN, and P. SOLLICH, all at *King's College, London*

This interdisciplinary graduate text gives a full, explicit, coherent and up-to-date account of the modern theory of neural information processing systems and is aimed at student with an undergraduate degree in any quantitative discipline (e.g. computer science, physics, engineering, biology, or mathematics). The book covers all the major theoretical developments from the 1940s to the present day, using a uniform and rigorous style of presentation and of mathematical notation.

September 2005 500 pp.  
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**340** **MCC-208 D**

● ☆ **The Travails of a Statistical Scientist—Invited**

**Council of Chapters**

*Organizer(s): Winston A. Richards, The Pennsylvania State University*

*Chair(s): Winston A. Richards, The Pennsylvania State University*

- 8:35 a.m.**    **The Matched Crossover Design in Clinical Trials—**  
◆ Vernon M. Chinchilli, Pennsylvania State College of Medicine
- 9:00 a.m.**    **Methodological Issues Encountered in the Review of the TPA Trials: a Statistical and Neurological Enterprise—**  
◆ W. Michael O'Fallon, Mayo Clinic; Thomas A. Louis, Johns Hopkins University; Vicki S. Hertzberg, Emory University; Teresa J. H. Christianson, Mayo Clinic; Timothy J. Ingall, Mayo Clinic; Kjell Asplund, National Board of Health and Welfare; Lewis R. Goldfrank, New York University
- 9:25 a.m.**    Disc: Jeffrey Wilson, Arizona State University
- 9:50 a.m.**    Disc: James L. Rosenberger, The Pennsylvania State University
- 10:15 a.m.**   Floor Discussion

**341** **MCC-102 A**

**Massive Multiple Comparisons—Invited**

**IMS, Section on Physical and Engineering Sciences, Section on Bayesian Statistical Science**

*Organizer(s): Peter Mueller, The University of Texas M. D. Anderson Cancer Center*

*Chair(s): Kim-Anh Do, The University of Texas M. D. Anderson Cancer Center*

- 8:35 a.m.**    **Decision Theory and Genomic Experiments—**  
◆ Giovanni Parmigiani, Johns Hopkins University
- 9:05 a.m.**    **Bayesian and Frequentist Approaches to Multiple Testing—**◆ M. J. Bayarri, University of Valencia; James Berger, Duke University
- 9:35 a.m.**    **False Discovery Rate for Infinitely Many Comparisons—**  
◆ Peter Westfall, Texas Tech University
- 10:05 a.m.**   Floor Discussion

**342** **MCC-103 F**

● ☆ **The Importance of Income Data in Policy Analysis of Health Statistics—Invited**

**Section on Health Policy Statistics, Business and Economics Statistics Section, Social Statistics Section, Section on Government Statistics, WNAR**

*Organizer(s): Joan L. Turek, U.S. Department of Health and Human Services*

*Chair(s): Michael Davern, University of Minnesota*

- 8:35 a.m.**    **Income and Health Estimates from Major National Surveys—**◆ Joan L. Turek, U.S. Department of Health and

Human Services; Gabrielle Denmead, Denmead Services & Consulting

- 9:00 a.m.**    **Income and Disability Estimates from Major National Surveys—**◆ Michele Adler, Social Security Administration; Tom Hale, Social Security Administration
- 9:25 a.m.**    **Income Measurement in the Medical Expenditure Panel Survey—**◆ Jessica Banthin, Agency for Healthcare Research and Quality; Thomas M. Selden, Agency for Healthcare Research and Quality; Didem Bernard, Agency for Healthcare Research and Quality
- 9:50 a.m.**    Disc: Constance Citro, National Academy of Sciences
- 10:10 a.m.**   Floor Discussion

**343** **MCC-208 C**

● ☆ **Stats, Maps, Geography, and People—Invited**

**Section on Statistical Graphics, Section on Statisticians in Defense and National Security, Social Statistics Section, WNAR, Biometrics Section**

*Organizer(s): Graham J. Wills, SPSS Inc.*

*Chair(s): Daniel B. Carr, George Mason University*

- 8:35 a.m.**    **Improving the Communication of the Geographic Patterns of Disease through Computer-based Tools—**  
◆ Linda W. Pickle, National Cancer Institute
- 9:05 a.m.**    **Interactive Statistical Analysis of Geographically Referenced Data—**◆ Martin Theus, University of Augsburg
- 9:35 a.m.**    **Maps, Time, and Interactivity—**◆ Graham J. Wills, SPSS Inc.
- 10:05 a.m.**   Floor Discussion

**344** **MCC-208 B**

● ☆ **Applications of Sequential Monte Carlo Methods in Statistics—Invited**

**Section on Statistical Computing, Section on Bayesian Statistical Science, Business and Economics Statistics Section**

*Organizer(s): Arnaud Doucet, Cambridge University*

*Chair(s): Arnaud Doucet, Cambridge University*

- 8:35 a.m.**    **Maximum Likelihood Parameter Estimation in General State-space Models Using Particle Methods—**  
◆ Sumeetpal S. Singh, Cambridge University; George Poyiadjis, Cambridge University; Arnaud Doucet, Cambridge University
- 9:05 a.m.**    **Particle Filter Methods for High-frequency Data—**  
◆ Michael Pitt, The University of Warwick

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**9:35 a.m.** Convergence of Adaptive Importance Sampling Algorithms—◆ Jean-Michel Marin, University Paris-Sud and CEREMADE; Christian Robert, University Paris-Sud and CEREMADE

**10:05 a.m.** Floor Discussion

## **345** **MCC-200 G**

### ☆ ☆ **Proof of Concept Strategies—Aspects of Study Design and Analysis—Invited**

**Biopharmaceutical Section, Section on Physical and Engineering Sciences, WNAR**

*Organizer(s): Michael Branson, Novartis Pharmaceuticals*

*Chair(s): Michael Branson, Novartis Pharmaceuticals*

**8:35 a.m.** Decisions in a Proof of Concept Strategy: a Union between Pharmacology and Statistics—◆ Amy Racine, Novartis Pharmaceuticals AG

**9:00 a.m.** Adaptive Designs for Proof of Concept and Dose Finding Trials—◆ Michael Smith, Pfizer, Ltd.

**9:24 a.m.** Role of Mechanistically-based PK/PD Models in Drug Development: a Case Study—◆ Niclas Jonsson, Uppsala University

**9:50 a.m.** Disc: Donald A. Berry, The University of Texas M. D. Anderson Cancer Center

**10:10 a.m.** Floor Discussion

## **346** **MCC-102 C**

### **Modeling of Computer Communications Network—Invited**

**Section on Physical and Engineering Sciences, Section on Quality and Productivity**

*Organizer(s): Angela Dean, The Ohio State University*

*Chair(s): William I. Notz, The Ohio State University*

**8:30 a.m.** Developments in Network Tomography—Earl Lawrence, University of Michigan; ◆ George Michailidis, University of Michigan; Vijayan Nair, University of Michigan

**9:05 a.m.** Statistical Estimation in Network Tomography—◆ Gang Liang, University of California, Irvine; Bin Yu, University of California, Berkeley

**9:35 a.m.** Voice over the Internet: the Statistics of Calls, Packets, and Silence Suppression—◆ William S. Cleveland, Purdue University; Hui Chen, Purdue University; Bowei Xi, Purdue University

**10:05 a.m.** Floor Discussion

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Invited Panels 8:30 a.m.–10:20 a.m.

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## **347** **MCC-205 D**

### ☆ **The Promise and Pitfalls of Data Mining—Invited**

**Committee on Privacy and Confidentiality, Business and Economics Statistics Section, Social Statistics Section, Section on Government Statistics, Committee on Professional Ethics, Scientific and Public Affairs Advisory Committee**

*Organizer(s): Alvan O. Zarate, National Center for Health Statistics*

*Chair(s): Fritz J. Scheuren, University of Chicago*

**Panelists:** ◆ William Seltzer, Fordham University  
◆ David Hand, Imperial College  
◆ Sam Hawala, U.S. Census Bureau  
◆ William F. Eddy, Carnegie Mellon University

**10:10 a.m.** Floor Discussion

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Topic Contributed Sessions 8:30 a.m.–10:20 a.m.

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## **348** **MCC-201 AB**

### **Bayesian Methods in Health Sciences—Topic Contributed**

**Biometrics Section, Section on Bayesian Statistical Science, WNAR**

*Organizer(s): Carlos D. Paulino, IST, Technical University of Lisbon*

*Chair(s): Alicia Carriquiry, Iowa State University*

**8:35 a.m.** Identification of Differentially Expressed Genes: Two Bayesian Approaches—◆ Lisete de Sousa, University of Lisbon; Maria A. Turkman, FCUL, DEIO; Luka Clarke, FCUL, DQB; Margarida Amaral, FCUL, DQB

**8:55 a.m.** Loglinear Models for Incomplete Categorical Data—◆ Paulo Soares, Instituto Superior Técnico, UTL; Carlos D. Paulino, IST, Technical University of Lisbon

**9:15 a.m.** New Statistical Models for Joint Action of Two Loci in Complex Binary Traits and Their Analysis by MCMC Methods—◆ Nuno Sepulveda, Instituto Gulbenkian de Ciência; Carlos D. Paulino, IST, Technical University of Lisbon; Carlos Penha-Gonçalves, Instituto Gulbenkian de Ciência

**9:35 a.m.** Bayesian Analysis for the Multinomial Probit Model—◆ Xiao Zhang, University of California, Los Angeles; John Boscardin, University of California, Los Angeles; Thomas R. Belin, University of California, Los Angeles

**9:55 a.m.** Floor Discussion

## 349 MCC-200 H

### ● ☆ Interpretation and Inference on Treatment Effects in Multiple-visit Clinical Trials with Dropouts—Topic Contributed

Biopharmaceutical Section, ENAR, WNAR, Biometrics Section

Organizer(s): Bob Zhong, Centocor, Johnson & Johnson

Chair(s): Scott Clark, Eli Lilly and Company

- 8:35 a.m.** Last Observation Analysis in ANOVA and ANCOVA—  
◆ Jun Shao, University of Wisconsin, Madison; Bin Cheng, Columbia University; Bob Zhong, Eli Lilly and Company
- 8:55 a.m.** Robust Analysis of Incomplete Longitudinal Data in Clinical Trials—◆ Devan Mehrotra, Merck Research Laboratories; Robin Mogg, Merck Research Laboratories
- 9:15 a.m.** Considerations in the Use of Composite versus Component Endpoints in Clinical Trials with Dropout—  
◆ Craig Mallinckrodt, Eli Lilly and Company; Christopher J. Kaiser, Eli Lilly and Company
- 9:35 a.m.** On the Treatment Effect in Clinical Trials with Dropout—  
◆ Bob Zhong, Eli Lilly and Company; Jun Shao, University of Wisconsin, Madison
- 9:55 a.m.** Disc: H.M. James Hung, U.S. Food and Drug Administration
- 10:15 a.m.** Floor Discussion

## 350 MCC-211 B

### ● ☆ Bayesian Modeling for Spatial and Environmental Problems—Topic Contributed

Section on Bayesian Statistical Science, ENAR, Section on Statistics and the Environment

Organizer(s): Mary K. Cowles, The University of Iowa

Chair(s): Mary K. Cowles, The University of Iowa

- 8:35 a.m.** Bayesian Modeling of Marked Spatial Point Patterns—  
◆ Matthew Bogner, The University of Iowa
- 8:55 a.m.** Modeling the Distribution of Environmental Radon Levels in Iowa: Combining Multiple Sources of Spatially Mismatched Data—◆ Brian J. Smith, The University of Iowa
- 9:15 a.m.** Hierarchical Modeling of Animal Movement and Resource Selection Data—◆ Aaron Christ, Alaska Department of Fish and Game
- 9:35 a.m.** Bayesian Model Selection for Geostatistical Regression Data—◆ Devin S. Johnson, University of Alaska Fairbanks
- 9:55 a.m.** Spatial Stochastic Volatility—◆ Jun Yan, The University of Iowa
- 10:15 a.m.** Floor Discussion

## 351 MCC-211 A

### ● ☆ Bayesian Methods and Applications—Topic Contributed

Section on Bayesian Statistical Science

Organizer(s): Jun Lu, American University

Chair(s): Jun Lu, American University

- 8:35 a.m.** Bayesian Selection of Multivariate Stochastic Models—  
◆ Shawn Ni, University of Missouri, Columbia; Dongchu Sun, University of Missouri, Columbia
- 8:55 a.m.** A Hybrid MCMC/Importance Sampling Approach to Black Box Modeling—◆ John Molitor, University of Southern California; Paul Marjoram, University of Southern California
- 9:15 a.m.** Bayesian Hierarchical Models for Fecundability—  
◆ Cuirong Ren, South Dakota State University; Dongchu Sun, University of Missouri, Columbia; Paul Speckman, University of Missouri, Columbia; Chong Z. He, University of Missouri, Columbia; Shanna Swan, University of Missouri, Columbia
- 9:35 a.m.** Bayesian Prediction Limits for Atlantic Tropical Storm Occurrences—◆ Valbona Bejleri, American University; Alexander White, American University
- 9:55 a.m.** Estimation of a Multivariate Normal Covariance Matrix with Staircase Pattern Data—◆ Xiaoqian Sun, University of Missouri, Columbia; Dongchu Sun, University of Missouri, Columbia
- 10:15 a.m.** Floor Discussion

## 352 MCC-103 C

### ● ☆ Obtaining Timely Monthly Estimates of Natural Gas Production: Challenges in Estimation from a New Sample Survey—Topic Contributed

Section on Government Statistics

Organizer(s): Howard Bradsher-Fredrick, Energy Information Administration

Chair(s): Nancy Kirkendall, Energy Information Administration

- 8:35 a.m.** EIA's Natural Gas Production Estimation Predicament and Proposed Solution—◆ Kara Norman, Energy Information Administration
- 8:55 a.m.** Applicability of Sampling Methods to an Evolving Frame—◆ Inderjit Kundra, Energy Information Administration; Joseph Sedransk, Energy Information Administration
- 9:15 a.m.** Simulation of Sampling Methods to an Evolving Frame—◆ Preston McDowney, Energy Information Administration

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**9:35 a.m.** EIA 914 Gas Production Survey and Gas Production Estimates—◆ John H. Wood, U.S. Department of Energy

**9:55 a.m.** Disc: Roy Whitmore, RTI International

**10:05 a.m.** Floor Discussion

## **353** **MCC-205 A**

### **Interpretation of Multireader Information for Studies Relating to Human Health—Topic Contributed**

**Section on Statistics in Epidemiology, WNAR**

*Organizer(s): Alan H. Feiveson, Johnson Space Center*

*Chair(s): Alan H. Feiveson, Johnson Space Center*

**8:35 a.m.** Latent Class Model for Space Decompression Sickness Diagnosis Accuracy—◆ Hsi-Guang Sung, USRA; Alan H. Feiveson, Johnson Space Center; Johnny Conkin, National Space Biomedical Research Institute

**8:55 a.m.** A Novel Approach To Assess Rater Agreement with Target Values for Ordinal Data—◆ Zheng Zhang, Emory University

**9:15 a.m.** Statistics Issues in Combining Multiple Sensors—◆ Carol Y. Lin, Emory University; Lance A. Waller, Emory University; Robert Lyles, Emory University

**9:35 a.m.** Using Multiply-read Cultures to Improve Biotechnology Identification—◆ Elizabeth Margosches, U.S. Environmental Protection Agency; Mark Segal, U.S. Environmental Protection Agency; P. De Vos, University of Gent; S. Dejsirilert, National Institute of Health, Thailand; P. Gillevet, George Mason University; D. Henry, University of British Columbia; M. Krichevsky, Bionomics International; J. Lalucat, University de les Illes Balears; E. Moore, Macaulay Research Institute; J. Tang, American Type Culture Collection; S. Whitehead, Children's & Women's Health Centre of B.C.; Y. Zhou, Chinese Academy of Sciences; H. Yu, Health Canada

**9:55 a.m.** Disc: Mari Palta, University of Wisconsin, Madison

**10:15 a.m.** Floor Discussion

## **354** **MCC-211 D**

### **Functional Data Analysis—Topic Contributed**

**Section on Nonparametric Statistics, ENAR, Biometrics Section**

*Organizer(s): Rima Izem, Harvard University*

*Chair(s): Rima Izem, Harvard University*

**8:35 a.m.** Hypothesis Testing for Heteroscedastic Functional Data—◆ Haiyan Wang, Kansas State University; Akritas G. Michael, The Pennsylvania State University

**8:55 a.m.** Detecting Differentially-expressed Time Course Gene Expression Profiles—◆ Xueli Liu, University of Florida; Rongling Wu, University of Florida; George Casella, University of Florida

**9:15 a.m.** Object-oriented Data Analysis: Sets of Trees—◆ Haonan Wang, Colorado State University; James Marron, The University of North Carolina at Chapel Hill

**9:35 a.m.** A Scale-based Approach to Finding Effective Dimensionality—◆ Xiaohui Wang, University of Virginia; James Marron, The University of North Carolina at Chapel Hill

**9:55 a.m.** Perspectives on High-dimensional Inference in Functional Data Analysis—◆ Dan Spitzner, Virginia Polytechnic Institute and State University

**10:15 a.m.** Floor Discussion

## **355** **MCC-202 AB**

### **☆ ☆ General Statistical Issues of Interest for Cancer—Topic Contributed**

**Biometrics Section, Biometrics Editorial Board, WNAR**

*Organizer(s): Terry Hyslop, Thomas Jefferson University*

*Chair(s): Terry Hyslop, Thomas Jefferson University*

**8:35 a.m.** Clinical Trial Designs for Marker Validation Studies—◆ Sumithra J. Mandrekar, Mayo Clinic; Daniel Sargent, Mayo Clinic

**8:55 a.m.** Detection of Genomic Changes and the Association with Clinical Parameters—◆ Chiang-Ching Huang, Northwestern University

**9:15 a.m.** Analysis of Randomized Phase II Trials—◆ Sin-Ho Jung, Duke University

**9:35 a.m.** Applications of Monte Carlo Metaanalyses in Ovarian Cancer Diagnosis—◆ Ying Lu, University of California, San Francisco; Mei-Hsiu Chen, University of California, San Francisco; Karen Kinkle, Institut de Radiologie

**9:55 a.m.** Estimating the Quality-of-life-adjusted Gap Time Distribution of Successive Events Subject to Censoring—◆ Adin-Cristian Andrei, University of Michigan; Susan Murray, University of Michigan

**10:15 a.m.** Floor Discussion

## **356** **MCC-102 E**

### **Improving Imputation in the Decennial Census—Topic Contributed**

**Section on Survey Research Methods, Social Statistics Section**

*Organizer(s): Sally M. Obenski, U.S. Census Bureau*

*Chair(s): Jason D. Machowski, U.S. Census Bureau*

**8:35 a.m.** Improving Imputation: the Plan To Examine Count, Status, Vacancy, and Item Imputation in the Decennial Census—◆ Gary Chappell, U.S. Census Bureau; Sally M. Obenski, U.S. Census Bureau

- 8:55 a.m.** The Development of Truth Decks for the 2010 Census Count Imputation Research—◆ Todd Williams, U.S. Census Bureau
- 9:15 a.m.** Measuring Discriminatory Power of Imputation Methods in an Enumeration—◆ Yves Thibaudeau, U.S. Census Bureau; Inez Chen, U.S. Census Bureau; Robert Sands, U.S. Census Bureau
- 9:35 a.m.** Using Administrative Records for Imputation in the Decennial Census—◆ James Farber, U.S. Census Bureau; Deborah Wagner, U.S. Census Bureau
- 9:55 a.m.** Improving Census 2000 Imputation: Results and Conclusions—◆ Sally M. Obenski, U.S. Census Bureau; Gary Chappell, U.S. Census Bureau
- 10:15 a.m.** Floor Discussion

## 357 **MCC-212 AB**

### ☆ Statistical Partnerships in Academe, Industry, and Government—Topic Contributed

SPAIG Committee, Section on Statistical Education, Section on Survey Research Methods, Section on Physical and Engineering Sciences

Organizer(s): Cynthia Z.F. Clark, Office for National Statistics

Chair(s): Cynthia Z.F. Clark, Office for National Statistics

- 8:35 a.m.** ASA Board Membership Initiative: Addressing Barriers to Partnerships between Academe and Business, Industry, and Government—◆ Robert Starbuck, Wyeth
- 8:55 a.m.** Data Needs for the Intelligent Design of University/ Industry Partnerships—◆ Merrilea Mayo, The National Academies
- 9:15 a.m.** The Merck/Temple Partnership: a Mutually Successful Relationship—◆ Boris Iglewicz, Temple University; Joseph F. Heyse, Merck & Co., Inc.
- 9:35 a.m.** NCSU Graduate Industrial Trainee Program—◆ Tom Gerig, North Carolina State University
- 9:55 a.m.** Disc: Roger Tourangeau, Joint Program in Survey Methodology
- 10:15 a.m.** Floor Discussion

Regular Contributed Sessions 8:30 a.m.–10:20 a.m.

## 358 **MCC-102 B**

### Testing Hypotheses and Goodness of Fit—Contributed

IMS, Section on Statistical Education

Chair(s): Elizabeth Leeds, Naval Surface Warfare Center, Dahlgren Division

- 8:35 a.m.** P-values as Random Variables: Its Expectation and Median—◆ Desale Habtzghi, University of Georgia

- 8:50 a.m.** The Weak Convergence of Empirical Processes from Multivariate Normal Vectors for Goodness-of-fit Tests—◆ Christopher Saunders, University of Kentucky; Constance L. Wood, University of Kentucky
- 9:05 a.m.** Using the Generalized Partitioning Principle To Control Generalized Familywise Error Rate—◆ Haiyan Xu, The Ohio State University
- 9:20 a.m.** Goodness-of-fit Tests for a Heavy-tailed Distribution—◆ Liang Peng, Georgia Institute of Technology; Alex Koning, Erasmus University Rotterdam
- 9:35 a.m.** Elementary Chis Squared—◆ George Terrell, Virginia Polytechnic Institute and State University
- 9:55 a.m.** Estimating a Distribution Less Peaked than Another—◆ Hari Mukerjee, Wichita State University
- 10:05 a.m.** Tukey's Compact Procedure of Comparing Two Means: a Simulation Study—◆ Yi-Kuan Jong, St. John and St. Mary Institute of Technology

## 359 **MCC-103 E**

### Statistical Genetics and Machine Learning—Contributed

General Methodology, Biometrics Section

Chair(s): Joseph Beyene, University of Toronto

- 8:35 a.m.** Regularized Discriminant Analysis and Its Application in Microarrays—◆ Yaqian Guo, Stanford University; Trevor Hastie, Stanford University; Robert Tibshirani, Stanford University
- 8:50 a.m.** A Statistical Method for Analyzing SAGE Libraries—◆ Zailong Wang, The Ohio State University; Shili Lin, The Ohio State University; Magdalena Popesco, The Ohio State University; Andrej Rotter, The Ohio State University
- 9:05 a.m.** Instability of Multiple Testing Procedures in Microarray Data Analysis—◆ Yuanhui Xiao, University of Rochester; Andrei Yakovlev, University of Rochester
- 9:20 a.m.** Haplotype-based Association Studies on Multivariate Responses—◆ Dan Nicolae, The University of Chicago
- 9:35 a.m.** Evaluating the Performances of Several Approaches in the Identification of Differentially Expressed Probesets in Affymetrix GeneChip® Analysis—◆ Fenghai Duan, Yale University; Heping Zhang, Yale University
- 9:50 a.m.** Comparison of Two Ways of Handling Replicates in the Context of Distance Measure of Time Course Microarray Gene Expression Data—◆ Yu Guo, Harvard School of Public Health; Cheng Li, Harvard School of Public Health
- 10:05 a.m.** Floor Discussion



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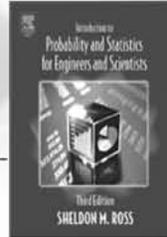


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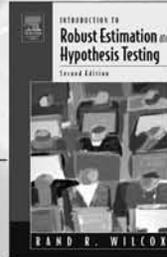


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## 360 MCC-210 AB

### Time Series and Forecasting—Contributed

#### Business and Economics Statistics Section

Chair(s): Tom Fullerton, The University of Texas at El Paso

- 8:35 a.m.** Statistical Inferences on Time Series with Dependent Innovations—◆ Wanli Min, IBM
- 8:50 a.m.** Identification of Time-series Models: Application to ARMA Processes—◆ Burtchy Bernard, Telecom Paris University; Carole Toque, Telecom Paris University
- 9:05 a.m.** Economic Phases via Velocity and Acceleration of GDP—◆ Stanley L. Sclove, University of Illinois, Chicago
- 9:20 a.m.** Power Transformations and Forecasting—◆ Lon-Mu Liu, University of Illinois, Chicago; William J. Lattyak, Scientific Computing Associates Corp.; Chung Chen, Syracuse University
- 9:35 a.m.** Effects of Temporal Aggregation on Cointegration Tests—Ceylan Yozgatligil, Temple University; ◆ William W. S. Wei, Temple University
- 9:50 a.m.** Yield Analysis Approach and Problems of Return on Investment Estimation—Igor Mandel, Media Planning Group; ◆ David Hauser, Media Planning Group
- 10:05 a.m.** A Macro Risk Analysis with Applications to the Hospital Industry Sector—◆ Radu Neagu, GE Company

## 361 MCC-200 I

### ★ ☆ Drug Combination Studies and Design of Clinical Trials—Contributed

#### Biopharmaceutical Section, WNAR

Chair(s): Xiaohui Luo, Merck & Co., Inc.

- 8:35 a.m.** Experimental Design for Testing Synergism in Drug Combination Studies—◆ Hongbin Fang, University of Maryland; Ming Tan, University of Maryland
- 8:50 a.m.** Optimal Experimental Designs for Drug Synergism Studies—◆ Donald White, The University of Toledo; William R. Greco, Roswell Park Cancer Institute
- 9:05 a.m.** A Semiparametric Response Surface Model for Assessing Drug Interaction as Synergy, Additivity, or Antagonism—◆ Maiying Kong, The University of Texas M. D. Anderson Cancer Center; J. Jack Lee, The University of Texas M. D. Anderson Cancer Center
- 9:20 a.m.** Flexible Multistage Study Design for Single-arm, Phase II Clinical Trials—◆ Muhammad Jalaluddin, Pfizer, Inc.; Enayet Talukder, Pfizer, Inc.
- 9:35 a.m.** Statistical Consideration of Group Sequential Method—◆ Huaixiang Li, U.S. Food and Drug Administration; Yi Tsong, U.S. Food and Drug Administration
- 9:50 a.m.** Significant Design Components in General Two-stage Adaptive Procedures—◆ Tatsuki Koyama, Vanderbilt

University; Allan R. Sampson, University of Pittsburgh; Leon J. Gleser, University of Pittsburgh

- 10:05 a.m.** Designs for Phase II Window Studies—◆ Myron Chang, University of Florida; Meenakshi Devidas, University of Florida; James Anderson, University of Nebraska

## 362 MCC-211 C

### Empirical and Maximal Likelihood—Contributed

#### Section on Nonparametric Statistics

Chair(s): Xiuwen Liu, Florida State University

- 8:35 a.m.** Yield Analysis and Mixed Model—Eugene Demidenko, Dartmouth University; ◆ Igor Mandel, Media Planning Group
- 8:50 a.m.** Inference for the Mean Residual Life Function—◆ Yichuan Zhao, Georgia State University
- 9:05 a.m.** Nonparametric Estimation for Competing-risk, Current-status Data: Convex Minorant Characterizations and Algorithms—◆ Marloes Maathuis, University of Washington
- 9:20 a.m.** Rank Regression Inference via Empirical Likelihood—◆ Ellen Bishop, RTI International
- 9:35 a.m.** Empirical Likelihood-based Inference Procedure for Quantile Regression—◆ Mi-Ok Kim, University of Kentucky; Mai Zhou, University of Kentucky
- 9:50 a.m.** Developing Empirical Likelihood under Long-range Dependence—◆ Daniel J. Nordman, University of Wisconsin, La Crosse; Soumendra N. Lahiri, Iowa State University
- 10:05 a.m.** Weighted Empirical Likelihood Estimates and Their Robustness Properties—◆ Nancy Glenn, University of South Carolina

## 363 MCC-209 AB

### ★ ☆ Bayesian Modeling and Inference—Contributed

#### Section on Bayesian Statistical Science

Chair(s): Patrick J. Wolfe, Harvard University

- 8:35 a.m.** On the Mixture of Skew Normal Distributions—◆ Jack C. Lee, National Chiao-Tung University; Tsung-I Lin, Tunghai University
- 8:50 a.m.** A Doubly Nested Hidden Markov Model for Internet Browsing Behavior—◆ Steven Scott, University of Southern California
- 9:05 a.m.** An Efficient Mixture-based Shrinkage Estimator: a Monte Carlo Analysis—◆ William Bolstad, University of Waikato
- 9:20 a.m.** Estimation of Bayesian Hierarchical Models with ARIMA Noise—◆ Miguel Arranz, Bayes Inference, S. A.
- 9:35 a.m.** Bayesian Analysis of the Computer Model Validation—◆ Fei Liu, Duke University

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**—Minneapolis Convention Center   **H**—Hilton Minneapolis   **HY**—Hyatt Regency Minneapolis

- 9:50 a.m.** Bayesian Inference with Latent Variable Models—  
◆ Eric Loken, The Pennsylvania State University
- 10:05 a.m.** Posterior Propriety for Hierarchical Models with Log-concave Likelihoods, Including Hierarchical Generalized Linear Models—◆ Sarah Michalak, Los Alamos National Laboratory; Carl N. Morris, Harvard University

## **364** **MCC-103 D** **Robust Regression Methods—Contributed** General Methodology, Section on Nonparametric Statistics

Chair(s): Jonas Ellenberg, University of Pennsylvania School of Medicine

- 8:35 a.m.** Estimating Regression Parameters in Inventory Management—◆ Samaradasa Weerahandi, Time Warner, Inc.; Martin Koschat, Time Warner, Inc.; Xiaolin Teng, Time Warner, Inc.
- 8:50 a.m.** On an Extension of Woodruff's Method for Calculating Sampling Variability for Medians—◆ Claude Girard, Statistics Canada
- 9:05 a.m.** Improved Estimation of Dissimilarities by Presmoothing Functional Data—◆ David B. Hitchcock, University of South Carolina; George Casella, University of Florida; James G. Booth, Cornell University
- 9:20 a.m.** Ridge Trace Properties under Structured Correlation Matrices—◆ Racheal Zhang, Oakland University
- 9:35 a.m.** Robustness in Structural Measurement Error Models—  
◆ Xianzheng Huang, North Carolina State University; Leonard A. Stefanski, North Carolina State University; Marie Davidian, North Carolina State University

- 9:50 a.m.** Diagnostics for Machine Learning: Generalizing the Functional ANOVA—◆ Giles Hooker, McGill University
- 10:05 a.m.** Equal Leverage via Robust Regression Using a Weighted Projection Matrix—◆ Tamekia Jones, University of Alabama at Birmingham; David T. Redden, University of Alabama at Birmingham

## **365** **MCC-102 F** **Mode Effects and Issues with Nontraditional Modes—Contributed** Section on Survey Research Methods, Social Statistics Section

Chair(s): Ting Yan, University of Maryland

- 8:35 a.m.** Latent Class Models for Studying Measurement-related Mode Effects in Mixed-mode Surveys—◆ Allan McCutcheon, UNL-Gallup Research Center
- 8:50 a.m.** Comparison of Telephone versus Face-to-face Response in the U.S. Consumer Expenditures Survey—  
◆ David McGrath, BAE Systems
- 9:05 a.m.** Effectiveness of Address-based Sampling Frame Alternative to RDD: BRFSS Mail Survey Experiment Results—◆ Michael W. Link, U.S. Centers for Disease Control and Prevention; Michael Battaglia, Abt Associates, Inc.; Martin R. Frankel, Abt Associates, Inc.; Pamela Giambo, Abt Associates, Inc.; Ali H. Mokdad, U.S. Centers for Disease Control and Prevention
- 9:20 a.m.** An Evaluation of Respondent Selection Methods for Household Mail Surveys—◆ Michael Battaglia, Abt Associates, Inc.; Michael W. Link, U.S. Centers for Disease Control and Prevention; Martin R. Frankel, Abt Associates, Inc.; Pamela Giambo, Abt Associates, Inc.; Ali H. Mokdad, U.S. Centers for Disease Control and Prevention
- 9:35 a.m.** Combining Information from Multiple Modes To Evaluate and Reduce Nonresponse Bias—◆ Mick Couper, University of Michigan; Andy Peytchev, University of Michigan; Roderick J. Little, University of Michigan; Victor Strecher, University of Michigan; Kendra Rothert, Kaiser Permanente
- 9:50 a.m.** Assessing Panel Bias in the Knowledge Networks Panel—◆ Vicki Pineau, Knowledge Networks, Inc.
- 10:05 a.m.** Floor Discussion

## **366** **MCC-205 B** **Modeling Incidence Rates and Epidemics—Contributed** Section on Statistics in Epidemiology, WNAR

Chair(s): Michael Haber, Emory University

- 8:35 a.m.** Trends and Risk Factors in British Female Breast Cancer—◆ Patrick Carroll, PAPRI

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# EXPO 2005

9:00 a.m.—2:00 p.m.  
MMC—Exhibit Hall C

**8:50 a.m.** BMI, Alcohol Consumption, and Risk of Prostate Cancer?—◆ Negasi Beyene, National Center for Health Statistics

**9:05 a.m.** A Comparison of Methods for the Surveillance of Congenital Malformations—◆ Landon Sego, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University

**9:20 a.m.** Epidemiologic Comparison of Disease Incidence among Populations: the Person-years Approach—  
◆ V. Shane Pankratz, Mayo Clinic; Robert Vierkant, Mayo Clinic; Shaun Maloney, Mayo Clinic; Lynn Hartmann, Mayo Clinic

**9:35 a.m.** Age-based Methods To Explore Time-related Variables in Occupational Epidemiologic Studies—◆ Janice Watkins, Oak Ridge Associated Universities

**9:50 a.m.** Modeling a Computer Virus Epidemic—◆ Lawrence Lessner, SUNY/NYS Department of Health; Sanjay Gioel, University at Albany, SUNY

**10:05 a.m.** Floor Discussion

## 367 **MCC-103 A**

### ★ Record Linkage, Disclosure Risk, and Confidentiality—Contributed

Section on Survey Research Methods, Section on Government Statistics, Social Statistics Section, Section on Statisticians in Defense and National Security

Chair(s): Mary Moien, National Center for Health Statistics

**8:35 a.m.** Advances in Record Linkage Theory—◆ Michael D. Larsen, Iowa State University

**8:50 a.m.** Disclosure Limitation of MCOD and NHIS-NDI Linked Files—◆ Wenxing Zha, National Center for Health Statistics; Paul D. Williams, National Center for Health Statistics; Jay J. Kim, National Center for Health Statistics

**9:05 a.m.** Multiple and Stochastic Swapping of Keys for Statistical Disclosure Control in Microdata—◆ Fang Liu, Merck Research Laboratories

**9:20 a.m.** A New Multiple-bootstrap-datasets Presentation Method for Confidentiality Protection—◆ Yan Li, National Center for Health Statistics; Paul D. Williams, National Center for Health Statistics

**9:35 a.m.** Effects of Released Marginals and Conditionals in Multiway Tables on Disclosure Limitation—◆ Aleksandra Slavkovic, The Pennsylvania State University

**9:50 a.m.** Disclosure Risks in Releasing Output Based on Regression Residuals—◆ Arnold Reznak, U.S. Census Bureau; T. Lynn Riggs, U.S. Census Bureau

**10:05 a.m.** The National Center for Health Statistics Research Data Center—◆ Kenneth Harris, National Center for Health Statistics

## 368 **MCC-213 AB**

### ★ Assessing the Performance of Marketing Models and Measures—Contributed

Section on Statistics and Marketing, Section on Bayesian Statistical Science

Chair(s): Lynd Bacon, Sighthound Solutions, Inc.

**8:35 a.m.** A Bayesian Approach to Linkage Research—◆ Shon Magnan, GfK Custom Research, Inc.; Michael Conklin, GfK Custom Research, Inc.

**8:50 a.m.** Evaluating Data Collection Method Effects via Demographic Matching—◆ Robert Mezera, GfK Custom Research, Inc.; Shon Magnan, GfK Custom Research, Inc.

**9:05 a.m.** Bayesian Efficiency Components Analysis: Applications in Marketing—◆ Sanjog Misra, University of Rochester

**9:20 a.m.** Performance Comparison of State Space and RBF-based Models for Daily Sales of Small Restaurants—◆ Rui Yamaguchi, Kyushu University; Tomoyuki Higuchi, Institute of Statistical Mathematics

**9:35 a.m.** Increased Model Acceptance through Improved Reporting—◆ Audrey Lyke, Advance Magazine Group

**9:50 a.m.** Alternative Assessment Criteria for Gauging Performance of Database Response Models—  
◆ Sam Koslowsky, Harte-Hanks, Inc.

**10:05 a.m.** Floor Discussion

## 369 **MCC-205 C**

### Ideas and Examples for Teaching Concepts in Statistics Classroom—Contributed

Section on Statistical Education

Chair(s): Mary Mortlock, California Polytechnic State University

**8:35 a.m.** Teaching the Consequences of Data Transformations—  
◆ Christopher Malone, Winona State University; Brant Deppa, Winona State University

**8:50 a.m.** Illustrating Basic Probability Calculations Using the Dice Game 'Craps'—◆ Roger Johnson, South Dakota School of Mines & Technology

**9:05 a.m.** Some Illustrative Classroom Examples Regarding Sums of Discrete Random Variables with Finite Support—  
◆ Jeff Terpstra, North Dakota State University

**9:20 a.m.** What Is the Probability of 'Pigging Out'?—◆ Mary Richardson, Grand Valley State University; David Coffey, Grand Valley State University

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

- 9:35 a.m.** The Statistical Ecology of Google Whacking—  
◆ Woolcott Smith, Temple University
- 9:50 a.m.** Statistics before Your Eyes: Photographs of Statistical Concepts—◆ Robert Jennigan, American University
- 10:05 a.m.** The Flat Earth Guide to Probabilities and Statistics—  
◆ John Turner, U.S. Naval Academy

## 370 **MCC-208 A**

### ☆ **Methods and Models for Genomics—Contributed** Section on Statistical Computing

Chair(s): Patrick Gaffney, Imclone Systems

- 8:35 a.m.** Application of a Hidden Markov Model To Calculate the Probability of Ancestral Origin of Partially Informative Markers—◆ Stephen Kachman, University of Nebraska
- 8:50 a.m.** Likelihood-based Inference for Multicolor Optical Mapping Data—◆ Liping Tong, University of Washington; Mary Sara McPeck, The University of Chicago; Laurens Mets, The University of Chicago
- 9:05 a.m.** Bioinformatics Tools for Multivariate u-Statistics Applied to Screening for Genetic Risk Factors of Cardiovascular Diseases—◆ Knut M. Wittkowski, The Rockefeller University
- 9:20 a.m.** Model Search in Highly Dimensional Constrained Graphical Models with Application to Protein Backbone Nuclear Magnetic Resonance Assignment—◆ Olga Vitek, Purdue University
- 9:35 a.m.** Matrix Reduction Information Measures for Microarray Gene Expression and Other Applications—◆ Ehsan Soofi, University of Wisconsin, Milwaukee; Nader Ebrahimi, Northern Illinois University; Joseph J. Retzer, Maritz Research
- 9:50 a.m.** Floor Discussion

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Special Presentation 10:30 a.m.–12:20 p.m.

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## 371 **MCC-200 ABC**

### **Late-breaking Session 2: The COX-2 Inhibitors Story: What Do (Should) We Know and When Do (Should) We Know It—and What Should We Do about It?**

The ASA, ENAR, IMS, SSC, WNAR, Biopharmaceutical Section, Biometrics Section, Section on Risk Analysis,

Organizer(s): Susan Ellenberg, University of Pennsylvania

Chair(s): Susan Ellenberg, University of Pennsylvania

- 10:35 a.m.** A Metaanalysis of Effects of COX-2 Inhibitors—  
◆ Patricia Kearney, University of Oxford
- 11:05 a.m.** Chronology of Clinically Important Cardiovascular (CV) Event Data in the Rofecoxib (VIOXX) Development Program—◆ Raymond Bain, Merck & Co., Inc.

- 11:35 a.m.** Disc: Stephen J.W. Evans, London School of Hygiene and Tropical Medicine
- 11:50 a.m.** Disc: Robert O'Neill, U.S. Food and Drug Administration
- 12:05 p.m.** Floor Discussion

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Invited Sessions 10:30 a.m.–12:20 p.m.

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## 372 **MCC-200 DE**

### ● ☆ **Noether Award Invited Session—Invited** Noether Award Committee

- 10:35 a.m.** All Statistical Methods, Confidence Quantiles—  
◆ Emanuel Parzen, Texas A&M University
- 11:20 a.m.** Model Selection in Semiparametric Models—◆ Gerda Claeskens, Katholieke Universiteit Leuven
- 12:05 p.m.** Floor Discussion

## 373 **MCC-205 A**

### **Dealing with Bias in Observational Studies in the Health Sciences—Invited**

Section on Statistics in Epidemiology, Section on Health Policy Statistics, WNAR

Organizer(s): Sander Greenland, University of California, Los Angeles

- 10:35 a.m.** Extending Likelihood-based Algorithms and Inference to Nonidentified Bias Models—◆ Sander Greenland, University of California, Los Angeles
- 11:00 a.m.** A Counterfactual Approach to Sensitivity Analysis for Unmeasured Confounding and Selection Bias—  
◆ Miguel A. Hernán, Harvard School of Public Health
- 11:25 a.m.** Monte Carlo Correction for Misclassification with Imperfect Internal Validation Data—◆ Timothy L. Lash, Boston University
- 11:50 a.m.** Disc: Paul Gustafson, University of British Columbia
- 12:15 p.m.** Floor Discussion

## 374 **MCC-102 C**

### ● **Statistics and Machine Learning—Invited** International Indian Statistical Association

Organizer(s): Malay Ghosh, University of Florida

Chair(s): Debashis Ghosh, University of Michigan

- 10:35 a.m.** A New Multiclass Generalization of AdaBoost—  
◆ Ji Zhu, University of Michigan
- 11:00 a.m.** Support Vector Machine: Its Strength, Limitation, and Improvement—◆ Yoonkyung Lee, The Ohio State University

**11:25 a.m.** Bayesian Variable Selection in Neural Network and Support Vector Machine Models for Classification of Tumors Using Gene Expression Data—◆ Sounak Chakraborty, University of Florida; Malay Ghosh, University of Florida

**11:50 a.m.** Variable Selection for SVM—◆ Hao H. Zhang, North Carolina State University

**12:15 p.m.** Floor Discussion

## 375 MCC-213 AB

### ☆ **Isotonic Methods in Toxicology and Risk—Invited Section on Risk Analysis, WNAR, Biometrics Section**

*Organizer(s):* Laura H. Gunn, Georgia Southern University

*Chair(s):* Susan Simmons, University of North Carolina, Wilmington

**10:35 a.m.** A Survival-adjusted Test for Comparing Tumor Incidence Rates Using Historical Control Data—◆ Gregg E. Dinse, National Institute of Environmental Health Sciences; Shyamal D. Peddada, National Institute of Environmental Health Sciences; Grace E. Kissling, National Institute of Environmental Health Sciences

**11:00 a.m.** Bayesian Methods for Assessing Ordering in Hazard Functions—◆ Laura H. Gunn, Georgia Southern University; David Dunson, National Institute of Environmental Health Sciences

**11:25 a.m.** Applying Isotonic Regression To Identify the Ideal Recall Rate in Screening Mammography—◆ Michael J. Schell, The University of North Carolina at Chapel Hill; William E. Barlow, University of Washington; Bahjat F. Qaqish, The University of North Carolina at Chapel Hill; Bonnie C. Yankaskas, The University of North Carolina at Chapel Hill

**11:50 a.m.** Disc: A. John Bailer, Miami University

**12:10 a.m.** Floor Discussion

## 376 MCC-211 C

### ● **Robust Parameter Design: Past, Present, and Future—Invited**

#### Section on Quality and Productivity, Section on Physical and Engineering Sciences

*Organizer(s):* Timothy J. Robinson, University of Wyoming

*Chair(s):* John Borkowski, Montana State University

**10:35 a.m.** Robust Parameter Design: a Historical Perspective—◆ Raymond Myers, Virginia Polytechnic Institute and State University

**11:05 a.m.** Recent Advances in Robust Parameter Design—◆ Timothy J. Robinson, University of Wyoming

**11:35 a.m.** Designed Experiments in Robust Parameter Design—◆ Connie Borror, University of Illinois, Urbana-Champaign

**12:05 p.m.** Floor Discussion

## 377

## MCC-102 B

### ● **Complex Data Structures—Invited SSC**

*Organizer(s):* James Stafford, University of Toronto

*Chair(s):* James Stafford, University of Toronto

**10:35 a.m.** LAGO: a Computationally Efficient Approach for Statistical Detection—◆ Mu Zhu, University of Waterloo

**11:05 a.m.** A Likelihood-based Approach—◆ Jason Loeppky, University of British Columbia; Derek Bingham, Simon Fraser University; William J. Welch, University of British Columbia

**11:35 a.m.** Extracting Correlation Information from the Gene Ontology Structures—◆ Rafal Kustra, University of Toronto

**12:05 p.m.** Floor Discussion

## 378

## MCC-200 J

### ☆ **Dynamic Treatment Regimes—Invited ENAR, Biometrics Section**

*Organizer(s):* Susan Murphy, University of Michigan

*Chair(s):* Susan Murphy, University of Michigan

**10:35 a.m.** Acute HIV Infection and Structured Treatment Interruption: Can Therapy Be Discontinued?—◆ Eric S. Rosenberg, Massachusetts General Hospital/Harvard Medical School

**11:00 a.m.** Adaptive Multicourse Treatment Strategies in Two Oncology Trials—◆ Peter F. Thall, The University of Texas M. D. Anderson Cancer Center

**11:25 a.m.** Using Machine Learning to Approximate Dynamic Programming for Large-scale Sequential Decision Problems—◆ Andrew Barto, University of Massachusetts

**11:50 a.m.** Estimating Mean Response as a Function of Treatment Duration, Where Treatment Duration May Be Informative-censored—◆ Anastasios A. Tsiatis, North Carolina State University; Brent Johnson, The University of North Carolina at Chapel Hill

**12:15 p.m.** Floor Discussion

## 379

## MCC-211 B

### ☆ **Wald II—Invited IMS**

*Organizer(s):* David Madigan, Rutgers, The State University of New Jersey

*Chair(s):* Sunder Sethuraman, Iowa State University

**10:35 a.m.** Large Deviations in Different Contexts—◆ S.R. Srinivasa Varadhan, New York University

**12:00 p.m.** Floor Discussion

## 380

## MCC-102 D

### ● **Accounting for Constraints in Optimization of Survey Procedures—Invited**

#### Section on Survey Research Methods

Organizer(s): John L. Eltinge, Bureau of Labor Statistics

Chair(s): Jean D. Opsomer, Iowa State University

**10:35 a.m.** Handling Program Constraints in the Sample Design for the Commodities and Services Component of the U.S. Consumer Price Index—◆ Sylvia G. Leaver, Bureau of Labor Statistics; Darin T. Solk, Bureau of Labor Statistics

**11:00 a.m.** Designing and Analyzing Surveys under Severe Resource Constraints—◆ Stephen J. Haslett, Massey University

**11:25 a.m.** Sample Design for the FDIC's Asset Loss Reserve Project—◆ David W. Chapman, Federal Deposit Insurance Corporation

**11:50 a.m.** Disc: John L. Eltinge, Bureau of Labor Statistics

**12:10 p.m.** Floor Discussion

## 381

## MCC-103 D

### ● **Going Beyond ITT: Noncompliance in Randomized Trials—Invited**

#### General Methodology, WNAR, Biopharmaceutical Section, Biometrics Section

Organizer(s): Michael R. Elliott, University of Pennsylvania

Chair(s): Michael R. Elliott, University of Pennsylvania

**10:35 a.m.** CATE (Complier Average Treatment Effect) in Trials Involving Two Active Treatments—◆ Qi Long, University of Michigan; Roderick J. Little, University of Michigan; Xihong Lin, Harvard University

**11:00 a.m.** Bounds on Causal Effects in Three-arm Trials with Noncompliance—◆ Jing Cheng, University of Pennsylvania; Dylan Small, The University of Pennsylvania

**11:25 a.m.** Longitudinal Nested Compliance Class Model in the Presence of Time-varying Noncompliance—◆ Julia Lin, University of Pennsylvania; Michael R. Elliott, University of Pennsylvania; Thomas T. Have, University of Pennsylvania

**11:50 a.m.** Causal Effects of Observed Error-prone Exposure Measures in Randomized Clinical Trials—◆ Els J. Goetghebeur, Ghent University; Stijn Vansteelandt, Ghent University

**12:15 p.m.** Floor Discussion

## 382

## MCC-200 F

### ● ☆ **Statistical Methods in Environmental Exposure Assessment—Invited**

#### Biometrics Section, Section on Statistics and the Environment, WNAR

Organizer(s): Amy H. Herring, University of North Carolina at Chapel Hill

Chair(s): Michael Pennell, The University of North Carolina at Chapel Hill/NIEHS

**10:35 a.m.** An Overview of Statistical Approaches to Assessing Chemical Exposures—◆ Stephen M. Rappaport, The University of North Carolina at Chapel Hill

**11:00 a.m.** Structural Equation Models in Environmental Epidemiology—◆ Esben Budtz-Jorgensen, University of Copenhagen

**11:25 a.m.** Latent Variable Semiparametric Regression Models for Spatial-temporal Modeling of Mobile Source Pollution in the Greater Boston Area—◆ Brent Coull, Harvard School of Public Health; Alexandros Gryparis, Harvard School of Public Health; Joel Schwartz, Harvard School of Public Health; Helen Suh, Harvard School of Public Health

**11:50 a.m.** Bayesian Methods for Characterizing Complex Multivariate Exposures—◆ Amy H. Herring, The University of North Carolina at Chapel Hill

**12:15 p.m.** Floor Discussion

## 383

## MCC-211 A

### ● ☆ **Statistics for Molecular-level Experiments—Invited**

#### IMS, WNAR, Biometrics Section

Organizer(s): Zhan-Qian J. Lu, National Institute of Standards and Technology

Chair(s): Nell Sedransk, National Institute of Standards and Technology

**10:35 a.m.** Stochastic Modeling in Single Molecule Biophysics—◆ Samuel Kou, Harvard University

Pick up Wednesday's  
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for the  
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Recipients**

**11:00 a.m.** High-dimensional Analysis of Variance with Application to MALDI-TOF Mass Spectrometry in Synthetic Polymer Experiments—◆ Zhan-Qian J. Lu, National Institute of Standards and Technology

**11:25 a.m.** First Entrance of DNA into a Nanopore—◆ Charles Hagwood, National Institute of Standards and Technology; Charles Hagwood, National Institute of Standards and Technology

**11:50 a.m.** Disc: Kevin Coakley, National Institute of Standards and Technology

**12:10 p.m.** Floor Discussion

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Invited Panels 10:30 a.m.–12:20 p.m.

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**384** **MCC-205 D**  
**Career Advice in Statistics Education: a Panel Discussion Including Waller Education Award Winners—Invited Section on Statistical Education**

*Organizer(s): Allan J. Rossman, California Polytechnic State University*

*Chair(s): Allan J. Rossman, California Polytechnic State University*

**Panelists:** ◆ Beth Chance, California Polytechnic State University  
 ◆ John Holcomb, Cleveland State University  
 ◆ Ginger Rowell, Middle Tennessee State University  
 ◆ Thomas Moore, Grinnell College  
 ◆ Jessica Utts, University of California, Davis

**12:10 p.m.** Floor Discussion

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Topic Contributed Sessions 10:30 a.m.–12:20 p.m.

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**385** **MCC-212 AB**  
 ☆ **Study Design for Genetic Epidemiology—Topic Contributed**

**Section on Statistical Consulting**

*Organizer(s): Stephen Lake, Harvard Medical School*

*Chair(s): Stephen Lake, Harvard Medical School*

**10:35 a.m.** Study Design Options for Assessing Gene-environment and Gene-gene Interaction—◆ W. James Gauderman, University of Southern California

**10:55 a.m.** Complex Diseases in Admixed Populations—◆ Hua Tang, Fred Hutchinson Cancer Research Center

**11:15 a.m.** Genomic Control—◆ Silviu-Alin Bacanu, University of Pittsburgh

**11:35 a.m.** Estimation of Genetic Effect at a Candidate Gene for Family-based Association Studies—◆ Mei-Chiung Shih, Harvard School of Public Health; Nan M. Laird, Harvard

School of Public Health; Christoph Lange, Harvard School of Public Health

**11:55 a.m.** Genomic Screening in Family-based Association Testing—◆ Christoph Lange, Harvard School of Public Health; Kristel Van Steen, Harvard School of Public Health

**12:15 p.m.** Floor Discussion

**386** **MCC-103 B**

★ **The American Time-use Survey: Findings and Methodological Issues—Topic Contributed**

**Section on Government Statistics, Social Statistics Section, Section on Survey Research Methods**

*Organizer(s): Polly Phipps, Bureau of Labor Statistics*

*Chair(s): Polly Phipps, Bureau of Labor Statistics*

**10:35 a.m.** How Do the Elderly Spend Their Time?—◆ Rachel Krantz-Kent, Bureau of Labor Statistics; Jay Stewart, Bureau of Labor Statistics

**10:55 a.m.** Nonresponse in the American Time-use Survey—◆ Grace O'Neill, Bureau of Labor Statistics

**11:15 a.m.** Pre-testing Sensitive Questions: Perceived Sensitivity, Comprehension, and Order Effects of Questions about Income and Weight—◆ Margaret Vernon, Bureau of Labor Statistics

**11:35 a.m.** The Relation between Response Propensity and Data Quality in the American Time-use Survey—◆ Scott Fricker, Bureau of Labor Statistics

**11:55 a.m.** Disc: Roger Tourangeau, Joint Program in Survey Methodology

**12:15 p.m.** Floor Discussion

**387** **MCC-208 B**

☆ ☆ **Cutting-edge Bayesian Modeling and Diagnostics—Topic Contributed**

**Section on Bayesian Statistical Science**

*Organizer(s): Iain Pardoe, University of Oregon*

*Chair(s): Ben B. Hansen, University of Michigan*

**10:35 a.m.** A Bayesian SEIR Approach to Modeling Smallpox Epidemics—◆ Vanja Dukic, The University of Chicago; Bret Elder, The University of Chicago; Greg Dwyer, The University of Chicago

**10:55 a.m.** Strategies for Building and Validating Bayesian Models—◆ Mario Peruggia, The Ohio State University; Ilenia Epifani, Politecnico di Milano; Steven N. MacEachern, The Ohio State University

**11:15 a.m.** Modeling Dependence in Conjoint Choice Experiments—◆ Steven N. MacEachern, The Ohio State University; Angela Dean, The Ohio State University; Shiling Ruan, The Ohio State University

Wednesday

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**11:35 a.m.** Bayesian Approaches to Value-added Modeling of Teacher and School Effects—◆ J. R. Lockwood, RAND Corporation; Dan McCaffrey, RAND Corporation; Louis T. Mariano, RAND Corporation

**11:55 a.m.** Predicting Academy Award Winners Using Discrete Choice Modeling—◆ Iain Pardoe, University of Oregon

**12:15 p.m.** Floor Discussion

## 388 **MCC-208 C** ☆ Bayesian Design and Analysis in Medical Devices— Topic Contributed

Section on Bayesian Statistical Science,  
 Biopharmaceutical Section, WNAR, Biometrics Section

Organizer(s): Gregory Campbell, U.S. Food and Drug Administration; David Breiter, Guidant Corporation

Chair(s): Thomas A. Louis, Johns Hopkins University

**10:35 a.m.** Bayesian Experimental Design of Sequential and Nonsequential Medical Device Trials—◆ George G. Woodworth, The University of Iowa; David Breiter, Guidant Corporation; Mah Jeng, Guidant Corporation

**10:55 a.m.** A Bayesian Adaptive Sample Design in Comparing Hazard Rates of Two Therapies—◆ Feng Tang, Medtronic,

Inc.; Lou Sherfese, Medtronic, Inc.; Andrew Mugglin, Medtronic, Inc.

**11:15 a.m.** Comparing Several Methods for Estimating Sensitivity and Specificity in Medical Devices—◆ Wenji Pu, Medtronic, Inc.; Feng Tang, Medtronic, Inc.; Duo Zhou, Medtronic, Inc.

**11:35 a.m.** Bayesian Metaanalysis of Covered Stent and Drug Eluting Stent Trials—◆ Yongyi Yu, Boston Scientific Corporation

**11:55 a.m.** Disc: Gregory Campbell, U.S. Food and Drug Administration

**12:15 p.m.** Floor Discussion

## 389 **MCC-200 G** ☆ Multiple Comparisons in Phase II Studies—Topic Contributed

Biopharmaceutical Section, WNAR

Organizer(s): Brian Wiens, Amgen Inc.; Alexei Dmitrienko, Eli Lilly and Company

Chair(s): Brian Wiens, Amgen Inc.

**10:35 a.m.** The Multistage Fallback Test for Clinical Trials with Multiple Objectives—◆ Alexei Dmitrienko, Eli Lilly and Company; Brian Wiens, Amgen Inc.



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**10:55 a.m.** Adaptive Design for Dose-response Studies Using the Partitioning Principle—Jason Hsu, The Ohio State University; ◆ Xiang Ling, The Ohio State University

**11:15 a.m.** A Modified Tukey Linear Trend Test in Dose-response Studies—◆ Chao-Yin Chen, University of Minnesota; Lan Kong, University of Pittsburgh; Huei Wang, Amgen Global Biostatistics; Thomas Liu, Amgen Global Biostatistics; Brian Wiens, Amgen Inc.

**11:35 a.m.** Performance of Some Multiple Testing Procedures To Compare Three Doses of a Test Drug and Placebo—◆ Lan Kong, University of Pittsburgh; Gary G. Koch, The University of North Carolina at Chapel Hill; Thomas Liu, Amgen Global Biostatistics; Huei Wang, Amgen Global Biostatistics

**11:55 a.m.** Multiple Inferences in Early Phase II Clinical Trials: Performance of Exact Methods for Dose Response—◆ Alok Krishen, GlaxoSmithKline; Rafe Donahue, GlaxoSmithKline

**12:15 p.m.** Floor Discussion

### 390 MCC-201 AB

● ☆ **Likelihood, Bayesian, and GEE Approaches to Informative Missingness—Topic Contributed**

Biometrics Section, Biopharmaceutical Section, WNAR

Organizer(s): Thomas R. Belin, University of California, Los Angeles

Chair(s): Samantha R. Cook, Columbia University

**10:35 a.m.** Addressing Alternative Missing-data Mechanisms in Multivariate Probit Models for Incomplete Ordinal Data—◆ Jun Xing, University of California, Los Angeles; Alan Rong, Amgen Inc.; Thomas R. Belin, University of California, Los Angeles

**10:55 a.m.** A Shared Random-effects Transition Model for Longitudinal Binary Data with Informative Missingness—◆ Jinhui Li, University of California, Los Angeles; Yingnian Wu, University of California, Los Angeles; Xiaowei Yang, BayesSoft, Inc.

**11:15 a.m.** Simulation Study for Longitudinal Data with Nonignorable Missing Data—◆ Rong Liu, Virginia Commonwealth University; V. Ramakrishnan, Virginia Commonwealth University

**11:35 a.m.** Shared Parameter Model with Nonparametric Trajectories—◆ Sarah Ratcliffe, University of Pennsylvania; Wensheng Guo, University of Pennsylvania

**11:55 a.m.** Handling Missing Data by Deleting Completely Observed Records—◆ Cuiling Wang, Albert Einstein College of Medicine of Yeshiva University; Myunghye Cho Paik, Columbia University

**12:15 p.m.** Floor Discussion

### 391

### MCC-202 AB

● ☆ **Topics in Causal Inference—Topic Contributed**  
Biometrics Section, WNAR

Organizer(s): Eva Petkova, Columbia University

Chair(s): Changxuan Mao, University of California, Riverside

**10:35 a.m.** Explanatory Analyses of Randomized Dose Response Trials with Direct and Indirect Effects—◆ Long-Long Gao, University of Pennsylvania; Marshall M. Joffe, University of Pennsylvania

**10:55 a.m.** Assessing Potential Mediator Variables via Structural Models—◆ Jeffrey Albert, Case Western Reserve University

**11:15 a.m.** A Formal Approach for Defining and Identifying the Fundamental Effects of Exposures on Disease from Experiments Conducted on Populations of Nonidentical Subjects—◆ Steven Mark, National Cancer Institute

**11:35 a.m.** Estimation of the Joint Causal Effects on Survival of Multistage Nonrandomized Treatment Sequences for Recurrent Diseases—◆ Xuelin Huang, The University of Texas M. D. Anderson Cancer Center

**11:55 a.m.** Covariate-adjusted Regression via Local Polynomial Modeling—◆ Danh Nguyen, University of California, Davis

**12:15 p.m.** Floor Discussion

### 392

### MCC-102 E

● ☆ **Conduct and Analysis of Surveys to Measure HIV, Risk, and Disease—Topic Contributed**

Section on Survey Research Methods

Organizer(s): Lillian S. Lin, U.S. Centers for Disease Control and Prevention

Chair(s): Ramses Sadek, U.S. Centers for Disease Control and Prevention

**10:35 a.m.** Sampling Issues in National HIV Behavioral Surveillance of Injecting Drug Users—◆ Michael Monsour, U.S. Centers for Disease Control and Prevention; Lillian S. Lin, U.S. Centers for Disease Control and Prevention; Myron Katzoff, National Center for Health Statistics; Steven Thompson, Simon Fraser University

**10:55 a.m.** Constructing a Sampling Frame of HIV Care Facilities for Clinical Surveillance of Persons in Care for HIV Infection in the United States—◆ Maxine Denniston, U.S. Centers for Disease Control and Prevention; Kathleen Gallagher, U.S. Centers for Disease Control and Prevention; Martin Frankel, Baruch College, CUNY; S. Morton, RAND Corporation; Amy Drake, U.S. Centers for Disease Control and Prevention; Samuel Bozette, RAND Corporation; Sandra H. Berry, RAND Corporation; Eyasu Teshale, U.S. Centers for Disease Control and Prevention; M. Shapiro, RAND Corporation; Patrick Sullivan, U.S. Centers for Disease Control and Prevention

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

- 11:15 a.m.** Detecting and Accounting for Clustering in Data from Time-space Sample (TSS) Surveys—◆ John Karon, Emergint Corporation
- 11:35 a.m.** Goodness-of-fit and Multilevel Models: Application to Survey Data from the Community Intervention Trial for Youth (CITY) Project—◆ DeMarc Hickson, Emory University; Lance A. Waller, Emory University
- 11:50 a.m.** Disc: Lillian S. Lin, U.S. Centers for Disease Control and Prevention
- 12:05 p.m.** Floor Discussion

## 393 **MCC-103 F**

### ● **Joint Social, Government Statistics, and Survey Research Methods Sections Student Competition Winners—Topic Contributed**

#### Social Statistics Section, Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Renee Miller, Energy Information Administration

Chair(s): Rachel Harter, NORC at the University of Chicago

- 10:35 a.m.** Design Effects in the Analysis of Longitudinal Survey Data—◆ Marcel de Toledo Vieira, University of Southampton
- 10:50 a.m.** Model-based Estimation in Network Sampling Using Samples Obtained by Subsampling—◆ Mike Kwanisai, NORC at the University of Chicago
- 11:15 a.m.** Research on Errors Associated with Period Reporters in Retail Trade Estimates—◆ Kelly Dixon, U.S. Census Bureau
- 11:35 a.m.** Bayesian Models To Adjust for Response Bias in Survey Data: an Example in Estimating Rape and Domestic Violence from the NCVS—◆ Qingzhao Yu, The Ohio State University; Elizabeth A. Stasny, The Ohio State University
- 11:55 a.m.** Imputation of Missing Hourly Pay Data Using Data Augmentation in the Case of Nonignorable Item-nonresponse—◆ Gabriele Durrant, University of Southampton
- 12:15 p.m.** Floor Discussion

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Topic Contributed Panels 10:30 a.m.–12:20 p.m.

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## 394 **MCC-208 A**

### **What We've Learned from Computer-based Learning at Brigham Young University—Topic Contributed** Section on Statistical Education

Organizer(s): Patti Collings, Brigham Young University

Chair(s): Bruce Schaalje, Brigham Young University

- Panelists:** ◆ Patti Collings, Brigham Young University  
◆ Howard Christensen, Brigham Young University  
◆ Paul Fields, Brigham Young University  
◆ Dennis Eggett, Brigham Young University

**12:15 p.m.** Floor Discussion

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Regular Contributed Sessions 10:30 a.m.–12:20 p.m.

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## 395 **MCC-211 D**

### **Wavelets and Functional Data Analysis—Contributed** Section on Nonparametric Statistics, ENAR, Biometrics Section

Chair(s): John R. Dixon, Florida State University

- 10:35 a.m.** Jump Reconstruction via Dilation Invariant Denoising—  
◆ Eric Chicken, Florida State University
- 10:50 a.m.** Minimax Estimation of Linear Functionals under Squared Error Loss—◆ Meng Zhao, Clemson University; K. B. Kulasekera, Clemson University
- 11:05 a.m.** Change Point Detection by Unbalance Continuous Wavelet Analysis—◆ Maarten Jansen, Technische Universiteit Eindhoven
- 11:20 a.m.** Wavelet-based Bootstrap for Long Memory Time Series—  
◆ Priya Kulkarni; David Hinkley, University of California, Santa Barbara
- 11:35 a.m.** Jump Detection in Regression Surfaces Using Both First-order and Second-order Derivatives—  
◆ Jingran Sun, University of Minnesota; Peihua Qiu, University of Minnesota
- 11:50 a.m.** Testing Equality of Curves—◆ Zhongfa Zhang, Case Western Reserve University; Jiayang Sun, Case Western Reserve University
- 12:05 p.m.** Diverging Moments, Wavelets, and Nonparametric Tail Estimation—◆ Rudolf Riedi, Rice University; Paulo Goncalves, INRIA Rhone-Alpes

## 396 **MCC-208 D**

### ● ☆ **Bayesian Clustering and Classification—Contributed** Section on Bayesian Statistical Science, Social Statistics Section

Chair(s): Fang Yu, University of Connecticut

- 10:35 a.m.** Model-based Clustering of Large Datasets Using Bayesian Computational Statistics—◆ Herbert Hoijtink, Universiteit Utrecht
- 10:50 a.m.** Market Segmentation Using Bayesian Model-based Clustering—◆ Pascal van Hattum, University Utrecht
- 11:05 a.m.** On Population-based Methods of Clustering—◆ Gopika Goswami, Harvard University

- 11:20 a.m.** A Bayesian Treed Approach To Form Poststrata for Capture-recapture Data—◆ Xinlei Wang, Southern Methodist University; Johan Lim, Texas A&M University; Lynne Stokes, Southern Methodist University
- 11:35 a.m.** A Comparative Evaluation on the Performance of Binary and Multiclass Support Vector Machines in the Analysis and Classification of Remotely Sensed Satellite Data—◆ Sharath Tadepalli, Purdue University
- 11:50 a.m.** Discriminant Analysis in Longitudinal Data through a Bayesian Semiparametric Model—◆ Rolando De la Cruz-Mesia, Pontificia Universidad Catolica de Chile; Fernando A. Quintana, Pontificia Universidad Catolica de Chile; Peter Müller, The University of Texas M. D. Anderson Cancer Center
- 12:05 p.m.** Bayesian CART: Prior Specification and Posterior Simulation—◆ Yuhong Wu, Duke University; Haakon Tjelmeland, Norwegian University of Science and Technology; Mike West, Duke University

**397** **MCC-103 C**  
**★ Analysis of Establishment Surveys—Contributed**  
**Section on Government Statistics, Section on Survey Research Methods**

*Chair(s): Kathy Downey, Bureau of Labor Statistics*

- 10:35 a.m.** Historical Reconstruction of Employment Time Series for Metropolitan Areas in the Current Employment Statistics Program—◆ Brian Dahlin, Bureau of Labor Statistics; Molly Garber, Bureau of Labor Statistics
- 10:50 a.m.** Developing Annual Estimates of Hires and Separations—◆ Brady Stephens, Bureau of Labor Statistics; Kim Riley, Bureau of Labor Statistics
- 11:05 a.m.** Estimation of the Change in Total Employment Using the U.S. Current Employment Statistics Survey—◆ Bogong Li, Bureau of Labor Statistics; Partha Lahiri, University of Maryland
- 11:20 a.m.** Data Modeling for a Simulation Study of the Quarterly Financial Report Estimator—◆ Donald M. Luery, U.S. Census Bureau
- 11:35 a.m.** From Lab to Market: Understanding the Role of Mergers, Acquisitions, and Technology Transfer in the Innovation Process—◆ Gary Anderson, National Institute of Standards and Technology
- 11:50 a.m.** Federal Funding of High-risk Research and Development: Findings from Multiple Award Competitions of the Advanced Technology Program—◆ Stephen Campbell, National Institute of Standards and Technology; Andrew Wang, National Institute of Standards and Technology
- 12:05 p.m.** Generalized Variance Estimation for Business Surveys—◆ James Chipperfield, Australian Bureau of Statistics

**398** **MCC-200 H**  
**★ Power, Selection Bias, Type I Error, and Measurement Error—Contributed**  
**Biopharmaceutical Section, WNAR**

*Chair(s): Hongwei Wang, Merck & Co., Inc.*

- 10:35 a.m.** Trials in Trials: Sample Size Planning—◆ Sue-Jane Wang, U.S. Food and Drug Administration; Hsien-Ming (James) Hung, U.S. Food and Drug Administration
- 10:50 a.m.** A Mixed Nash Equilibrium Procedure for Minimizing Selection Bias in Clinical Trials—◆ William Grant, Duke University; Kevin Anstrom, Duke University; David Crosslin, Duke University; Kevin Schulman, Duke University
- 11:05 a.m.** Addressing the Type I Error Inflation Problem in Cumulative Metaanalysis—◆ Mingxiu Hu, Pfizer, Inc.; K. Gordon Lan, Sanofi-Aventis; Joseph Cappelleri, Pfizer, Inc.
- 11:20 a.m.** A Directional Error Study of Two-sided Multiple Comparison Procedure—◆ Tianhui Zhou, Temple University; Sanat K. Sarkar, Temple University
- 11:35 a.m.** An Alternative Weight Approach for the Least Squares Means—◆ Larry Ma, Merck & Co., Inc.; Anthony Rodgers, Merck & Co., Inc.
- 11:50 a.m.** Design and Analysis in Drug Abuse Potential Studies—◆ Ling Chen, U.S. Food and Drug Administration
- 12:05 p.m.** Evaluating the Sample Invariance Property of the Standard Error of Measurement—◆ Samiran Ghosh, University of Connecticut; Joseph Cappelleri, Pfizer, Inc.; Andrew Bushmakim, Pfizer, Inc.; William R. Lenderking, Pfizer, Inc.

**399** **MCC-205 C**  
**Seasonality and Time Series—Contributed**  
**Business and Economics Statistics Section**

*Chair(s): Brian McCall, University of Minnesota*

- 10:35 a.m.** Comparing the Automatic ARIMA Model Selection Procedures of X-12-ARIMA Versions 0.2 and 0.3—◆ Ayonda Dent, U.S. Census Bureau; Kathleen M. McDonald-Johnson, U.S. Census Bureau; Catherine H. Hood, U.S. Census Bureau; Roxanne Feldpausch, U.S. Census Bureau
- 10:50 a.m.** Experiences with Indirect Seasonal Adjustment—◆ Kathleen M. McDonald-Johnson, U.S. Census Bureau; Catherine H. Hood, U.S. Census Bureau; Roxanne Feldpausch, U.S. Census Bureau
- 11:05 a.m.** Statistical Properties of Signal Extraction Diagnostics—◆ Tucker McElroy, U.S. Census Bureau
- 11:20 a.m.** An Empirical Comparison of Methods for Benchmarking Seasonally Adjusted Series to Annual Totals—◆ Catherine H. Hood, U.S. Census Bureau

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**11:35 a.m.** Model-based Analysis of Seasonal Heteroskedasticity in Census Bureau Construction Time Series—◆ Thomas M. Trimbur, U.S. Census Bureau

**11:50 a.m.** Issues in Estimating Easter Regressors Using regARIMA Models with X-12-ARIMA—◆ Brian C. Monsell, U.S. Census Bureau; David Findley, U.S. Census Bureau; Kellie Wills, Corporate Executive Board

**12:05 p.m.** Floor Discussion

## **400** **MCC-200 I**

### ● **Modeling Strategies to Accommodate Longitudinal/Spatial Correlations—Contributed**

**ENAR, Section on Statistics in Epidemiology, WNAR, Biometrics Section**

*Chair(s): Erning Li, Texas A&M University*

**10:35 a.m.** Semiparametric Mixed Models for Longitudinal Data—◆ Guei-Feng Tsai, Oregon State University; Annie Qu, Oregon State University

**10:50 a.m.** Nonparametric Correlation Estimation in Colon Carcinogenesis—◆ Yehua Li, Texas A&M University; Naisyin Wang, Texas A&M University; Raymond J. Carroll, Texas A&M University

**11:05 a.m.** Adjusted Quasi-least Squares for Analysis of Correlated Binary Data—◆ Justine Shults, University of Pennsylvania; Wenguang Sun, University of Pennsylvania

**11:20 a.m.** A Continuous-time Markov Chain Approach to Data Analysis on Longitudinal Categorical Outcome—  
◆ Wenyaw Chan, The University of Texas Health Science Center at Houston; Yen-Peng Li, The University of Texas Health Science Center at Houston

**11:35 a.m.** Spatio-temporal Analysis of Emergency Room Visits for Ischemic Heart Disease in NSW, Australia—◆ Subharup Guha, Harvard School of Public Health; Louise Ryan, Harvard University

**11:50 a.m.** Defining a Reproducibility Statistic as a Function of a Continuous Variable in Biomarker Studies—◆ Irene B. Helenowski, Northwestern University; Edward Vonesh, Baxter Healthcare Corporation; Borko Jovanovic, Northwestern University; Vijayalakshmi Ananthanarayanan, Northwestern University; Peter H. Gann, Northwestern University

**12:05 p.m.** Floor Discussion

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## **401** **MCC-103 E**

### **Distributional Approximations—Contributed**

**General Methodology, IMS**

*Chair(s): Bo Yang, Schering-Plough*

**10:35 a.m.** A Halfgraph Depth for Functional Data—◆ Sara Lopez-Pintado, Universidad Carlos III de Madrid; Juan Romo, Universidad Carlos III de Madrid

**10:50 a.m.** Inversion Formulas of the Univariate C-characteristic Function and Their Applications—◆ Thomas J. Jiang, National Chengchi University; Kun-Lin Kuo, National Chengchi University

**11:05 a.m.** Developments in Weak Convergence—◆ John Fresen, University of Limpopo

**11:20 a.m.** An Iterative Procedure for General Probability Measures To Obtain I-Projections onto Intersections of Convex Sets—◆ Bhaskar Bhattacharya, Southern Illinois University, Carbondale

**11:35 a.m.** Simulation as an Alternative to the Delta Method—  
◆ Patrick R. Johnston, Abt Associates, Inc.

**11:50 a.m.** Improving the Delta Method for Nonlinear Functions—  
◆ Paul Duty, University of Missouri, Columbia; Nancy Flournoy, University of Missouri, Columbia

**12:05 p.m.** Nonstandard Asymptotics for Quantile Regression—  
◆ Chuan Goh, University of Toronto

## **402** **MCC-209 AB**

### **Process Performance and Control—Contributed**

**Section on Physical and Engineering Sciences, Section on Quality and Productivity**

*Chair(s): Derek Bingham, Simon Fraser University*

**10:35 a.m.** Lab Evaluation of Fiber Optic EFPI Sensors for Extreme Environment Tests—◆ David Banaszak, Air Force Research Laboratory; Larry O. Kretz, Air Force Research Laboratory

**10:50 a.m.** Robust Parameter Design with Feedback Control—  
◆ Tirthankar Dasgupta, Georgia Institute of Technology; Jeff Wu, Georgia Institute of Technology

**11:05 a.m.** A New Nuclear Material Safeguard Method Based on Fractal Dimension—◆ David Booth, Kent State University; Stephane Booth, Kent State University

**11:20 a.m.** Integration of Multivariate Statistics and Design of Experiments To Identify Critical Process Variables for Pharmaceutical Process Analytical Technology (PAT) Applications—◆ Huiquan Wu, U.S. Food and Drug Administration; Ajaz S. Hussain, Office of Pharmaceutical Science

**11:35 a.m.** Two Designs for Weak Quantum State Discrimination—  
◆ Michael Frey, Bucknell University

**11:50 a.m.** Optimal Estimation of Variance from Uniformly-spaced Data—◆ Thomas Bzik, Air Products and Chemicals

**12:05 p.m.** Floor Discussion

**403** **MCC-210 AB**  
**Spatial and Spatio-temporal Modeling—Contributed**  
**Section on Statistics and the Environment, ENAR,**  
**WNAR, Biometrics Section**

*Chair(s): Matthew Bognar, The University of Iowa*

**10:35 a.m.** Assessing Spatial Point Process Models Using Weighted K-functions: Analysis of California Earthquakes—

◆ Alejandro Veen, University of California, Los Angeles; Frederic Paik Schoenberg, University of California, Los Angeles

**10:50 a.m.** Fitting Spatial Point Process Models Using Subsampling—

◆ Yongtao Guan, University of Miami

**11:05 a.m.** Detecting Spatial Clustering in Matched-case Control Studies—◆ Andrea Cook, Harvard School of Public Health; Yi Li, Dana-Farber Cancer Institute, Harvard School of Public Health

**11:20 a.m.** The Contest between MLE, GMM, and Subsampling for Huge Spatial Autoregressive Models—◆ Janelle Walde, University of Innsbruck; Mario Larch, University of Innsbruck; Gottfried Tappeiner, University of Innsbruck

**11:35 a.m.** Robustness of Data Augmentation for the Analysis of Censored Spatial Data—◆ Brooke Fridley, University of Wisconsin, La Crosse

**11:50 a.m.** Calibration of Texas Radar Rainfall Estimates by Rain Gauge Data—◆ Bo Li, Texas A&M University; Michael Sherman, Texas A&M University; Raymond J. Carroll, Texas A&M University; Marian Eriksson, Texas A&M University; Raghavan Srinivasan, Texas A&M University

**12:05 p.m.** Testing and Modeling Lack of Symmetry in Spatial-temporal Processes—◆ Man Sik Park, North Carolina State University; Montserrat Fuentes, North Carolina State University

**404** **MCC-205 B**  
**Bayesian Approaches to Epidemiologic Data Analysis—Contributed**

**Section on Statistics in Epidemiology, Section on Bayesian Statistical Science, WNAR**

*Chair(s): Andrew Hill, Emory University*

**10:35 a.m.** Methodological Issues in Modeling of Mental Functioning in the Australian Longitudinal Study of Ageing—

◆ Petra Graham, CSIRO; Louise Ryan, Harvard University; Mary Luszcz, Flinders University School of Psychology; Gary Andrews, University of South Australia

**10:50 a.m.** Bayesian Multistate Growth Processes with Unknown Initiation Times—◆ James Slaughter, The University of North Carolina at Chapel Hill; Amy H. Herring, The University of North Carolina at Chapel Hill

**11:05 a.m.** A Gene-environment Independence in Case-control Study—◆ Li Zhang, University of Florida; Bhramar Mukherjee, University of Florida; Malay Ghosh, University of Florida; Samiran Sinha, Texas A&M University

**11:20 a.m.** Identification of Treatment Responders in an Interstitial Cystitis Clinical Trial Using a Bayesian Multivariate Growth Curve Mixture Model—◆ Benjamin Leiby, University of Pennsylvania; Mary Sammel, University of Pennsylvania; Thomas Ten Have, University of Pennsylvania; Kevin Lynch, University of Pennsylvania

**11:35 a.m.** Semiparametric Classification of Longitudinal Trajectories with Application to Hormone Curves—◆ Jamie Bigelow, National Institute of Environmental Health Sciences; David Dunson, National Institute of Environmental Health Sciences

**11:50 a.m.** Estimation in the Presence of Missing Data: an Application of Bayesian Methods to the Analysis of North Dakota Death Certificate Data—◆ Betsy L. Cadwell, U.S. Centers for Disease Control and Prevention; Edward F. Tierney, U.S. Centers for Disease Control and Prevention; Theodore J. Thompson, U.S. Centers for Disease Control and Prevention; James P. Boyle, U.S. Centers for Disease Control and Prevention

**12:05 p.m.** Floor Discussion

**405** **MCC-102 F**  
**Telephone Survey Issues—Contributed**  
**Section on Survey Research Methods, Social Statistics Section**

*Chair(s): Joe Murphy, RTI International*

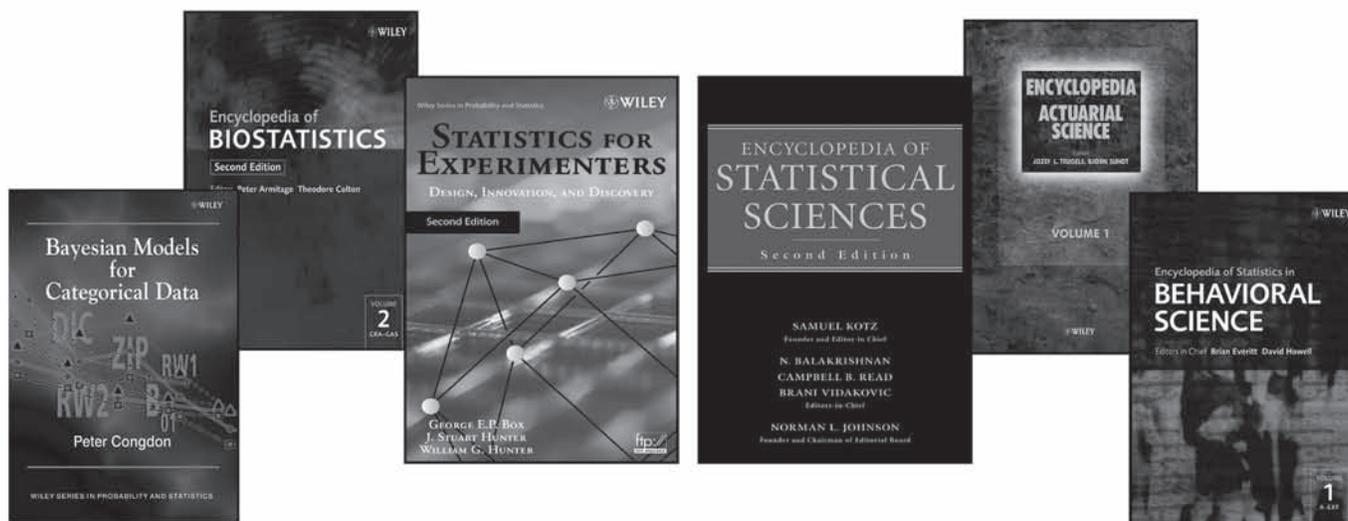
**10:35 a.m.** A List-assisted Telephone Sampling: Conjugate Pair Selection—◆ Hee-Choon Shin, NORC at the University of Chicago

**10:50 a.m.** Extensions to the Two-stratum Model for Sampling Rare Subpopulations in Telephone Surveys—William D. Kalsbeek, The University of North Carolina at Chapel Hill; ◆ Walter R. Boyle, RTI International

**11:05 a.m.** Optimizing Call Time Lags by Modeling the Probability of Call Outcomes—◆ Brian Meekins, Bureau of Labor Statistics; Roberta Sangster, Bureau of Labor Statistics; John F. Meekins, Aerospace Corporation

**11:20 a.m.** Compensating for Noncoverage of Nontelephone Households Using the National Health Interview Survey—◆ Karen Davis, National Center for Health Statistics; Meena Khare, National Center for Health Statistics

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**11:35 a.m.** Analysis of Behavioral Risk Factor Surveillance System Partial Completes and Terminations—◆ Herbert F.

Stackhouse, U.S. Centers for Disease Control and Prevention; Ziya Gizlice, North Carolina State Center for Health Statistics; Lina Balluz, U.S. Centers for Disease Control and Prevention

**11:50 a.m.** Assessing Representativeness in RDD Surveys: Coverage and Nonresponse in the Behavioral and Risk Factor Surveillance System—◆ Sowmya R. Rao, Abt Associates, Inc.;

Michael W. Link, Centers for Disease Control and Prevention; Michael Battaglia, Abt Associates, Inc.; Martin R. Frankel, Abt Associates, Inc.; Pamela Giambo, Abt Associates, Inc.; Ali H. Mokdad, U.S. Centers for Disease Control and Prevention

**12:05 p.m.** Floor Discussion

## 406 MCC-103 A

● **Collecting and Reporting Race, Ethnicity, and Gender—Contributed**

**Section on Survey Research Methods, Social Statistics Section**

*Chair(s): Katie Joseph, George Washington University*

**10:35 a.m.** Race Reporting by Latin American Immigrants in Census 2000—◆ Sharon R. Ennis, U.S. Census Bureau; Jorge del Pinal, U.S. Census Bureau

**10:50 a.m.** Self-reported Race and Ethnicity in School Surveys—

◆ James G. Ross, ORC Macro International, Inc.; Ronald Iachan, ORC Macro International, Inc.; William H. Robb, ORC Macro International, Inc.; Katherine H. Flint, ORC Macro International, Inc.; Alan Bloch, U.S. Centers for Disease Control and Prevention; Pedro J. Saavedra, ORC Macro International, Inc.

**11:05 a.m.** Processing of Race and Ethnicity in the National Survey on Drug Use and Health—◆ Eric Grau, RTI International;

Peilan Martin, RTI International; Peter Frechtel, RTI International; Jeanne Snodgrass, RTI International; Rachel Caspar, RTI International

**11:20 a.m.** Using Names To Check Accuracy of Race and Gender Coding in NAEP—◆ Jennifer Czuprynski Kali, Westat;

James Bethel, Westat; John Burke, Westat; David Morganstein, Westat; Sharon Hirabayashi, Westat

**11:35 a.m.** A Simulation Study of Cell Collapsing in Poststratification—◆ Jay J. Kim, National Center for Health Statistics; Richard L. Valliant, University of Michigan; Linda Tompkins, National Center for Health Statistics

**11:50 a.m.** Investigating the Role of Hispanic Origin in Estimating the Number of Uninsured—◆ Sharareh Craig, U.S. Census Bureau; Joanna M. Turner, U.S. Census Bureau

**12:05 p.m.** Floor Discussion

Speaker Luncheon 12:30 p.m.–1:50 p.m.

## 407 MCC-206 AB

**Section on Health Policy Statistics Speaker Luncheon (fee event)—Luncheons**

**Section on Health Policy Statistics**

*Organizer(s): Chris Schmid, Tufts New England Medical Center*

**WL00** A Miner's Guide to the United States Renal Data System—  
◆ Robert N. Foley, United States Renal Data System

Roundtable Luncheons 12:30 p.m.–1:50 p.m.

## 408 MCC-Ballroom B

**Biopharmaceutical Section Roundtable Luncheons (fee event)—Luncheons**

*Organizer(s): B. Christine Clark, ICON Clinical Research*

**WL01** Statistical Issues Related to the FDA Draft Guidance 'The Clinical Evaluation of QT/QTc Interval Prolongation and Proarrhythmic Potential for Nonantiarrhythmic Drugs'—  
◆ Lisa Hickey, Merck Research Laboratories

**WL02** Pharmacogenomics: the Critical Path to Personalized Medical Products—◆ Alison Graham, GlaxoSmithKline; Xiaohua Zhang, Merck Research Laboratories; Amber Anderson, GlaxoSmithKline

**WL03** Registration of Trials and Reporting of Results: Old Concerns or New Trends?—◆ C. V. Damaraju, Ortho-McNeil Pharmaceuticals, Johnson & Johnson

**WL04** Diagnostic Medical Devices—◆ Lakshmi Vishnuvajjala, U.S. Food and Drug Administration

**WL05** Current Issues in the Design and Analysis of Dose-finding Studies: Multiple-comparison Procedures versus Modeling—  
◆ Jose Pinheiro, Novartis Pharmaceuticals

**WL06** The Biopharmaceutical Section: Learn What It Does, How To Become Involved, Offer Suggestions on Ways It Can Better Serve Its Members—◆ Leonard Oppenheimer, Eisai Medical Research

**WL07** Current Thinking on the Use of Bayesian Inference in the Drug-approval Process—◆ Stacy R. Lindborg, Eli Lilly and Company

## 409 **MCC-Ballroom B** Section on Bayesian Statistical Science Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Steven N. MacEachern, The Ohio State University

**WL08** Bayesian Modeling of Spatial and Spatiotemporal Processes—  
◆ Christopher K. Wikle, University of Missouri, Columbia

**WL09** Bayesian Evaluation of Surrogate Endpoints—◆ Mary K. Cowles, The University of Iowa

## 410 **MCC-Ballroom B** Section on Government Statistics Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Michael P. Cohen, Bureau of Transportation Statistics

**WL10** A-76 Competitive Sourcing and Government Statistics—  
◆ Arthur Kendall, Social Research Consultants

## 411 **MCC-Ballroom B** Section on Physical and Engineering Sciences Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Thomas Loughin, Kansas State University

**WL11** Surviving in Industry: Advice for Newcomers—◆ Fred Hulting, General Mills, Inc.

**WL12** Designing Real Experiments: Tricks of the Trade—◆ George Milliken, Kansas State University

## 412 **MCC-Ballroom B** Section on Quality and Productivity Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Martha Gardner, GE Global Research

**WL13** Statistical Models for Financial Applications—◆ Radu Neagu, GE Company

## 413 **MCC-Ballroom B** Section on Statistical Graphics Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Juergen Symanzik, Utah State University

**WL14** Just Because You Can, Doesn't Mean You Should: Better Charts with Excel—◆ Naomi B. Robbins, NBR

## 414 **MCC-Ballroom B** Section on Statistics and the Environment Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Estelle Russek-Cohen, U.S. Food and Drug Administration

**WL15** Nearest Neighbor Methods—◆ Ronald E. McRoberts, USDA  
USDA Forest Service

## 415 **MCC-Ballroom B** Section on Statistics in Epidemiology Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Lisa Sullivan, Boston University

**WL16** Monitoring and Improving the Quality of U.S. Elections—  
◆ Arlene Ash, Boston University

**WL17** Bridging the Gap: Statisticians Working as Principal Investigators of Epidemiology Studies—◆ Lisa Sullivan, Boston University; George Howard, University of Alabama at Birmingham; Kiang Liu, Northeastern University

## 416 **MCC-Ballroom B** Section on Survey Research Methods Roundtable Luncheons (fee event)—Luncheons

Organizer(s): David R. Judkins, Westat

**WL18** Web-based Surveys: What Do We Know about Data Quality?—◆ Vicki Pineau, Knowledge Networks, Inc.

**WL19** The Transition from Graduate School to a Career in Statistics—◆ Edward M. English, NORC at the University of Chicago

## 417 **MCC-Ballroom B** Social Statistics Section Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Juanita Tamayo Lott, U.S. Census Bureau

**WL20** Human Welfare and Population Trends—◆ Kelvin Pollard, Population Reference Bureau

## 418 **MCC-Ballroom B** Section on Teaching of Statistics in the Health Sciences Roundtable Luncheon (fee event)—Luncheons

Organizer(s): Janet Tooze, Wake Forest University School of Medicine

**WL21** Distance Education in Biostatistics—◆ Scott Evans, Harvard University

## 419 **MCC-Ballroom B** Section on Statistical Education Roundtable Luncheons (fee event)—Luncheons

Organizer(s): Paul J. Roback, St. Olaf College

**WL22** Preparing Students To Be Actuaries—◆ Richard Cleary, Bentley College

**WL23** Using Concept Mapping To Teach Statistics—◆ Marjorie Bond, Monmouth College

**WL24** Integrating Ethics into Statistics Education—◆ Mary Gray, American University

**420** **MCC-Ballroom B**  
**Section on Statistics in Defense and National Security Roundtable Luncheon (fee event)—Luncheons**

Organizer(s): Wendy Martinez, Office of Naval Research

- WL25** Building and Validating Simulation Models in Defense—  
 ◆ David Banks, Duke University

**421** **MCC-Ballroom B**  
**Section on Statistical Consulting Roundtable Luncheon (fee event)—Luncheons**

Organizer(s): Todd G. Nick, Cincinnati Children's Hospital Medical Center

- WL26** Delivering Client-focused Results—◆ Karl Heiner, SUNY, New Paltz

**422** **MCC-Ballroom B**  
**Statistical Society of Canada Roundtable Luncheons (fee event)—Luncheons**

Organizer(s): Georgia R. Roberts, Statistics Canada

- WL27** Structural Equation Modeling: Where Do We Go from Here?—◆ David Binder
- WL28** The Canadian Model for Accreditation of Professional Statisticians—◆ Judy-Anne Chapman, Statistical Society of Canada

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Invited Sessions 2:00 p.m.–3:50 p.m.

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**423** **MCC-200 DE**  
**Joseph Fleiss Memorial Session—Invited Memorial, Biometrics Section, ENAR, WNAR**

Organizer(s): Emilia Bagiella, Columbia University

Chair(s): Emilia Bagiella, Columbia University

- 2:05 p.m.** Building on SMRP—◆ Bruce Levin, Columbia University
- 2:35 p.m.** Reliability as a Statistical Topic: the Impact of Joseph L. Fleiss on Studies of Medical and Psychiatric Diagnosis—◆ Patrick E. Shrout, New York University
- 3:05 p.m.** Measures of Inter-rater Agreement for Unbalanced Designs—◆ J. Richard Landis, University of Pennsylvania
- 3:35 p.m.** Floor Discussion

**424** **MCC-208 D**  
**Modeling Abundance and Occurrence of Plants and Animals—Invited**

Section on Statistics and the Environment, WNAR

Organizer(s): Andy Royle, U.S. Geological Survey

Chair(s): Jay Ver Hoef, Alaska Department of Fish and Game

- 2:05 p.m.** Hierarchical Spatial Modeling of Avian Abundance and Occurrence from Spatially Replicated Survey Data—  
 ◆ Andy Royle, U.S. Geological Survey; Marc Kery, Swiss Ornithological Institute

- 2:30 p.m.** Improving Removal-based Estimates of Local Abundance in a Metapopulation of Endangered Fishes—  
 ◆ Robert M. Dorazio, U.S. Geological Survey; Howard L. Jelks, U.S. Geological Survey; Frank Jordan, Loyola University New Orleans

- 2:55 p.m.** Hierarchical Bayesian Matrix Models for Describing the Spatio-temporal Population Dynamics of Invasive Species—◆ Mevin B. Hooten, University of Missouri, Columbia; Christopher K. Wikle, University of Missouri, Columbia

- 3:20 p.m.** Bayesian Estimation of Wildlife Population Sizes Using Noninformative Priors—◆ Chong Z. He, University of Missouri, Columbia; Xiaoyin Wang, Towson University

- 3:45 p.m.** Floor Discussion

**425** **MCC-213 AB**  
**EM Algorithm: Upgrading the Imputation Work Horse for Modern-day Computational Statistics Applications—Invited**

Section on Statistical Computing

Organizer(s): Richard Levine, San Diego State University

Chair(s): Richard Levine, San Diego State University

- 2:05 p.m.** Aitken and Step-lengthening Methods for EM—  
 ◆ Tim C. Hesterberg, Insightful Corp.
- 2:35 p.m.** Stochastic Variants of EM: Monte Carlo, Quasi-Monte Carlo and More—◆ Wolfgang Jank, University of Maryland
- 3:05 p.m.** EM as a Unifying Approach for Incomplete Data Structures—◆ Robert Shumway, University of California, Davis
- 3:35 p.m.** Floor Discussion

**426** **MCC-200 J**  
**JASA Applications and Case Studies Invited Paper Session—Invited**

JASA, Applications and Case Studies

Organizer(s): Mark S. Kaiser, Iowa State University

Chair(s): Mark S. Kaiser, Iowa State University

- 2:05 p.m.** Hidden Markov Models for Microarray Time-course Data in Multiple Biological Conditions—Ming Yuan, Georgia Institute of Technology; ◆ Christina Kendziorski, University of Wisconsin, Madison
- 2:40 p.m.** Disc: Hongzhe Li, University of California, Davis
- 2:55 p.m.** Disc: John Storey, University of Washington

Wednesday

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**3:10 p.m.** Disc: Dan Nettleton, Iowa State University

**3:35 p.m.** Floor Discussion

## 427 **MCC-200 ABC**

● ☆ **Applications of Environmental Statistics—Invited**  
**WNAR, ENAR, Section on Statistics and the Environment, Biometrics Section**

Organizer(s): Timothy G. Gregoire, Yale University

Chair(s): Timothy G. Gregoire, Yale University

**2:05 p.m.** Residual-based Diagnostics for Spatial Regression Models—◆ Oliver Schabenberger, SAS Institute, Inc.; Carol A. Gotway Crawford, U.S. Centers for Disease Control and Prevention

**2:35 p.m.** Stratified Estimation for Forest Inventory Applications Using Satellite Imagery—◆ Ronald E. McRoberts, USDA USDA Forest Service

**3:05 p.m.** Estimation Strategies for Rapid Assessment of Changes in U.S. Forests from Wildfire—◆ Gretchen Moisen, USDA USDA Forest Service; Mark Finco, USDA USDA Forest Service; Ken Brewer, USDA USDA Forest Service

**3:35 p.m.** Floor Discussion

## 428 **MCC-208 C**

☆ **Advances in Nonparametric Econometrics—Invited**  
**Business and Economics Statistics Section, Section on Nonparametric Statistics**

Organizer(s): Aman Ullah, University of California, Riverside

Chair(s): Aman Ullah, University of California, Riverside

**2:05 p.m.** A Model Selection Test for Bivariate Failure-time Data—◆ Yanqin Fan, Vanderbilt University

**2:25 p.m.** New Grounds for Bandwidth Selection in Kernel Smoothing: the Univariate and Multivariate Cases—◆ Ibrahim Ahmad, University of Central Florida

**2:40 p.m.** Combined Estimator of Time Series Conditional Heteroskedasticity—◆ Aman Ullah, University of California, Riverside; Santosh Mishra, Oregon State University; Liangjun Su, Peking University

**3:00 p.m.** A Nonparametric Wald Test of General Nonlinear Restrictions—◆ Jeffrey Racine, McMaster University

**3:20 p.m.** Disc: Victoria Zinde-Walsh, McGill University

**3:40 p.m.** Floor Discussion

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## 429 MCC-205 C

### ● **Distance Learning in the Health Sciences—Invited** Section on Statistical Education, Section on Teaching Statistics in the Health Sciences

Organizer(s): Patrick G. Arbogast, Vanderbilt University

Chair(s): Scott Evans, Harvard University

- 2:05 p.m.** Basic Biostatistics Online: a Distance Education Success Story—◆ John McGready, Johns Hopkins University
- 2:30 p.m.** Distance Learning from the Trenches: Lessons Learned—◆ Carol Bigelow, University of Massachusetts; Penelope Pekow, University of Massachusetts
- 2:55 p.m.** Distance Learning in Statistical Training of Health Care Professionals Conducting Research—◆ Robert H. Riffenburgh, Naval Medical Center San Diego
- 3:20 p.m.** Floor Discussion

## 430 MCC-211 C

### ☆ **Interface between Mathematics and Statistics—Invited** IMS

Organizer(s): André I. Khuri, University of Florida

Chair(s): Ramon Littell, University of Florida

- 2:05 p.m.** A Tutorial on MM Algorithms—◆ Kenneth Lange, University of California, Los Angeles
- 2:30 p.m.** Applications of Dirac's Delta Function in Statistics—◆ André I. Khuri, University of Florida
- 2:55 p.m.** Square-root N Consistent and Exhaustive Estimation of Dimension Reduction Space—◆ Bing Li, The Pennsylvania State University
- 3:20 p.m.** Applications of Reproducing Kernel Hilbert Spaces in Statistics—◆ Randall L. Eubank, Texas A&M University
- 3:45 p.m.** Floor Discussion

## 431 MCC-103 C

### ● **Research Access to Confidential Data for Analysis—Invited**

#### Section on Government Statistics, Social Statistics Section, Section on Statisticians in Defense and National Security, Section on Survey Research Methods

Organizer(s): Steve Cohen, Bureau of Labor Statistics

Chair(s): Jacob Bournazian, Energy Information Administration

- 2:05 p.m.** Issues in Designing a Confidentiality-preserving Model Server—◆ Philip Steel, U.S. Census Bureau
- 2:30 p.m.** Confidentiality Protection in the U.S. Census Bureau's Quarterly Workforce Indicators—◆ John M. Abowd,

Cornell University/U.S. Census Bureau; Bryce Stephens, University of Maryland/U.S. Census Bureau; Lars Vilhuber, Cornell University

- 2:55 p.m.** Methods of Secure Computation and Data Integration—◆ Jerome Reiter, Duke University
- 3:20 p.m.** Disc: Stephen F. Roehrig, Carnegie Mellon University
- 3:40 p.m.** Floor Discussion

## 432 MCC-208 A

### ● ☆ **Bayesian Methods for Cartographic Problems—Invited**

#### Section on Bayesian Statistical Science, Section on Statistics and the Environment, Section on Statistical Graphics

Organizer(s): Alan E. Gelfand, Duke University

Chair(s): Bradley P. Carlin, University of Minnesota

- 2:05 p.m.** Estimating Nonstationary Spatial Covariance Using Deformations—◆ Peter Guttorp, University of Washington
- 2:30 p.m.** Gradients Gone Wild—◆ Alan E. Gelfand, Duke University
- 2:55 p.m.** Modeling Map Positional Error To Infer about True Feature Location—◆ Jarrett J. Barber, Montana State University; Alan E. Gelfand, Duke University
- 3:20 p.m.** Disc: Sudipto Banerjee, University of Minnesota
- 3:45 p.m.** Floor Discussion

## 433 MCC-103 A

### ● ☆ **Measuring Poverty: New Developments—Invited** Social Statistics Section, Section on Government Statistics, Section on Survey Research Methods

Organizer(s): Susan Schechter, Office of Management and Budget

Chair(s): Katherine Wallman, Office of Management and Budget

- 2:05 p.m.** NAS Workshop Summary Report—◆ John Iceland, University of Maryland
- 2:30 p.m.** Estimating Resources for Poverty Measurement—◆ Kathleen S. Short, U.S. Census Bureau
- 2:55 p.m.** Developing Poverty Thresholds—◆ Thesia I. Garner, Bureau of Labor Statistics
- 3:20 p.m.** Disc: Timothy M. Smeeding, Syracuse University
- 3:40 p.m.** Floor Discussion

**434**

**MCC-200 I**

● **Feature Extraction in Signals and Images via Nonparametric Methods—Invited**

Section on Nonparametric Statistics, Section on Statisticians in Defense and National Security, Section on Statistical Graphics

Organizer(s): Eric Chicken, Florida State University

Chair(s): Eric Chicken, Florida State University

- 2:05 p.m.** Statistical Models for Feature Extraction and Matching in Fingerprint Images—◆ Sarat C. Dass, Michigan State University; Arun Ross, West Virginia University; Anil Jain, Michigan State University
- 2:30 p.m.** Chirplets: Multiscale Detection and Recovery of Chirps from Very Noisy Data—◆ Emmanuel J. Candes, California Institute of Technology
- 2:55 p.m.** A Bayesian MRF Framework for Labeling Terrain Using Hyperspectral Imaging—◆ Robert E. Neher, Air Force Institute of Technology; Anuj Srivastava, Florida State University
- 3:20 p.m.** Recent Progresses of Multiscale Analysis in Image Detection—Xiaoming Huo, Georgia Institute of Technology; ◆ Xuelei Ni, Georgia Institute of Technology
- 3:45 p.m.** Floor Discussion

**435**

**MCC-209 AB**

● ☆ **High-level Image Analysis: from Images to Understanding—Invited**

IMS, Section on Statisticians in Defense and National Security, Section on Statistical Graphics

Organizer(s): Thomas Lee, Colorado State University

Chair(s): Thomas Lee, Colorado State University

- 2:05 p.m.** New Asymptotic Results in Multiscale Image Analysis—◆ Xiaoming Huo, Georgia Institute of Technology; Xuelei Ni, Georgia Institute of Technology
- 2:30 p.m.** Multiscale, Multigranular Image Analysis—◆ Eric Kolaczyk, Boston University; Junchang Ju, Boston University; Sucharita Gopal, Boston University
- 2:55 p.m.** A General Cluster Sampling Method for Bayesian Inference—◆ Adrian Barbu, University of California, Los Angeles; Song-Chun Zhu, University of California, Los Angeles
- 3:20 p.m.** From Information Scaling of Natural Images to Regimes of Statistical Models—◆ Yingnian Wu, University of California, Los Angeles; Song-Chun Zhu, University of California, Los Angeles; Cheng-En Guo, University of California, Los Angeles
- 3:45 p.m.** Floor Discussion

**436**

**MCC-202 AB**

● **Statistical Methods for the Analysis of Hormonal Time-series Data—Invited**

Biometrics Section, Section on Statistics in Epidemiology, WNAR

Organizer(s): Timothy D. Johnson, University of Michigan

Chair(s): Timothy D. Johnson, University of Michigan

- 2:05 p.m.** Functional Mixed Effects Models with Prior Information—◆ Wensheng Guo, University of Pennsylvania; Li Qin, Fred Hutchinson Cancer Research Center
- 2:35 p.m.** Detecting Pulsatile Hormone Secretions Using Nonlinear Mixed-effects Partial Spline Models—◆ Yuedong Wang, University of California, Santa Barbara; Yu-Chieh Yang, National Taichung Institute of Technology; Anna Liu, University of Massachusetts
- 3:05 p.m.** Modeling of Hormone Secretion with Marked Nonhomogeneous Poisson Process—◆ Anna Liu, University of Massachusetts; Yuedong Wang, University of California, Santa Barbara
- 3:35 p.m.** Floor Discussion

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Topic Contributed Sessions 2:00 p.m.–3:50 p.m.

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**437**

**MCC-205 B**

**Multivariate Longitudinal Data—Topic Contributed**

Biometrics Section, WNAR

Organizer(s): Geert Verbeke, Katholieke Universiteit Leuven

Chair(s): Geert Verbeke, Katholieke Universiteit Leuven

- 2:05 p.m.** Using Multivariate Mixed-effects Models To Predict Prostate Cancer—◆ Christopher Morrell, Loyola College in Maryland; Larry J. Brant, National Institute on Aging; Shan Sheng, National Institute on Aging; E. Jeffrey Metter, National Institute on Aging
- 2:25 p.m.** Three-mode Models for Multivariate Longitudinal Data of Multiple Groups—◆ Frans J. Oort, University of Amsterdam
- 2:45 p.m.** Random-effects Models for Multivariate Repeated Responses—◆ Steffen Fieuws, Katholieke Universiteit Leuven; Geert Verbeke, Katholieke Universiteit Leuven
- 3:05 p.m.** Analysis of Spatially-correlated Multidimensional Longitudinal Data—◆ Jason Roy, University of Rochester
- 3:25 p.m.** Penalized Likelihood Estimation of a Mixed-effect Transfer Function Model—◆ Elizabeth Hansen, The University of Iowa; Kung-Sik Chan, The University of Iowa
- 3:45 p.m.** Floor Discussion

# NEW FROM SAGE PUBLICATIONS

## Cohort Analysis

Second Edition

Norval D. Glenn

*University of Texas at Austin*



**Cohort Analysis, Second Edition** covers the basics of the cohort approach to studying aging, social, and cultural change. New to this edition is: a chapter on the analysis of survey data; emphasis on the difference between linear and nonlinear effects; and advice on how to use available data from cohort studies, such as the National Election Studies, the General Social Surveys, and the Census.

Quantitative Applications in the Social Sciences, Vol 5  
2005, 72 pages  
Paperback: \$15.95, ISBN: 0-7619-2215-6

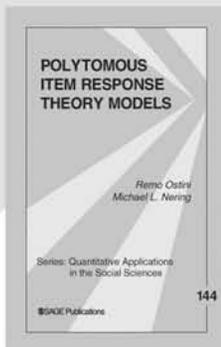
## Polytomous Item Response Theory Models

Remo Ostini

*University of Queensland in Brisbane, Australia*

Michael L. Nering

*Measured Progress, Inc.*



This book provides a unified, comprehensive introduction to the range of polytomous models available within item response theory (IRT). Practical examples of major models using real data are provided, as is a chapter on choosing an appropriate model.

Quantitative Applications in the Social Sciences, Vol 144  
July 2005, 120 pages  
Paperback: \$15.95, ISBN: 0-7619-3068-X

## Measurement Error and Research Design

A Practical Approach to the Intangibles of Research Design

Madhu Viswanathan

*University of Illinois, Urbana-Champaign*



*"Dr. Viswanathan has made an important contribution to the array of books available on measurement. In his book, he calls the reader's attention to types of errors encountered in measurement, how they are made, and most importantly, how researchers can go about identifying and eliminating them. If you are doing research, whether you are developing measures or using already developed measures, the information in this book will help you to understand how to investigate the limitations of the measures you work with."*

—Dennis L. Jackson, *University of Windsor*

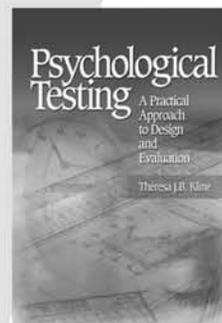
2005, 456 pages  
Paperback: \$44.95, ISBN: 1-4129-0642-3

## Psychological Testing

A Practical Approach to Design and Evaluation

Theresa J.B. Kline

*University of Calgary*



*"Kline's book provides a well-written treatment of the critical issues in designing and evaluating psychometric instruments. This book will be very useful to advanced undergraduate students, graduate students, and researchers."*

—Richard Block, *Montana State University*

2005, 368 pages  
Hardcover: \$79.95, ISBN: 1-4129-0544-3

**438**

**MCC-200 H**

● **Quality Management in Statistical Organizations II—Topic Contributed**

**Section on Quality and Productivity**

*Organizer(s): Eugene Burns, Bureau of Transportation Statistics*

*Chair(s): Eugene Burns, Bureau of Transportation Statistics*

- 2:05 p.m.** Avoiding Correlated Observations When Control-charting Hierarchically Structured Data—◆ Carl Pierchala, National Highway Traffic Safety Administration; Jyoti Surti, National Highway Traffic Safety Administration
- 2:25 p.m.** Quality Assurance Efforts for the 2006 Census Test Requirements Management Process—◆ Megan C. Sheppard, U.S. Census Bureau; John M. Bushery, U.S. Census Bureau; Jennifer W. Reichert, U.S. Census Bureau
- 2:45 p.m.** Survey Quality Self-assessments—◆ Thomas Broene, Energy Information Administration
- 3:05 p.m.** Internal Quality Audits at the Portuguese National Statistical Institute—◆ Maria João Zilão, Instituto Nacional de Estatística
- 3:25 p.m.** Disc: David Morganstein, Westat
- 3:45 p.m.** Floor Discussion

**439**

**MCC-200 G**

**Calibration Issues in Diagnostic Medicine—Topic Contributed**

**Section on Statistics in Epidemiology, Biopharmaceutical Section, WNAR**

*Organizer(s): Mojtaba Noursalehi, Abbott Laboratories; Estelle Russek-Cohen, U.S. Food and Drug Administration*

*Chair(s): Kristen Meier, U.S. Food and Drug Administration*

- 2:05 p.m.** Evaluation of Accuracy and Optimal Cutoff of Diagnostic Devices in the Same Study—◆ Marina Kondratovich, U.S. Food and Drug Administration; Waleed Yousef, U.S. Food and Drug Administration
- 2:25 p.m.** Computer Simulation in Medical Diagnostic Assay Calibration Evaluation—◆ Ping Shi, Abbott Laboratories
- 2:45 p.m.** Parametric and Nonparametric Approaches for Method Comparisons in Diagnostic Devices: Strengths and Weaknesses—◆ May Mo, Abbott Laboratories; Mojtaba Noursalehi, Abbott Laboratories
- 3:05 p.m.** Precision and Accuracy of an Analytical Method: Total Error of Measurement—◆ Beimar Iriarte, Abbott Laboratories

- 3:25 p.m.** Sample Size and Study Design Considerations for Method Comparison Studies Based on Regression Analyses—◆ Estelle Russek-Cohen, U.S. Food and Drug Administration; Marina Kondratovich, U.S. Food and Drug Administration

- 3:45 p.m.** Floor Discussion

**440**

**MCC-212 AB**

● ☆ **Statistical Methods in Computer Intrusion Detection—Topic Contributed**

**Section on Statisticians in Defense and National Security, Section on Statistical Graphics**

*Organizer(s): David Marchette, Naval Surface Warfare Center, Dahlgren Division*

*Chair(s): David Marchette, Naval Surface Warfare Center, Dahlgren Division*

- 2:05 p.m.** A Nonparametric Multichart CUSUM Test for Rapid Intrusion Detection—◆ Alexander G. Tartakovsky, University of Southern California; Boris Rozovskii, University of Southern California
- 2:25 p.m.** A Model of Backscatter as Escher Tessellations—◆ Kendall Giles, Johns Hopkins University; David Marchette, Naval Surface Warfare Center, Dahlgren Division; Carey Priebe, Johns Hopkins University
- 2:45 p.m.** Application Protocol Recognition in Encrypted Internet Traffic—◆ Charles Wright, Johns Hopkins University; Fabian Monroe, Johns Hopkins University; Gerald Masson, Johns Hopkins University
- 3:05 p.m.** Visualization Tools for Detecting Network Attacks Using Internet Packet Data—◆ Karen Kafadar, University of Colorado, Denver
- 3:25 p.m.** Disc: Edward J. Wegman, George Mason University
- 3:45 p.m.** Floor Discussion

**441**

**MCC-208 B**

● ☆ **Recent Advances in Event Studies Including Recurrent Events—Topic Contributed**

**Section on Bayesian Statistical Science**

*Organizer(s): Lynn Kuo, University of Connecticut*

*Chair(s): Lynn Kuo, University of Connecticut*

- 2:05 p.m.** Unified Bayesian Modeling for Survival Data with a Surviving Fraction—◆ Dipak Dey, University of Connecticut
- 2:25 p.m.** Sequential Monte Carlo Approach to Dynamic Data-driven Event Reconstruction for Atmospheric Releases—◆ Gardar Johannesson, Lawrence Livermore National Laboratory
- 2:45 p.m.** Bayesian Analysis for Studies with Outcome-dependent Clinic Visits—◆ Debajyoti Sinha, Medical University of South

Carolina; Bani Mallick, Texas A&M University; Stuart Lipsitz, Medical University of South Carolina; Duchwan Ryu, Texas A&M University

**3:05 p.m. Dynamic Models for Recurrent Event Data—**

◆ Changhong Song, University of Connecticut; Lynn Kuo, University of Connecticut

**3:25 p.m. Recurrent Event Modeling and Analysis—**◆ Edsel Pena, University of South Carolina; Jun Han, University of South Carolina; Elizabeth Slate, Medical University of South Carolina

**3:45 p.m. Floor Discussion**

**442 MCC-103 B**

**\* Distribute Trades Surveys—Sharing Experiences Amongst Countries—Topic Contributed**

**Section on Government Statistics**

*Organizer(s): Robert Lussier, Statistics Canada*

*Chair(s): Robert Lussier, Statistics Canada*

**2:05 p.m. The United Nations' Statistics Division Activities in Distributive Trades Statistics: an Outline—**◆ Vladimir Markhonko, United Nations

**2:25 p.m. Backcasting and Seasonal Adjustment of Canada's National Retail Commodity Survey—**◆ Norman Fyfe, Statistics Canada; Richard Evans, Statistics Canada

**2:45 p.m. Measuring the Economy's Middleman in an Era of Global Supply Chains and Electronic Business—**◆ Anne Russell, U.S. Census Bureau

**3:05 p.m. Satellite Trade Accounts in France—**◆ Odile Bovar, INSEE France

**3:25 p.m. Disc:** Jennifer Ribarsky, Bureau of Economic Analysis

**3:45 p.m. Floor Discussion**

**443 MCC-103 F**

**\* Joint Survival and Longitudinal Modeling—Topic Contributed**

**Section on Health Policy Statistics, Social Statistics Section, WNAR**

*Organizer(s): Chris Barker, Scios, Inc.*

*Chair(s): Chris Schmid, Tufts New England Medical Center*

**2:05 p.m. A Nonlinear Latent Process Model for Multivariate Longitudinal Data—**◆ Jeremy Taylor, University of Michigan; Cecile Proust, INSERM, University of Bordeaux 2; Helene Jacqmin-Gadda, INSERM, University of Bordeaux 2

**2:25 p.m. Estimation for Generalized Linear Models When Covariates Are Random Effects for Longitudinal Data—**◆ Erning Li, Texas A&M University; Daowen Zhang, North Carolina State University; Marie Davidian, North Carolina State University

**2:45 p.m. Modeling Longitudinal and Recurrent Event Outcomes with Application—**◆ Elizabeth Slate, Medical University of South Carolina; Edsel Pena, University of South Carolina; Jun Han, University of South Carolina

**3:05 p.m. Disc:** Frank E. Harrell, Jr., Vanderbilt University

**3:25 p.m. Disc:** Kiros Berhane, University of Southern California

**3:45 p.m. Floor Discussion**

**444 MCC-201 AB**

**\* ☆ Design and Analysis Issues in Medical Devices Including Postmarket Surveillance—Topic Contributed Biopharmaceutical Section, WNAR**

*Organizer(s): Jeng Mah, Guidant Corporation; Gosford Sawyerr, Medtronic, Inc.*

*Chair(s): George G. Woodworth, The University of Iowa*

**2:05 p.m. Statistical Design and Analysis with Pharmacogenomic, Drug-diagnostic Codevelopment—**◆ Lakshmi Vishnuvajjala, U.S. Food and Drug Administration; Gene Pennello, U.S. Food and Drug Administration

**2:25 p.m. Drugs vs. Diagnostics: Key Concepts, Similarities, and Differences—**◆ Mojtaba Noursalehi, Abbott Laboratories

**2:45 p.m. Statistical Methods in Signaling and Monitoring Medical Device Adverse Reports—**◆ Chang Lao, U.S. Food and Drug Administration

**3:05 p.m. Design and Analysis of the Postmarket Surveillance Study in Medical Device Industry—**◆ Chi-Hong Tseng, New York University

**3:25 p.m. Disc:** Gosford Sawyerr, Medtronic, Inc.

**3:45 p.m. Floor Discussion**

**445 MCC-102 D**

**\* Exploring Calibration—Topic Contributed Section on Survey Research Methods**

*Organizer(s): Phillip S. Kott, National Agricultural Statistics Service*

*Chair(s): Phillip S. Kott, National Agricultural Statistics Service*

**2:05 p.m. Calibration Estimation Using Empirical Likelihood Ratio in Survey—**◆ Jae-kwang Kim, Yonsei University; Tae Hoon Lee, Yonsei University

**2:25 p.m. Using Equalization Constraints To Find Optimal Calibration Weights—**◆ Reid Alan Rottach, U.S. Census Bureau; David Warren Hall, U.S. Census Bureau

**2:45 p.m. Calibration Adjustments When Not All Targets Can Be Met—**Matthew J. Fetter, National Agricultural Statistics Service; ◆ James Gentle, George Mason University; Charles R. Perry, National Agricultural Statistics Service

**3:05 p.m. On Nonresponse Adjustment via Calibration—**◆ Michael Sverchkov, Bureau of Labor Statistics; Alan Dorfman,

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

Bureau of Labor Statistics; Lawrence R. Ernst, Bureau of Labor Statistics; Thomas Moerhle, Bureau of Labor Statistics; Steven P. Paben, Bureau of Labor Statistics; Chester H. Ponikowski, Bureau of Labor Statistics

- 3:25 p.m.** Variance Estimation for Volunteer Panel Web Surveys Using Propensity Score Adjustment and Calibration Adjustment—◆ Sunghee Lee, University of California, Los Angeles; Richard L. Valliant, University of Michigan
- 3:45 p.m.** Floor Discussion

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Topic Contributed Panels 2:00 p.m.–3:50 p.m.

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## **446** **MCC-205 D** **CAUSE Updates on Research, CAUSEweb, and USCOTS—** **Topic Contributed**

### Section on Statistical Education

Organizer(s): Dennis Pearl, The Ohio State University

Chair(s): Ginger Holmes Rowell, Middle Tennessee State University

- Panelists:** ◆ Dennis Pearl, The Ohio State University  
◆ Joan Garfield, University of Minnesota  
◆ Deborah Rumsey, The Ohio State University  
◆ Roger Woodard, North Carolina State University

- 3:35 p.m.** Floor Discussion

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Regular Contributed Sessions 2:00 p.m.–3:50 p.m.

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## **447** **MCC-102 C** **Poisson and Counting Processes and Survival** **Analysis—Contributed**

### General Methodology, Biometrics Section

Chair(s): Andrea B. Troxel, University of Pennsylvania

- 2:05 p.m.** Monitoring a Continuous Poisson Process Subject to Change—◆ Marlo Brown, Niagara University
- 2:20 p.m.** Analysis of Interval-censored Survival Data in the Presence of Informative Examination Times Using an EM Algorithm—◆ Anjela Tzontcheva, University of Toronto; James Stafford, University of Toronto
- 2:35 p.m.** Imputation Methods for Doubly Censored Survival Data with an Interval-censored Covariate—◆ Wei Zhang, The University of Iowa; Ying Zhang, The University of Iowa; Kathryn Chaloner, The University of Iowa
- 2:50 p.m.** Semiparametric Transformation Models for Survival Data with a Cure Fraction—◆ Donglin Zeng, The University of North Carolina at Chapel Hill; Guosheng Yin, The University of Texas M. D. Anderson Cancer Center; Joseph G.

Ibrahim, The University of North Carolina at Chapel Hill

- 3:05 p.m.** Inference for the Bivariate Positive Stable Frailty Models—◆ Madhujha Mallick, Merck Research Laboratories; Nalini Ravishanker, University of Connecticut
- 3:20 p.m.** Nonparametric Survival Analysis on Time-dependent Covariate Effects in Case-cohort Sampling Design—◆ Chunfeng Huang, North Dakota State University; Haimeng Zhang, Concordia College
- 3:35 p.m.** Regression Analysis of Mean Lifetime: Exploring Nonlinear Relationship with Heteroscedasticity—◆ Linda Sun, Northwestern University; Wenxin Jiang, Northwestern University

## **448** **MCC-102 B** **Model Checking and Model Selection—Contributed** **General Methodology**

Chair(s): Sarah Ratcliffe, University of Pennsylvania

- 2:05 p.m.** Nonconcave Penalized Likelihood with a Diverging Number—◆ Heng Peng, Princeton University
- 2:20 p.m.** Variable Selection in Finite Mixture of Regression Models—◆ Abbas Khalili, University of Waterloo; Jiahua Chen, University of Waterloo
- 2:35 p.m.** Goodness-of-testing Based on Components of Pearson's Chi-squared Statistic Using Marginal Frequencies of Multinomial Data—◆ Mark Reiser, Arizona State University; Martin Knott, London School of Economics
- 2:50 p.m.** Partial Intrinsic Bayes Factor—◆ Yongsung Joo, University of Florida; George Casella, University of Florida
- 3:05 p.m.** Testing Time-series Linearity: Goodness-of-fit Approach—◆ Nusrat Jahan, James Madison University; Jane Harvill, Mississippi State University
- 3:20 p.m.** Floor Discussion

## **449** **MCC-200 F** **\* Bayesian and Adaptive Methods in Clinical Trials—** **Contributed**

### Biopharmaceutical Section, Section on Bayesian Statistical Science, WNAR

Chair(s): Dong Xu, Bristol-Myers Squibb Company

- 2:05 p.m.** Planning from Pilot Study to Confirmatory Trial Using a Bayesian Approach—◆ Hong Amy Xia, Amgen Inc.; Bin Yao, Amgen Inc., Cambridge; Moraye Bear, Amgen Inc.; Alan Forsythe, Amgen Inc.
- 2:20 p.m.** Comparison of Exact, Approximate, and Bayesian Tests for Testing the Hypothesis of Efficacy—◆ Pralay Mukhopadhyay, Bristol-Myers Squibb Company; Roger Berger, Arizona State University; Sujit K. Ghosh, North Carolina State University

- 2:35 p.m.** Bayesian Hierarchical Modeling of Drug Stability Data—◆ Jinglin Zhong, Merck & Co., Inc.; Jie Chen, Merck & Co., Inc.; Lei Nie, University of Maryland Baltimore County
- 2:50 p.m.** A Bayesian Test for Binary Outcomes in Fixed-dose Combination Drug Studies—◆ Melinda Holt, Southeastern Louisiana University; James Stamey, Stephen F. Austin State University; John Seaman, Baylor University; Dean M. Young, Baylor University; Dean M. Young, Baylor University
- 3:05 p.m.** Estimation Following Adaptive Design—◆ Chengqing Wu, National Institute of Child and Health & Human Development; Aiyi Liu, National Institute of Child and Health & Human Development; Kai F. Yu, National Institute of Child and Health & Human Development; James F. Troendle, National Institute of Child and Health & Human Development
- 3:20 p.m.** Floor Discussion

**450** **MCC-103 D**  
**Sampling and Censoring—Contributed**  
**Section on Nonparametric Statistics, Section on Survey Research Methods**

*Chair(s): Omer Ozturk, The Ohio State University*

- 2:05 p.m.** Efficient Estimation in Interval-censored Data with Nonparametric Covariate Effects—◆ Tingting Yi, Michigan State University
- 2:20 p.m.** Shrinkage Nonparametric Estimation of Mean Survival Time from Censored Data—◆ Mohammad Rahbar, Michigan State University; Alla Sikorskii, Michigan State University; S. Ejaz Ahmed, University of Windsor; Sangchoon Jeon, Michigan State University; Joseph C. Gardiner, Michigan State University
- 2:35 p.m.** A Confidence Interval for the Median of a Finite Population under Unequal Probability Sampling: a Model-assisted Approach—◆ Suzanne Dubnicka, Kansas State University
- 2:50 p.m.** Judgment Poststratification and Auxiliary Information—◆ Xiaobai Li, The Ohio State University; Steven N. MacEachern, The Ohio State University; Elizabeth A. Stasny, The Ohio State University
- 3:05 p.m.** Ranked Set Sampling: Improving Estimates Obtained from a Stratified Simple Random Sample—◆ Christopher Sroka, The Ohio State University
- 3:20 p.m.** Not Worth the Effort: Balanced Ranked Set Sampling and Random Predictor OLS Regression—◆ Elizabeth J. Murff, Eastern Washington University; Thomas W. Sager, The University of Texas at Austin
- 3:35 p.m.** Rank Set Sampling: Allocation of Sample Units to the Judgment Order Statistics—◆ Jessica Kohlschmidt, The Ohio State University; Elizabeth A. Stasny, The Ohio State University; Doug Wolfe, The Ohio State University

**451** **MCC-210 AB**  
**New Methods in Estimation of Models—Contributed**  
**IMS**

*Chair(s): C. Shane Reese, Brigham Young University*

- 2:05 p.m.** Detecting Abrupt Changes in Locally Stationary Time Series—◆ Michael Last, University of California, Davis
- 2:20 p.m.** An Application of Empirical Processes to ROC Curve—◆ Costel Chirila, University of Kentucky; Arne Bathke, University of Kentucky; Arnold J. Stromberg, University of Kentucky
- 2:35 p.m.** Estimation for the Simple Linear Boolean Model—◆ Catherine Crespi, University of California, Los Angeles; Kenneth Lange, University of California, Los Angeles
- 2:50 p.m.** Local Likelihood Estimation of the Intensity Function for Spike Trains Observed on Overlapping, Nonidentical Intervals—◆ Matt Gregas, University of Minnesota
- 3:05 p.m.** A Two-step Empirical Likelihood Approach for Combining Sample and Population Data in Regression Estimation—◆ Sanjay Chaudhuri, University of Washington; Mark S. Handcock, University of Washington; Michael S. Rendall, RAND Corporation
- 3:20 p.m.** A General Class of Linearly-structured Bivariate Lifetime Distributions—◆ Norou Diawara, Auburn University; Mark Carpenter, Auburn University; Yi Han, Auburn University
- 3:35 p.m.** Full Likelihood Inference for Exchangeable Poisson Data—◆ Sankar Bokka, The University of Mississippi; Hanxiang Peng, The University of Mississippi; LaTonya Garner, The University of Mississippi

**452** **MCC-211 D**  
**Experimental Design and Functional Data Analysis—Contributed**  
**IMS**

*Chair(s): Nick Hengartner, Los Alamos National Laboratory*

- 2:05 p.m.** A Geometric Method for Singular C-optimal Designs—◆ Shenghua Fan, National University of Singapore; Kathryn Chaloner, The University of Iowa
- 2:20 p.m.** p-Optimal Designs for a Linear Log Contrast Model for Experiments with Mixtures—◆ Miao-Kuan Huang, National Sun Yat-sen University; Mong-Na L. Huang, National Sun Yat-sen University
- 2:35 p.m.** A-optimal Designs for Weighted Polynomial Regression—◆ Fu-Chuen Chang, National Sun Yat-sen University
- 2:50 p.m.** Optimal Designs for Calibrations in Multiresponse-univariate Linear Regression Models—◆ Chun-Sui Lin, National Sun Yat-sen University; Mong-Na L. Huang, National Sun Yat-sen University

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**3:05 p.m.** Modeling Computer Experiments with Functional Response—◆ Zhe Zhang, The Pennsylvania State University

**3:20 p.m.** Curve Forecasting by Functional Autoregression—  
◆ Vladislav Kargin, New York University; Alexei Onatski, Columbia University

**3:35 p.m.** Floor Discussion

## **453** **MCC-102 E**

### ● **Variance Estimation for Surveys II—Contributed** Section on Survey Research Methods, Social Statistics Section

*Chair(s): Steve Miller, Bureau of Labor Statistics*

**2:05 p.m.** Application of Jackknife Replication Method to Two-stage Sample Data with a Large Number of Certainty PSUs—◆ Donsig Jang, Mathematica Policy Research, Inc.

**2:20 p.m.** Variance Estimation for Fractionally Imputed Survey Data—◆ Arindam Chatterjee, Iowa State University; Wayne A. Fuller, Iowa State University; Jean D. Opsomer, Iowa State University

**2:35 p.m.** A Simulation Study of Three Methods of Variance Estimation with Two-stage Cluster Sampling and Hot-deck Imputation—◆ Michael E. Jones, Westat; J. Michael Brick, Westat; Richard L. Valliant, University of Michigan

**2:50 p.m.** Poststratified Estimator and Variance Estimation in Stratified Multistage Cluster Sampling—◆ Kyongryun Kim, Texas A&M University; Suojin Wang, Texas A&M University

**3:05 p.m.** Variance Estimation for Systematic Sampling—  
◆ Xiaoxi Li, Iowa State University; Jean D. Opsomer, Iowa State University

**3:20 p.m.** Variance Estimation under Balanced Sampling Plans Excluding Adjacent Units—◆ James Wright, Bucknell University

**3:35 p.m.** Replicate Control Totals—◆ Varma S. D. S. Nadimpalli, Westat; David R. Judkins, Westat; Samson A. Adeshiyani, U.S. Census Bureau

## **454** **MCC-102 F**

### ● **Coverage and Frames for Household Survey—Contributed** Section on Survey Research Methods, Social Statistics Section

*Chair(s): Donald Camburn, RTI International*

**2:05 p.m.** Enumeration Status of Census 2000 Enumerations Deemed Insufficient Information for Matching and Followup—◆ Paul W. Livermore Auer, U.S. Census Bureau

**2:20 p.m.** Complex Sample Design Effects Using the Census 2000 A.C.E. Sample and Logistic Regression Modeling—

◆ Douglas Olson, U.S. Census Bureau; Richard Griffin, U.S. Census Bureau

**2:35 p.m.** Lessons Learned in the 2004 Census Test of Overseas Enumeration—◆ Mary Frances E. Zelenak, U.S. Census Bureau

**2:50 p.m.** Geocoding Procedure To Find Geographic Identifiers in the Housing Component of the Consumer Price Index—◆ John Schilp, Bureau of Labor Statistics

**3:05 p.m.** Evaluating the Frame Development Operation for Group Quarters—◆ Carrae Echols, U.S. Census Bureau

**3:20 p.m.** Simple Approaches to Estimating the Variance of the Propensity Score Weighted Estimator Applied on Volunteer Panel Web Survey Data: a Comparative Study—◆ Annica Isaksson, Statistics Sweden; Sunghye Lee, University of California, Los Angeles

**3:35 p.m.** Floor Discussion

## **455** **MCC-205 A**

### ● **Hierarchical and Latent Variable Modeling with Epidemiologic Applications—Contributed** Section on Statistics in Epidemiology, Section on Bayesian Statistical Science, WNAR

*Chair(s): Renee Moore, Emory University*

**2:05 p.m.** Hierarchical Latent Class Model for Evaluating Diagnostic Tests—◆ Alula Hadgu, U.S. Centers for Disease Control and Prevention; Nandini Dendukuri, McGill University

**2:20 p.m.** Profiling VA Facilities Using Bayesian Hierarchical Models—◆ Chuan Zhou, University of Washington

**2:35 p.m.** Multilevel Flexible Models for Bivariate Longitudinal Data—◆ Nuoo-Ting Molitor, University of Southern California; Kiros Berhane, University of Southern California

**2:50 p.m.** The Multilevel Hierarchical Random Effect Models: What Do We Gain by Accounting for More Levels?—◆ An-Lin Cheng, Yale University; Haiqun Lin, Yale University

**3:05 p.m.** Comparison of PQL and Laplace 6 Estimates of Hierarchical Generalized Linear Models When Comparing Groups of Small Incident Rates in Cluster-Randomized Trials—◆ Rafael Diaz, University of California, Davis

**3:20 p.m.** A Composite Clustering Model for Space-time Disease Counts—◆ Ping Yan, University of Wisconsin, Madison; Murray K. Clayton, University of Wisconsin, Madison

**3:35 p.m.** Floor Discussion

## 456 MCC-103 E Statistics in Basketball, Baseball, Football, Hockey, and Golf—Contributed

Section on Statistics in Sports, Section on Statistical Education

Chair(s): Michael Anderson, IBM

- 2:05 p.m. On Successive Proportions of Binary Sequences—  
◆ Laurence D. Robinson, Ohio Northern University;  
Mihai Caragiu, Ohio Northern University
- 2:20 p.m. A Spatial Analysis of Basketball Shot Chart Data—  
◆ Brian Reich, University of Minnesota; Bradley P. Carlin,  
University of Minnesota; James Hodges, University of  
Minnesota; Adam Reich, University of Minnesota
- 2:35 p.m. Who Controls the Plate?—◆ Ben Alamar, University of  
California at San Francisco; Gabriel Desjardins, Avnera  
Corporation
- 2:50 p.m. Some Properties of Playoff Systems for NCAA I-A  
Football—◆ David Annis, Naval Postgraduate School;  
Samuel Wu, University of Florida
- 3:05 p.m. Position and Location in Ice Hockey Using a Markov  
Chain Model—◆ Andrew Thomas, Harvard University
- 3:20 p.m. The Importance of Individual Golf Skills and How These  
Change with Innovations in Technology—◆ Erik Heiny,  
University of Northern Colorado
- 3:35 p.m. Floor Discussion

## 457 MCC-211 A Reliability and Survival Modeling—Contributed

Section on Physical and Engineering Sciences,  
Section on Quality and Productivity

Chair(s): Vivek Ajmani, General Mills, Inc.

- 2:05 p.m. The Eyring Rate Reaction Model and Its Use in Sensitivity  
Analysis—◆ Haiming Ma, Iowa State University; William Q.  
Meeker, Iowa State University
- 2:20 p.m. The Performance of Hazard Plotting in Estimating the  
Parameters of a Weibull Life Distribution in the  
Presence of an Independent Competing Weibull Failure  
Mode—◆ John I. McCool, Pennsylvania State Great Valley;  
Edward Romanowski, QVC, Inc.
- 2:35 p.m. Weibull Confidence Bounds with Few or Zero Failures—  
◆ Ulrike Genschel, University of Dortmund; William Q. Meeker,  
Iowa State University
- 2:50 p.m. Bivariate Weibull Reliability/Survival Models—◆ Yi Han,  
Auburn University; Mark Carpenter, Auburn University; Norou  
Diawara, Auburn University
- 3:05 p.m. Beta-Weibull Distribution and Its Applications—  
◆ Felix Famoye, Central Michigan University; Carl Lee, Central  
Michigan University

- 3:20 p.m. Generalized Log-logistic Families of Lifetime  
Distributions—◆ James Gleaton, University of North Florida;  
James Lynch, University of South Carolina

- 3:35 p.m. Floor Discussion

## 458 MCC-211 B Network Traffic and Datastreams—Contributed

Section on Physical and Engineering Sciences,  
Section on Statisticians in Defense and National  
Security, Section on Quality and Productivity

Chair(s): Peter Hovey, University of Dayton

- 2:05 p.m. Waiting Time Distribution of Tandem Queues with  
Correlated Service Nodes—◆ Alfred Akinsete, Marshall  
University
- 2:20 p.m. Statistical Models for Network Traffic Measurements—  
◆ Bowei Xi, Purdue University
- 2:35 p.m. Statistical Analysis of Equipment Profiles—◆ Theresa  
Utlaut, Intel Corporation
- 2:50 p.m. Statistical Design and Data Mining for Microsensor  
Arrays—◆ Nell Sedransk, National Institute of Standards and  
Technology; Zhan-Qian J. Lu, National Institute of Standards  
and Technology
- 3:05 p.m. Statistical Investigation of Chaotic Datastreams Using  
a Haar Wavelet Transform—◆ Carolyn Morgan, Hampton  
University; Morris H. Morgan, III, Hampton University
- 3:20 p.m. Statistical Analysis of Star Data—◆ John Rigsby, Naval  
Surface Warfare Center, Dahlgren Division; Yasmin Said,  
George Mason University
- 3:35 p.m. Floor Discussion

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Invited Sessions 4:00 p.m.–5:50 p.m.

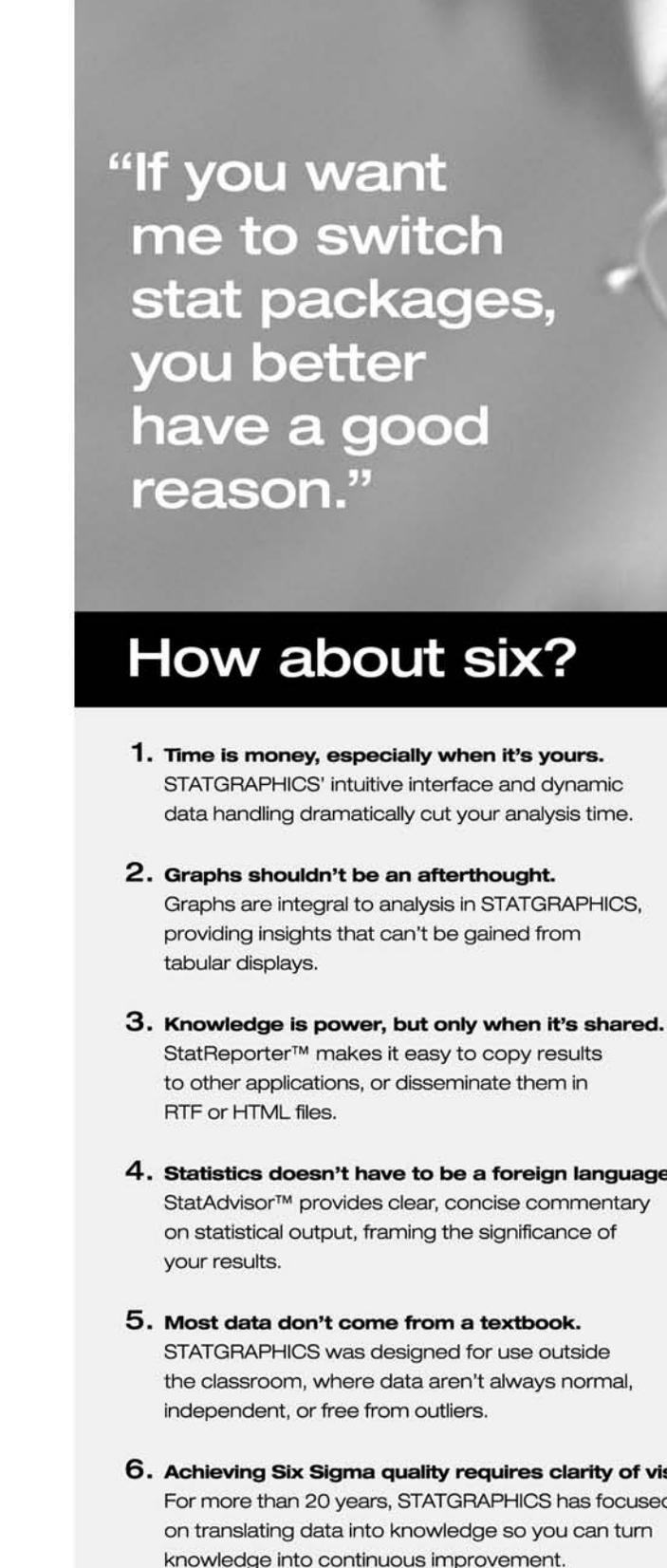
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## 459 MCC-Ballroom A COPSS Awards and Fisher Lecture Session—Invited

Committee of Presidents of Statistics Societies  
(COPSS), The ASA, ENAR, IMS, SSC, WVAR,  
Biometrics Section

Chair(s): Linda J. Young, University of Florida

- 4:00 p.m. Presentation of Awards—◆ Linda J. Young, University of  
Florida
- 4:20 p.m. Dimension Reduction in Regression—◆ R. D. Cook,  
University of Minnesota
- 5:30 p.m. Floor Discussion



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**THURSDAY, AUGUST 11**

Committee/Business Meetings & Other Activities

7:00 a.m.–10:30 a.m. **Speaker Work Room** MCC-204 A

7:00 a.m.–10:30 a.m. **Speaker Work Room** MCC-204 B

7:00 a.m.–10:30 a.m. **MCC-Level 1, Registration Lobby  
Cyber Café and Message Center**

7:00 a.m.–10:30 a.m. **MCC-Level 1, Registration Lobby  
JSM Main Registration  
The ASA Communities Booth  
Special Assistance and Press Desk**

8:00 a.m.–10:00 a.m. **MCC-Level 1, Registration Lobby  
Council of Sections Response Meeting (closed)**  
*Chair(s): E. Jacquelin Dietz, Meredith College*

7:00 a.m.–10:30 a.m. **MCC-Level 1, Registration Lobby  
The ASA Marketplace**

10:00 a.m.–12:00 p.m. **MCC-206 AB  
Council of Sections Debriefing Meeting (closed)**  
*Chair(s): E. Jacquelin Dietz, Meredith College*

Special Presentation 8:30 a.m.–10:20 a.m.

**460** **MCC-L100 G**  
**Introductory Overview Lecture on Objective Bayesian Inference**

**The ASA, ENAR, IMS, SSC, WNAR, Business and Economics Statistics Section, Section on Bayesian Statistical Science, Biometrics Section**

*Organizer(s): Ming-Hui Chen, University of Connecticut  
Chair(s): Ming-Hui Chen, University of Connecticut*

**8:35 a.m.** Objective Bayesian Estimation—◆ James Berger, Duke University

**9:25 a.m.** Objective Bayesian Testing and Model Selection—  
◆ M. J. Bayarri, University of Valencia

**10:15 a.m.** Floor Discussion

Invited Sessions 8:30 a.m.–10:20 a.m.

**461** **MCC-L100 E**  
**Frank Proschan Memorial Session—Invited**

**Memorial, Section on Nonparametric Statistics, ENAR**  
*Organizer(s): Nozer D. Singpurwalla, George Washington University  
Chair(s): Michael Proschan, National Heart, Lung, and Blood Institute*

**8:35 a.m.** Frank Proschan: Career Highlights—◆ Myles Hollander, Florida State University

**8:55 a.m.** Memories of a Working Friendship with Frank Proschan—  
◆ Philip J. Bolland, National University of Ireland

**9:15 a.m.** Applications of Frank Proschan's Ideas and Methodology to Markov Chains—◆ Mark Brown, City College of New York, CUNY

**9:35 a.m.** Proschan and Pittsburgh—Henry W. Block, University of Pittsburgh; ◆ Thomas H. Savits, University of Pittsburgh

**9:55 a.m.** Frank Proschan's Contributions to Statistics—  
◆ Francisco J. Samaniego, University of California, Davis

**10:15 a.m.** Floor Discussion

**462** **MCC-103 A**  
**\* ☆ Wavelets and Self-similarity—Invited**  
**IMS, Section on Nonparametric Statistics**

*Organizer(s): Eric Kolaczyk, Boston University  
Chair(s): Eric Kolaczyk, Boston University*

**8:35 a.m.** Wavelet-based Volatility Estimation for High-frequency Financial Data—◆ Yazhen Wang, University of Connecticut

**9:00 a.m.** Wavelet-based Convex Rearrangements in Estimation of Hurst Exponent—◆ Brani Vidakovic, Georgia Institute of Technology

**9:25 a.m.** Wavelet-based Inferences for Long Memory Processes—  
◆ Peter F. Craigmile, The Ohio State University

**9:50 a.m.** Wavelet-based Estimators of the Hurst Parameter: Statistical Properties and Applications—◆ Carlos J. Morales, WPI; Eric Kolaczyk, Boston University

**10:05 a.m.** Floor Discussion

**463** **MCC-L100 A**  
**\* ☆ Dynamic Allocation of Patients in Clinical Trials—Invited**

**Biopharmaceutical Section, ENAR, WNAR, Biometrics Section**

*Organizer(s): Mani Lakshminarayanan, Pfizer, Inc.  
Chair(s): Mani Lakshminarayanan, Pfizer, Inc.*

**8:35 a.m.** Adaptive Allocation Methods for Balance of Treatment Assignment—◆ Susan Ellenberg, University of Pennsylvania

**Thursday**

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**9:05 a.m.** Dynamic Allocation and Randomization—◆ Terry M. Therneau, Mayo Clinic

**9:35 a.m.** Disc: Charles Anello, U.S. Food and Drug Administration

**9:55 a.m.** Disc: Andrew P. Grieve, Pfizer Central Research

**10:15 a.m.** Floor Discussion

## **464** **MCC-L100 F**

### ☆ Career Success: Statisticians Collaborating and Thinking beyond Statistics—Invited

**Committee on Career Development, Section on Statistical Consulting, Biopharmaceutical Section, Business and Economics Statistics Section, Social Statistics Section**

*Organizer(s): Janet Myhre, Reed Institute for Decision Science*

*Chair(s): Janet Myhre, Reed Institute for Decision Science*

**8:35 a.m.** The Transition from 'Service' to 'Collaboration' in a Statistical Consulting Environment—◆ Daniel R. Jeske, University of California, Riverside

**8:55 a.m.** Collaborating, Data Analysis, and Science in Statistical Education—◆ Johanna Hardin, Pomona College

**9:15 a.m.** From Statistician to Involved Colleague—◆ Matthias Schonlau, RAND Corporation; John Adams, RAND Corporation

**9:35 a.m.** Disc: Arnold Goodman, UCI Center for Statistical Consulting

**9:55 a.m.** Disc: Lee Wilkinson, Northwestern University

**10:15 a.m.** Floor Discussion

## **465** **MCC-200 F**

### ● Recent Advances of Statistical Methodologies for Assessing the Nonlinear and/or Nonadditive Environmental Effects on Ecological Systems—Invited **Biometrics Section, Section on Statistics and the Environment, WNAR**

*Organizer(s): Kung-Sik Chan, The University of Iowa*

*Chair(s): Henghsiu Tsai, Institute of Statistical Science, Academia Sinica*

**8:35 a.m.** Nonadditive Environmental Effects in a Large Marine Fish Population—◆ Lorenzo Ciannelli, University of Oslo; Kung-Sik Chan, The University of Iowa; Kevin Bailey, Alaska Fisheries Science Center, NOAA; Nils C. Stenseth, University of Oslo

**9:00 a.m.** A Survey of Statistical Methods Useful for Exploring and Analyzing Nonlinearity and/or Nonadditivity in Ecological Systems—◆ Kung-Sik Chan, The University of Iowa

**9:25 a.m.** Spatial and Temporal Variability Exert Opposing Effects on Density Dependence in Populations of Large Herbivores—◆ Guiming Wang, Colorado State University; Tom Hobbs, Colorado State University; Randall B. Boone, Colorado State University; Andrew W. Illius, University of Edinburgh; Iain J. Gordon, CSIRO; John E. Gross, National Park Service; Kenneth L. Hamlin, Montana Fish, Wildlife, and Parks

**9:50 a.m.** Disc: Nils C. Stenseth, University of Oslo

**10:10 a.m.** Floor Discussion

## **466** **MCC-209 AB**

### ● Statistical Methods and Problems for Electronic Markets—Invited

**Business and Economics Statistics Section, Section on Statistics and Marketing**

*Organizer(s): Wolfgang Jank, University of Maryland*

*Chair(s): Wolfgang Jank, University of Maryland*

**8:35 a.m.** Consumer Surplus in Online Auctions—◆ Ravi Bapna, University of Connecticut

**9:05 a.m.** Sampling eCommerce Data from the Web: Methodological and Practical Issues—◆ Galit Shmueli, University of Maryland; Wolfgang Jank, University of Maryland; Ravi Bapna, University of Connecticut

**9:35 a.m.** The Bid Arrival Process in Online Auctions—◆ Ralph P. Russo, The University of Iowa

**10:05 a.m.** Floor Discussion

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467

MCC-103 B

**Causal Inference—Invited**

IMS, Section on Bayesian Statistical Science, Business and Economics Statistics Section, Social Statistics Section, Section on Health Policy Statistics, Section on Statistics in Epidemiology, WNAR, Biometrics Section

Organizer(s): Siddhartha Chib, Washington University in St. Louis

Chair(s): Ivan Jeliazkov, University of California, Irvine

8:35 a.m. Recent Applications of Principal Stratification—  
◆ Donald B. Rubin, Harvard University

9:05 a.m. Modeling and Calculating the Effect of Treatment at Baseline from Panel Outcomes—◆ Siddhartha Chib, Washington University in St. Louis

9:35 a.m. Robust and Honest Confidence Intervals for Causal Effects: Application of a Unified Theory of Parametric, Semi and Nonparametric Statistics Based on Higher Dimensional Influence Functions—◆ Aad van der Vaart, Vrije University; James M. Robins, Harvard University; Eric Tchetgen, Harvard University; Lingling Li, Harvard University

10:05 a.m. Floor Discussion

468

MCC-212 AB

● ☆ **Recent Smoothing Procedures for Estimating Discontinuous Curves and Surfaces—Invited**

Section on Statistical Computing, Section on Nonparametric Statistics

Organizer(s): Peihua Qiu, University of Minnesota

Chair(s): Peihua Qiu, University of Minnesota

8:35 a.m. Estimation of Discontinuous Curves and Surfaces: Edge-preserving and Smoothing—◆ Irene Gijbels, Catholic University of Louvain

9:00 a.m. Testing for Parameter Changes at Unknown Times in a Stochastic Regression Framework—◆ Venkata K. Jandhyala, Washington State University

9:25 a.m. Spatially Adaptive Smoothing: a Propagation-separation Approach for Imaging Problems—◆ Joerg Polzehl, WIAS; Vladimir Spokoiny, WIAS

9:50 a.m. Inference of Trends in Time Series—◆ Wei B. Wu, The University of Chicago

10:15 a.m. Floor Discussion

469

MCC-205 C

● ☆ **In Sickness and in Health: Research on Informal Caregiving across the Lifespan—Invited**

The Caucus for Women in Statistics, Social Statistics Section, ENAR, Committee on Women in Statistics, Biometrics Section

Organizer(s): Julia Bienias, Rush University Medical Center

Chair(s): Christina M. Gullion, Kaiser Permanente

8:35 a.m. Informal Caregiving for the Elderly: Current Research Findings and Future Directions—◆ Judith J. McCann, Rush University Medical Center

9:00 a.m. Multidimensional Aspects Related to Caregiving Experience—◆ Chih-Hung Chang, Northwestern University; Linda L. Emanuel, Northwestern University

9:25 a.m. Measuring Child Care: the Validity of Parental Reports—◆ Jerry West, National Center for Education Statistics

9:50 a.m. Disc: Mari Palta, University of Wisconsin, Madison

10:10 a.m. Floor Discussion

470

MCC-200 ABC

● ☆ **Novel Statistical Genetics Methods That Integrate Genomic and Post-genomic Data—Invited**

WNAR, ENAR, Biopharmaceutical Section, Biometrics Section

Organizer(s): Steve Horvath, University of California, Los Angeles

Chair(s): Jun Dong, University of California, Los Angeles

8:35 a.m. Complex Systems To Understand Complex Traits: beyond the Petri Dish—◆ Eric E. Schadt, Rosetta Inpharmatics

9:05 a.m. Statistical Methods for Constructing Weighted Gene Coexpression Networks: Applications to Identifying Complex Disease Genes in Mouse Crosses—◆ Steve Horvath, University of California, Los Angeles; Bin Zhang, University of California, Los Angeles

9:35 a.m. Integrated Statistical Modeling of Gene Expression Data—◆ Hongyu Zhao, Yale University

10:05 a.m. Floor Discussion

471

MCC-200 DE

● ☆ **Computational Biology—Invited**

ENAR, WNAR, Biometrics Section

Organizer(s): Jun S. Liu, Harvard University

Chair(s): Jun S. Liu, Harvard University

8:35 a.m. Statistical Paradigms for RNA Folding and Applications—◆ Ye Ding, Wadsworth Center

9:00 a.m. Sequential Monte Carlo Methods and Protein Structures—◆ Rong Chen, University of Illinois, Chicago

Thursday

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

- 9:25 a.m.** Transcription Regulation Networks—◆ Chiara Sabatti, University of California, Los Angeles
- 9:50 a.m.** Statistical Analysis for Transcription Regulatory Modules—◆ Mayetri Gupta, The University of North Carolina at Chapel Hill; Jun S. Liu, Harvard University
- 10:15 a.m.** Floor Discussion

## **472** **MCC-103 E** \* **Multi-block Analysis in Microarrays and Chemometrics—Invited**

Section on Physical and Engineering Sciences, WNAR, Section on Quality and Productivity, Biometrics Section

Organizer(s): S. Stanley Young, National Institute of Statistical Sciences

Chair(s): S. Stanley Young, National Institute of Statistical Sciences

- 8:35 a.m.** Mining Systems Biology Data—◆ Raymond L. Lam, Centacor
- 9:00 a.m.** PLS, GPA, and Multiblock Analysis Methods—◆ Michel Tenenhaus, HEC School of Management
- 9:25 a.m.** Multiblock Relationships in High Dimensions—◆ Douglas M. Hawkins, University of Minnesota; Despina Stefan, University of Minnesota
- 9:50 a.m.** Ontology-enhanced Statistical Analysis—◆ Jiajun Liu, North Carolina State University; Jacqueline M. Hughes-Oliver, North Carolina State University; Alan Menius, GlaxoSmithKline
- 10:15 a.m.** Floor Discussion

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Topic Contributed Sessions 8:30 a.m.–10:20 a.m.

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## **473** **MCC-200 I** \* **Brain Image Analysis—Topic Contributed** Biometrics Section, Section on Bayesian Statistical Science, WNAR

Organizer(s): Daniel B. Rowe, Medical College of Wisconsin

Chair(s): Daniel B. Rowe, Medical College of Wisconsin

- 8:35 a.m.** An Angular Regression Model for Phase-only fMRI Data—◆ Christopher Meller, Medical College of Wisconsin; Daniel B. Rowe, Medical College of Wisconsin
- 8:55 a.m.** An Evaluation of Methods for Identifying Regions of Activation in fMRI Analysis—◆ Maya Geliatzkova, University of Wisconsin, Milwaukee; Brent Logan, Medical College of Wisconsin
- 9:15 a.m.** Spatial-temporal Modeling of Visual Cortex Pathology—◆ Raymond G. Hoffmann, Medical College of Wisconsin; Daniel B. Rowe, Medical College of Wisconsin; Edgar A. Deyoe, Medical College of Wisconsin

- 9:35 a.m.** Determining Significant Connectivity by 3D Spatio-temporal Wavelet Packet Resampling of Functional Neuroimaging Data—◆ Rajan Patel, Emory University; F. DuBois Bowman, Emory University
- 9:55 a.m.** Maximizing Power with Arterial Spin Labeling fMRI—◆ Jeanette Mumford, University of Michigan; Luis Hernandez-Garcia, University of Michigan; Thomas Nichols, University of Michigan
- 10:15 a.m.** Floor Discussion

## **474** **MCC-211 B** \* ☆ **Bayesian Phylogenetics—Topic Contributed** Section on Bayesian Statistical Science, ENAR, WNAR, Biometrics Section

Organizer(s): Bret Larget, University of Wisconsin, Madison

Chair(s): Cecile Ane, University of Wisconsin, Madison

- 8:35 a.m.** Detecting Differential Selection on Predefined Groups of Sequences—◆ Karin Dorman, Iowa State University; Xun Gu, Iowa State University
- 8:55 a.m.** A Bayesian Phylogenetic Method To Identify Multiple Recombination Events among Recombinant Sequences with Apparent Similar Mosaic Structure—◆ Fang Fang, Iowa State University; Karin Dorman, Iowa State University; Marc A. Suchard, University of California, Los Angeles; Vladimir N. Minin, University of California, Los Angeles
- 9:15 a.m.** A Bayesian Modeling of AFLP Data and Phylogenetic Inference—◆ Ruiyan Luo, University of Wisconsin, Madison; Bret Larget, University of Wisconsin, Madison
- 9:35 a.m.** Resolving Phylogenies for Rapidly Emerging Pathogens with Indel Information—◆ Benjamin Redelings, University of California, Los Angeles; Marc A. Suchard, University of California, Los Angeles
- 9:55 a.m.** Reconstructing Posterior Distributions of a Species Phylogeny Using Estimated Gene Tree Distributions—◆ Liang Liu, The Ohio State University; Dennis Pearl, The Ohio State University
- 10:15 a.m.** Floor Discussion

## **475** **MCC-205 A** \* **Interesting Methodological Topics Related to Internal Revenue Service Tax Statistics—Topic Contributed** Section on Government Statistics

Organizer(s): Kevin Cecco, Internal Revenue Service

Chair(s): Lisa Blumberman, U.S. Census Bureau

- 8:35 a.m.** A Cluster Analysis Approach to Describing Tax Return Data—◆ Brian Raub, U.S. Internal Revenue Service

**8:55 a.m.** A Comparison of Income Concepts Across Agencies: IRS, Census, and BLS—◆ Eric Henry, U.S. Internal Revenue Service; Charles Day, U.S. Internal Revenue Service

**9:15 a.m.** Consider the Source: Differences in Estimates of Income and Wealth from Survey and Tax Data—◆ Barry Johnson, U.S. Internal Revenue Service; Kevin Moore, Federal Reserve Board

**9:35 a.m.** The 1999–2003 Statistics of Income Individual Income Tax Return Edited Panel—◆ Michael Weber, U.S. Internal Revenue Service; Victoria L. Bryant, U.S. Internal Revenue Service

**9:55 a.m.** Trends in 401(k) and IRA Contribution Activity, 1999–2002: Results from a Panel of Matched Tax Returns and Information Documents—◆ Peter Sailer, U.S. Internal Revenue Service; Victoria L. Bryant, U.S. Internal Revenue Service; Sarah A. Holden, Investment Company Institute

**10:15 a.m.** Floor Discussion

## 476 **MCC-211 A**

### ● ☆ Bayesian Modeling and Computation—Topic Contributed

#### Section on Bayesian Statistical Science

Organizer(s): Hedibert F. Lopes, The University of Chicago

Chair(s): Hedibert F. Lopes, The University of Chicago

**8:35 a.m.** Sequential Monte Carlo Methods for Static Problems—◆ Arnaud Doucet, Cambridge University

**8:55 a.m.** Factor Models with Markov Switching Stochastic Volatility—◆ Carlos M. Carvalho, Duke University; Hedibert F. Lopes, The University of Chicago

**9:15 a.m.** The Importance of Posterior Moments and Parameterization in Bayes Computation—◆ Paul Speckman, University of Missouri, Columbia; Dongchu Sun, University of Missouri, Columbia

**9:35 a.m.** Identification and Adaptive Control of ARX Models with Occasional Parameter Jumps via Fast Particle Filters—◆ Yuguo Chen, Duke University

**9:55 a.m.** Sequential Monte Carlo with Lookahead—◆ Junni Zhang, Peking University

**10:15 a.m.** Floor Discussion

## 477 **MCC-200 J**

### ● ☆ Recent Developments in Microarray—Topic Contributed

#### Biometrics Section, Section on Bayesian Statistical Science, WNAR

Organizer(s): Adam Olshen, Memorial Sloan-Kettering Cancer Center

Chair(s): Yingfu Li, University of Houston, Clear Lake

**8:35 a.m.** Validating Microarray Results across Institutions or over Time—◆ Adam Olshen, Memorial Sloan-Kettering Cancer Center; Shaokun Chuai, Memorial Sloan-Kettering Cancer Center; William Gerald, Memorial Sloan-Kettering Cancer Center

**8:55 a.m.** Bayesian Finite Mixture Models and Metaanalysis for Multitissue Polygenic Phenomena in Complex Biological Systems—◆ Yulan Liang, University at Buffalo; Xueya Cai, University at Buffalo; Arpad Kelemen, Niagara University

**9:15 a.m.** Bayes Regression Approach to the Analysis of Array CGH Data—◆ I-Shou Chang, National Health Research Institutes; Chi-Chung Wen, National Health Research Institutes; Yuh-Jenn Wu, National Health Research Institutes; Shih-Sheng Jiang, National Health Research Institutes; Shu-Chen Liu, National Health Research Institutes; Jyh-Lyh Juang, National Health Research Institutes; Chao A. Hsiung, National Health Research Institutes

**9:35 a.m.** A Local Polynomial Method for Detection of Gene Copy Number Changes in Human Cancer—◆ Lexin Li, University of California, Davis; Hongzhe Li, University of California, Davis

**9:55 a.m.** Crossplatform Comparison of Microarray Gene Expression Intensities—◆ Kellie J. Archer, Virginia Commonwealth University; Daniela Puiu, Virginia Commonwealth University; Catherine I. Dumur, Virginia Commonwealth University

**10:15 a.m.** Floor Discussion

## 478 **MCC-208 C**

### ● Weighting for Nonresponse and Problems—Topic Contributed

#### Section on Survey Research Methods, Social Statistics Section

Organizer(s): Phillip S. Kott, National Agricultural Statistics Service

Chair(s): David R. Judkins, Westat

**8:35 a.m.** Propensity Models versus Weighting Cell Approaches to Nonresponse Adjustment: a Methodological Comparison—◆ James Chromy, RTI International; Peter Siegel, RTI International; Elizabeth Copello, RTI International

**8:55 a.m.** Modeling and Polishing of Nonresponse Propensity—◆ Hongsheng Hao, Westat; David R. Judkins, Westat

**9:15 a.m.** ‘No’ Is the Easiest Answer: Using Calibration To Assess Nonignorable Nonresponse in the 2002 Census of Agriculture—◆ Phillip S. Kott, National Agricultural Statistics Service

**9:35 a.m.** Using Calibration To Fit Nonresponse and Undercoverage Models—◆ Theodore Chang, University of Virginia; Phillip S. Kott, National Agricultural Statistics Service

**9:55 a.m.** Identifying Likely Duplicates by Record Linkage in a Survey of Prostitutes—◆ Thomas R. Belin, University of California, Los Angeles; Hemant Ishwaran, Cleveland Clinic Foundation; Naihua Duan, University of California, Los Angeles; Sandra H. Berry, RAND Corporation; David E. Kanouse, RAND Corporation

**10:15 a.m.** Floor Discussion

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Topic Contributed Panels 8:30 a.m.–10:20 a.m.

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**479** **MCC-205 D**  
**Community-based Learning in Undergraduate Courses—**  
**Topic Contributed**

**Section on Statistical Education**

*Organizer(s): K. Scott Alberts, Truman State University*

*Chair(s): Matt Richey, St. Olaf College*

**Panelists:** ◆ K. Scott Alberts, Truman State University  
 ◆ Sheila Weaver, University of Vermont  
 ◆ Eric Nordmoe, Kalamazoo College

**10:05 a.m.** Floor Discussion

**480** **MCC-208 A**  
 ● **Statistical Consulting: from Client Acquisition to Project Reporting—Topic Contributed**  
**Section on Statistical Consulting**

*Organizer(s): Karen Copeland, Boulder Statistics*

*Chair(s): Sue McGorray, University of Florida*

**Panelists:** ◆ Charles Kincaid, COMSYS  
 ◆ Susan Devlin, The Artemis Group  
 ◆ Patrick O'Meara, Pat O'Meara Associates, Inc.  
 ◆ Karen Copeland, Boulder Statistics

**10:15 a.m.** Floor Discussion

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Regular Contributed Sessions 8:30 a.m.–10:20 a.m.

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**481** **MCC-201 AB**  
 ● **Neurons, Spikes, and Time Course Data—Contributed**  
**Biometrics Section, WNAR**

*Chair(s): Jeffrey Spence, The University of Texas Southwestern Medical Center at Dallas*

**8:35 a.m.** The Analysis of Multiple Neuron Spike Trains—  
 ◆ Zhenglei Gao, Duke University; Michael Lavine, Duke University; Paul Marriott, University of Waterloo

**8:50 a.m.** A Maximum Likelihood Approach to Assessing Neuron-muscle Relationship—◆ Vera Bulaevskaya, Carnegie Mellon University; Robert E. Kass, Carnegie Mellon University

**9:05 a.m.** Improved Models for Analysis of Motor-cortical Signals—◆ Alex L. Rojas, Carnegie Mellon University; Anthony E. Brockwell, Carnegie Mellon University

**9:20 a.m.** Nonlinear Hyperbolic Models and Applications in Craniofacial and Stem Cell Growth—◆ Zoran Bursac, University of Arkansas for Medical Sciences; Mohammad Tabatabai, Cameron University; David K. Williams, University of Arkansas for Medical Sciences

**9:35 a.m.** A Generalized Growth Curve Model, Related Testing, and Comparison of Growth Rates—◆ Sabyasachi Bhattacharya, Iowa State University

**9:50 a.m.** Weighted Estimating Equation for Case-control Study with Possibly Correlated Times—◆ Sangwook Kang, The University of North Carolina at Chapel Hill; Jianwen Cai, The University of North Carolina at Chapel Hill

**10:05 a.m.** Change-point Modeling To Evaluate a Rule for Prostate-specific Antigen (PSA) Failure When the Rule Is Defined as Three Consecutive PSA Rises—◆ Carine Bellera, McGill University; James Hanley, McGill University; Lawrence Joseph, McGill University; Peter Albertsen, University of Connecticut; Juanita Crook, Ottawa Regional Cancer Center

**JSM 2005**  
**Proceedings Submissions Opened**  
**August 1**  
 Deadline for submitting is  
**October 21, 2005**

## BEST IN SCHOLARSHIP FROM CAMBRIDGE

**Playfair's Commercial and Political Atlas and Statistical Breviary**

William Playfair

Introduced and annotated by Howard Wainer and Ian Spence

**Essentials of Statistical Inference**

G. A. Young and R. L. Smith

**Elements of Distribution Theory**

Thomas A. Severini

**Statistical Models**

Theory and Practice

David Freedman

**Quantile Regression**

Roger Koenker

**Semiparametric Regression**

David Ruppert, M. P. Wand, and R. J. Carroll

**An Introduction to Statistical Signal Processing**

Robert M. Gray and Lee D. Davison

**Statistics Explained**

An Introductory Guide for Life Scientists

Steve McKillup

**Bayesian Logical Data Analysis for the Physical Sciences**

A Comparative Approach with Mathematica Support

P.C. Gregory

**Algebraic Statistics for Computational Biology**

Edited by L. Pachter and B. Sturmfels

**Essential Epidemiology**

An Introduction for Students and Health Professionals

Penny Webb, Chris Bain, and Sandi Pirozzo

**Branching Processes**

Variation, Growth, and Extinction of Populations

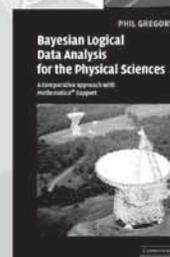
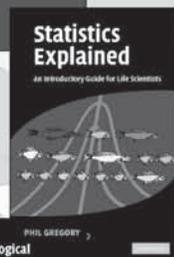
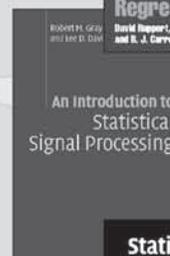
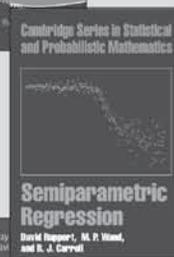
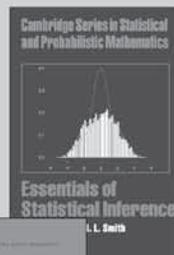
Patsy Haccou, Peter Jagers, and Vladimir A. Vatutin

**DNA, Words and Models**

S. Robin, F. Rodolphe, and S. Schbath

**Models and Methods in Social Network Analysis**

Edited by Peter J. Carrington, John Scott, and Stanley Wasserman



Please visit our booth (#501 and 503) for a 20% discount on these and other related titles.



# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

## 482

## MCC-200 G

### ☆ Mapping Quantitative Trait Loci—Contributed

#### Biometrics Section, WNAR

Chair(s): Ken Burnham, U.S. Geological Survey/Colorado State University

- 8:35 a.m.** Nonparametric Functional Interval Mapping of QTL—  
◆ Jie Yang, University of Florida; George Casella, University of Florida
- 8:50 a.m.** Estimating QTL Parameters under Selective Genotyping—◆ Jaya Satagopan, Memorial Sloan-Kettering Cancer Center; Saunak Sen, University of California, San Francisco; Gary Churchill, The Jackson Laboratory
- 9:05 a.m.** The Impact of Transformation in Quantitative Genetics Analysis—◆ Mariza de Andrade, Mayo Clinic
- 9:20 a.m.** Don't Use the Bootstrap for QTL Mapping—◆ Ani Manichaikul, Johns Hopkins University; Karl W. Broman, Johns Hopkins University
- 9:35 a.m.** Bayesian Hierarchical Model for Detecting QTLs—  
◆ Susan Simmons, University of North Carolina, Wilmington; Haikun Bao, University of North Carolina, Wilmington
- 9:50 a.m.** Strategies for Fine Mapping of QTL in Complex Pedigrees Using Combined Linkage and Linkage Disequilibrium Method—◆ Natascha Vukasinovic, Monsanto; Fengxing Du, Monsanto
- 10:05 a.m.** Floor Discussion

## 483

## MCC-200 H

### ● Topics in Experimental Design—Contributed

#### Biometrics Section, Biopharmaceutical Section, WNAR

Chair(s): Guosheng Yin, The University of Texas M. D. Anderson Cancer Center

- 8:35 a.m.** The Mean-squared Error D-optimum Design Criterion with Applications to Nonlinear Experiments—◆ Takashi Daimon, Translational Research Informatics Center; Goto Masashi, Biostatistical Research Association
- 8:50 a.m.** On a Modified Ehrenfest Urn Design—◆ Yung-Pin Chen, Lewis & Clark College
- 9:05 a.m.** Model-based Designs for Phase I Cancer Clinical Trials—◆ Pei-Ling Chu, Novo Nordisk, Inc.; Yong Lin, The University of Medicine and Dentistry of New Jersey; Weichung J. Shih, The University of Medicine and Dentistry of New Jersey
- 9:20 a.m.** Optimal Design of Experiments Accounting for Potential Missing Trials—◆ InYoung Baek, SUNY, Stony Brook
- 9:35 a.m.** Sample Size and Statistical Power Assessing the Effect of Interventions in the Context of Mixture Distributions with Detection Limits—◆ Haitao Chu, Johns Hopkins

University; Lei Nie, University of Maryland Baltimore County; Stephen R. Cole, Johns Hopkins University

- 9:50 a.m.** A New Interim Monitoring Statistic for Group Sequential Clinical Trials—◆ Joshua Tebbs, Kansas State University; Barry K. Moser, Duke University
- 10:05 a.m.** Internal Pilots for Repeated Measures and Multivariate Linear Models—◆ Sola Park, The University of North Carolina at Chapel Hill; Keith E. Muller, University of North Carolina at Chapel Hill

## 484

## MCC-103 C

### Asymptotic Methods and Statistical Theory—Contributed IMS

Chair(s): Margaret Short, Los Alamos National Laboratory

- 8:35 a.m.** Convergence Rate of MLE in Generalized Linear and Nonlinear Mixed-effects Models—◆ Nie Lei, University of Maryland Baltimore County
- 8:50 a.m.** Asymptotic Expansion of the Null Distribution of F-statistic for One-way ANOVA under Nonnormality—  
◆ Solomon Harrar, South Dakota State University; Arjun K. Gupta, Bowling Green State University
- 9:05 a.m.** Asymptotics for Sliced Average Variance Estimation—  
◆ Yingxing Li, The University of Hong Kong; Lixing Zhu, The University of Hong Kong
- 9:20 a.m.** Empirical Bayesian Estimation for Bivariate Binary Data with Covariates—◆ Ananya Roy, University of Florida; Malay Ghosh, University of Florida
- 9:35 a.m.** A Class of Probability-generating Functions Inspired by Shock Model—◆ Satrajit Roychoudhury, New Jersey Institute of Technology; Manish Bhattacharjee, New Jersey Institute of Technology
- 9:50 a.m.** Generation of the Distribution of the Test for Testing a General Linear Hypothesis under Heteroscedasticity—  
◆ Hubert J. Chen, National Cheng Kung University; Miin-Jye Wen, National Cheng Kung University
- 10:05 p.m.** Floor Discussion

## 485

## MCC-208 B

### ● Risk Factors for Health—Contributed

#### Section on Health Policy Statistics, Social Statistics Section, WNAR

Chair(s): Richard R. Carlson, HealthPartners

- 8:35 a.m.** Revised Estimates of the Risk Factors for Psychiatric Diseases in the United States—◆ Elizabeth Savoca, Smith College
- 8:50 a.m.** A Digraph Model of Alcohol Ecology—◆ Yasmin Said, George Mason University; Edward J. Wegman, George Mason University

**9:05 a.m.** Who Defines Race? The Influence of Self- and Other-identified Race on Health—◆ Sarah E. Boslaugh, Washington University School of Medicine

**9:20 a.m.** Using the Cumulative Logit Model To Enhance Interpretation of Health Status Measure—◆ Joseph Cappelleri, Pfizer, Inc.

**9:35 a.m.** Not Doing It Until 'I do': a Simulated Experiment of the Efficacy of Sexual Abstinence Pledges Using Mahalanobis Matching—◆ Janet Rosenbaum, Harvard University

**9:50 a.m.** Ecological Inference in the Use of Aggregate Consumer Data for Health Communication Planning: Avoiding Ecological Fallacies—◆ William Pollard, Centers for Disease Control and Prevention

**10:05 a.m.** Floor Discussion

**486** **MCC-103 D**  
**Regression II—Contributed**  
**Section on Nonparametric Statistics**

*Chair(s): Kagba Suaray, University of California, Riverside*

**8:35 a.m.** Large Sample Properties of Shape-restricted Regression Estimators with Smoothness Adjustments—◆ Jayanta Pal, University of Michigan

**8:50 a.m.** Affine Equivariant Rank-based and Generalized Rank Estimators for Multivariate Linear Models—◆ Majeda Salman, University of Bahrain; Joe McKean, Western Michigan University

**9:05 a.m.** Estimating Residual Variance in Nonparametric Regression Using Least Squares—◆ Tiejun Tong, University of California, Santa Barbara; Yuedong Wang, University of California, Santa Barbara

**9:20 a.m.** Model Choice: Universal Principles and Approximation—◆ Henrike Weinert, University of Dortmund; Daniel J. Nordman, University of Wisconsin, La Crosse; Ursula Gather, University of Dortmund; Laurie Davies, University of Duisburg-Essen

**9:35 a.m.** A Lack-of-fit Test for Nonlinear Regression Models with Local Linear Regression Techniques—◆ Chin-Shang Li, St. Jude Children's Research Hospital

**9:50 a.m.** Nonlinear Varying Coefficient Models—◆ Yang Wang, The Pennsylvania State University

**10:05 a.m.** Floor Discussion

**487** **MCC-L100 C**  
**Sample Size and Power—Contributed**  
**Biopharmaceutical Section, WNAR**

*Chair(s): Kapildeb Sen, Bristol-Myers Squibb Company*

**8:35 a.m.** Power Consideration in Clinical Outcome Study with Uncertain Endpoints—◆ Hongwei Wang, Merck & Co., Inc.; Cong Chen, Merck & Co., Inc.; Steven Snapinn, Amgen Inc.

**8:50 a.m.** Power of a Test with Multiple Subtests in a Longitudinal Data Study—◆ Jiannong Wang, Novartis Pharmaceuticals

**9:05 a.m.** The Loss in Power When the Test of Differential Expression Is under a Wrong Scale—◆ Shuguang Huang, Eli Lilly and Company; Yongming Qu, Eli Lilly and Company

**9:20 a.m.** Nonproportional Hazards in Sequential Trials—◆ Qi Jiang, Amgen Inc.; Steven Snapinn, Amgen Inc.

**9:35 a.m.** Methods of Adjusting Sample Size for Noncompliance in Studies with Intent-to-treat Analyses of Survival Endpoints—◆ Patricia L. Stephenson, Rho, Inc.; Robert J. Gray, Dana-Farber Cancer Institute, Harvard School of Public Health

**9:50 a.m.** Curtailment Procedure for Selecting among Bernoulli Populations—◆ Elena Buzaiuanu, Syracuse University; Pinyuen Chen, Syracuse University

**10:05 a.m.** Floor Discussion

**488** **MCC-210 AB**  
**Labor and Statistical Education—Contributed**  
**Business and Economics Statistics Section, Section on Statistical Education**

*Chair(s): Brian C. Monsell, U.S. Census Bureau*

**8:35 a.m.** On-the-job Search and the Minimum Wage—◆ Anne Polivka, Bureau of Labor Statistics; Rosemary Hyson, Mercer Human Resource Consulting

**8:50 a.m.** Decomposing Wage Distribution Changes with Self-selection—◆ Brian McCall, University of Minnesota; Alexandru Lefter, University of Minnesota

**9:05 a.m.** Dealing with Job Crossover in Hiring Evaluations—◆ Marika Litras, U.S. Department of Labor; Charles McGhee, U.S. Department of Labor; Michael Sinclair, U.S. Department of Labor

**9:20 a.m.** Undergraduate Business Degrees and MBA Academic Performance—◆ Andrew Braunstein, Iona College

**9:35 a.m.** Statistics Journals: How Schools of Business Use Them—◆ Mary Whiteside, The University of Texas at Arlington; Mark E. Eakin, The University of Texas at Arlington

**9:50 a.m.** The Application of Statistics to Economics—◆ Hyun Suk Lee, Statistics Research Place

**10:05 a.m.** Floor Discussion

**489**

● **Topics in Survey Research—Contributed**

**General Methodology, Section on Survey Research Methods, Social Statistics Section**

*Chair(s): B. Christine Clark, ICON Clinical Research*

- 8:35 a.m.** Sequential Sampling Inspection Protocols Could Save Money in Real Time: a Case in Connecticut in Point—  
◆ Nitis Mukhopadhyay, University of Connecticut
- 8:50 a.m.** Model-assisted Imputation Strategies for the Longitudinal Survey of Immigrants to Canada: Wave 2 Imputation and Validation of Wave 1 Imputation Model—◆ Asma Alavi, Statistics Canada
- 9:05 a.m.** Migrating to a Web-based Format While Improving the Edit Process for the Public Libraries Survey—◆ Joanna F. McLaughlin, U.S. Census Bureau; Terri L. Craig, U.S. Census Bureau; Patricia O'Shea, U.S. Census Bureau
- 9:20 a.m.** Linear and Loglinear Models Based on Generalized Inverse Sampling Scheme—◆ Soumi Lahiri, New Jersey Institute of Technology; Sunil K. Dhar, New Jersey Institute of Technology
- 9:35 a.m.** Collecting Blood and Urine: the Experience of the Canadian Health Measures Survey—◆ Rebecca Morrison, Statistics Canada; Suzelle Giroux, Statistics Canada
- 9:50 a.m.** Weighting Challenges When Dealing with a Large-scale Longitudinal Survey—◆ Charles Tardif, Statistics Canada
- 10:05 a.m.** Floor Discussion

**490**

**Regression Topics—Contributed**

**General Methodology**

*Chair(s): Jun Li, Rutgers, The State University of New Jersey*

- 8:35 a.m.** Decomposing the Interaction Sum of Squares in Two Factor Experiments When Both Factors Are Quantitative—◆ Charles Monlezun, Louisiana State University
- 8:50 a.m.** On the Mixture of Regressions—◆ Derek Young, The Pennsylvania State University
- 9:05 a.m.** Marginal Regression Analysis of Longitudinal Data with Irregular, Biased Sampling—◆ Petra Buzkova, The University of North Carolina at Chapel Hill; Thomas Lumley, University of Washington
- 9:20 a.m.** An Alternate Version of the Conceptual Predictive Statistic—◆ Joseph Cavanaugh, The University of Iowa; Andrew Neath, Southern Illinois University, Edwardsville; Simon Davies, Pfizer, Inc.
- 9:35 a.m.** A Study of a Partial F Test for a Multiple Linear Regression Model—◆ Mortaza Jamshidian, California State University, Fullerton; Wei Liu, University of Southampton

**MCC-211 C**

- 9:50 a.m.** On the Probability of Exploiting Factor Effects through Experimentation—◆ Hungjen Wang, Massachusetts Institute of Technology; Daniel Frey, Massachusetts Institute of Technology
- 10:05 a.m.** Fourier Methods for Estimating Dimension Reduction Subspace When the Distribution of Predictors Is Arbitrary—◆ Yu Zhu, Purdue University; Peng Zeng, Purdue University

**491**

● **Anomaly Detection, Dimension Reduction, and Models—Contributed**

**Section on Statistical Graphics, Section on Statisticians in Defense and National Security**

*Chair(s): Juergen Symanzik, Utah State University*

- 8:35 a.m.** Statistical Anomaly Detection and Dynamic Data Exploration—◆ Colin Goodall, AT&T Labs-Research; Sylvia Halasz, AT&T Labs-Research; Guy Jacobson, AT&T Labs-Research; Arnold Lent, AT&T Labs-Research; Simon Tse, AT&T Labs-Research; Deepak Agarwal, AT&T Labs-Research
- 8:50 a.m.** Regression Graphics and Dimension Reduction in Exponential Family—◆ Siamak Noorbaloochi, VA HSR/University of Minnesota; David B. Nelson, VA HSR/University of Minnesota
- 9:05 a.m.** PRIM-PCA: a Novel Bump-hunting Search Strategy—◆ Jean-Eudes J. Dazard, Case Western Reserve University; Sunil J. Rao, Case Western Reserve University
- 9:20 a.m.** Biplots for Visualizing Linear Models—◆ Heike Hofmann, Iowa State University
- 9:35 a.m.** Computing and Visualizing Effects from Loglinear Models—◆ Oksana Yakhnenko, Iowa State University; Heike Hofmann, Iowa State University
- 9:50 a.m.** Following Traces of Lost Models—◆ Simon Urbanek, AT&T Labs-Research
- 10:05 a.m.** Floor Discussion

**MCC-213 AB**

**492**

☆ **Monitoring and Modeling Air Quality and Its Health Effects—Contributed**

**Section on Statistics and the Environment, Section on Health Policy Statistics, Section on Statistics in Epidemiology, ENAR, WNAR, Biometrics Section**

*Chair(s): Brian J. Smith, The University of Iowa*

- 8:35 a.m.** Bayesian Model Averaging in Semiparametric Models of Air Quality and Respiratory Health—◆ Chava Zibman, The University of Chicago
- 8:50 a.m.** Model Mining: a Case Study in Air Pollution and Mortality—◆ Ciprian Crainiceanu, Johns Hopkins University

**9:05 a.m.** Mixture Periodic Autoregressive Time-series Models—

◆ Qin Shao, The University of Toledo

**9:20 a.m.** Estimating Chronic Effects of Fine Particles (PM<sub>2.5</sub>) on Adult Mortality at Different Spatial and Temporal Scales—◆ Sorina Eftim, Johns Hopkins University; Francesca Dominici, Johns Hopkins University; Aidan McDermott, Johns Hopkins University; Scott Zeger, Johns Hopkins University; Jonathan M. Samet, Johns Hopkins University

**9:35 a.m.** A Study of Roadside Remote Sensing Mobile Emissions Data—◆ Wendy Meiring, University of California, Santa Barbara

**9:50 a.m.** Exploding Houses, Coalbed Methane, and Trends—◆ George Heine, BLM

**10:05 a.m.** Floor Discussion

## 493

## MCC-208 D

### \* Frames and Design Issues for Business Survey—Contributed

#### Section on Survey Research Methods, Section on Government Statistics

*Chair(s): Rita Jo Petroni, U.S. Census Bureau*

**8:35 a.m.** Optimal Coordination of Samples in Business Surveys—◆ Lenka Mach, Statistics Canada; Ioana Schiopu-Kratina, Statistics Canada; Jean-Marc Fillion, Statistics Canada; Philip Reiss, Columbia University

**8:50 a.m.** The Redesign of the Canadian Business Register—◆ Stuart Pursey, Statistics Canada

**9:05 a.m.** Defining the Sampling Frame for the Convenience Store Industry in a Business Setting—◆ Eric Falk, Ernst & Young LLP; Glenn D. White, Jr., Ernst & Young LLP

**9:20 a.m.** Overview of the Establishment Sampling Frame, Computer Edits, and Imputation Methodology Used for the 2002 Commodity Flow Survey—◆ David Kinyon, U.S. Census Bureau; Carol S. King, U.S. Census Bureau

**9:35 a.m.** Business Survey Response Rates: Can They Be Improved?—◆ Glenn D. White, Jr., Ernst & Young LLP; Amy Luo, Ernst & Young LLP

**9:50 a.m.** Floor Discussion

## 494

## MCC-202 AB

### Issues in Surveillance, Census, and Mortality Studies—Contributed

#### Section on Statistics in Epidemiology

*Chair(s): Carol Y. Lin, Emory University*

**8:35 a.m.** Estimation of United States Decennial Life Tables: 1999–2001—◆ Rong Wei, National Center for Health Statistics; Lester Curtin, Centers for Disease Control and

Prevention; Robert Anderson, National Center for Health Statistics; Elizabeth Arias, National Center for Health Statistics

**8:50 a.m.** Changes of Mortality from Five Leading Causes by Socioeconomic Status: U.S. Residents, 1990–2000—◆ Jay H. Kim, National Center for Health Statistics; Jay J. Kim, National Center for Health Statistics; Paul D. Williams, National Center for Health Statistics

**9:05 a.m.** Profiles of COX-2 Users and Nonusers—◆ Brian L. James, Pfizer, Inc./UMDNJ

**9:20 a.m.** Methods Assessing Contribution of Diseases to Disparity in Life Expectancy—◆ Charles Lin, U.S. Census Bureau; Norman Johnson, U.S. Census Bureau

**9:35 a.m.** Temporal Relationship at the Population Level between Antimicrobial Use and Streptococcus Pneumoniae Penicillin Resistance—◆ Robertino M. Mera, GlaxoSmithKline

**9:50 a.m.** Association of Race/Ethnicity with Prevalence of Epilepsy and Its Treatment with Antiepileptic Drugs in Nursing Home Admissions—◆ Yanping Chang, Eli Lilly and Company; Lynn E. Eberly, University of Minnesota; Susan L. Harms, University of Minnesota; Judith M. Garrard, University of Minnesota

**10:05 a.m.** Floor Discussion

## 495

## MCC-205 B

### \* New Developments and Applications in the Tools of Social Statistics: Social Networks, Observational and Longitudinal Studies, Cluster Analysis—Contributed

#### Social Statistics Section, Section on Survey Research Methods

*Chair(s): Roberta Sangster, Bureau of Labor Statistics*

**8:35 a.m.** Estimating the Number of Foreign Bodies Injuries in Childhood with the Scale-up Method—◆ Silvia Snidero, Università degli Studi di Torino; Bruno Morra, Università degli Studi di Torino; Roberto Corradetti, Università degli Studi di Torino; Dario Gregori, Università degli Studi di Torino

**8:50 a.m.** Quantifying Elephant Social Structure: Using a Bayesian Bilinear Mixed-effects Model To Elicit Qualities of Elephant Behavior—◆ Eric Vance, Duke University

**9:05 a.m.** Estimation and Examination of Covariance Structures of Longitudinal Social Network Data—◆ Anton Westveld, University of Washington; Peter Hoff, University of Washington

**9:20 a.m.** Use of Constructed Observational Studies To Assess Ignorability—◆ Jennifer Hill, Columbia University

**9:35 a.m.** The Relationship between Hours Worked and Alcohol Use Disorders—◆ Richard Bryant, University of Missouri, Rolla; V. A. Samaranyake, University of Missouri, Rolla

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   ● Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**9:50 a.m.** Comparison of Spatial Characteristics of Local Air Quality Reported Using the Air Quality Index in the State of North Carolina of 1999 and 2004—◆ Kuo-Ping Li, The University of North Carolina at Chapel Hill; Chirayath Suchindran, The University of North Carolina at Chapel Hill

**10:05 a.m.** Clustering Linkage Methods: Humor to a Statistician—◆ Wade Watkins, University of Alabama; Bruce Barrett, University of Alabama

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Invited Sessions 10:30 a.m.–12:20 p.m.

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## **496** **MCC-209 AB** **Statistics in Forensics—Invited**

**CHANCE, Business and Economics Statistics Section, Section on Statisticians in Defense and National Security, WNAR, Biometrics Section**

*Organizer(s): Michael Lavine, Duke University*

*Chair(s): Michael Lavine, Duke University*

**10:35 a.m.** Some Aspects of Our Work on the NRC Bullet Committee—◆ Clifford Spiegelman, Texas A&M University/Texas Transportation Institute; Karen Kafadar, University of Colorado, Denver

**11:00 a.m.** On Forensic Decision Analysis—◆ David W. Peterson, peopleclick

**11:25 a.m.** Statistical Issues for DNA Profiles—◆ Bruce Weir, North Carolina State University

**11:50 a.m.** Disc: Albyn Jones, Reed College

**12:10 p.m.** Floor Discussion

## **497** **MCC-L100 A** **Genomic Applications—Invited** **IMS, Biopharmaceutical Section**

*Organizer(s): Ingo Ruczinski, Johns Hopkins University*

*Chair(s): Ingo Ruczinski, Johns Hopkins University*

**10:35 a.m.** The Genomes of Recombinant Inbred Lines—◆ Karl W. Broman, Johns Hopkins University

**11:05 a.m.** On Using Permutation Tests To Compare Multiple Variables Simultaneously—◆ Greg DiRienzo, Harvard School of Public Health

**11:35 a.m.** Mixture Modeling for Genome-wide Localization of Transcription Factors—◆ Sunduz Keles, University of Wisconsin, Madison

**12:05 p.m.** Floor Discussion

## **498** **MCC-200 H** **Methodological Advances in Prognostic Stratification—Invited**

**Section on Statistics in Epidemiology, WNAR**

*Organizer(s): Linda J. Young, University of Florida*

*Chair(s): Linda J. Young, University of Florida*

**10:35 a.m.** Is There a Role for the Hazard Ratio in Determining a Cutoff for Prognostic Stratification?—◆ Wendy B. London, University of Florida

**11:05 a.m.** Extreme Regression Models for Prognosis—◆ Michael LeBlanc, Fred Hutchinson Cancer Research Center

**11:35 a.m.** Methods for Categorizing a Prognostic Variable in a Multivariable Setting—◆ Alex Smith, Pacific Data Designs, Inc.; Madhu Mazumdar, Weill Medical College of Cornell University; Jennifer Bacik, Memorial Sloan-Kettering Cancer Center

**12:05 p.m.** Floor Discussion

## **499** **MCC-205 C** **★ New Strategies for Telephone Samples—Invited** **Section on Survey Research Methods, Social Statistics Section**

*Organizer(s): Charlotte Steeh, Georgia State University*

*Chair(s): Charlotte Steeh, Georgia State University*

**10:35 a.m.** Dual-frame Landline/Cellular Telephone Survey Design—◆ James M. Lepkowski, University of Michigan; Sun-Woong Kim, Dongguk University

**11:00 a.m.** Methods of Surveying All Households with Telephone Service—J. Michael Brick, Westat; ◆ Sarah Dipko, Westat; Stanley Presser, Joint Program in Survey Methodology; Clyde Tucker, Bureau of Labor Statistics; Angela Yuan, Westat

**11:25 a.m.** Single-frame versus Multiple-frame Designs for Telephone Samples—◆ Charlotte Steeh, Georgia State University

**11:50 a.m.** Disc: Brian Meekins, Bureau of Labor Statistics

**12:10 p.m.** Floor Discussion

## **500** **MCC-205 B** **Q-BANK: an Interagency Database of Pretested Survey Questions—Invited**

**Section on Government Statistics, Social Statistics Section**

*Organizer(s): Diane K. Willimack, U.S. Census Bureau*

*Chair(s): Gordon B. Willis, National Cancer Institute*

**10:35 a.m.** Q-BANK: Development of a Tested-question Database—◆ Kristen S. Miller, National Center for Health Statistics

**11:00 a.m.** Design of the Q-BANK: Determining Concepts, Content, and Standards—◆ Paul C. Beatty, National Center for Health Statistics; Gordon B. Willis, National Cancer Institute; Jennifer E. Hunter, U.S. Census Bureau; Kristen S. Miller, National Center for Health Statistics; Jennifer Rothgeb, U.S. Census Bureau

**11:25 a.m.** Broadening the Horizons of Q-BANK: Expanding the Framework To Encompass Self-administered and Establishment Surveys—Cleo Redline, National Science Foundation; ◆ Jennifer E. Hunter, U.S. Census Bureau; Rebecca L. Morrison, U.S. Census Bureau; Diane K. Willimack, U.S. Census Bureau; Roberta Sangster, Bureau of Labor Statistics

**11:50 a.m.** Disc: Norman Bradburn, NORC at the University of Chicago

**12:10 p.m.** Floor Discussion

## 501 Wald III—Invited IMS

**MCC-L100 C**

*Organizer(s): David Madigan, Rutgers, The State University of New Jersey*

*Chair(s): Michael Pitt, The University of Warwick*

**10:35 a.m.** Large Deviations in Different Contexts—◆ S.R. Srinivasa Varadhan, New York University

**12:00 p.m.** Floor Discussion

## 502 New Frontiers in Survival Analysis—Invited

**MCC-200 I**

**ENAR, Section on Nonparametric Statistics, WNAR, Biometrics Section**

*Organizer(s): Ying Qing Chen, University of California, Berkeley*

*Chair(s): Ying Qing Chen, University of California, Berkeley*

**10:35 a.m.** Semiparametric Methods for the AFT Model—◆ Zhiliang Ying, Columbia University

**11:00 a.m.** Semiparametric Pseudo Z-estimation and Case-cohort Studies—◆ Bin Nan, University of Michigan

**11:25 a.m.** Semiparametric Bivariate Linear Regression Model for Estimating the Effect of Treatment on Time to Disease Progression and Death—◆ Daniel Scharfstein, Johns Hopkins University

**11:50 a.m.** Disc: Lee-Jen Wei, Harvard University

**12:10 p.m.** Floor Discussion

## 503

**MCC-201 AB**

### ☆ Statistical Geoinformatics for Human Environment Interface in the mid-Atlantic Region of the United States—Invited

**Environmental and Ecological Statistics, ENAR, WNAR, Section on Statistics and the Environment, Biometrics Section**

*Organizer(s): Ganapati P. Patil, The Pennsylvania State University*

*Chair(s): Ganapati P. Patil, The Pennsylvania State University*

**10:35 a.m.** Surveillance Geoinformatics for Hotspot Detection, Prioritization, Intervention, and Sustainable Management—◆ Reza Modarres, George Washington University; ◆ Stephen Rathbun, The Pennsylvania State University; Charles Taillie, The Pennsylvania State University; Ganapati P. Patil, The Pennsylvania State University

**10:55 a.m.** Geospatial Data Mining and Knowledge Discovery for mid-Atlantic Watersheds for Sustainable Protection and Restoration—◆ Wayne L. Myers, The Pennsylvania State University; Mary McKenney-Easterling, The Pennsylvania State University; Bronson Griscom, Canaan Valley Institute; Kristen Hychka, The Pennsylvania State University; Joseph Bishop, The Pennsylvania State University; Robert Brooks, The Pennsylvania State University; George Constantz, Canaan Valley Institute; Ganapati P. Patil, The Pennsylvania State University; Charles Taillie, The Pennsylvania State University; Gian Rocco, The Pennsylvania State University

**11:15 a.m.** Development, Testing, and Application of Ecological and Socioeconomic Indicators for Integrated Assessment of Aquatic Ecosystems of the Atlantic Slope in the mid-Atlantic States—◆ Denice H. Wardrop, Pennsylvania State Cooperative Wetlands Center; Ganapati P. Patil, The Pennsylvania State University; Charles Taillie, The Pennsylvania State University; Wayne L. Myers, The Pennsylvania State University; Kent Thornton, FTN Associates, LLC

**11:35 a.m.** Disc: Barry D. Nussbaum, U.S. Environmental Protection Agency

**11:55 a.m.** Disc: Bo Ranney, Swedish University of Agricultural Sciences

**12:15 p.m.** Floor Discussion

## 504

**MCC-L100 F**

### \* ☆ Statistical Applications in Finance and Compliance—Invited

**Section on Quality and Productivity**

*Organizer(s): Fred Faltin, The Faltin Group*

*Chair(s): Martha Gardner, GE Global Research*

**10:35 a.m.** Six Sigma Quality: Turning Sarbanes-Oxley into a Win for the Corporation—◆ Fred Faltin, The Faltin Group; Donna Faltin, The Faltin Group

# GENERAL PROGRAM SCHEDULE

☆ Themed Session   \* Applied Session   ◆ Presenter   **MCC**-Minneapolis Convention Center   **H**-Hilton Minneapolis   **HY**-Hyatt Regency Minneapolis

**11:05 a.m.** The Role of Statistics and Metrics in Data Governance and Compliance Issues—◆ Michele Drgon, Data Probity

**11:35 a.m.** Transparency in Capital Markets: Exposing Bad Apples or a Bad Bushel?—◆ David Souder, University of Minnesota; Jared Harris, University of Minnesota

**12:05 p.m.** Floor Discussion

## **505** **MCC-200 DE**

\* ☆ **Nonrandomized Pharmaceutical Studies—Invited Section on Health Policy Statistics, Section on Physical and Engineering Sciences, Business and Economics Statistics Section, Biometrics Section, WNAR, Section on Quality and Productivity, Biopharmaceutical Section**

*Organizer(s): W. Scott Clark, Eli Lilly and Company*

*Chair(s): Shiva Sajjan, Merck & Co., Inc.*

**10:35 a.m.** Lilly Experience with Nonstandard Clinical Studies—◆ Pandurang M. Kulkarni, Eli Lilly and Company; W. Scott Clark, Eli Lilly and Company

**11:00 a.m.** Do You Believe in RCTs or Observational Studies?—◆ Suna Barlas, Merck & Co., Inc.

**11:25 a.m.** Deriving Useful Information from Nonrandomized Studies: the Canadian Experience—◆ Muhammad Mamdani, University of Toronto

**11:50 a.m.** Disc: Robert L. Obenchain, U.S. Medical Outcomes Research, Eli Lilly

**12:10 p.m.** Floor Discussion

## **506** **MCC-200 ABC**

\* ☆ **Industry Use of SNPs/Haplotypes and in Clinical Trials—Invited**

**Biopharmaceutical Section, WNAR**

*Organizer(s): Peggy Wong, Merck Research Laboratories*

*Chair(s): Bret Musser, Merck Research Laboratories*

**10:35 a.m.** Examples of the Use of Haplotyping in Clinical Trials—◆ Bonnie Fijal, Johnson & Johnson

**11:00 a.m.** Use of SNPs/Haplotypes To Study Complex Diseases in Clinical Trials—◆ Michael Man, Pfizer, Inc.

**11:25 a.m.** Disc: Patricia Ruppel, DKB Technologies

**11:50 p.m.** Floor Discussion

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Invited Panels 10:30 a.m.–12:20 p.m.

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## **507** **MCC-208 A**

### **New Developments in Funding Opportunities at the NSF—Invited**

**National Science Foundation, Social Statistics Section, IMS, WNAR, Biometrics Section**

*Organizer(s): Shulamith T. Gross, National Science Foundation*

*Chair(s): Xuming He, University of Illinois, Urbana-Champaign*

**Panelists:** ◆ Cheryl Eavey, National Science Foundation  
◆ Shulamith T. Gross, National Science Foundation  
◆ Wen Masters, National Science Foundation  
◆ Robert Serfling, University of Texas, Dallas

**12:05 p.m.** Floor Discussion

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Topic Contributed Sessions 10:30 a.m.–12:20 p.m.

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## **508** **MCC-211 C**

### \* ☆ **Bayesian Modeling in Spatial Statistics—Topic Contributed**

**Section on Bayesian Statistical Science, ENAR, WNAR, Biometrics Section**

*Organizer(s): Sudipto Banerjee, University of Minnesota*

*Chair(s): Deepak Agarwal, AT&T Labs-Research*

**10:35 a.m.** Hierarchical Bayesian Finite Element Parameterizations of Spatio-temporal Processes with Application to Ocean Dynamics—◆ Ali Arab, University of Missouri, Columbia; Christopher K. Wikle, University of Missouri, Columbia

**10:55 a.m.** Approximately Optimal Spatial Design Approaches for Environmental Health Data—◆ Gangqiang Xia, Duke University; Alan E. Gelfand, Duke University; Marie L. Miranda, Duke University

**11:15 a.m.** A Bayesian Approach to Spatio-temporal Interaction in Mortality Rates—◆ Gentry White, University of Missouri, Columbia

**11:35 a.m.** A Multivariate Space-time Dynamic Model—◆ Mark Fitzgerald, University of Colorado, DHSC; Stephan Sain, University of Colorado, DHSC; Craig Johns, University of Colorado, Denver

**11:55 a.m.** Coregionalized Lattice Models for Multivariate Areal Data—◆ Xiaoping Jin, University of Minnesota; Sudipto Banerjee, University of Minnesota; Bradley P. Carlin, University of Minnesota

**12:15 p.m.** Floor Discussion

509

MCC-200 G

● ☆ **Challenges in Evaluating Endpoints in Cardiovascular Device Trials—Topic Contributed**  
Biopharmaceutical Section, WNAR

Organizer(s): Peter Lam, Boston Scientific Corporation; Roseann White, Guidant Corporation

Chair(s): Gajanan Bhat, Praecis Pharmaceuticals Incorporated

- 10:35 a.m.** Recurrent Events Methods in the Analysis of Clinical Trials for Cardiac-resynchronization Therapy—  
◆ Rui Song, University of Wisconsin, Madison; Michael Kosorok, University of Wisconsin, Madison; Susan Anderson, University of Wisconsin, Madison; David Breiter, Guidant Corporation; David L. DeMets, University of Wisconsin, Madison; Elizabeth Galle, Guidant Corporation; Michael Gruber, University of Wisconsin, Madison
- 11:00 a.m.** Functional Linear Model with Histogram Covariates—  
◆ Chunlei Ke, St. Jude Medical, Inc.; Yong Wang, St. Jude Medical, Inc.
- 11:25 a.m.** Missing Data and Other Problems Inherent in Analyzing Clinical Data Obtained from Programmable Medical Devices—◆ Andrew Mugglin, Medtronic, Inc.

- 11:50 a.m.** Disc: Barathi Sethuraman, St. Jude Medical, Inc.
- 12:10 p.m.** Floor Discussion

510

MCC-210 AB

● ☆ **Innovations in Prospective Anomaly Detection for Biosurveillance—Topic Contributed**  
Section on Statisticians in Defense and National Security

Organizer(s): Howard Burkom, Johns Hopkins University

Chair(s): Howard Burkom, Johns Hopkins University

- 10:35 a.m.** Wavelet-based Monitoring Methods for the Rapid Detection of Bioterrorist Attacks—Galit Shmueli, University of Maryland; ◆ Bernard Dillard, University of Maryland
- 10:55 a.m.** A Study of the Performance of Multivariate Forecast-based Surveillance Schemes for Infectious Diseases on Multiple Locations—◆ Bo Hong, Pioneer Hi-Bred International; J. Michael Hardin, University of Alabama
- 11:15 a.m.** The Impact of Time of Periods on Sensitivity and Specificity of Aberration Detection Methods—◆ Lori Hutwagner, Centers for Disease Control and Prevention; Carol Knowles, Centers for Disease Control and Prevention



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**11:35 a.m.** Time-distributed Effect of Exposure and Infectious Outbreaks—◆ Elena Naumova, Tufts University; Ian MacNeill, The University of Western Ontario

**11:55 a.m.** A Workflow Scan Statistic—◆ Luiz Duczmal, University Federal de Minas Gerais; David L. Buckeridge, VA Palo Alto Health Care System/Stanford University

**12:15 p.m.** Floor Discussion

## **511** **MCC-202 AB**

### ● ☆ **A Procedure to Differentiate Level versus Structural Relationships in Correlational Data—Topic Contributed Social Statistics Section**

*Organizer(s): Ernest Davenport, University of Minnesota*

*Chair(s): Hee-Choon Shin, NORC at the University of Chicago*

**10:35 a.m.** A Regression-based Procedure to Parse Level versus Structure with Theoretical and Practical Implications—◆ Ernest Davenport, University of Minnesota

**10:55 a.m.** Finding a Pattern of High School Coursework Predictive of High Achievement—◆ Mark Davison, University of Minnesota

**11:15 a.m.** Identifying and Validating Criterion-related Patterns in Psychological Assessment: an Illustration Using MMPI-2 Clinical Scales—◆ Chi Keung Chan, University of Minnesota

**11:35 a.m.** The Pattern of Opportunity, Racial Fairness, and the Allocation of Educational Opportunity to Post-secondary Institutions—◆ Steve Culpepper, University of Minnesota

**11:55 a.m.** Disc: Sanford Weisberg, University of Minnesota

**12:15 p.m.** Floor Discussion

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Regular Contributed Sessions 10:30 a.m.–12:20 p.m.

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## **512** **MCC-208 C**

### ● ☆ **Biopharmaceutical Applications and Related Topics in Survival—Contributed**

**Biometrics Section, Biopharmaceutical Section, WNAR**

*Chair(s): Susan Willavize, Pfizer, Inc.*

**10:35 a.m.** Additive Risk Model for Studies with Two-stage Data—Gang Li, University of California, Los Angeles; ◆ Yu Zhao, University of California, Los Angeles

**10:50 a.m.** Survival Analysis in Two-stage Randomization with Sequential Consent Information—◆ Abdus Wahed, University of Pittsburgh

**11:05 a.m.** Estimation of Survival Distributions in Two-stage Randomization Designs with Censored Survival Data—

◆ Xiang Guo, North Carolina State University; Anastasios A. Tsiatis, North Carolina State University

**11:20 a.m.** Estimating the Cumulative Incidence of a Competing Risk When Data Are Subject to Left-truncation—◆ Bingshu E. Chen, National Institutes of Health; Joan Kramer, National Institutes of Health; Mark H. Greene, National Institutes of Health; Philip S. Rosenberg, National Cancer Institute

**11:35 a.m.** A Class of Supreme Version Tests for Comparing Cumulative Incidence—◆ Juhui Jiao, Roche

**11:50 a.m.** Sample-size Calculation for Composite Endpoints in Survival Trials—◆ Hongyan Zhang, Merck & Co., Inc.

**12:05 p.m.** Floor Discussion

## **513** **MCC-208 D**

### ☆ **Interrater Agreement and Quality of Life—Contributed Biometrics Section, Biopharmaceutical Section, WNAR**

*Chair(s): Bin Cheng, Columbia University*

**10:35 a.m.** Latent Class Interexaminer Agreement Models with Applications in Oral Health Research—◆ Elizabeth Hill, Medical University of South Carolina; Elizabeth Slate, Medical University of South Carolina

**10:50 a.m.** Coefficients of Agreement for Fixed Observers Measuring a Continuous Quantity—◆ Michael Haber, Emory University; Huiman X. Barnhart, Duke University

**11:05 a.m.** A Tolerance Interval Approach for Assessment of Agreement in Method Comparison Studies with Repeated Measurements—◆ Pankaj Choudhary, The University of Texas Southwestern Medical Center at Dallas

**11:20 a.m.** Quality-of-life Instrument Validation: a Statistical Evaluation—◆ Stephanie Land, University of Pittsburgh

**11:35 a.m.** Confidence Interval Computation for a Novel Quality-of-life Measurement—◆ Richard McNally, Quintiles; Louise Johnson, Quintiles; Grant Runyan, Quintiles; Steve Gulyas, Pfizer, Inc.

**11:50 a.m.** Floor Discussion

## **514** **MCC-211 B**

### ● ☆ **Topics in Gene Expression Data in Microarray Experiments—Contributed**

**Biometrics Section, WNAR**

*Chair(s): Lehana Thabane, McMaster University*

**10:35 a.m.** Comparison of the Background Corrections for Spotted DNA Microarrays—◆ Dongseok Choi, Oregon Health & Science University; Jong S. Kim, Portland State University; Jin Wang, Portland State University; Saralees Nadarajah, University of Nebraska; Jodi Lapidus, Oregon Health & Science University

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Dr. Sarjinder Singh is an Assistant Professor at St. Cloud State University, St. Cloud, MN, U.S.A.. He has published over 80 research papers. He introduced ideas of higher order calibration, hybridizing imputation and calibration, bias filtration, hidden gangs, several new randomized response models, median estimation using two-phase sampling, and exact traditional linear regression estimator using calibration in survey sampling. In this book you can enjoy his new ideas such as: How Michael 'Selected' Amy.

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- 10:50 a.m.** The S-score Algorithm in the Analysis of Gene Expression Data—◆ Richard E. Kennedy, Virginia Commonwealth University; Kellie J. Archer, Virginia Commonwealth University; Michael Miles, Virginia Commonwealth University
- 11:05 a.m.** Another Look at PLIER—◆ Karla Ballman, Mayo Clinic; Terry M. Therneau, Mayo Clinic
- 11:20 a.m.** The Effects of Normalization on the Correlation Structure of Microarray Data—◆ Xing Qiu, University of Rochester; Andrew I. Brooks, University of Rochester; Lev Klebanov, Charls University; Andrei Yakovlev, University of Rochester
- 11:35 a.m.** Risk Modeling in Epidemiologic Studies Using Microarray Gene Expression Data—◆ Abhijit Dasgupta, National Cancer Institute
- 11:50 a.m.** Effect of Normalization on Crossplatform Assessment of Microarray Experiments—◆ Sudeshna Adak, GE Global Research; Manohar Kollegal, GE Global Research; Richard Shippy, GE Healthcare; Timothy Sendera, GE Healthcare
- 12:05 p.m.** Floor Discussion

**515**

**MCC-211 A**

## ☆ ☆ Bayesian Methods in Biostatistics Setting—Contributed

Biometrics Section, Section on Bayesian Statistical Science, WNAR

Chair(s): Ram C. Tiwari, National Cancer Institute

- 10:35 a.m.** Automated Aggregation of Surveillance Data—Al Ozonoff, Boston University; ◆ Paola Sebastiani, Boston University
- 10:50 a.m.** Bayesian Approach to Bivariate Change Point—◆ Pulak Ghosh, Georgia State University; Florin Vaida, University of California, San Diego
- 11:05 a.m.** Bayesian Fixed and Random-effects Selection for Binary Response Models—◆ Satkartar Kinney, Duke University; David Dunson, National Institute of Environmental Health Sciences
- 11:20 a.m.** Computation-based Discovery of Cis-regulatory Modules by Hidden Markov Model—◆ Jing Wu, Purdue University
- 11:35 a.m.** Prediction of Random Intercepts and Slopes When Data Are Subject to a Detection Limit—◆ Renee Moore, Emory University
- 11:50 a.m.** Floor Discussion

**516**

**MCC-103 A**

## ● Issues in Observational Studies—Contributed General Methodology, Section on Statistics in Epidemiology, Social Statistics Section

Chair(s): Yodit Seifu, Novartis Pharmaceuticals

- 10:35 a.m.** Estimation of Causal Effects Using Instrumental Variables—◆ Zhiqiang Tan, Johns Hopkins University
- 10:50 a.m.** Causal Inference for Semiparametric Regression Models Using Higher-order Influence Functions—◆ Lingling Li, Harvard University
- 11:05 a.m.** Higher-order Influence Functions of Robust Inference in Coarsened at-Random Data Models—◆ Eric Tchetgen, Harvard University
- 11:20 a.m.** Estimation of Covariate Balanced Contrasts of Expectations—◆ David B. Nelson, VA HSR/University of Minnesota; Siamak Noorbaloochi, VA HSR/University of Minnesota
- 11:35 a.m.** Estimating the False Discovery Rate Using Constrained Multinomial Likelihoods—◆ Irina Ostrovskaya, The University of Chicago; Dan Nicolae, The University of Chicago
- 11:50 a.m.** A Call for Moderator Analysis via the Mixed-effects Model in Metaanalysis—◆ Wolfgang Viechtbauer, University of Maastricht
- 12:05 p.m.** Floor Discussion

**517**

**MCC-213 AB**

## Applications in Business and Economics II—Contributed Business and Economics Statistics Section

Chair(s): Anne Polivka, Bureau of Labor Statistics

- 10:35 a.m.** Forecasting eBay's Online Auction Prices Using Functional Data Analysis—◆ Shanshan Wang, University of Maryland
- 10:50 a.m.** Models of Competitive Performance—◆ Simon J. Sheather, Texas A&M University
- 11:05 a.m.** Regional Econometric Housing Forecast Accuracy—◆ Tom Fullerton, The University of Texas at El Paso
- 11:20 a.m.** Multi-transactions Model for Constructing Housing Market Index—◆ George H. Wang, Commodity Futures Trading Commission; Andre H Gao, Mannie Mae
- 11:35 a.m.** Why Do People Pay Taxes in China?—◆ Wei Yu, The University of Texas at Austin
- 11:50 a.m.** Grouping Mutual Funds on the Basis of Performance—◆ Ranjan Maitra, Iowa State University
- 12:05 p.m.** Floor Discussion

518

**Statistical Applications in Health and Substance Abuse—Contributed****Section on Government Statistics, Social Statistics Section***Chair(s): Arthur Kendall, Social Research Consultants*

- 10:35 a.m.** Modeling Syndromic Indicators for New York and Los Angeles Metropolitan Areas from the National Health Surveys—◆ Abera Wouhib, National Center for Health Statistics; Paul D. Williams, National Center for Health Statistics; Myron Katzoff, National Center for Health Statistics
- 10:50 a.m.** Alternative Methods for Estimating Influenza-associated Deaths in the United States—◆ William Thompson, U.S. Centers for Disease Control and Prevention; Eric Weintraub, U.S. Centers for Disease Control and Prevention; Lynnette Brammer, U.S. Centers for Disease Control and Prevention; Lori Hutwagner, U.S. Centers for Disease Control and Prevention; David Williamson, U.S. Centers for Disease Control and Prevention; Nancy Cox, U.S. Centers for Disease Control and Prevention; Keiji Fukuda, U.S. Centers for Disease Control and Prevention; David Shay, U.S. Centers for Disease Control and Prevention
- 11:05 a.m.** Semiparametric Forecasting of U.S. Mortality—◆ Guanhua Lu, University of Maryland/NCHS; Ben Kedem, University of Maryland; Rong Wei, National Center for Health Statistics; Paul D. Williams, National Center for Health Statistics
- 11:20 a.m.** A Parametric Approach To Measure the Effects of the 10th ICD Revision on Mortality—◆ YouSung Park, Korea University; Jai W. Choi, National Center for Health Statistics; Sungyong Kim, Korea University; Robert Anderson, National Center for Health Statistics; Doug Williams, National Center for Health Statistics; Arialdi Minino, National Center for Health Statistics
- 11:35 a.m.** Survival Analysis of Length of Stay in Substance Abuse Treatment—◆ Maxime Bokossa, Synectics for Management Decisions, Inc.; Alisa Male, Synectics for Management Decisions, Inc.
- 11:50 a.m.** Comparing State Mental Health and Substance Abuse Treatment Workforce: Synthetic Data Tabulation and Mapping—◆ Gary Huang, Synectics for Management Decisions, Inc.; Thomas Nephew, Synectics for Management Decisions, Inc.; Emmanuel Sikali, Synectics for Management Decisions, Inc.; Mindy Reiser, Synectics for Management Decisions, Inc.
- 12:05 p.m.** Approximate Power Curves for Detecting Changes in Trend for Complex Surveys—◆ Maya Sternberg, U.S. Centers for Disease Control and Prevention

MCC-205 A

519

**Nonparametric Testing—Contributed****Section on Nonparametric Statistics***Chair(s): Robert E. Neher, Air Force Institute of Technology*

- 10:35 a.m.** The Multivariate, Two-sample Dispersion Problem: a Statistical Depth Approach—◆ Asheber Abebe, Auburn University; Sai V. Nudurupati, Auburn University
- 10:50 a.m.** A Weighted Multivariate Sign Test for Cluster-correlated Data—◆ Denis Larocque, HEC Montreal
- 11:05 a.m.** Improving the Power of the Stratified Wilcoxon Rank Sum Test—◆ Xiaoming Li, Merck & Co., Inc.; Devan Mehrotra, Merck Research Laboratories
- 11:20 a.m.** A New Class of Smooth Tests of Fit for Exponential Family (Koopman-Darmois) Distributions—◆ Mark Inlow, Rose-Hulman Institute of Technology
- 11:35 a.m.** Statistical Tests for Scale in Univariate Population Setup—◆ Samuel L. Dolo, The University of Mississippi
- 11:50 a.m.** An Efficient Test for Bivariate Location Problem—◆ Pamela Smith, The University of Mississippi
- 12:05 p.m.** New Nonparametric Tests of Multivariate Locations and Scales Using Data Depth—◆ Jun Li, Rutgers, The State University of New Jersey; Regina Liu, Rutgers, The State University of New Jersey

MCC-103 F

520

**Clustering, Factor Analysis, and Correlation—Contributed****General Methodology, Social Statistics Section***Chair(s): Phyllis Gimotty, University of Pennsylvania School of Medicine*

- 10:35 a.m.** Two More Methods of Testing Equality of Two Dependent Correlations—◆ Robert Noble, Miami University of Ohio; Robert Schaefer, Miami University of Ohio
- 10:50 a.m.** Interchangeable Measurements in Gaussian and Multinomial Graphical Models—◆ Henk Kelderman, Free University Amsterdam
- 11:05 a.m.** Generalized P-value and Generalized Confidence Region for the Common Mean Vector of Several Multivariate Normal Populations—◆ Shu-Hui Lin, National Taichung Institute of Technology; Jack C. Lee, National Chiao-Tung University
- 11:20 a.m.** Clustering with Mixed-type Attributes—◆ Jong-Min Kim, University of Minnesota; Seoung-San Chae, Daejeon University; William D. Warde, Oklahoma State University
- 11:35 a.m.** Impact Evaluation of the Recent Reform on Degree Programs of the Italian Universities—◆ Luigi Biggeri, National University Evaluation Committee; Matilde Bini, Università degli Studi di Firenze
- 11:50 a.m.** Floor Discussion

## 521

## MCC-211 D

### ● ☆ Bayesian Methods in Political Science, Medical, and Health Care Research—Contributed

#### Section on Bayesian Statistical Science, WNAR, Social Statistics Section, Biometrics Section

Chair(s): *Chong Z. He, University of Missouri, Columbia*

**10:35 a.m.** Time Trends in Opinions about the Death Penalty in the United States—◆ Shouhao Zhou, Columbia University; Andrew Gelman, Columbia University

**10:50 a.m.** Spatial Interaction of Crime Incidents in Japan—◆ Kazuhiko Kakamu, Institut Für Höhere Studien; Hajime Wago, Nagoya University; Wolfgang Polasek, Institute for Advanced Studies

**11:05 a.m.** A Hierarchical Bayesian Multivariate Stochastic Volatility Model on fMRI Motion Correction Data—◆ Jun Ying, Indiana University School of Medicine; Siu Hui, Indiana University School of Medicine; Tie-Qiang Li, National Institute of Neurological Disorders and Stroke; Yang Wang, Indiana University School of Medicine

**11:20 a.m.** Naïve Bayes Classifier for Noisy Medical Information Dataset—◆ Xiaowei Yang, BayesSoft, Inc.; Yirong Yang, BayesSoft, Inc.

**11:35 a.m.** The Use of Hierarchical Empirical Bayes for the Analysis of a Smoking Cessation Dissemination Project: the SCRIPT Study—◆ Billie Anderson, The University of Alabama; J. Michael Hardin, University of Alabama at Birmingham; Myra A. Crawford, University of Alabama at Birmingham; Lesa L. Woodby, University of Alabama at Birmingham

**11:50 a.m.** Spatial Modeling of Relationships between Measures of Urban Form, Socioeconomic Deprivation, and Chronic Disease Mortality: a Comparative Analysis—◆ Gerald Shoultz, National Center for Health Statistics

**12:05 p.m.** Determinants of County-level Stroke Mortality in the Southeastern United States, 1999–2002—◆ Eric Tassone, Emory University; Lance A. Waller, Emory University

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## MCC-200 F

### Issues in Preclinical and Dose-ranging Trials—Contributed Biopharmaceutical Section, WNAR

Chair(s): *Wei Shen, Eli Lilly and Company*

**10:35 a.m.** Optimal Designs in Stability Studies—◆ Xu Yan, U.S. Food and Drug Administration; Samad Hedayat, University of Illinois, Chicago

**10:50 a.m.** Statistical Design and Analysis of Pooling Experiments—◆ Katja Remlinger, GlaxoSmithKline; Jacqueline M. Hughes-Oliver, North Carolina State University

**11:05 a.m.** A Model for the Interaction of Two Chemicals—◆ Pali Sen, University of North Florida; Denis Bell, University of North Florida

**11:20 a.m.** A New Method to Identify the Minimum Effective Dose—◆ Jianan Peng, Acadia University; Chun-In C. Lee, Memorial University of Newfoundland; Lin Liu, University of California, San Diego

**11:35 a.m.** Choices of Tests in Dose-ranging Clinical Trials When the Data Is Skewed—◆ Lee-Lian Kim, Centocor, Inc.

**11:50 a.m.** Statistical Learning Techniques on a High-dimensional, Richly Structured Feature Space To Predict Orthodontic Treatment Outcomes and Optimize Treatment Parameters—◆ Christopher Overton, Align Technology; Michael Zakharevich, Align Technology; Xiaorong Chen, Align Technology

**12:05 p.m.** Floor Discussion

## 523

## MCC-212 AB

### Using Technology and the Web When Teaching Statistics—Contributed

#### Section on Statistical Education, Social Statistics Section

Chair(s): *Diane Fisher, Louisiana State University*

**10:35 a.m.** Best of Both Worlds? Statistical Methods and Concepts in a Programming Class—◆ A. John Bailer, Miami University

**10:50 a.m.** Experiences with International Web-based, Introductory, Long-distance Statistics Courses—◆ Juergen Symanzik, Utah State University; Natascha Vukasinovic, Monsanto; Alex C. Wun

**11:05 a.m.** Improving the Quality of and Access to Undergraduate Statistics Education by Using Innovative Web-based and Multimedia Materials—◆ Eric Hintze, Texas A&M University; Michael Speed, Texas A&M University; Kathleen Speed, Texas A&M University

**11:20 a.m.** The Best of Both Worlds: a Hybrid Statistics Course—◆ Barbara Ward, Belmont University

**11:35 a.m.** Using Online Learning at TAMU To Teach Statistics—◆ Michael Speed, Texas A&M University

**11:50 a.m.** The STAT-CAVE and a Multitask Approach To Improve the Teaching of Intro Stats—◆ Edith Seier, East Tennessee State University; Robert Price, Jr., East Tennessee State University; Jeff Knisley, East Tennessee State University

**12:05 p.m.** Statistics and Mathematics: Do Students Differentiate?—◆ Sterling Hilton, Brigham Young University

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## 524 MCC-L100 G

### Recurrent Events and Data Assimilation—Contributed

#### Section on Physical and Engineering Sciences, Section on Quality and Productivity

Chair(s): *Ivelisse Aviles, NIST*

- 10:35 a.m.** Analysis of Window-observation Recurrence Data—  
◆ Jianying Zuo, Iowa State University; Huaqing Wu, Iowa State University; William Q. Meeker, Iowa State University
- 10:50 a.m.** Nonparametric Comparison of Sets of Recurrent Events Data—◆ Wayne Nelson, Wayne Nelson Stat Consulting
- 11:05 a.m.** Some Results on a General Class of Parametric Models—  
◆ Russell Stocker, Mississippi State University; Edsel Pena, University of South Carolina
- 11:20 a.m.** Some Analyses of Geochemical Surveys—◆ James Yen, National Institute of Standards and Technology
- 11:35 a.m.** Floor Discussion

## 525 MCC-L100 E

### \* Environmental Risk Analysis and Methodological Approaches—Contributed

#### Section on Risk Analysis

Chair(s): *Mridul Chowdhury, U.S Food and Drug Administration*

- 10:35 a.m.** Comparison of Bayesian and Frequentist Approaches in Modeling Risk of Preterm Birth near the Sydney Tar Ponds, Nova Scotia, Canada—◆ Afisi Ismaila, McMaster University; Angelo Canty, McMaster University; Lehana Thabane, McMaster University
- 10:50 a.m.** Statistical TK/TD Dose Response Modeling of Toxicity—◆ Munni Begum, The University of North Carolina at Chapel Hill
- 11:05 a.m.** Use of 'Extremes' in Identifying GIS-based Bivariate Associations—◆ Turkan K. Gardenier, Pragmatica Corporation
- 11:20 a.m.** Predictive Growth Curve Modeling of *Listeria Monocytogenes* on Frankfurters Treated with Organic Acid Salts at 6%—◆ Chunwang Gao, Iowa State University; Zheng Lu, Iowa State University
- 11:35 a.m.** Floor Discussion

## 526 MCC-103 E

### \* Statistical Learning—Contributed

#### Section on Statistical Computing

Chair(s): *Rong Huang, University of California, Los Angeles*

- 10:35 a.m.** Randomized Sampling and Dynamic Rescaling for Mining Overlapping Clusters—◆ Mei Kobayashi, IBM; Masaki Aono, Toyohashi University of Technology

- 10:50 a.m.** Statistics and Machine Learning—◆ Alan J. Izenman, Temple University
- 11:05 a.m.** An Experimental Comparison of the Effects of Ensemble Learning Methods, Mapping Scale, and Information Hierarchy on Prediction Accuracy of Rare Events—  
◆ Zhaofei Fan, University of Missouri, Columbia; Stephen S. Lee, University of Idaho; Stephen Shifley, USDA Forest Service; Frank R. Thompson, USDA Forest Service; David R. Larsen, University of Missouri, Columbia
- 11:20 a.m.** Choosing Variable Weights To Maximize Prediction Strength—◆ Samuel Buttrey, Naval Postgraduate School
- 11:35 a.m.** Integrated Gaussian Process and Monotone Smoothing without Splines—◆ Farideh Dehkordi-Vakil, Western Illinois University
- 11:50 a.m.** Solving the Weighted Least Absolute Deviations Regression Problem via Mathematical Programming—  
◆ Avi Giloni, Yeshiva University; Bhaskar Sengupta, ExxonMobil Research and Engineering; Jeffrey S. Simonoff, New York University
- 12:05 p.m.** Floor Discussion

## 527 MCC-205 D

### \* Small-area Estimation—Contributed

#### Section on Survey Research Methods, Social Statistics Section

Chair(s): *Sunghee Lee, University of California, Los Angeles*

- 10:35 a.m.** Transformation Usage and Model Strategies in Small-area Estimation—◆ Dawei Xie, University of Pennsylvania; Trivellore Raghunathan, University of Michigan
- 10:50 a.m.** Model-assisted Estimation for the American Community Survey—◆ Robert E. Fay, U.S. Census Bureau
- 11:05 a.m.** American Community Survey: Improved Reliability for Small-area Estimates—◆ Michael Starsinic, U.S. Census Bureau
- 11:20 a.m.** An Evaluation of Synthetic Small-area Census Coverage Error Using a Random-effects Model—◆ Donald Malec, U.S. Census Bureau/National Institute of Standards and Technology; Jerry Maples, U.S. Census Bureau
- 11:35 a.m.** Investigation of Extreme Estimates of Census Coverage Error for Small Areas—◆ Mary H. Mulry, U.S. Census Bureau; Bruce D. Spencer, Northwestern University; Eric L. Schindler, U.S. Census Bureau; Tom Mule, U.S. Census Bureau; Nganha Nguyen, U.S. Census Bureau
- 11:50 a.m.** Variance Estimation for Small Domains—◆ Julie B. Gershunskaya, Bureau of Labor Statistics; Partha Lahiri, University of Maryland
- 12:05 p.m.** Floor Discussion

528

MCC-208 B

● **Missing Data and Under-reported Data—Contributed**  
**Section on Survey Research Methods, Social Statistics**  
**Section**

Chair(s): Karol Krotki, RTI International

**10:35 a.m. Analysis of Nonresponse in Student Surveys—**

◆ Ronaldo Iachan, ORC Macro International, Inc.; William H. Robb, ORC Macro International, Inc.; James G. Ross, ORC Macro International, Inc.; Katherine H. Flint, ORC Macro International, Inc.; Alan Bloch, Centers for Disease Control and Prevention

**10:50 a.m. Comparison of Methods for Handling Missing Data in a Collegiate Survey of Tobacco Use—**

◆ Liza M. Nirelli, Iowa State University; Michael D. Larsen, Iowa State University; Ivana T. Croghan, Mayo Clinic; Darrell R. Schroeder, Mayo Clinic; Kenneth P. Offord, Mayo Clinic; Richard D. Hurt, Mayo Clinic

**11:05 a.m. Methodology To Evaluate Longitudinal Estimates after Imputation in a Graduate Student Survey—**

◆ Adriana

Perez, The University of Texas Health Science Center at Houston

**11:20 a.m. Measuring and Reducing Inconsistency among Questionnaire Items through Imputation: an Application to the NSOPF—**

◆ Kimberly Ault, RTI International

**11:35 a.m. A Test for Judging the Number-one Product in a Marketing Survey: a Multinomial Approach with Incomplete Rank Data—**

◆ Chien-Hua Wu, Chung-Yuan Christian University; Shu-Mei Wan, Lughwa University of Science and Technology; Che-Wei Hsin, Chung-Yuan Christian University

**11:50 a.m. Estimating the Level of Underreporting of Expenditures among Expenditure Reporters: a Micro-level Latent Class Analysis—**

◆ Clyde Tucker, Bureau of Labor Statistics; Brian Meekins, Bureau of Labor Statistics; Paul Biemer, RTI International

**12:05 p.m. Floor Discussion**

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*Machine learning*

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