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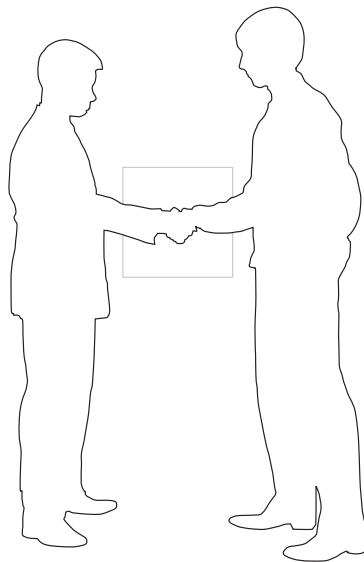
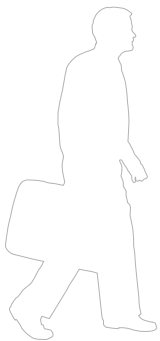
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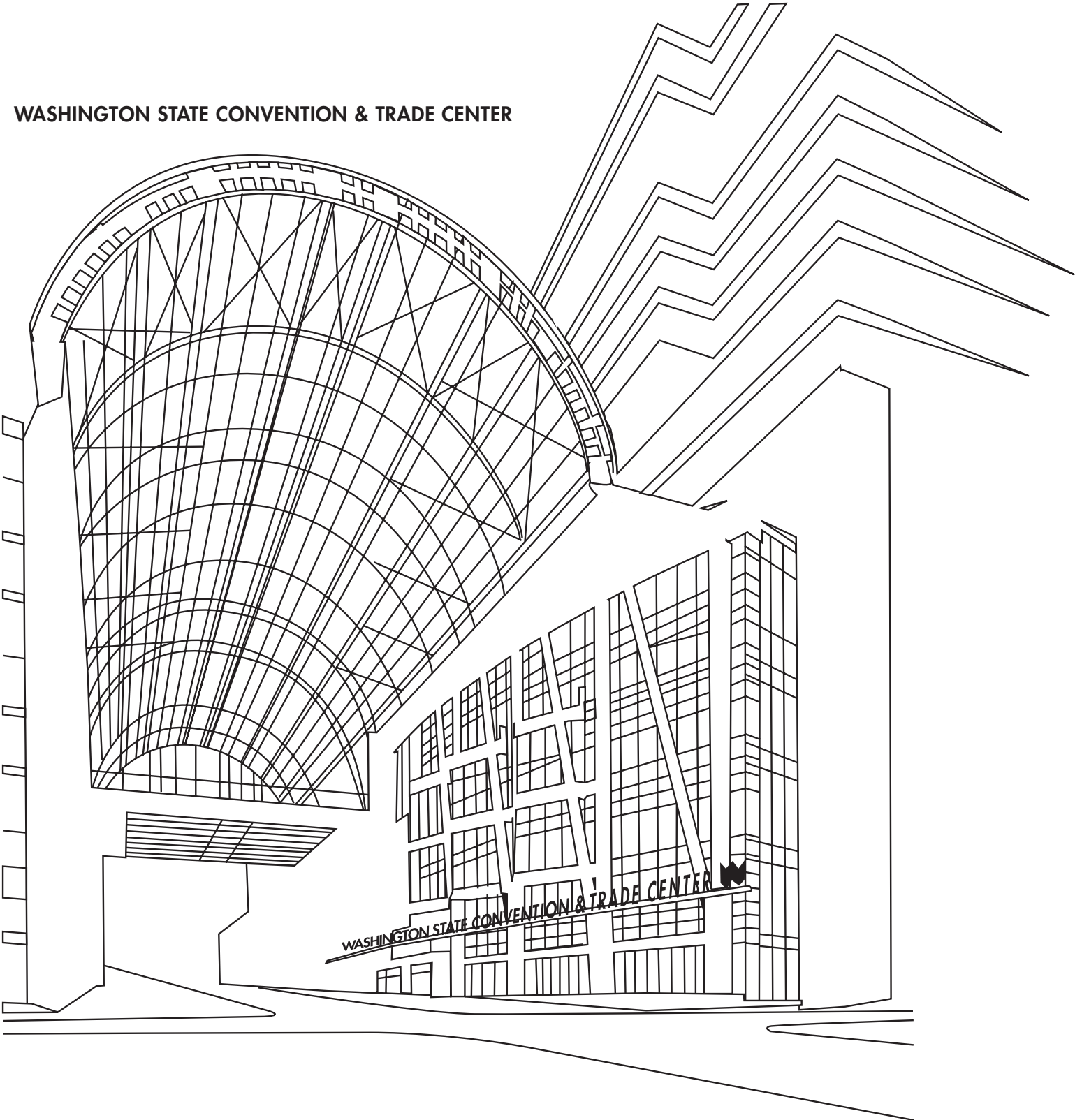
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# General Information

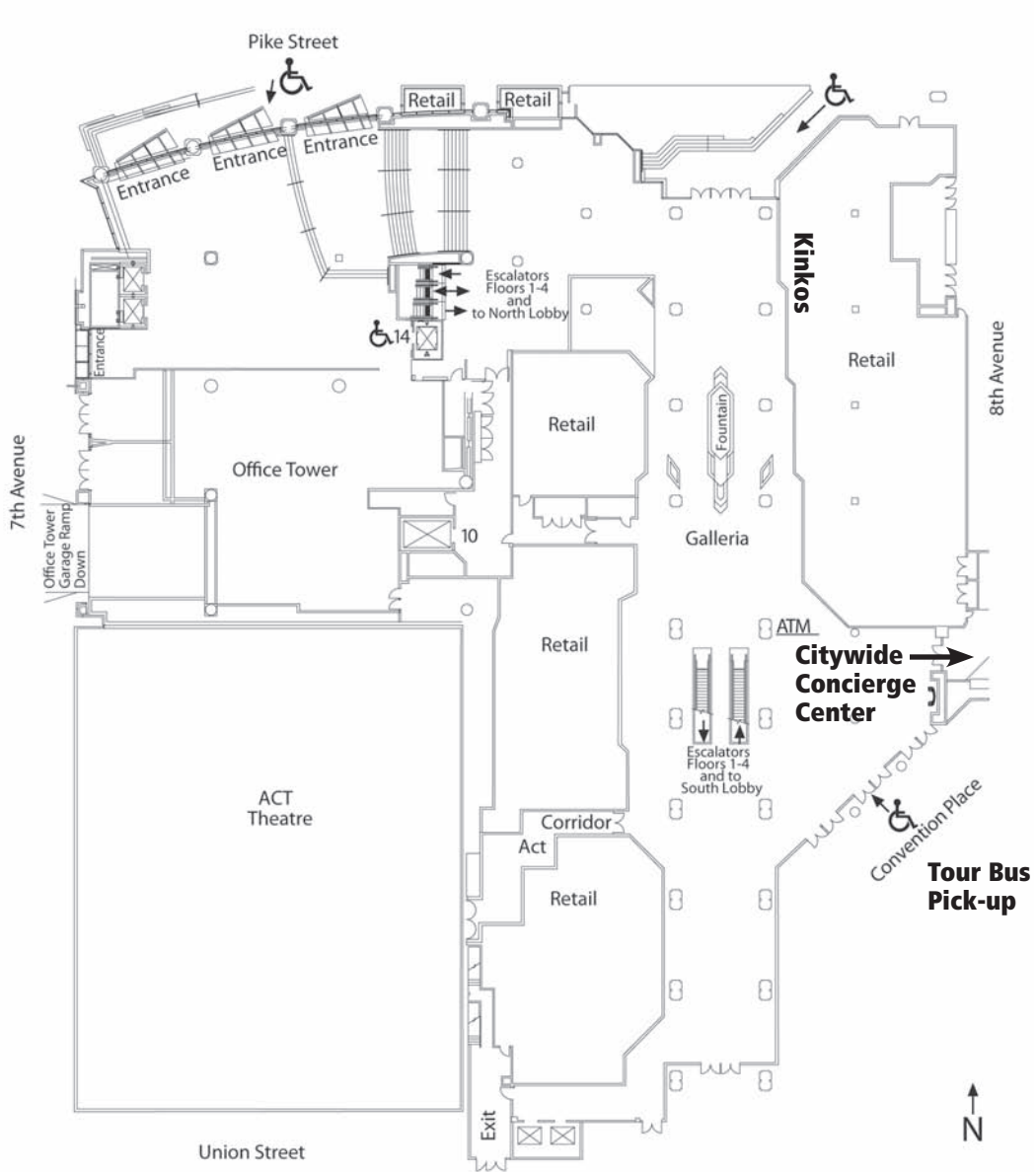
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WASHINGTON STATE CONVENTION & TRADE CENTER



# Washington State Convention & Trade Center

Level 1

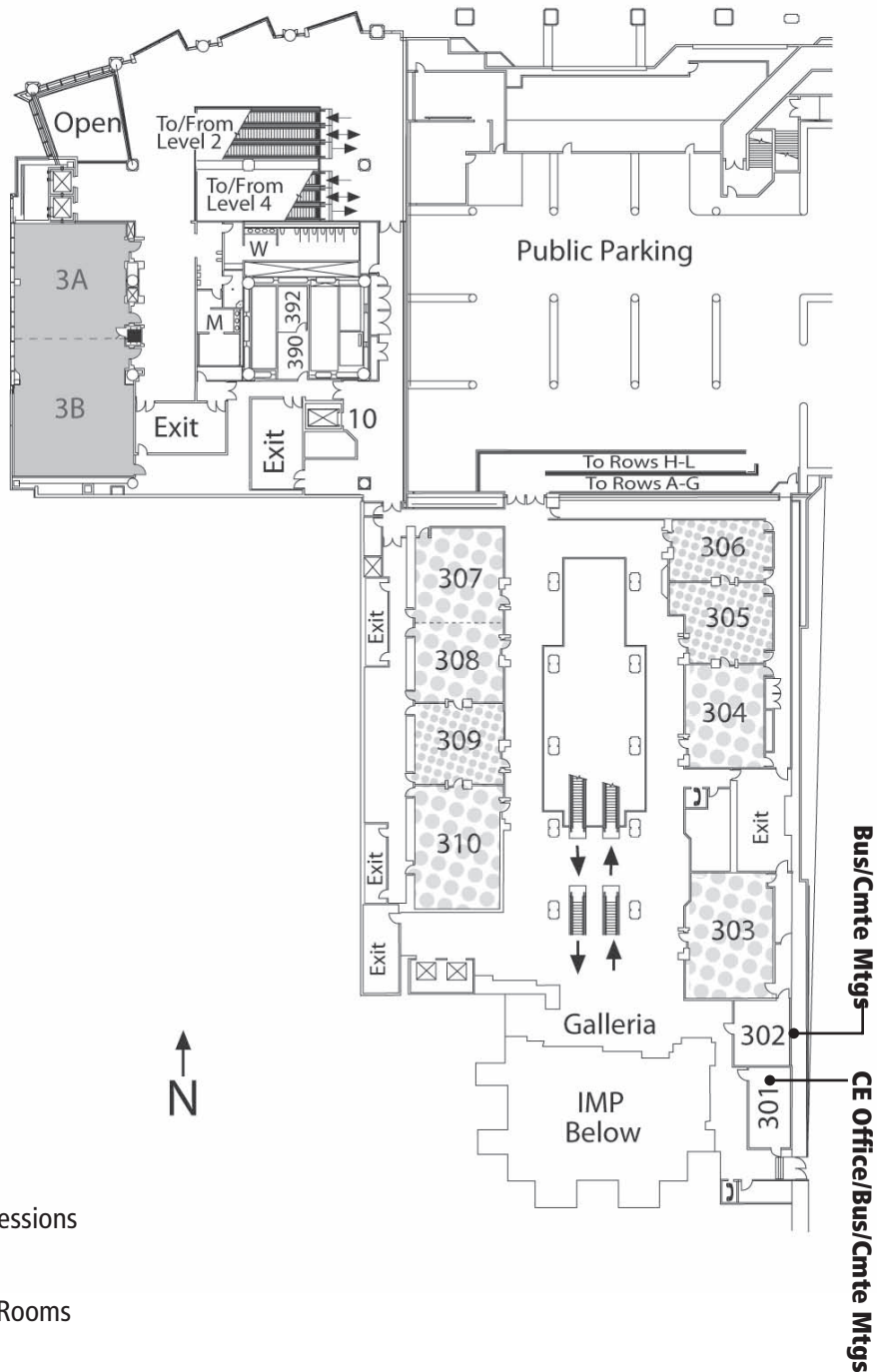






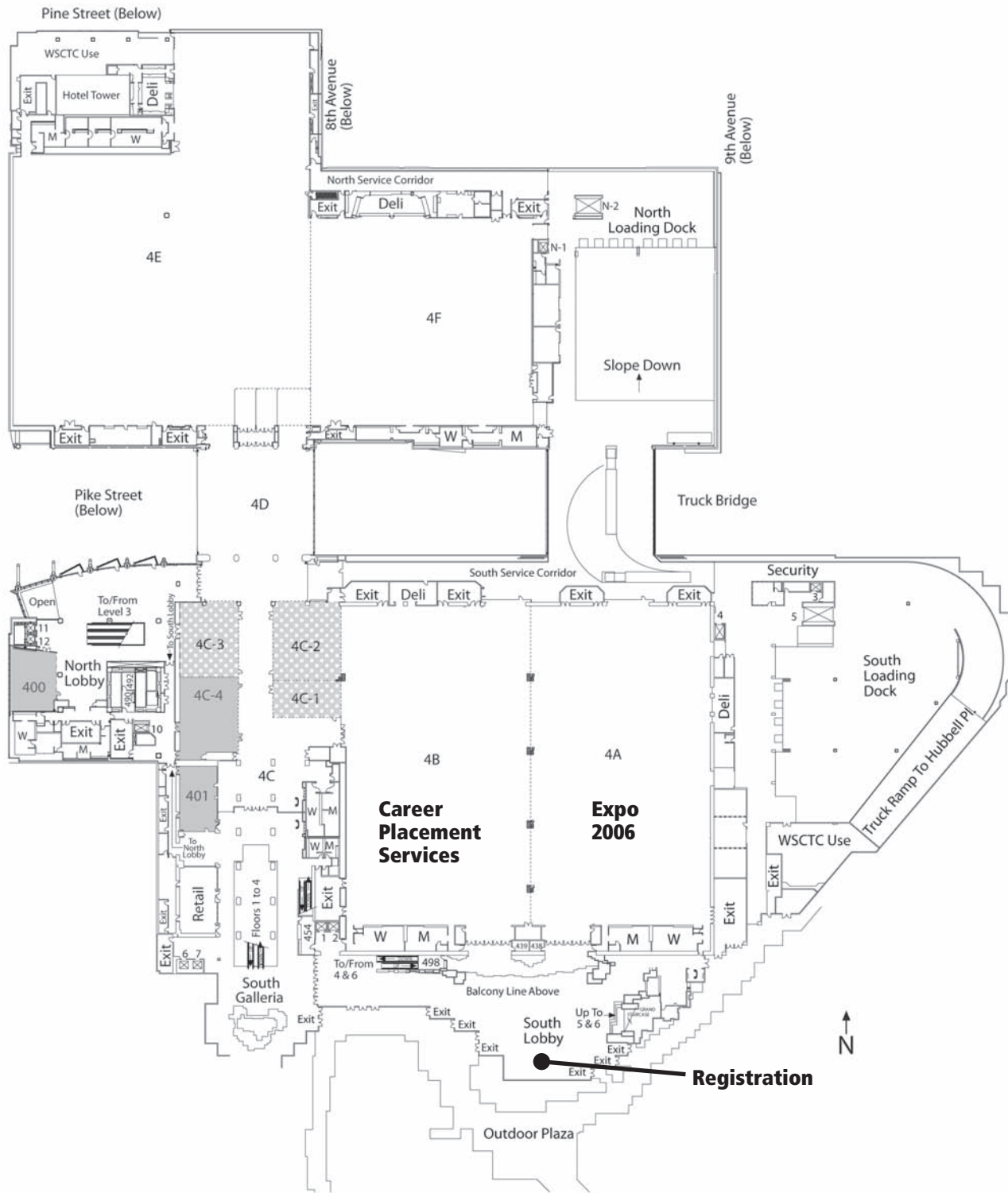
# Washington State Convention & Trade Center

## Level 3



# Washington State Convention & Trade Center

## Level 4

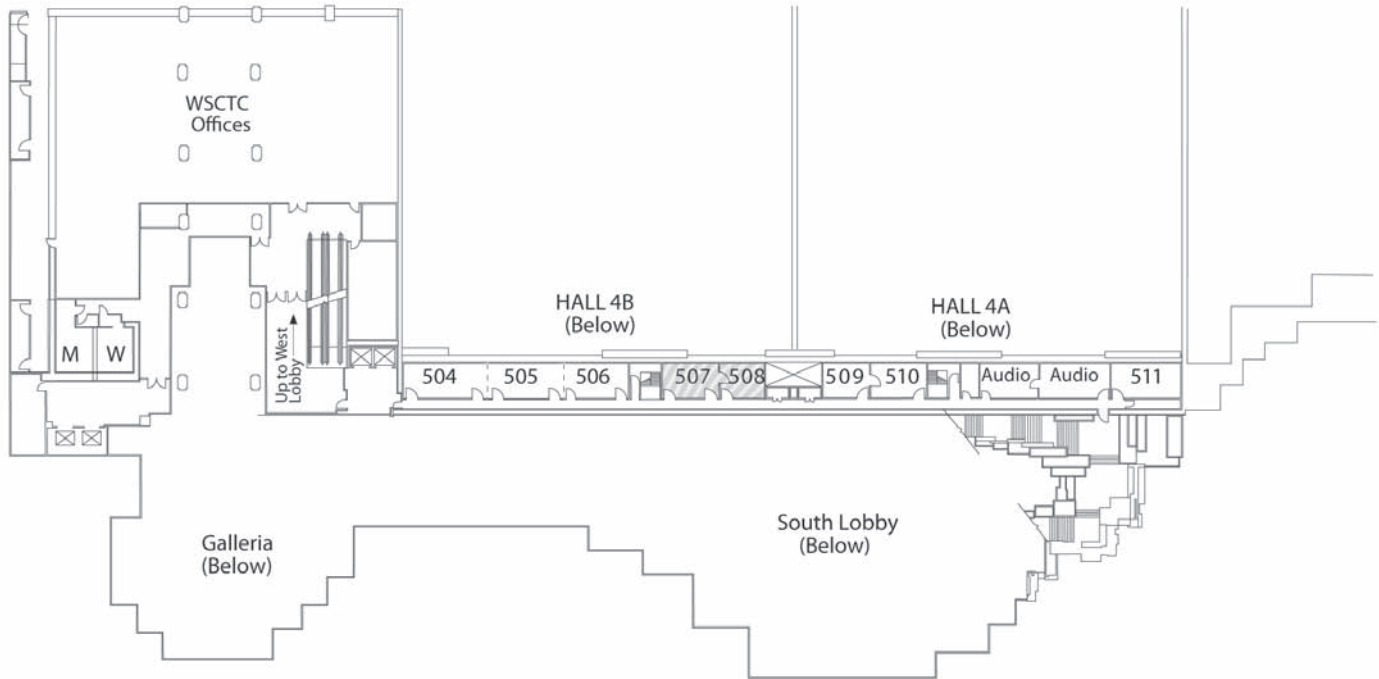



— Technical Sessions

— Roundtable/Speaker Luncheon Rooms & Bus/Cmte Mtgs

# Washington State Convention & Trade Center

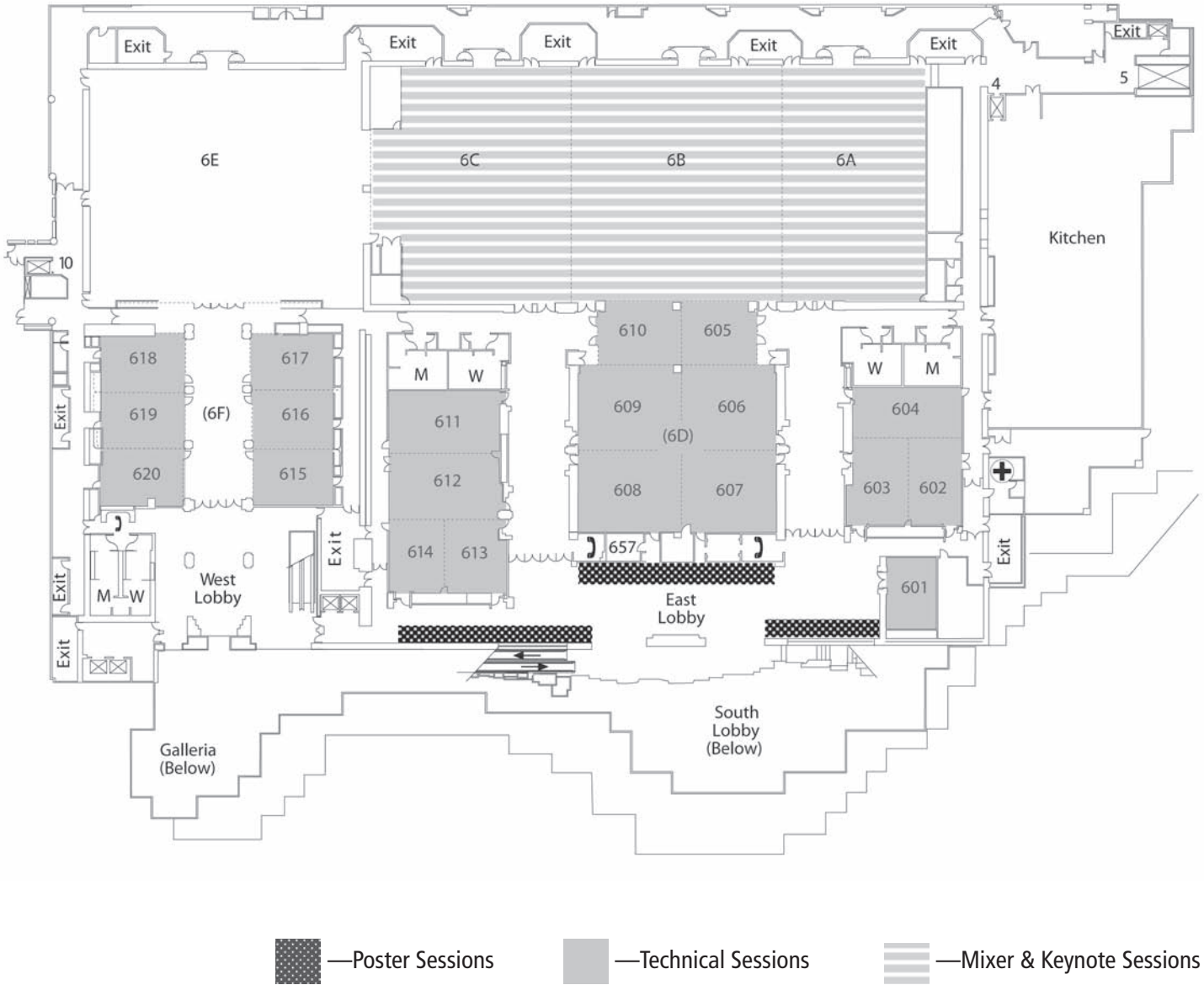
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 — Speaker Workrooms

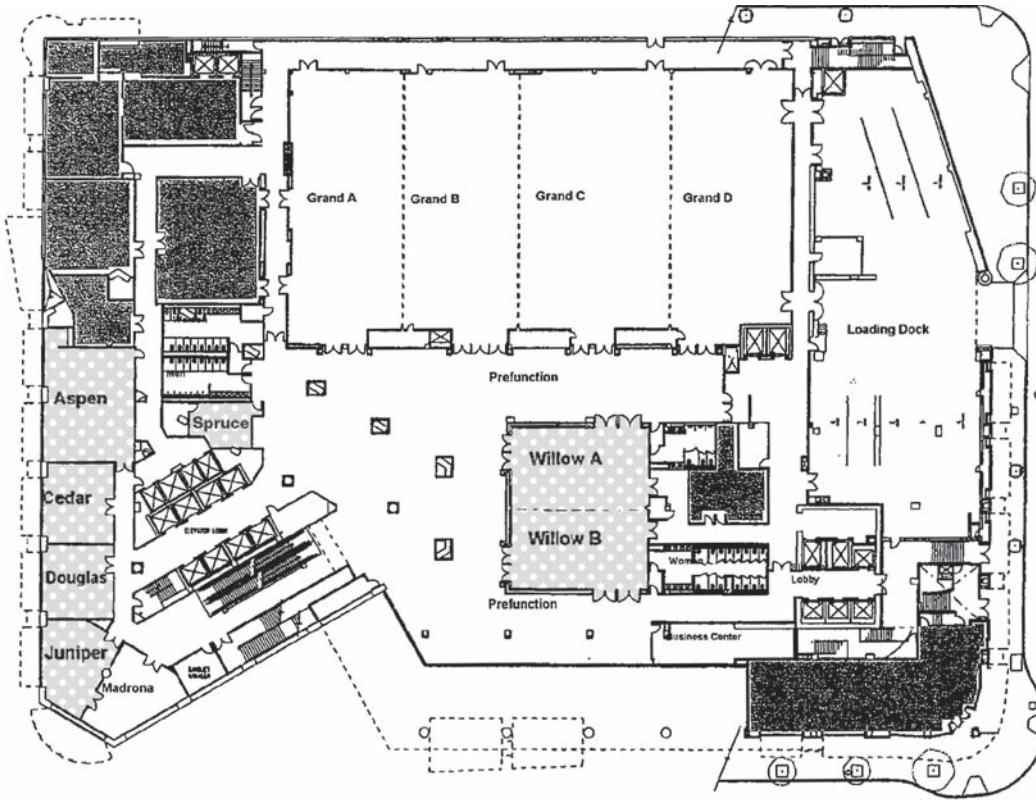
# Washington State Convention & Trade Center

## Level 6



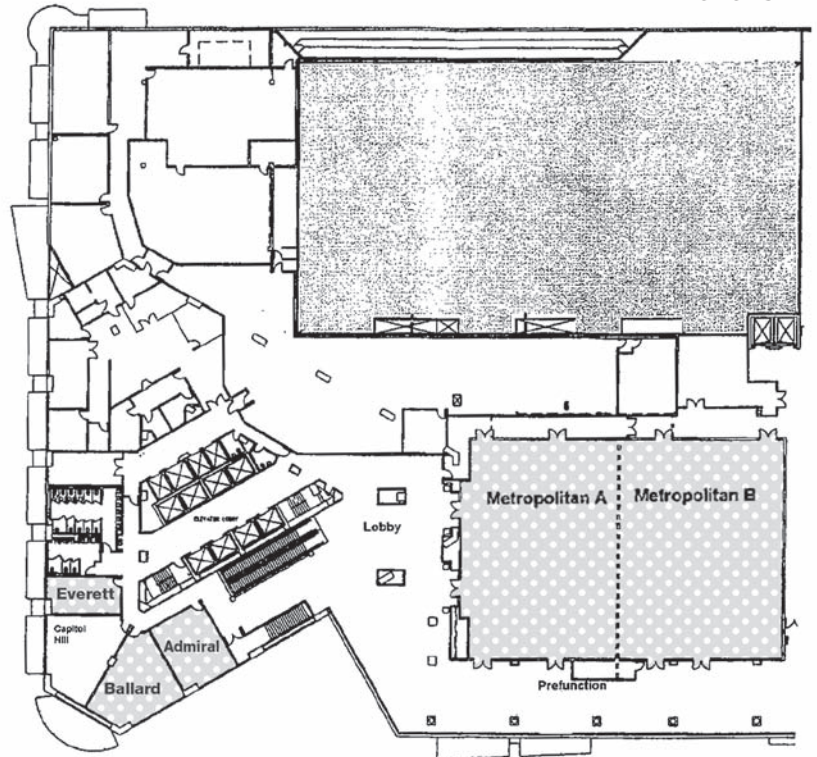
# Sheraton Seattle Hotel & Towers

Level 2



 —Business & Committee Meetings

Level 3



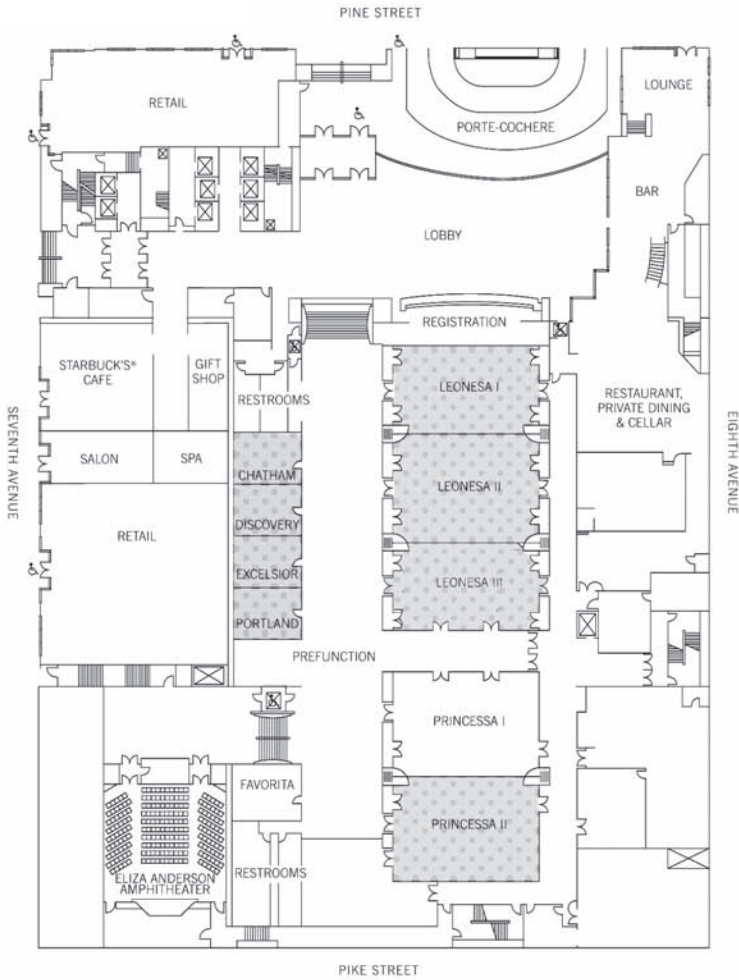
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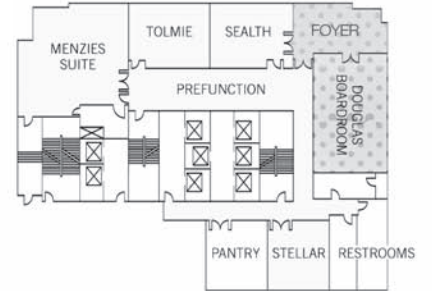


# Grand Hyatt Seattle

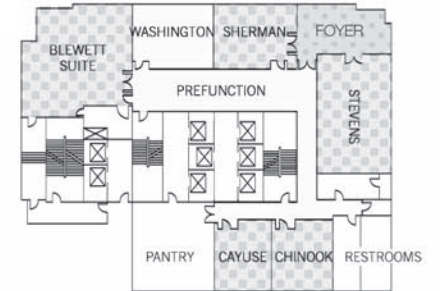
Level 1



Level 6



Level 7



 —Business & Committee Meetings

# Housing Map and Hotel Listings

**1 Sheraton Seattle Hotel & Towers**

1400 Sixth Avenue  
COC/COS, committee, and social activities

**2 Grand Hyatt Seattle**

721 Pine Street  
Committee and social activities

**No scheduled activities**

**3 Summerfield Suites**

1011 Pike Street

**4 Red Lion Hotel on Fifth Avenue**

1415 Fifth Avenue

**5 The Roosevelt Seattle**

1531 Seventh Avenue

**6 The Paramount Hotel**

724 Pine Street

**7 Mayflower Park Hotel**

405 Olive Way

**8 Hilton Seattle**

1301 Sixth Avenue

**9 Crowne Plaza Seattle**

1113 Sixth Avenue

**10 Executive Hotel Pacific**

400 Spring Street

**11 Renaissance Seattle Hotel**

515 Madison Street

**12 The Warwick Seattle Hotel**

401 Lenora Street

**13 Sixth Avenue Inn**

2000 Sixth Avenue

**14 Seattle University**

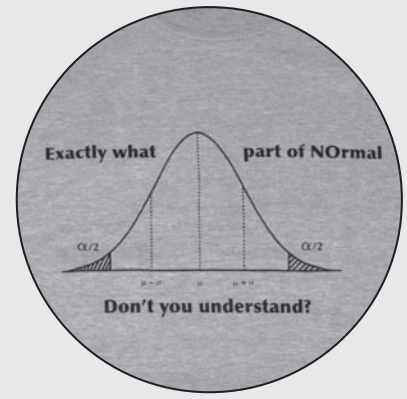
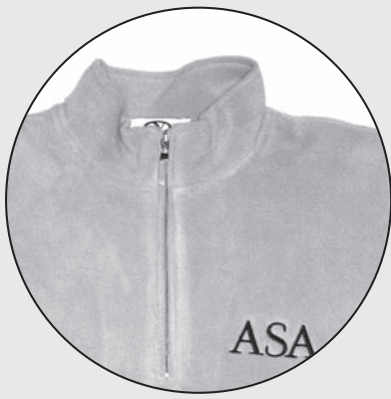
1111 E. Columbia, Bellarmine Hall

**15 Marriott SpringHill Suites**

1800 Yale Avenue







*American Statistical Association*

# MARKET PLACE

**LOCATED IN THE MAIN  
REGISTRATION AREA**

**Saturday, Aug. 5**  
noon – 5:00 p.m.

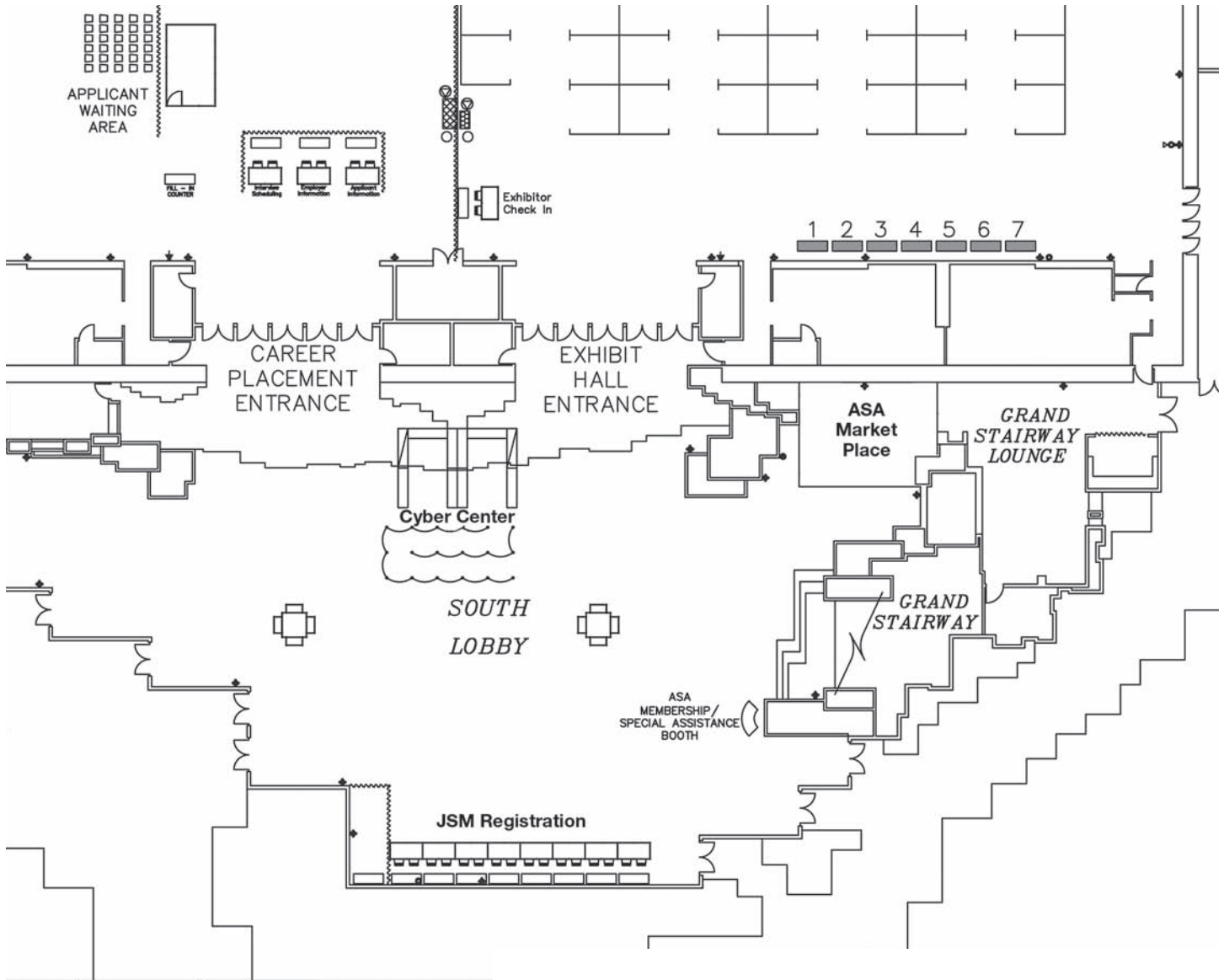
**Sunday – Wednesday**  
Aug. 6 – Aug. 9  
9:00 a.m. – 5:00 p.m.

**Thursday, Aug. 10**  
8:00 – 10:30 a.m.

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

# JSM Registration Area Floor Plan and Committee or Society Tables

Washington State Convention & Trade Center—Level 4



—Committee or Society Tables

1. Caucus for Women in Statistics
2. Christian Statisticians
3. Federal Committee on Statistical Methodology (FCSM)
4. Gay and Lesbian Concerns in Statistics
5. International Chinese Statistical Association (ICSA)
6. International Indian Statistical Association (IISA)
7. International Statistical Institute (ISI)

## While at JSM...



### Emergency Telephone Messages

The general conference telephone number is (206) 219-4700. This will connect you to the JSM Special Assistance Desk and should only be used for emergency purposes. Emergency messages will be posted in the electronic JSM Cyber Center, located in the registration area at the Washington State Convention & Trade Center. All other calls or messages should be left in the attendee's guestroom on his/her voice mail.

### Convention Hotels

The main phone numbers for the convention hotels are:

|                                     |                |
|-------------------------------------|----------------|
| Sheraton Seattle Hotel & Towers     | (206) 621-9000 |
| Grand Hyatt Seattle                 | (206) 774-1234 |
| Summerfield Suites                  | (206) 682-8282 |
| Red Lion Hotel on Fifth Avenue      | (206) 971-8000 |
| The Roosevelt Seattle               | (206) 621-1200 |
| The Paramount Hotel                 | (206) 292-9500 |
| Mayflower Park Hotel                | (206) 623-8700 |
| Hilton Seattle                      | (206) 624-0500 |
| Crowne Plaza Seattle                | (206) 464-1980 |
| Executive Hotel Pacific             | (206) 623-3900 |
| Renaissance Seattle Hotel           | (206) 583-0300 |
| The Warwick Seattle Hotel           | (206) 443-4300 |
| Sixth Avenue Inn                    | (206) 441-8300 |
| Seattle University, Bellarmine Hall | (206) 296-5620 |
| Marriott SpringHill Suites          | (206) 254-0500 |

### Assistance for Those with Disabilities

If you have a disability that may impede your participation, please contact a staff member at the Special Assistance Desk on Level 4, South Lobby, of the Washington State Convention & Trade Center.

### Child Care

While JSM will not have organized child care, services may be organized through PANDA Dial-a-Sitter. Child care providers will come to your hotel room; the rate is \$76 (plus parking) for four hours of service for up to two children, with an additional fee of \$14 per hour thereafter. With the addition of a third child, the fee is \$88 (plus parking) and \$16/hour after the four-hour minimum. All three children cannot be under the age of 5. The fee for two families that want to share a sitter is decided on a case-by-case basis. For more information, call (206) 325-2327 or visit [www.seattlesbestchildcare.com](http://www.seattlesbestchildcare.com).

The Caucus for Women in Statistics will provide a subsidy toward four hours of babysitting per family for up to 14 families. For details, contact Mary Gray at [mgray@american.edu](mailto:mgray@american.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 speakers 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 outside).

### Photographs and Videotaping

Taking photographs or using video equipment in any session or at any JSM event is prohibited, and 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

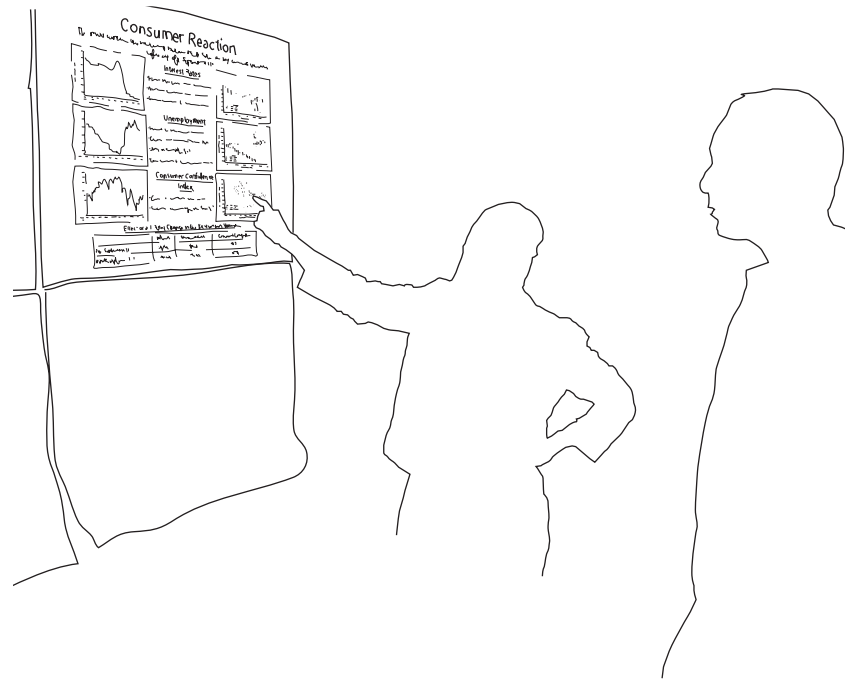
Your participation can make the difference. You can help by making use of the paper, plastic, aluminum, and glass trash containers in the lobby areas of the Washington State Convention & Trade Center. Also, participating in the towel and linen programs in use at the area hotels makes a significant impact on the amount of energy and water used. You also can change the option from print to not print or use the paper recycling containers available at the Cyber Center to help us continue our efforts to conserve. If you have additional questions, please stop by the Special Assistance Desk at the Washington State Convention & Trade Center registration area.

## Poster Sessions

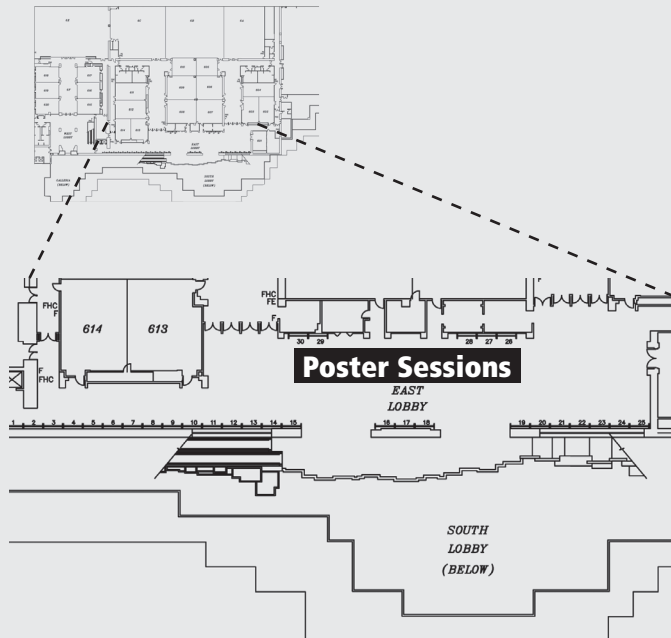
### CC – Level 6, East Lobby

Regular and topic-contributed poster sessions are held Sunday from 4:00 p.m.–5:50 p.m. and 8:00 p.m.– 9:50 p.m. and Monday, Tuesday, and Wednesday from 10:30 a.m.–12:20 p.m. and 2:00 p.m.–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.

The Monday morning session includes the **Data Expo** competition entries, which provide graphical summaries of a NASA dataset containing geographic and atmospheric data. The competition is sponsored by the Sections on Statistical Graphics, Statistical Computing, and Statistics and the Environment.



## Poster Session Location



Washington State Convention & Trade Center  
Level 6, East Lobby

## Introductory Overview Lectures

The Introductory Overview Lectures are a series of talks on a variety of topics. No pre-registration is necessary, and they are open to all JSM registrants. If you have suggestions for next year, please contact 2007 JSM Program Chair Allan Rossman at [arossman@calpoly.edu](mailto:arossman@calpoly.edu).

- |   |         |
|---|---------|
| Sunday, August 6, 2:00 p.m. - 3:50 p.m.                                       | CC-4C-4 |
| <b>Session 1</b> <i>Genetic Association Studies</i>                           |         |
| Sunday, August 6, 4:00 p.m. - 5:50 p.m.                                       | CC-4C-4 |
| <b>Session 38</b> <i>Adaptive Designs/Interim Pilots and Regression Trees</i> |         |
| Monday, August 7, 8:30 a.m. - 10:20 a.m.                                      | CC-400  |
| <b>Session 83</b> <i>Statistical Consulting</i>                               |         |
| Tuesday, August 8, 8:30 a.m. - 10:20 a.m.                                     | CC-4C-4 |
| <b>Session 219</b> <i>Computer Experiments</i>                                |         |
| Wednesday, August 9, 8:30 a.m. - 10:20 a.m.                                   | CC-4C-4 |
| <b>Session 355</b> <i>Image Statistics and Bootstrap</i>                      |         |

## 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 7, 2:00 p.m. – 3:50 p.m. CC - 4C-4  
**Session 173** *Statistical/Mathematical Challenges in Biodefense Immune Modeling*

Wednesday, August 9, 8:30 a.m. – 10:20 a.m. CC-400  
**Session 354** *What Is the Role of Statistics in Public Policy Debates about Climate Change?*

## 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. The business meetings of ASA Sections provide the opportunity for JSM attendees to give suggestions about Section business.

## Opening Mixer

CC – Ballroom 6ABC

Don't miss your chance to get JSM 2006 off to a great start while enjoying refreshments with your colleagues. Join us Sunday, August 6, from 8:00 p.m. - 10:30 p.m. Based on last year's success, a poster session will be on display during the mixer in the East Lobby. We will see you there!

## Student Mixer

S – Metropolitan Ballroom B

Student registrants can enjoy refreshments, meet their peers, and make plans for local events and outings at this mixer, Monday, August 7, from 6:00 p.m. – 7:30 p.m. The 2006 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!

## 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.

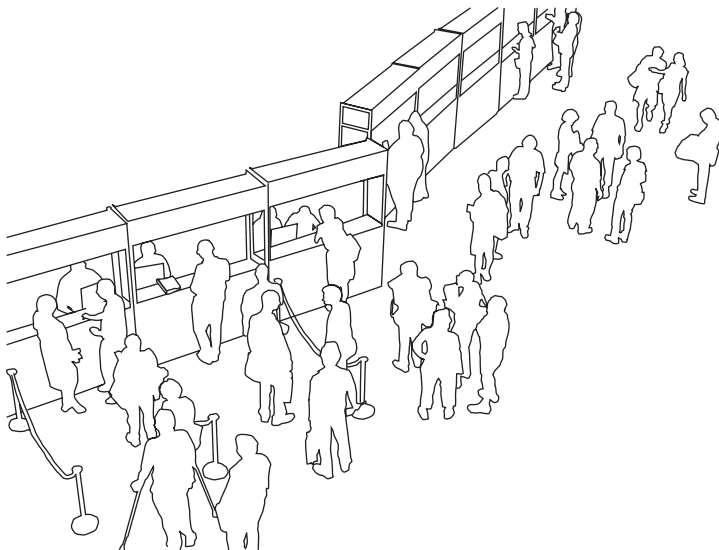
**American Statistical Association** CC-612  
Sunday, August 6, 6:00 p.m. – 7:30 p.m.

**Statistical Society of Canada Reception** H-Princessa II Ballroom  
Monday, August 7, 5:00 p.m. – 7:00 p.m.

**IMS Member Reception** S-Aspen  
Monday, August 7, 5:30 p.m. – 7:00 p.m.

**International Biometric Society, ENAR Business Meeting** CC-604  
Tuesday, August 8, 5:30 p.m. – 7:00 p.m.

**IMS New Member & Student Reception** S-Willow A  
Tuesday, August 8, 5:30 p.m. – 6:30 p.m.







# Gertrude Cox Scholarship Race

## 5K Race and 2.5K Fun Run/Walk

### Tuesday, August 8

The Caucus for Women in Statistics, in conjunction with the ASA, presents the 17th annual Gertrude Cox Scholarship Race at the Joint Statistical Meetings in Seattle, Washington. All proceeds will benefit the Gertrude M. Cox Scholarship in Statistics.

**The Race:** Two races running concurrently—a competitive 5K and a 2.5K fun run/walk

**When:** Tuesday, August 8, at 7:00 a.m.

**Where:** Location and logistical information will be posted at the caucus table in the exhibit hall, Hall 4A, Level 4 of the Washington State Convention & Trade Center.

**How Much:** The entry fee is **\$20**.

**Registration:** Those interested in participating are encouraged to register early. You may register at the hospitality table for the Caucus for Women in Statistics in the exhibit hall, Hall 4A, Level 4 of the Washington State Convention & Trade Center. 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 \_\_\_\_\_

Gender  M  F Age \_\_\_\_\_

Event  5K Race  2.5K Fun Run/Walk

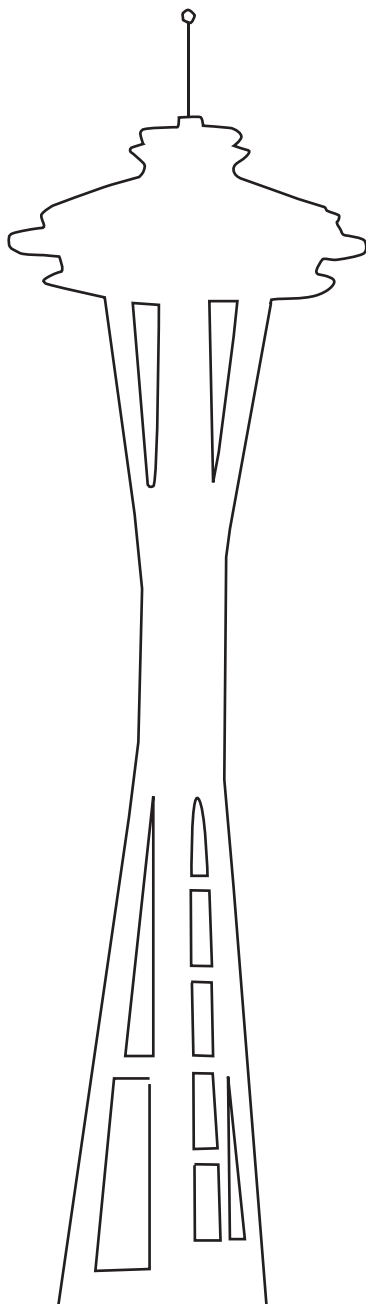
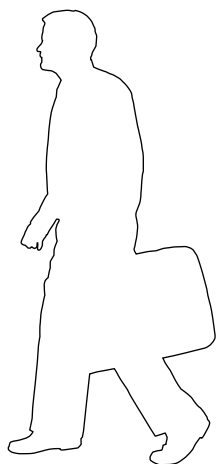
T-shirt size  L  XL

**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, 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) \_\_\_\_\_

Make check payable to **The Gertrude Cox Scholarship Fund**. Please return this form along with your check to Lori Thombs, Race Organizer, Department of Statistics, University of Missouri, Middlebush 146, Columbia, MO 65211, or fax to (573) 884-5524.



## Recycling Badge Holders

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

new  
Proceedings  
policy

## 2006 JSM Proceedings

A copy of the 2006 Proceedings CD-ROM is included with most registration types; however, additional copies may be ordered by calling (888) 231-3473 or visiting [www.amstat.org/asastore](http://www.amstat.org/asastore). CDs will mail in early 2007.

Anyone who orally presents a paper, panel, or poster during JSM is eligible to submit a paper for publication on the 2006 Proceedings CD-ROM. For information about submitting a paper, visit [www.amstat.org/meetings/jsm/2006/index.cfm?fuseaction=proceedings](http://www.amstat.org/meetings/jsm/2006/index.cfm?fuseaction=proceedings). Papers may be submitted from August 1–October 20 and must be in electronic format.

## JSM 2007

The 2007 Joint Statistical Meetings will be held in Salt Lake City, Utah, July 29–August 2, at the Salt Palace Convention Center. Preliminary information about JSM 2007 can be found at the Salt Lake Booth, #109, at this year's EXPO. The complete listing of the 2007 Program Committee and instructions for submitting contributed papers appeared in the June issue of *Amstat News* and can be found at [www.amstat.org/meetings/jsm/2007](http://www.amstat.org/meetings/jsm/2007).

## If You Are Not a Member...

Information about the ASA, ENAR, WNAR, IMS, and SSC will be available at the society booths located in the exhibit hall. Each society provides a variety of publications and activities to anyone interested in applied and/or theoretical statistics. Student membership is offered at substantially reduced rates.

If you are not already a member of the ASA, join now and receive a \$15 discount on your first year of Limited or Regular membership. Join at the ASA Membership/Special Assistance Desk in the registration area by Thursday, August 10, at 10 a.m. to receive your discount. This discount is valid for Limited or Regular memberships only. Ask about other discounted memberships for students, post-graduates, retirees, and developing country residents.



# Hours of Operation

## 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 4, South Lobby, of the Washington State Convention & Trade Center. The ASA Membership/Special Assistance Desk also is located here. Additionally, you may add Continuing Education courses, the Career Placement Service, tours, guests, roundtables with coffee, and roundtables with lunch to your registration at the JSM Registration Desk. Hours of operation:

|                            |                               |
|----------------------------|-------------------------------|
| <b>Saturday, August 5</b>  | <b>7:00 a.m. – 6:00 p.m.</b>  |
| <b>Sunday, August 6</b>    | <b>7:00 a.m. – 8:30 p.m.</b>  |
| <b>Monday, August 7</b>    | <b>7:30 a.m. – 6:00 p.m.</b>  |
| <b>Tuesday, August 8</b>   | <b>7:30 a.m. – 4:30 p.m.</b>  |
| <b>Wednesday, August 9</b> | <b>7:30 a.m. – 4:30 p.m.</b>  |
| <b>Thursday, August 10</b> | <b>7:30 a.m. – 10:30 a.m.</b> |

JSM registration includes the program book and abstract book or CD, access to EXPO 2006, admission to the Opening Mixer (dry snacks, beer, and soft drinks), the Student Mixer (students only), and the Informal Dance Party (dry snacks and cash bar). If you did not purchase roundtable tickets with your advance registration, ask at the JSM Registration Desk for availability. Existing tickets will be sold until 2 p.m. on the day prior to the scheduled roundtable. NOTE: No onsite kosher or heart healthy meal tickets will be available.

## ASA Continuing Education Courses

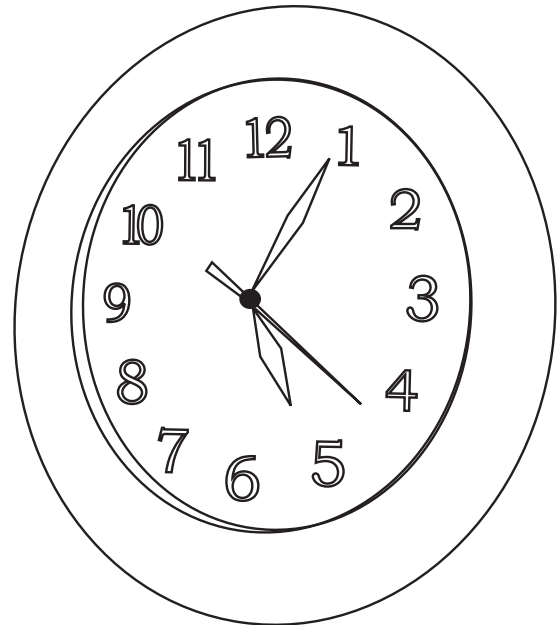
Courses will be held in rooms on Level 3 of the Washington State Convention & Trade Center. For room assignments, please review the general program or visit the Special Assistance Desk on Level 4, South Lobby, of the Washington State Convention & Trade Center.

Onsite CE Registration: Go to the JSM Registration Desk, located on Level 4, South Lobby, of the Washington State Convention & Trade Center. Availability may be limited, and textbooks will not be available.

## Speaker Work Rooms

There will be two speaker work rooms this year, both at the Washington State Convention & Trade Center, Level 5, in rooms 507 and 508. Hours of operation:

|                            |                               |
|----------------------------|-------------------------------|
| <b>Saturday, August 5</b>  | <b>7:00 a.m. – 6:00 p.m.</b>  |
| <b>Sunday, August 6</b>    | <b>7:00 a.m. – 6:00 p.m.</b>  |
| <b>Monday, August 7</b>    | <b>7:00 a.m. – 6:00 p.m.</b>  |
| <b>Tuesday, August 8</b>   | <b>7:00 a.m. – 6:00 p.m.</b>  |
| <b>Wednesday, August 9</b> | <b>7:00 a.m. – 6:00 p.m.</b>  |
| <b>Thursday, August 10</b> | <b>7:00 a.m. – 10:30 a.m.</b> |



A speaker work room is available for all presenters. There will be practice equipment available in each room. The practice equipment will consist of an overhead projector and screen and 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 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

CC – Exhibit Hall 4B

The JSM 2006 Career Placement Service will be located in the Washington State Convention & Trade Center, Hall B. Hours of operation:

### Saturday, August 5

Job Posting and Résumé Submission Only 9:00 a.m. – 5:00 p.m.

### Sunday, August 6

Full Career Placement Service Open 1:00 p.m. – 6:00 p.m.

### Monday, August 7

Full Career Placement Service Open 8:00 a.m. – 6:00 p.m.

**Tuesday, August 8**

Full Career Placement Service Open 8:00 a.m. – 6:00 p.m.

**Wednesday, August 9**Full Career Placement Service Open 8:00 a.m. – 6:00 p.m.  
(Onsite registration closes at noon.)**EXPO 2006**

CC – Exhibit Hall 4A

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

**Exhibitors Move in and out Information**

Saturday, August 5

(exhibitor move in only) 8:00 a.m. – 5:00 p.m.

Sunday, August 6

(exhibitor move in only) 8:00 a.m. – 11:00 a.m.

Wednesday, August 9

(exhibitor move out only) 2:00 p.m. – 8:00 p.m.

**Show Hours of Operation****Sunday, August 6** 1:00 p.m. – 6:00 p.m.**Monday, August 7** 9:00 a.m. – 6:00 p.m.**Tuesday, August 8** 9:00 a.m. – 6:00 p.m.**Wednesday, August 9** 9:00 a.m. – 2:00 p.m.**Cyber Center**

CC – Level 4, South Lobby

There will be 20 terminals in the Cyber Center available for internet access and the electronic Message Center. The Cyber Center is for registered JSM attendees and will be located in the JSM registration area on Level 4, South Lobby, of the Washington State Convention &amp; Trade Center. There will NOT be 24-hour access to the Cyber Center. To reach an attendee when the Cyber Center is closed, please call his/her hotel directly. Hours of operation:

**Saturday, August 5** 7:00 a.m. – 6:00 p.m.**Sunday, August 6** 7:00 a.m. – 10:00 p.m.**Monday, August 7** 7:00 a.m. – 10:00 p.m.**Tuesday, August 8** 7:00 a.m. – 10:00 p.m.**Wednesday, August 9** 7:00 a.m. – 10:00 p.m.**Thursday, August 10** 7:00 a.m. – 10:30 a.m.**Wireless Internet Access**

The Washington State Convention &amp; Trade Center has wireless internet access in the following locations: 1st floor – Pike Street entrance; 2nd floor – International Meeting Place; 4th floor – South Escalator Landing; and 6th Floor – East and West lobbies. The cost is \$9.95 per day; call (206) 219-5644 for technical support.

**ASA Marketplace**

CC – Level 4, South Lobby

The ASA Marketplace is your store for JSM and ASA souvenirs. Purchase your official JSM 2006 T-shirt, new shirt designs, great new gifts, and clearance items. Hours of operation:

**Saturday, August 5** 12:00 p.m. – 5:00 p.m.**Sunday, August 6** 9:00 a.m. – 5:00 p.m.**Monday, August 7** 9:00 a.m. – 5:00 p.m.**Tuesday, August 8** 9:00 a.m. – 5:00 p.m.**Wednesday, August 9** 9:00 a.m. – 5:00 p.m.**Thursday, August 10** 8:00 a.m. – 10:30 a.m.**ASA Communities Booth Hours**

CC – Exhibit Hall 4A, Booth 101

Learn about the many programs available to you, including Chapters, Sections, career development, statistical education, and membership. Hours of operation:

**Sunday, August 6** 1:00 p.m. – 6:00 p.m.**Monday, August 7** 9:00 a.m. – 6:00 p.m.**Tuesday, August 8** 9:00 a.m. – 6:00 p.m.**Wednesday, August 9** 9:00 a.m. – 2:00 p.m.**Citywide Concierge Center**

CC – Level 1

The Citywide Concierge Center is operated by the Washington State Convention &amp; Trade Center and provides extensive information and referrals for restaurants, tours, and sightseeing—along with up-to-date maps and travel information. The center is located in the Main Lobby on Level 1 of the convention center. Hours of operation:

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



## President's Invited Address

"A Data-Driven World: Why Now, and What Do We Do about It?"

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

### William R. Pulleyblank

Vice President, Center for Business Optimization, IBM Global Services, IBM Business Consulting Services

William R. Pulleyblank is the vice president of the Center for Business Optimization within IBM Business Consulting Services. He has served on a number of boards, advisory panels, and editorial boards. His research interests are in operations research, combinatorial optimization, and applications of optimization.



## Deming Lecture

"Making Another World: a Holistic Approach to Performance Improvement"

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

### Ronald D. Sne

Tunnell Consulting

Ron Sne is principal of Process and Organizational Excellence at Tunnell Consulting. Sne received his BA in mathematics from Washington and Jefferson College and MS and PhD degrees from Rutgers University in applied and mathematical statistics. He is a Fellow of the American Statistical Association, American Society of Quality, and the American Association for the Advancement of Science. His work has been recognized by 20 major awards and medals. He has published four books and more than 165 papers in the fields of performance improvement, statistics, quality, and management.



## ASA Presidential Address

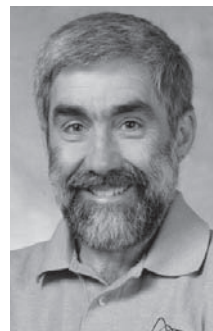
"From Data to Policy: Scientific Excellence Is Our Future"

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

### Sallie Keller-McNulty

Rice University

Sallie Keller-McNulty is dean of the George R. Brown School of Engineering, professor of statistics, and the E.D. Butcher Chair of Engineering at Rice University in Houston, Texas. She is also Fellow and president of the American Statistical Association, was named fellow of the American Association for the Advancement of Science, and is a recipient of the ASA's Founders Award. She has more than 60 statistical science publications. Her areas of research are uncertainty quantification, computational and graphical statistics and related software and modeling techniques, and data access and confidentiality.



## COPSS Fisher Lecture

"Recombination and Linkage"

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

### Terence P. Speed

University of California, Berkeley

While working toward his PhD in mathematics at Monash University, Terence P. Speed was in close contact with population genetics and heard much about Fisher's work in that area, but his research was in algebra. His first academic job was at the University of Sheffield, where he fell in love with sufficiency and dipped more deeply into Fisher's works. In 1997, he took up a 50% appointment in medical research at the University of Melbourne. Since then, he has divided his time as follows: 50% Berkeley, 50% Melbourne, and 50% in the air. Statistics, genetics, and molecular biology are among his major research interests.

## Advisory Committee on Continuing Education

**Charles Yun Tan, Chair**  
Merck & Co., Inc.

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Smith College

**Gordon J. Johnston**  
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**Leonard Oppenheimer**  
J&J PRD

**Xiaoming Sheng**  
University of Utah

**Clyde Tucker**  
Bureau of Labor Statistics

## ASA Continuing Education

**Madge Haven**  
Education Programs Administrator

**Rick Peterson**  
Education Programs Administrator

## ASA Meetings

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

**Kathleen Wert**  
Meetings Planner

**Donna R. Arrington**  
Meetings Planner

American Statistical Association  
Email: [jsm@amstat.org](mailto:jsm@amstat.org)  
Web: [www.amstat.org](http://www.amstat.org)

# 2006 PROGRAM COMMITTEE



JSM 2006 Program Chair  
**Lisa M. LaVange**  
The University of North Carolina



International Biometric Society (ENAR)  
**Brent Coull**  
Harvard School of Public Health



International Biometric Society (WNAR)  
**Gabriel Huerta**  
University of New Mexico



Statistical Society of Canada (SSC)  
**Georgia Roberts**  
Statistics Canada



Council of Chapters, ASA  
**James R. Kenyon**  
Bristol-Myers Squibb Company



Committee on Committees, ASA  
**Margo J. Anderson**  
University of Wisconsin-Milwaukee



Invited and Contributed Posters  
**Maura E. Stokes**  
SAS Institute



Section on Bayesian Statistical Science, ASA  
**Steven N. MacEachern**  
The Ohio State University



Biometrics Section, ASA  
**Michael J. Daniels**  
University of Florida



Statistical Computing Section, ASA  
**Michael W. Trosset**  
College of William and Mary



Section on Statistical Consulting, ASA  
**Todd G. Nick**  
Cincinnati Children's Hospital Medical Center



Section on Statistics in Defense and National Security, ASA  
**Wendy Martinez**  
Office of Naval Research



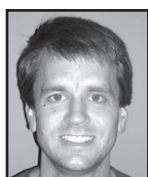
Section on Epidemiology, ASA  
**Lisa M. Sullivan**  
Boston University



Section on Government Statistics, ASA  
**Michael P. Cohen**  
Bureau of Transportation Statistics



Section on Statistical Graphics, ASA  
**Juergen Symanzik**  
Utah State University



Section on Nonparametric Statistics, ASA  
**Todd Ogden**  
Columbia University



Section on Physical & Engineering Sciences, ASA  
**Thomas M. Loughin**  
Kansas State University



Section on Quality & Productivity, ASA  
**Martha M. Gardner**  
General Electric Global Research





Institute of Mathematical Statistics (Invited)  
**Christopher Genovese**  
Carnegie Mellon University



Institute of Mathematical Statistics (Contributed)  
**Jennifer Hoeting**  
Colorado State University



Section on Statistics in Sports, ASA  
**Kara L. Morgan**  
IBM



General Methodology, ASA  
**Barry Graubard**  
National Cancer Institute



General Methodology, ASA  
**Jianwen Cai**  
The University of North Carolina



Section on Survey Research Methods, ASA  
**David R. Judkins**  
Westat



Biopharmaceutical Section, ASA  
**B. Christine Clark**  
ICON Clinical Research



Business & Economic Statistics Section, ASA  
**Margaret Land**  
Texas A&M University, Kingsville



Section on Teaching Statistics in the  
Health Sciences, ASA  
**Janet Tooze**  
Wake Forest University



Section on Statistical Education, ASA  
**Paul J. Roback**  
St. Olaf College



Section on Statistics and the Environment, ASA  
**Estelle Russek-Cohen**  
U.S. Food and Drug Administration



Section on Health Policy Statistics, ASA  
**Christopher H. Schmid**  
Tufts-New England Medical Center



Section on Statistics in Marketing, ASA  
**Andrew Ainslie**  
UCLA Anderson School of Management



Section on Risk Analysis, ASA  
**Ingo Ruczinski**  
The Johns Hopkins University



Social Statistics Section, ASA  
**Juanita Tamayo Lott**  
U.S. Census Bureau

## Local Area Committee

**Dan Fitzsimmons**  
Boeing, Cochair

**Tim Hesterberg**  
Insightful Corporation, Cochair

**Bruce Peters**  
TerraStat

**Christian K. Hansen**  
Eastern Washington University

**JoAnna Scott**  
University of Washington

**I-li Lu**  
Boeing

**Jim Ward**  
Sand Point Statistics Group

**Winson Taam**  
Boeing

**Brian Leroux**  
University of Washington

**Martin Meckesheimer**  
Boeing

**Aileen Murphy**  
ZymoGenetics

**Paul Below**  
IEEE Computer Society

**Paul Ross**  
Industrial and Organizational  
Psychologist (retired)

**Sabyasachi (Shobbo) Basu**  
Boeing

**Shuguang Song**  
Boeing

**Stephen Kaluzny**  
Insightful Corporation

**Dane Wu**  
Pacific Lutheran University

**Anne York**  
York Data Analysis

**Catherine White**  
University of Washington

# 2006 Association Officers

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## American Statistical Association

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**Daniel Kasprzyk**

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**Katherine Monti**

**June Morita**

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**Ronald Fecso**

**Ralph O'Brien**

**Nathaniel Schenker**

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**Edward Wegman**

International Representative

**Denise Lievesley**

Editors, *Journal of the American Statistical Association*

Coordinating and Applications and Case Studies:

**Mark S. Kaiser**

Theory and Methods:

**Stephen Portnoy** and **Walter Piegorsch**

Book Reviews:

**Robert Lund**

Editor, *The American Statistician*

**Peter Westfall**

Editor, *CHANCE*

**Michael Lavine**

Editors, *Current Index to Statistics*

**George Styan**, Abstracting Editor

**David James**, Database Editor

Editor, *Journal of Agricultural, Biological,  
and Environmental Statistics*

**Byron J. T. Morgan**

Editor, *Journal of Business & Economic Statistics*

**Torben G. Andersen**

Editor, *Journal of Computational and Graphical Statistics*

**Luke Tierney**

Editor, *Journal of Educational and Behavioral Statistics*

**David M. Thissen**

Editor, *STATS: The Magazine for Students of Statistics*

**Paul J. Fields**

Editor, *Technometrics*

**Randy Sitter**

Editors, *Amstat Online*

**Martha Aliaga**

**William B. Smith**

Editor, *Journal of Statistics Education*

**W. Robert Stephenson**

Editor, ASA/SIAM Book Series

**Martin T. Wells**

Editor, *Statistics in Biopharmaceutical Research*

**Joseph F. Heyse**

Council of Chapters Chair

**Ronald L. Wasserstein**

Council of Sections Chair

**John E. Boyer**

### Business Office

William B. Smith, Executive Director

American Statistical Association

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Alexandria, VA 22314-1943

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Fax: (703) 684-6456

Email: [asainfo@amstat.org](mailto:asainfo@amstat.org)

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



# International Biometric Society—Eastern North American Region

January – December 2006

President  
**Jane Pendergast**

Past President  
**Peter Imrey**

President-Elect  
**Lisa LaVange**

Secretary (2004–2006)  
**Lance Waller**

Treasurer (2004–2006)  
**Oliver Schabenberger**

## Regional Committee (RECOM)

President (Chair): **Jane Pendergast**

Six ordinary members (elected to three-year terms):  
RAB Chair: **Scarlett Bellamy**

|                        |                         |                       |
|------------------------|-------------------------|-----------------------|
| 2004–2006              | 2006–2007               | 2006–2008             |
| <b>Bruce Craig</b>     | <b>Gregory Campbell</b> | <b>A. John Bailor</b> |
| <b>Amita Manatunga</b> | <b>Naisyin Wang</b>     | <b>Stacy Linborg</b>  |
|                        |                         | <b>Tom TenHave</b>    |

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

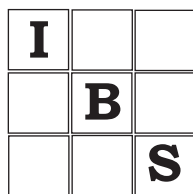
Appointed Members of the Regional Advisory Board  
(three-year terms)  
Chair: **Stacy Lindborg**

|                        |                          |                       |
|------------------------|--------------------------|-----------------------|
| 2004–2006              | 2006–2007                | 2006–2007             |
| <b>Hongshik Ahn</b>    | <b>Barbara Bailey</b>    | <b>Michael Hardin</b> |
| <b>Brent Coull</b>     | <b>Sudipto Banerjee</b>  | <b>Eileen King</b>    |
| <b>Debashis Ghosh</b>  | <b>Jason Conner</b>      | <b>Carol Lin</b>      |
| <b>Amy Herring</b>     | <b>Todd Durham</b>       | <b>Keith Muller</b>   |
| <b>Tom Loughin</b>     | <b>Kirk Easley</b>       | <b>Soomin Park</b>    |
| <b>Jared Lunceford</b> | <b>Abie Ekangaki</b>     | <b>Shyamal</b>        |
| <b>Paddada</b>         |                          |                       |
| <b>Jeffrey Morris</b>  | <b>Deborah Ingram</b>    | <b>Jose Pinheiro</b>  |
| <b>Kerrie Nelson</b>   | <b>Xuejen Peng</b>       | <b>Paul Rathouz</b>   |
| <b>Frank Roesch</b>    | <b>James Rosenberger</b> | <b>Jeremy Taylor</b>  |
| <b>Helen Zhang</b>     | <b>Maura Stokes</b>      | <b>Melanie Taylor</b> |

## Programs

2006 Joint Statistical Meetings  
**Brent Coull**

2007 Joint Statistical Meetings  
**Christopher S. Coffey**



2006 Spring Meeting – Tampa, Florida  
Program Chair: **Montserrat Fuentes**  
Program Cochair: **Jose Pinheiro**

2007 Spring Meeting – Atlanta, Georgia  
Program Chair: **Amy Herring**  
Program Cochair: **Gene Pennello**

*Biometrics* Editors  
**Marie Davidian, Laurence Freedman, Mike Kenward, Naisyin Wang**

*Biometric Bulletin* Editor  
**Urania Dafni**

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

ENAR Executive Director  
**Kathy Hoskins**

International Biometric Society Business Manager  
**Claire Shanley**

Committee of Presidents of Statistical Societies (COPSS) ENAR Representatives  
**Jane Pendergast (President), Peter Imrey (Past-President), Lisa LaVange (President-Elect)**

ENAR Standing/Continuing Committee Chairs  
Nominating **Marie Davidian**  
Sponsorship **B. Christine Clark**

Information Technology Oversight Committee (ITOC)  
**Bonnie LaFleur**

American Association for the Advancement of Science (Joint with WNAAR) Terms through February 22, 2006

|                                  |                        |
|----------------------------------|------------------------|
| Section N, Medical Sciences      | <b>Joan Hilton</b>     |
| Section G, Biological Sciences   | <b>Geof Givens</b>     |
| Section U, Statistics            | <b>Mary Foulkes</b>    |
| Section O, Agriculture           | <b>Kenneth Porter</b>  |
| Section E, Geology and Geography | <b>Stephen Rathbun</b> |

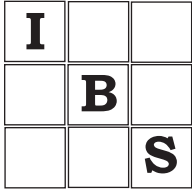
National Institute of Statistical Sciences (ENAR President is also an ex-officio member) Board of Trustees Member: **Lisa LaVange**

## Business Office

Eastern North American Region  
International Biometric Society  
12100 Sunset Hills Road, Suite 130  
Reston, VA 20190  
Phone: (703) 437-4377  
Fax: (703) 435-4390  
Email: [enar@enar.org](mailto:enar@enar.org)  
Web: [www.enar.org](http://www.enar.org)



## International Biometric Society— Western North American Region



President  
**Christine McLaren**

President-Elect  
**Ken Burnham**

Past President  
**Chris Drake**

Secretary  
**Antje Hoering**

Treasurer  
**Kenneth Kopecky**

Program Coordinator  
**Weng Kee Wong**

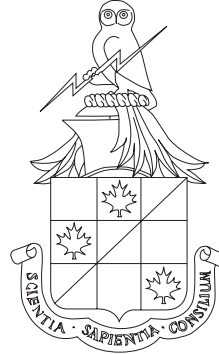
Representatives at-Large  
2006–2008: **Jennifer Hoeting, Rhonda Rosychuk**  
2005–2007: **Todd Alonzo, Barbra Richardson**  
2004–2006: **Ken Burnham, Sandrine Dudoit**

IBS Council Representatives  
**John Neuhaus**  
**Elizabeth Thompson**

### **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: [www.wnar.org](http://www.wnar.org)

## Statistical Society of Canada- Executive 2006–2007



President  
**Charmaine Dean**

President-Elect  
**Christian Genest**

Past President  
**David Binder**

Secretary  
**Paul Cabilio**

Treasurer  
**Edward Chen**

Public Relations Officer  
**Angelo Canty**

### **Business Office:**

Statistical Society of Canada  
577 King Edward Avenue  
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Fax: (613) 565-6774  
Email: [admin@ssc.ca](mailto:admin@ssc.ca)  
Web: [www.ssc.ca](http://www.ssc.ca)

# Institute of Mathematical Statistics



## Executive Committee

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President-Elect

**Jianqing Fan**

Past President

**Thomas Kurtz**

Program Secretary

**Andrew Nobel**

Executive Secretary

**Cindy Christiansen**

Treasurer

**Jiayang Sun**

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Editor, *The Annals of Applied Probability*

**Ed Waymire**

Editor, *The Annals of Probability*

**Gregory F. Lawler**

Editors, *The Annals of Statistics*

**Morris L. Eaton**

**Jianqing Fan**

Executive Editor, *Statistical Science*

**Ed George**

Editor, *IMS Bulletin*

**Bernard Silverman**

Editor, *Lecture Notes-Monograph Series*

**Richard Vitale**

Editor, IMS Web Site

**Krzysztof Burdzy**

Managing Editor, *Statistics*

**Paul Shaman**

Managing Editor, *Probability*

**Michael Phelan**

Editor, *Electronic Journal of Probability*

**Andreas Greven**

Editor, *Electronic Communications in Probability*

**David Nualart**

Managing Editors, *Electronic Probability Journals*

**Philippe Carmona**

**Zhenqing Chen**

Editor, *Probability Surveys*

**David Aldous**

## Council

**Richard Gill** 2006

**Hans R. Kunsch** 2006

**Christian P. Robert** 2006

**Ruth J. Williams** 2006

**Thomas DiCiccio** 2006

**Susan Holmes** 2007

**Nancy Flournoy** 2007

**Erwin Bolthausen** 2007

**Michael Steele** 2007

**Xuming He** 2007

**Maury Bramson** 2008

**Merlise Clyde** 2008

**John H. J. Einmahl** 2008

**Jun Liu** 2008

**Daniel Peña** 2008

## Business Office

Elyse R. Gustafson, Executive Director

P.O. Box 22718

Beachwood, OH 44122

Phone: (216) 295-2340

Fax: (216) 295-5661

Email: [ims@imstat.org](mailto:ims@imstat.org)

Web: [www.imstat.org](http://www.imstat.org)

# Continuing Education *at a glance*

| Time                            | Course | Instructor(s)  | Course Title  |
|---------------------------------|--------|--|---|
| <b>SATURDAY, AUGUST 5, 2006</b> |        |  |   |
| 8:30 a.m. – 5:00 p.m.           | CE_01C | Gary G. Koch/Todd Schwartz/Rebekkah Dann               | Categorical Data Analysis (two-day course)  |
| 8:30 a.m. – 5:00 p.m.           | CE_02C | Partha Lahiri  | Small Area Estimation   |
| 8:30 a.m. – 5:00 p.m.           | CE_03C | Peter Guttorp/Paul Sampson                             | Modern Approaches to Nonstationary Models of Spatial and Space-Time Processes with Air Quality Applications |
| 8:30 a.m. – 5:00 p.m.           | CE_04C | Bruno Sanó   | Bayesian Inference  |
| 8:30 a.m. – 5:00 p.m.           | CE_05C | Richard De Veaux                                       | Practical Data Mining   |
| 8:30 a.m. – 5:00 p.m.           | CE_06C | Garrett Fitzmaurice                                    | Applied Longitudinal Analysis   |
| <b>SUNDAY, AUGUST 6, 2006</b>   |        |  |   |
| 8:30 a.m. – 5:00 p.m.           | CE_01C | Gary G. Koch/Todd Schwartz/Rebekkah Dann               | Categorical Data Analysis (two-day course)  |
| 8:30 a.m. – 5:00 p.m.           | CE_07C | David Madigan/David Lewis                              | Text Mining   |
| 8:30 a.m. – 5:00 p.m.           | CE_08C | Roger Tourangeau                                       | The Psychology of Survey Response   |
| 8:30 a.m. – 5:00 p.m.           | CE_09C | Stefan Wellek  | Statistical Methods for the Confirmatory Analysis of Equivalence/Noninferiority Studies                     |
| 8:30 a.m. – 5:00 p.m.           | CE_10C | Jennifer A. Hoeting/Geof H. Givens                     | Computational Statistics: Methods for Monte Carlo Integration and Optimization                              |
| 8:30 a.m. – 5:00 p.m.           | CE_11C | Frank E. Harrell, Jr.                                  | Regression Modeling Strategies  |
| 8:30 a.m. – 5:00 p.m.           | CE_12C | Bradley P. Carlin/Thomas A. Louis                      | Hierarchical Bayes Methods and Software for Data Analysis   |
| 8:30 a.m. – 5:00 p.m.           | CE_13C | Oliver Schabenberger                                   | Generalized Linear Mixed Models: Theory and Applications  |
| <b>MONDAY, AUGUST 7, 2006</b>   |        |  |   |
| 8:00 a.m. – noon                | CE_14C | Anthony R. Olsen/Donald L. Stevens, Jr.                | Spatial Survey Design with a Focus on Natural Resources   |
| 8:00 a.m. – noon                | CE_15C | Danyu Lin  | Analysis of Multivariate Failure Time Data  |
| ★ 8:30 a.m. – 5:00 p.m.         | CE_16C | Peter H. Westfall                                      | Multiple Comparisons and Multiple Tests   |
| 8:30 a.m. – 5:00 p.m.           | CE_17C | Bruce D. Spencer/Juha M. Alho                          | Statistical Demography with Applications  |
| ★ 8:30 a.m. – 5:00 p.m.         | CE_18C | Christy Chuang-Stein/Alex Dmitrienko/Geert Molenberghs | Analysis of Clinical Trials: Theory and Applications  |
| 8:30 a.m. – 5:00 p.m.           | CE_19C | Alan Gelfand/Athanasios Kottas                         | Applied Bayesian Nonparametric Modeling   |
| 8:30 a.m. – 5:00 p.m.           | CE_20C | Sophia Rabe-Hesketh/Anders Skrondal                    | Generalized Linear and Latent Mixed Models  |
| 1:00 p.m. – 5:00 p.m.           | CE_21C | Naomi B. Robbins                                       | Creating More Effective Graphs  |
| <b>TUESDAY, AUGUST 8, 2006</b>  |        |  |   |
| 8:00 a.m. – noon                | CE_23C | Thomas W. O’Gorman                                     | Adaptive Tests of Significance and Confidence Intervals   |
| 8:30 a.m. – 5:00 p.m.           | CE_24C | Malay Ghosh/Bhramar Mukherjee/Samiran Sinha            | Bayesian Analysis of Case-Control Data  |
| 8:30 a.m. – 5:00 p.m.           | CE_25C | Dennis R. Helsel/Lopaka Lee                            | Analysis of Environmental Data with Nondetects  |
| 8:30 a.m. – 5:00 p.m.           | CE_26C | Geert Verbeke/Geert Molenberghs                        | Models for Discrete Repeated Measures   |
| 8:30 a.m. – 5:00 p.m.           | CE_27C | Judith A. Swan   | Effective Scientific Writing  |
| 8:30 a.m. – 5:00 p.m.           | CE_28C | Scott D. Patterson/Byron Jones                         | Bioequivalence and Statistics in Clinical Pharmacology  |
| 8:30 a.m. – 5:00 p.m.           | CE_29C | Geoff McLachlan/Kim-Anh Do                             | Methods and Computational Tools for the Screening and Classification of Microarray Gene Expression Data     |
| 1:00 p.m. – 5:00 p.m.           | CE_30C | Ingram Olkin   | Meta-analysis: Statistical Methods for Combining the Results of Independent Studies                         |

★—Excellence-in-CE Award

# WEDNESDAY, August 9

**FEE: \$50 each**  
**Computer Technology Workshops**



## Computer Technology Workshops *at a glance*

| Time                    | Course | Instructor(s)                          | Title  |
|-------------------------|--------|--|--|
| 8:30 a.m. – 10:15 a.m.  | CE_31T | Dongping Fang                          | Time Series in SPSS: Automatic Model Selection and Outlier Detection   |
| 8:30 a.m. – 10:15 a.m.  | CE_32T | Michael Borenstein/Hannah R. Rothstein | Meta-analysis: Concepts and Applications   |
| 8:30 a.m. – 10:15 a.m.  | CE_33T | John Castelloe                         | Power and Sample Size Analysis Using SAS/STAT Software   |
| 10:30 a.m. – 12:15 p.m. | CE_34T | Mikhail Golovnya                       | Introduction to CART: Data Mining with Decision Trees  |
| 10:30 a.m. – 12:15 p.m. | CE_35T | Michael Borenstein                     | Power Analysis: A Simple and Effective Approach  |
| 10:30 a.m. – 12:15 p.m. | CE_36T | Robert Cohen                           | Modern Regression Analysis in SAS Software   |
| 2:00 p.m. – 3:45 p.m.   | CE_37T | Mikhail Golovnya                       | Advances in Data Mining: Jerome Friedman's TreeNet/MART and Leo Breiman's Random Forests                     |
| 2:00 p.m. – 3:45 p.m.   | CE_38T | Cyrus Mehta                            | East 4: A Comprehensive Package for Adaptive and Group Sequential Design, Interim Monitoring, and Simulation |
| 2:00 p.m. – 3:45 p.m.   | CE_39T | Colin (Lin) Chen                       | Quantile Regression Using the SAS QUANTREG Procedure   |
| 4:00 p.m. – 5:45 p.m.   | CE_40T | Mikhail Golovnya                       | Introduction to MARS: Predictive Modeling with Nonlinear Automated Regression Tools                          |
| 4:00 p.m. – 5:45 p.m.   | CE_41T | Shawn Harahush                         | From Software to Solutions in Statistics and Risk Analysis   |

# Seeking a CAREER in STATISTICS?

Seattle, WA  
August 6–10



Are you nearing graduation and wondering about entry-level jobs?  
Are you an experienced statistics professional interested in career information?

## Register for the JSM Career Placement Service!

### *What can the CAREER PLACEMENT SERVICE do for YOU?*

Each year, hundreds of companies, universities, recruiters, and government agencies search for applicants using the JSM Career Placement Service. At the 2005 JSM in Minneapolis, employers listed more than 200 positions for qualified statisticians. The JSM Career Placement Service provided the best opportunity for qualified applicants to meet employers, establish valuable contacts, and learn about organizations employing statisticians.

### *Career Placement Service BENEFITS*

**APPLICANT READING AREA**—for applicants to review complete job descriptions and contact information for all registered employers.

**VISIBILITY TO EMPLOYERS**—applicants who register by July 20, 2006, will have their forms and résumés included in the Advance Applicant access database, available to employers prior to the meeting. Employers often contact applicants whose forms are included in the database prior to JSM to schedule interviews.

**COMPUTERIZED MESSAGE CENTER**—allows applicants and employers to communicate throughout the meeting.

***[www.amstat.org/meetings/jsm/2006/placement](http://www.amstat.org/meetings/jsm/2006/placement)***

#### Organizations Represented at Recent JSM Career Placement Services

Capital One • FDA • Genentech • PPD • Stanford University  
GE Consumer Finance • Pacific Northwest National Lab • Eli Lilly

**The JSM Career Placement Service** offers a full-service recruiting facility, including online registration, private interview booths, and an onsite computerized message center. Each year, hundreds of qualified applicants look to the JSM Career Placement Service to begin or further their careers in statistics. If you are an employer with statistical job openings or a statistician looking for a first or new job, the JSM Career Placement Service is here to help. Please see Page 19 for hours of operation.

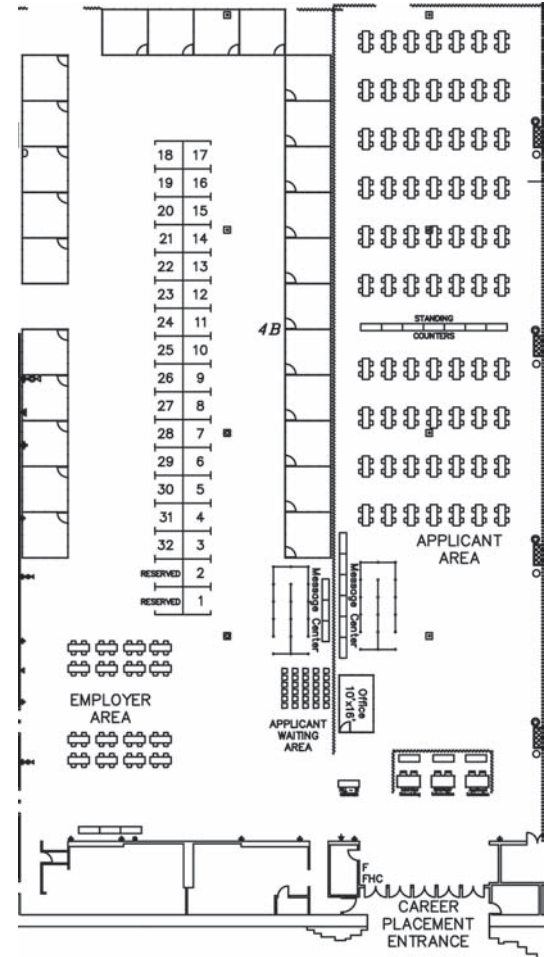
## JSM 2006 Registered Employers\*

### Executive Suite Employers

|                                    |  |
|------------------------------------|--|
| Abbott Vascular                    | Mayo Clinic                                    |
| Amgen Inc.                         | Merck Research Laboratories                    |
| Battelle                           | National Institute of Standards and Technology |
| Bristol-Myers Squibb               | National Opinion Research Center               |
| Capital One                        | National Security Agency                       |
| Eli Lilly and Company              | Novartis Pharmaceuticals, Inc.                 |
| Food and Drug Administration, CDRH | PPD, Inc.                                      |
| GE Consumer Finance                | sanofi-aventis                                 |
| GlaxoSmithKline                    | SAS Institute, Inc.                            |
| Google                             | University of Florida, College of Medicine     |
| John Deere Credit                  |  |

### Registered Employers

|  |   |
|--|---|
| Axio Research Acquisition Co., LLC.                | Smith Hanley Consulting Group                       |
| Baruch College, City University of New York        | Takeda Global Research and Development Center, Inc. |
| Bureau of Labor Statistics                         | TAP Pharmaceuticals                                 |
| Clemson University                                 | Texas Tech University                               |
| CSU Fullerton                                      | The Boeing Company                                  |
| DuPont Engineering Technology                      | The Cambridge Group, Ltd.                           |
| GE Global Research                                 | The EMMES Corporation                               |
| Internal Revenue Service                           | The University of Texas Health Science Center       |
| Johnson & Johnson Family of Companies              | U.S. Census Bureau                                  |
| Kennesaw State University                          | University of Alberta, School of Business           |
| Lawrence Livermore National Laboratory             | University of Denver, Daniels College of Business   |
| LSU School of Public Health                        | University of South Florida                         |
| Medical Technology and Practice Patterns Institute | Virginia Commonwealth University                    |
| Northwestern University                            | W.L. Gore & Associates                              |
| Organon  | Washington University, School of Medicine           |
| Pfizer Global Research and Development             | Westat  |
| SciMetrika, LLC                                    |   |
| Smith Hanley Associates                            |   |



### Washington State Convention & Trade Center Exhibit

Hall 4B

\*This list represents employers who registered by the Early Bird deadline of June 29, 2006. Additional employers will be participating onsite.



# Listing of Exhibitors by Booth Number

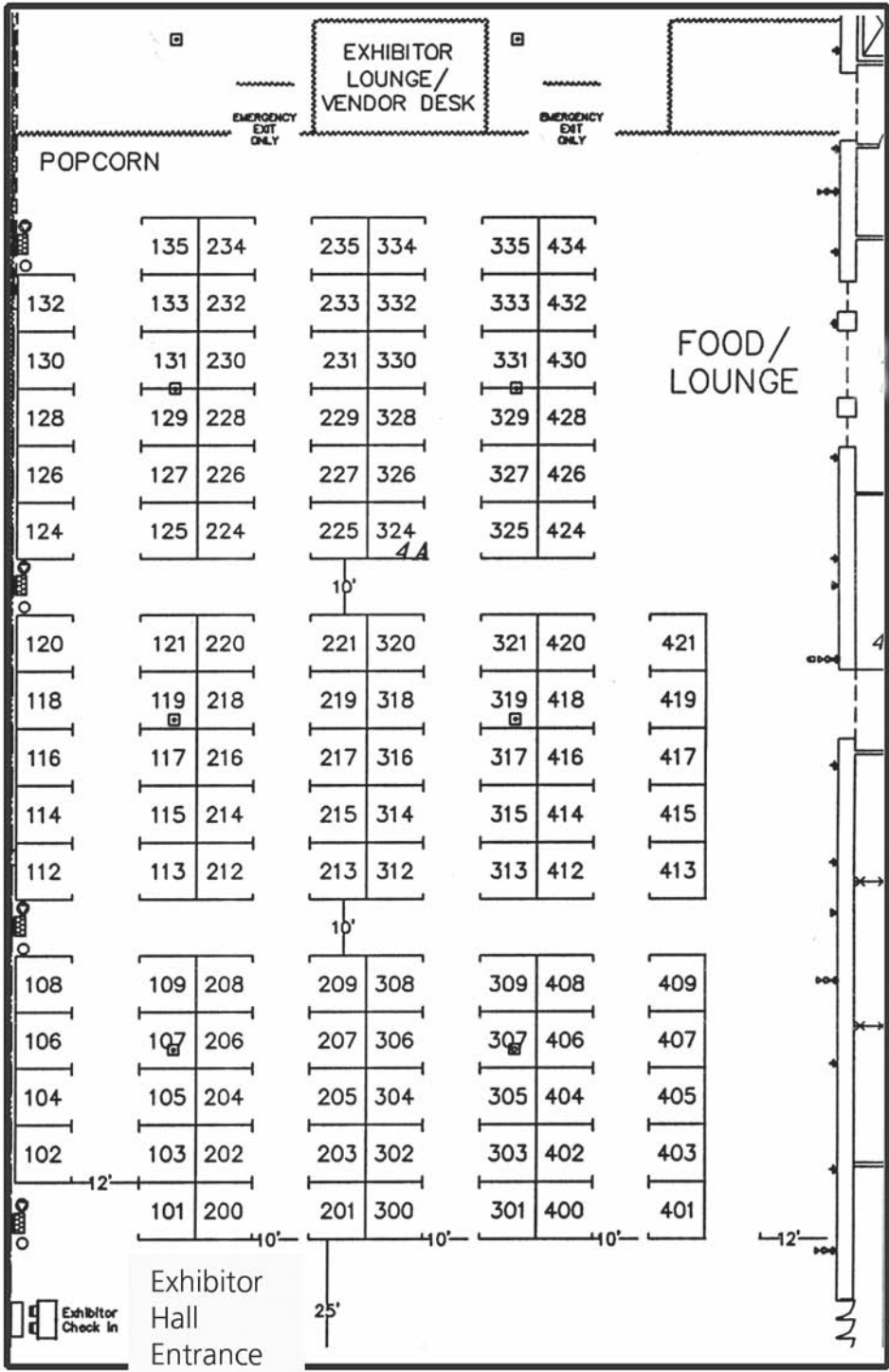
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| <b>Booth Number</b>       | <b>Exhibitor Name</b>  |
|---------------------------|--|
| <b>101, 103, 105, 107</b> | American Statistical Association   |
| <b>102</b>                | Institute of Mathematical Statistics                                     |
| <b>104</b>                | Statistical Society of Canada  |
| <b>106</b>                | SIAM—Society for Industrial & Applied Mathematics                        |
| <b>108</b>                | ASA-SIAM Series  |
| <b>109</b>                | JSM 2007 Salt Lake City  |
| <b>112, 114</b>           | Minitab Inc.   |
| <b>113, 115, 117, 119</b> | Springer   |
| <b>116, 118</b>           | Salford Systems  |
| <b>120</b>                | Bureau of Economic Analysis  |
| <b>121</b>                | MacKichan Software   |
| <b>124</b>                | National Center for Health Statistics                                    |
| <b>125</b>                | Centers for Disease Control and Prevention                               |
| <b>126</b>                | Bureau of Labor Statistics   |
| <b>127</b>                | Internal Revenue Service (IRS), Statistics of Income Division            |
| <b>128, 130</b>           | U.S. Census Bureau   |
| <b>129</b>                | U.S. Department of Education   |
| <b>131, 133</b>           | National Security Agency   |
| <b>132</b>                | U.S. Department of Agriculture, National Agricultural Statistics Service |
| <b>135</b>                | National Death Index, NCHS, CDC  |
| <b>200, 202</b>           | JMP  |
| <b>201, 203, 205</b>      | SAS Application  |
| <b>204, 206, 208</b>      | SAS Publishing   |
| <b>207, 209</b>           | SAS Education  |
| <b>212, 214</b>           | Cytel Inc.   |
| <b>213</b>                | NCSS   |
| <b>215, 217</b>           | Duxbury  |
| <b>216</b>                | statistics.com   |
| <b>218, 220</b>           | Cambridge University Press   |
| <b>219</b>                | Hawkes Learning Systems  |
| <b>221</b>                | Blackwell Publishing   |
| <b>224</b>                | Placemart Personnel Service  |
| <b>225</b>                | The Cambridge Group Ltd.   |
| <b>233, 235</b>           | Aptech Systems, Inc.   |
| <b>300</b>                | W.H. Freeman and Company   |

| <b>Booth Number</b>                 | <b>Exhibitor Name</b>                        |
|-------------------------------------|--|
| <b>301, 303</b>                     | Statpoint Inc.                               |
| <b>302</b>                          | Visual Numerics, Inc.                        |
| <b>304</b>                          | Capital One                                  |
| <b>305</b>                          | Eli Lilly and Company                        |
| <b>306, 308</b>                     | Prentice Hall                                |
| <b>307</b>                          | GE Money - Global Decision Sciences          |
| <b>309, 408</b>                     | Insightful Corporation                       |
| <b>312</b>                          | SAGE Publications                            |
| <b>313, 315</b>                     | RTI International                            |
| <b>314</b>                          | MedFocus LLC                                 |
| <b>316</b>                          | Allergan, Inc.                               |
| <b>317, 319, 321, 416, 418, 420</b> | CRC Press - Taylor & Francis Group LLC       |
| <b>318</b>                          | Stat-Ease, Inc.                              |
| <b>320</b>                          | Smith Hanley                                 |
| <b>324</b>                          | Amgen Inc.                                   |
| <b>325</b>                          | Systat Software, Inc.                        |
| <b>326</b>                          | ASG, Inc.                                    |
| <b>327</b>                          | McGraw-Hill Higher Education                 |
| <b>329</b>                          | Organon, USA                                 |
| <b>331</b>                          | Pfizer Global Research and Development       |
| <b>400, 402</b>                     | Oxford University Press                      |
| <b>401, 403</b>                     | StatSoft, Inc.                               |
| <b>404</b>                          | Mayo Clinical Trial Services                 |
| <b>405</b>                          | Kforce Clinical Research Staffing            |
| <b>406</b>                          | Amazon.com                                   |
| <b>407, 409</b>                     | ELSEVIER                                     |
| <b>412</b>                          | Addison-Wesley                               |
| <b>413</b>                          | Palisade Corporation                         |
| <b>415, 417</b>                     | Scientific Computing Associates, Inc. (SCAI) |
| <b>419</b>                          | Biostat, Inc.                                |
| <b>421</b>                          | COMSYS                                       |
| <b>424, 426, 428, 430</b>           | Wiley  |
| <b>432, 434</b>                     | SPSS, Inc.                                   |



# EXPO 2006 Floor Plan



Washington State Convention & Trade Center—Exhibit Hall 4A

# Listing of Exhibitors by Name

| Exhibitor Name   | Booth Number                 |
|--|------------------------------|
| ASA-SIAM Series  | 108                          |
| ASG, Inc.  | 326                          |
| Addison-Wesley   | 412                          |
| Allergan, Inc.   | 316                          |
| Amazon.com   | 406                          |
| American Statistical Association                                 | 101, 103, 105, 107           |
| Amgen Inc.   | 324                          |
| Aptech Systems, Inc.   | 233, 235                     |
| Biostat, Inc.  | 419                          |
| Blackwell Publishing   | 221                          |
| Bureau of Economic Analysis                                      | 120                          |
| Bureau of Labor Statistics                                       | 126                          |
| COMSYS   | 421                          |
| CRC Press -<br>Taylor & Francis Group LLC                        | 321, 319, 317, 416, 418, 420 |
| Cambridge University Press                                       | 218, 220                     |
| Capital One  | 304                          |
| Centers for Disease Control and Prevention                       | 125                          |
| Cytel Inc.   | 212, 214                     |
| Duxbury  | 215, 217                     |
| Eli Lilly and Company  | 305                          |
| ELSEVIER   | 407, 409                     |
| GE Money - Global Decision Sciences                              | 307                          |
| Hawkes Learning Systems  | 219                          |
| Insightful Corporation   | 309, 408                     |
| Institute of Mathematical Statistics                             | 102                          |
| Internal Revenue Service (IRS),<br>Statistics of Income Division | 127                          |
| JMP  | 200, 202                     |
| JSM 2007 Salt Lake City  | 109                          |
| Kforce Clinical Research Staffing                                | 405                          |
| MacKichan Software   | 121                          |
| Mayo Clinical Trial Services                                     | 404                          |
| McGraw-Hill Higher Education                                     | 327                          |
| MedFocus LLC   | 314                          |
| Minitab Inc.   | 112, 114                     |
| NCSS   | 213                          |

| Exhibitor Name  | Booth Number       |
|---|--------------------|
| National Center for Health Statistics (NCHS)                                | 124                |
| National Death Index, NCHS, CDC   | 135                |
| National Security Agency  | 131, 133           |
| Organon USA   | 329                |
| Oxford University Press   | 400, 402           |
| Palisade Corporation  | 413                |
| Pfizer Global Research and Development                                      | 331                |
| Placemart Personnel Service   | 224                |
| Prentice Hall   | 306, 308           |
| RTI International   | 313, 315           |
| SAGE Publications   | 312                |
| Salford Systems   | 116, 118           |
| SAS Application   | 201, 203, 205      |
| SAS Education   | 207, 209           |
| SAS Publishing  | 204, 206, 208      |
| Scientific Computing Associates, Inc. (SCAI)                                | 415, 417           |
| SIAM-Society for Industrial & Applied Mathematics                           | 106                |
| Smith Hanley  | 320                |
| Springer  | 113, 115, 117, 119 |
| SPSS, Inc.  | 432, 434           |
| Stat-Ease, Inc.   | 318                |
| Statistical Society of Canada   | 104                |
| statistics.com  | 216                |
| Statpoint Inc.  | 301, 303           |
| StatSoft, Inc.  | 401, 403           |
| Systat Software, Inc.   | 325                |
| The Cambridge Group Ltd   | 225                |
| U.S. Census Bureau  | 128, 130           |
| U.S. Department of Agriculture,<br>National Agricultural Statistics Service | 132                |
| U.S. Department of Education  | 129                |
| Visual Numerics, Inc.   | 302                |
| W.H. Freeman & Company  | 300                |
| Wiley   | 424, 426, 428, 430 |

# Who's Who in the Exhibit Hall

▲—Pinnacle Partner ◆—Diamond Partner ★—Gold Partner ○—Silver Partner

## **ASA-SIAM Series** 108

Alexandria, Virginia

The ASA-SIAM Series on Statistics and Applied Probability is published jointly by the ASA and the Society for Industrial and Applied Mathematics. The series consists of a spectrum of books on topics in statistics and applied probability and provides inexpensive, quality publications of interest to the intersecting membership of the two societies.

## **ASG, Inc.** 326

Vernon Hills, Illinois

ASG, Inc., is a growing national staffing and functional outsourcing company 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.

## **Addison-Wesley** 412

Upper Saddle River, New Jersey

Stop by, meet our authors, and explore a full display of our statistics titles, including DeVeaux/Velleman/Bock's *Intro Stats (2nd edition)* and *Triola Elementary Statistics (10th edition)* and new texts in biostatistics, probability, and time series. And try out our new and exciting technology, including MyStatLab and ActivStats!

## **Allergan, Inc.** 316

Irvine, California

Allergan is a global specialty pharmaceutical company that develops and commercializes innovative products for eye care, neuromodulator, skin care, and other specialty markets.

## **Amazon.com** 406

Seattle, Washington

Amazon.com Risk Analytics team is at the forefront of risk management at Amazon. The activities of Risk Analytics have a direct impact on Amazon's business through the use of statistical modeling and analysis and data mining to detect and eliminate the ever-increasing risks in the e-commerce marketplace.

## **American Statistical Association** 101, 103, 105, 107

Alexandria, Virginia

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 many areas of statistics, including medicine, computer applications, quality management, analytical research, setting standards for statistics, and promoting statistical education.

## **Amgen Inc.** 324

Thousand Oaks, California,

Amgen (NASDAQ: AMGN)—a biotechnology pioneer—discovers, develops, and delivers innovative human therapeutics. Our medicines have helped millions of patients in the fight against cancer, kidney disease, rheumatoid arthritis, and other serious illnesses. With a deep and broad pipeline of potential new medicines, we continue to advance science to serve patients.

## **Aptech Systems, Inc.** 233, 235

Maple Valley, Washington

The GAUSS Mathematical and Statistical System is a fast matrix programming language used widely for solving mathematical and statistical problems. GAUSS is designed for computationally intensive tasks and suits the researcher who lacks time to develop programs in C or FORTRAN, but finds statistical or mathematical packages inflexible.

## **Biostat, Inc.** 419

Englewood, New Jersey

Comprehensive Meta-Analysis is the world's best-selling program for meta-analysis. Sign up for our workshop or visit our booth for a free trial CD—[www.meta-analysis.com](http://www.meta-analysis.com).

## **Blackwell Publishing** 221

Malden, Massachusetts

Blackwell Publishing is a leading international publisher in all areas of statistics, science, technology, and medicine. Please stop by our booth for complimentary copies of our journals. You also may visit our web site at [www.blackwellpublishing.com](http://www.blackwellpublishing.com) for information about all our publications.

## **Bureau of Economic Analysis** 120

Baltimore, Maryland

The BEA promotes a better understanding of the U.S. economy by providing the most timely, relevant, and accurate economic accounts data in an objective and cost-effective way.

## **Bureau of Labor Statistics** 126

Washington, DC

As the principal fact-finding agency for the federal government in the broad field of labor economics and statistics, the BLS provides useful data that pertain to your community. For example, BLS tracks employment, work-related injuries, illnesses and fatalities, the Consumer Price Index, and wages by area and occupational title. We encourage you to visit our booth and ask for our five-minute demonstration on how to access online current and historical BLS data from the database. Our web site is [www.bls.gov](http://www.bls.gov).

- COMSYS** 421  
Portage, Michigan  
COMSYS is the leading provider of SAS statistics and clinical services to companies nationwide. We enable statisticians and programmers to support their customers more efficiently through innovative analytical applications and overflow support. COMSYS is a SAS Alliance Gold Partner, with more than 40 offices in the United States and Canada.
- CRC Press - Taylor & Francis Group LLC** 317, 319, 321, 416, 418, 420  
Boca Raton, Florida  
Chapman & Hall/CRC (now a part of The 20) Taylor & Francis Group LLC is a premier publisher of books and journals on statistics. Please visit our booth to pick up a journal sample copy and browse through our books that include specials at a 50% discount and all other titles at up to a 25% discount.
- **Cambridge University Press** 218, 220  
New York, New York  
Cambridge's new titles in statistics, biostatistics, econometrics, mathematical finance, and more are available at a 20% discount. New books in the Cambridge Series in Statistical and Probabilistic Mathematics include *Statistical Mechanics of Disordered Systems* by Anton Bovier and *The Coordinate-Free Approach to Linear Models* by Michael J. Wichura.
- ◆ **Capital One** 304  
Richmond, Virginia  
Capital One is a Fortune 500 company providing access to credit to tens of millions worldwide. We also provide auto, home, and business loans, plus banking and other services. Statistical expertise is central to our success. Capital One seeks superior applied statisticians at all career stages.
- Centers for Disease Control and Prevention** 125  
Atlanta, Georgia  
The Centers for Disease Control and Prevention is one of the 13 major operating components of the 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.
- **Cytel Inc.** 212, 214  
Cambridge, Massachusetts  
Cytel Inc. provides innovative clinical trial design services and specialized statistical applications. Cytel's East® is used throughout industry, academia, and the FDA for designing, simulating, and monitoring clinical trials. Cytel develops superior tools and services that increase problemsolving efficiencies and reduce development costs.
- Duxbury** 215, 217  
Belmont, California  
Visit Duxbury-Thomson Publishers at booths 215 and 217. View our latest publications and technology innovations. With more than 30 years of 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...
- ★ **Eli Lilly and Company** 305  
Indianapolis, Indiana  
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.
- ELSEVIER** 407, 409  
New York, New York  
Elsevier/Academic Press is a worldwide leader in scientific and technical publishing. Come see our latest titles, including Roussas' *An Introduction to Probability*, Ross' *Introduction to Probability Models (9th edition)*, and Freund/Wilson's *Regression Analysis (2nd edition)*. Pick up instructor copies at up to 30% off in addition to sample journals, including *Statistical Methodology*. Visit <http://books.elsevier.com/apmath>.
- GE Money - Global Decision Sciences** 307  
Stamford, Connecticut  
GE Money is a leading provider of credit services to consumers, retailers, and auto dealers in 50 countries. With more than 300,000 employees across 160 countries and the power of \$163 billion in assets, we offer flexible working arrangements, a diverse environment, world-class leadership, comprehensive training, and "Fast Track Leadership Programs."
- Hawkes Learning Systems** 219  
Charleston, South Carolina  
For 20 years, Hawkes Learning Systems has specialized in math courseware. Our courseware is based on mastery-level learning and offers unlimited practice problems, tutorials, and intelligent feedback. On its own or as a supplement, our courseware improves student performance and provides instructors with an online grade book and state-of-the-art test generator.
- Insightful Corporation** 309, 408  
Seattle, Washington  
Insightful Corporation (NASDAQ:IFUL) is a provider of predictive analytics and reporting solutions. Insightful products S-PLUS®, Insightful Miner®, S-PLUS® Server, and InFact® provide companies with the knowledge to act. Insightful consulting services provide specialized expertise and proven processes for the design, development, and deployment of customized solutions.

|  |          |   |          |
|--|----------|---|----------|
| <b>Institute of Mathematical Statistics</b><br>Beachwood, Ohio   | 102      | <b>McGraw-Hill Higher Education</b><br>New York, New York   | 327      |
| The Institute of Mathematical Statistics 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 and organization of scientific meetings.   |          | McGraw-Hill is the leading provider of textbooks and technology applications in higher education and publishes introductory and advanced titles in general statistics and statistics for business and economics, engineering, and social sciences. ALEKS, Homework Manager Plus, Visual Statistics, and MathZone are a few of the technology applications available from McGrawHill.  |          |
| <b>Internal Revenue Service (IRS),<br/>Statistics of Income Division</b><br>Washington, DC   | 127      | <b>MedFocus LLC</b><br>Des Plaines, Illinois  | 314      |
| The Statistics of Income (SOI) Division produces data compiled from tax and information returns filed with the IRS. SOI data about the financial composition of individuals, business taxpayers, tax-exempt organizations, and more are available through publications, electronic databases, Tax Stats ( <a href="http://www.irs.gov/taxstats">www.irs.gov/taxstats</a> ), and SOI's Statistical Information Services office, (202) 874-0410. |          | MedFocus offers clinical and scientific research contract outsourcing and staffing to the pharmaceutical, biotechnology, and medical device industries specifically. MedFocus has achieved premier status as a top source of hiring for clinical research.  |          |
| <b>JMP</b><br>Cary, North Carolina   | 200, 202 | <b>Minitab Inc.</b><br>State College, Pennsylvania  | 112, 114 |
| Point. Click. Discover. With JMP(r)6, the most recent release of statistical discovery software from SAS, it's that simple to innovate new products, processes, and services—with fewer R&D bottlenecks and reduced time to market. Check us out.  |          | Minitab®, the leading statistical software package in education, is used around the world by instructors at more than 4,000 colleges, universities, and high schools. Minitab Statistical Software contains all the statistical methods students need and is powerful, reliable, and easy-to-use. For affordable student rental and purchase options, visit e-academy's Minitab Center at <a href="http://www.e-academy.com/minitab">www.e-academy.com/minitab</a> . For more information, visit <a href="http://www.minitab.com/education">www.minitab.com/education</a> . |          |
| <b>JSM 2007 Salt Lake City</b><br>Salt Lake City, Utah   | 109      | <b>NCSS</b><br>Kaysville, Utah  | 213      |
| Salt Lake City, host of JSM 2007, welcomes you. Please stop by Booth 109 for visitor information and answers to your questions.  |          | NCSS announces the availability of GESS, a new program for the statistical analysis of microarray data. Stop by our booth for a demonstration. We will also demonstrate PASS, our sample size program, and NCSS, our data analysis program.   |          |
| <b>Kforce Clinical Research Staffing</b><br>Tampa, Florida   | 405      | <b>National Center for Health Statistics</b><br>Hyattsville, Maryland   | 124      |
| Kforce provides 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.  |          | 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.  |          |
| <b>MacKichan Software</b><br>Poulsbo, Washington   | 121      | <b>National Death Index, NCHS, CDC</b><br>Hyattsville, Maryland   | 135      |
| New! Scientific WorkPlace 5.5 simplifies writing, sharing, and doing mathematics. The 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.   |          | The National Death Index assists researchers in determining whether subjects have died and provides the states and dates of death, death certificate numbers, and cause of death.   |          |
| <b>Mayo Clinical Trial Services</b><br>Rochester, Minnesota  | 404      |   |          |
| Mayo Clinical Trial Services, a full-service Academic Research Organization (ARO), offers capabilities a CRO cannot match due to Mayo Clinic's medical expertise and academic leadership.  |          |   |          |



○ **National Security Agency** 131, 133

Fort Meade, Maryland

The Information Assurance mission provides the solutions, products, and services—and conducts defensive information operations—to achieve information assurance for information infrastructures critical to U.S. national security interests. The foreign signals intelligence, or SIGINT, mission allows for an effective, unified organization and control of all the foreign signals collection and processing activities of the United States.

○ **Organon, USA** 429

Roseland, New Jersey

Organon is a global leader in the creation of innovative prescription medicines for women's health, mental health, and anesthesia—products that contribute to the health of people and their quality of life. Organon offers challenging work assignments with a chance to grow and learn on professional and personal levels within a global organization.

○ **Oxford University Press** 400, 402

New York, New York

Oxford University Press is the oldest publisher in the English language and known throughout the world for the quality of their publications. A department of Oxford University, OUP publishes more than 4,000 titles and 150 journals a year. Stop by our booth and save 20% on all titles on display.

○ **Palisade Corporation** 413

Ithaca, New York

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

○ **Pfizer Global Research and Development** 331

New York, New York

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. Our search for new treatments spans research projects across multiple therapeutics areas—more than any other company.

○ **Placemart Personnel Service** 224

Lanoka Harbor, New Jersey

Placemart Personnel Service specializes in executive search services in clinical drug and medical product R&D. For more than 40 years, we 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 details, visit [www.placemart.com](http://www.placemart.com).

○ **Prentice Hall** 306, 308

Upper Saddle River, New Jersey

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

○ **RTI International** 313, 315

Research Triangle Park, North Carolina

For more than 45 years, RTI statisticians have developed and applied scientifically accepted statistical methodologies to address major national and global public policy issues. One tool RTI has developed is the internationally recognized SUDAAN Statistical Software package, which provides various procedures for analyzing survey and other cluster-correlated data.

○ **SAGE Publications** 312

Thousand Oaks, California

SAGE Publications—an independent international publisher in the social sciences, technology, and medicine—provides journals, books, and electronic media of the highest caliber. Researchers, students, and professionals have relied on our innovative resources for more than 40 years. Please stop by our booth or visit us at [www.sagepub.com](http://www.sagepub.com).

○ **Salford Systems** 116, 118

San Diego, California

Salford Systems develops advanced statistical and data mining software, including the CART® decision tree, MARS® 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 won several distinguished international honors recently.

▲ **SAS Application** 201, 203, 205

Cary, North Carolina

SAS will exhibit its software for statistics, data mining, econometrics, and statistical quality control. Visit the SAS booth to talk with members of the development staff and learn about current offerings and upcoming software.

▲ **SAS Education** 207, 209

Cary, North Carolina

SAS' Higher Education Consulting Group provides universities and community colleges with programs and services that can help them incorporate SAS technology into their curriculums. The SAS Certified Professional program helps SAS users validate their knowledge of SAS software with globally recognized credentials. Visit both SAS-sponsored programs at booths 207 and 209.



▲ **SAS Publishing** 204, 206, 208  
Cary, North Carolina

Visit booths 204, 206, and 208 to learn more about saving 20% on orders placed or mailed to us by September 11, new SAS product documentation titles, new SAS Press titles, and SAS® Learning Edition 2.0, SAS® Self-Paced e-Learning. SAS Publishing staff are available to answer any questions and to assist you with your orders. Enjoy the conference!

**Scientific Computing Associates, Inc. (SCAI)** 415, 417  
New Haven, Connecticut

Scientific Computing Associates, Inc. (SCAI) is a leading provider of software and support for open-source and proprietary scripting languages, including R. The R Professional system from SCAI combines high-level scripting (for increased productivity) with high-performance computing to meet dramatically increasing computational demands. R Professional from SCAI provides full commercial support and independent certification.

**SIAM—Society for Industrial & Applied Mathematics** 106  
Philadelphia, Pennsylvania

Visit the SIAM booth to check out titles in the mathematics—ASA-SIAM Series on Statistics and Applied Probability. Browse recently published books and information. See sample issues of SIAM's renowned journals; membership applications will be available. Don't forget to pick up a copy of SIAM News for the road. [www.siam.org](http://www.siam.org).

**Smith Hanley** 320  
New York, New York

Our two divisions, permanent placement and contract staffing, offer targeted recruitment in statistics, biostatistics, SAS programming, data management, market research health outcomes, and epidemiology. Since 1980, we've provided clients and recruits dedicated service, experience, and insight into industry trends for positions at all levels. Visit [www.smithhanley.com](http://www.smithhanley.com) or [www.smithhanley-consulting.com](http://www.smithhanley-consulting.com).

○ **Springer** 113, 115, 117, 119  
New York, New York

Springer is one of the most renowned scientific publishing companies in the world. Its publications cover subjects ranging from the natural sciences, mathematics, engineering, and computer science to medicine, humanities, economics, and law. Springer publishes more than 3,400 new books each year and 1,250 journals, most of which are also available in electronic form.

▲ **SPSS, Inc.** 432, 434  
Chicago, Illinois

SPSS is the world's leading provider of predictive analytics software and solutions. Since 1968, SPSS has enabled its customers to improve their performance. Our software helps organizations optimize interactions with their customers and ensure that the actions they are taking today will positively affect their ability to reach tomorrow's goals.

**Stat-Ease, Inc.** 318  
Minneapolis, Minnesota

Stat-Ease, Inc. produces two easy-to-use Windows programs for design of experiments (DOE), including Design-Ease® 7.0 (new!) software for finding breakthrough factors and Design-Expert® 7.0 (new!) software for optimization. The company also offers computer-intensive DOE workshops, including Experiment Design Made Easy, Response Surface Methods for Process Optimization, and Mixture Design for Optimal Formulations.

**Statistical Society of Canada** 104  
Ottawa, Ontario

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.

**statistics.com** 216  
Arlington, Virginia

XLMiner is a comprehensive data mining add-in for Excel. It offers neural nets, classification and regression trees, naive Bayes, k-nearest neighbors, logistic and linear regression, discriminant analysis, association rules, principal components, k-means and hierarchical clustering, partitioning, over-sampling, missing data handling, and sampling from and scoring to databases. Visit [www.xlminer.com](http://www.xlminer.com).

**Bringing the ASA to Seattle**

Visit the **ASA COMMUNITIES BOOTH** at JSM and learn about the many programs available to you. Within the ASA Communities Booth, you can hear 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**—Pick up information to help you make informed decisions about formulating and meeting your objectives

**EDUCATION**—Get brochures about statistics in education and programs such as Adopt-a-School, Poster Competition and Project Competition, Student Teacher Network, AP Statistics, and Beyond AP Statistics

*Discover the benefits of membership*

○ **Statpoint Inc.** 301, 303

Herndon, Virginia

STATGRAPHICS Centurion XV, unmatched statistical software for data analysis, statistical modeling, quality improvement, and Six Sigma. Perform sophisticated data analysis without investing weeks learning a statistical package. Entirely menu-driven, numerous innovative tools—including StatAdvisor, StatWizard, and StatReporter—provide maximum return on investment. STATGRAPHICS Mobile for handheld devices also is available.

**StatSoft, Inc.** 401, 403

Tulsa, Oklahoma

StatSoft, Inc., creators of STATISTICA, is one of the largest developers of enterprise-wide and single-user software for data analysis, data mining, and quality control worldwide. STATISTICA has received the highest rating in every comparative review of statistics software since its release in 1993—a record unmatched in the industry.

**Systat Software, Inc.** 325

Richmond, California

Systat Software, Inc., provides specialized scientific software products and services for the environment sciences, life sciences, behavioral sciences, medical research, and engineering. Our 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.** 225

Westport, Connecticut

The Cambridge Group Ltd. focuses on careers in biostatistics, clinical data management, clinical systems, SAS programming, and more. Opportunities range from entry through 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; [biostat@cambridgegroup.com](mailto:biostat@cambridgegroup.com); (800) 525-3396.

**U.S. Census Bureau** 128, 130

Washington, DC

The U.S. Census Bureau produces key data about the nation's economic and social health. We produce the Decennial Census each decade, the Economic Census every five years, more than 100 household and business surveys each year, and several monthly surveys that supply data for the nation's economic indicators.

**U.S. Department of Agriculture,** 132

**National Agricultural Statistics Service**

Washington, DC

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.

**U.S. Department of Education** 129

Washington, DC

As the research, evaluation, and statistics-gathering arm of the U.S. Department of Education, the Institute of Education Sciences funds research studies on ways to improve academic achievement, conducts large-scale evaluations of federal education programs, and reports an array of statistics on the condition of education.

**Visual Numerics, Inc.** 302

San Ramon, California

For decades, Visual Numerics has provided analysis and visualization software to academia on platforms such as C/C++, .NET, Java, and FORTRAN. It delivers tools for conducting research and building curricula for students. The unique combination of the IMSL Libraries, PV-WAVE, and expert professional services is unsurpassed for analytical applications.

**W.H. Freeman and Company** 300

New York, New York

W.H. Freeman and Company publishes high-quality textbooks and media in statistics and mathematics. Visit Booth 300 to learn more about the new editions of Moore's *The Basic Practice of Statistics* and Moore/Notz's *Statistics: Concepts and Controversies* and the current edition of Moore/McCabe's *Introduction to the Practice of Statistics*. Also on view will be our innovative media, including our new nationally hosted solution for statistics: StatsPortal. For more information, visit [www.whfreeman.com](http://www.whfreeman.com).

○ **Wiley** 424, 426, 428, 430

Hoboken, New Jersey

John Wiley & Sons, a leading publisher in statistics, provides numerous print and electronic products, including *Encyclopedia of Statistical Sciences (2nd edition)*, *Applied Regression Modeling*, *Bayesian Models for Categorical Data*, *Bayesian Statistics and Marketing*, *Regression Analysis by Example (4th edition)*, *Statistics in Medicine*, and *Data Mining and Statistics*.

## Session Tag Descriptions

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

### THEME ☆

JSM Theme sessions are directly relevant to the 2006 JSM theme “Statistics for an Uncertain World: Meeting Global Challenges.” These sessions highlight presentations and discussions on the role that is being played by statistical sciences in the protection and development of people around the globe.. 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.

## Meeting Rooms

Meeting rooms include “letters” before the name of the room, designating in which facility the room is located:

**Washington State Convention & Trade Center = CC**

**Sheraton Seattle Hotel & Towers = S**

**Grand Hyatt Seattle = H**

## THURSDAY, AUGUST 3

### Committee/Business Meetings & Other Activities

6:00 p.m.–7:00 p.m. S-Douglas Room  
**The ASA Management Review Committee (closed)**  
*Chair(s): Sallie Keller-McNulty, Rice University*

7:00 p.m.–9:00 p.m. S-Douglas Room  
**The ASA Board of Directors Executive Committee Working Dinner (closed)**  
*Chair(s): Sallie Keller-McNulty, Rice University*

## FRIDAY, AUGUST 4

### Committee/Business Meetings & Other Activities

7:30 a.m.–8:30 a.m. S-Cedar Room  
**ASA Board of Directors Breakfast (closed)**  
*Chair(s): Sallie Keller-McNulty, Rice University*

8:30 a.m.–10:30 a.m. S-Aspen Room  
**The ASA Planning Committee (closed)**  
*Chair(s): Sallie Keller-McNulty, Rice University*

10:30 a.m.–5:00 p.m. S-Aspen Room  
**The ASA Board of Directors Meeting (closed)**  
*Chair(s): Sallie Keller-McNulty, Rice University*

12:30 p.m.–1:30 p.m. S-Cedar Room  
**The ASA Board of Directors Lunch (closed)**  
*Chair(s): Sallie Keller-McNulty, Rice University*

6:30 p.m.–7:30 p.m. S-Governors Suite  
**JSM Staff and ASA Board of Directors Reception (closed)**  
*Chair(s): William B. Smith, American Statistical Association; Sallie Keller-McNulty, Rice University*

# GENERAL PROGRAM SCHEDULE

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

## SATURDAY, AUGUST 5

### Committee/Business Meetings & Other Activities

7:00 a.m.–6:00 p.m. CC-Level 4 South Lobby  
**JSM Main Registration**  
**ASA Membership/Special Assistance Desk**  
**Cyber Center**

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

7:30 a.m.–8:30 a.m. S-Cedar Room  
**The ASA Board of Directors Breakfast (closed)**  
*Chair(s): Sallie Keller-McNulty, Rice University*

8:00 a.m.–5:00 p.m. CC-Exhibit Hall 4A  
**Exhibitor Move in and Lounge**

8:30 a.m.–5:30 p.m. S-Aspen Room  
**The ASA Board of Directors Meeting (closed)**  
*Chair(s): Sallie Keller-McNulty, Rice University*

8:30 a.m.–10:30 a.m. S-Spruce Room  
**ASA BOD-2006 Strategic Activities Review**  
**Subcommittee (closed)**  
*Chair(s): Nathaniel Schenker, National Center for Health Statistics*

8:30 a.m.–10:30 a.m. S-Douglas Room  
**ASA BOD-2006 Dues Subcommittee (closed)**  
*Chair(s): Daniel Kasprzyk, Mathematica Policy Research, Inc.*

9:00 a.m.–5:00 p.m. CC-Level 1  
**Citywide Concierge Center**

9:00 a.m.–5:00 p.m. CC-Exhibit Hall 4B  
**Career Placement Service (Electronic Registration Only)**

11:30 a.m.–12:30 p.m. S-Willow A  
**Association of GCRC Statisticians Lunch (closed)**  
*Organizer(s): Robert Oster, The University of Alabama at Birmingham*

12:15 p.m.–1:00 p.m. S-Cedar Room  
**The ASA Board of Directors Lunch (closed)**  
*Chair(s): Sallie Keller-McNulty, Rice University*

12:00 p.m.–5:00 p.m. CC-Level 4 South Lobby  
**ASA Marketplace**

12:30 p.m.–5:30 p.m. S-Willow B  
**Association of GCRC Statisticians Meeting (closed)**  
*Organizer(s): Robert Oster, The University of Alabama at Birmingham*

3:00 p.m.–6:00 p.m. S-Spruce Room  
**ICES III Program Committee Meeting (closed)**  
*Chair(s): Eva Elvers, Statistics Sweden*

7:00 p.m.–8:30 p.m. S-Cedar Room  
**National Numeracy Network Board Meeting**  
*Organizer(s): Bernard Madison, University of Arkansas*

### Continuing Education (Fee Events)

CE\_01C CC-310  
8:30 a.m.–5:00 p.m.  
**Categorical Data Analysis (two-day course)**  
The ASA  
*Instructor(s): Gary Koch, The University of North Carolina at Chapel Hill; Todd Schwartz, The University of North Carolina at Chapel Hill; Rebekkah Dann, The University of North Carolina at Chapel Hill*

CE\_02C CC-308  
8:30 a.m.–5:00 p.m.  
**Small-Area Estimation**  
The ASA, Section on Survey Research Methods  
*Instructor(s): Partha Lahiri, University of Maryland*

CE\_03C CC-307  
8:30 a.m.–5:00 p.m.  
**Modern Approaches to Nonstationary Models of Spatial and Space-Time Processes with Air Quality Applications**  
The ASA  
*Instructor(s): Peter Guttorp, University of Washington; Paul D. Sampson, University of Washington*

CE\_04C CC-306  
8:30 a.m.–5:00 p.m.  
**Bayesian Inference**  
The ASA, Section on Bayesian Statistical Science  
*Instructor(s): Bruno Sanso, University of California, Santa Cruz*

# GENERAL PROGRAM SCHEDULE

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

CE\_05C CC-304  
8:30 a.m.–5:00 p.m.  
**Practical Data Mining**  
The ASA  
*Instructor(s): Richard De Veaux, Williams College*

CE\_06C CC-303  
8:30 a.m.–5:00 p.m.  
**Applied Longitudinal Analysis**  
The ASA, Biometrics Section  
*Instructor(s): Garrett Fitzmaurice, Harvard University*

## SUNDAY, AUGUST 6

### Tours

9:30 a.m.–1:30 p.m. CC-Convention Place  
**TR01 - Northwest Winery Tour (fee event)**

1:00 p.m.–4:00 p.m. CC-Convention Place  
**TR02 - Seattle City Highlights Tour (fee event)**

### Committee/Business Meetings & Other Activities

7:00 a.m.–8:00 a.m. S-Willow A  
**Association of GCRC Statisticians Breakfast (closed)**  
*Organizer(s): Robert Oster, The University of Alabama at Birmingham*

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

7:00 a.m.–8:30 p.m. CC-Level 4 South Lobby  
**JSM Main Registration**  
**ASA Membership/Special Assistance Desk**

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

7:30 a.m.–10:30 a.m. S-Douglas Room  
**Committee on Women in Statistics (closed)**  
*Chair(s): Teri Peterson, Idaho State University*

7:30 a.m.–12:30 p.m. H-Blewett Suite  
**Committee on Publications Meeting (closed)**  
*Chair(s): William Q. Meeker, Jr., Iowa State University*

8:00 a.m.–10:00 a.m. S-Juniper  
**Business Statistics Focus Group (closed)**  
*Organizer(s): Dona Kenly, Addison Wesley*

8:00 a.m.–11:00 a.m. CC-Exhibit Hall 4A  
**Exhibitor Move in**

8:00 a.m.–12:00 p.m. S-Willow B  
**Association of GCRC Statisticians Meeting (closed)**  
*Organizer(s): Robert Oster, The University of Alabama at Birmingham*

8:00 a.m.–12:00 p.m. CC-302  
**ICES III Organizing Committee Meeting (closed)**  
*Chair(s): Howard Hogan, U.S. Census Bureau*

8:00 a.m.–6:00 p.m. CC-209  
**Amgen Inc. Interview Room (by invitation only)**  
*Organizer(s): Chander Varma, Amgen Inc.*

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

9:00 a.m.–12:00 p.m. S-Cedar Room  
**Council of Sections Governing Board Meeting (closed)**  
*Chair(s): John E. Boyer, Kansas State University*

9:00 a.m.–1:00 p.m. CC-301  
**Advisory Committee on Teacher Enhancement Annual Meeting (closed)**  
*Chair(s): Robert Gould, University of California, Los Angeles*

9:00 a.m.–5:00 p.m. CC-Level 1  
**Citywide Concierge Center**

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

11:00 a.m.–2:00 p.m. CC-4C-1  
**NISS/SAMSI Affiliates Meeting (closed)**  
*Organizer(s): Alan Karr, National Institute of Statistical Sciences*

11:30 a.m.–1:00 p.m. S-Douglas Room  
**Committee on Committees Meeting (closed)**  
*Chair(s): Darryl Downing, GlaxoSmithKline*

12:00 p.m.–1:00 p.m. S-Willow A  
**Association of GCRC Statisticians Lunch (closed)**  
*Organizer(s): Robert Oster, The University of Alabama at Birmingham*

Thurs-Sun



# GENERAL PROGRAM SCHEDULE

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

- 12:00 p.m.–1:30 p.m. H-Portland  
**Amgen Inc. (closed)**  
*Organizer(s): Chander Varma, Amgen Inc.*
- 12:00 p.m.–1:30 p.m. CC-601  
**Friends of the Indian Statistical Institute Business Meeting**  
*Organizer(s): Nitish Mukhopadhyay, University of Connecticut*
- 12:00 p.m.–2:00 p.m. S-Juniper  
**Journal of Statistics Education Editorial Board (closed)**  
*Chair(s): W. Robert Stephenson, Iowa State University*
- 12:00 p.m.–2:00 p.m. S-Aspen Room  
**Statistica Sinica Board Meeting (closed)**  
*Organizer(s): Michelle Liou, Academia Sinica; Xiao-Li Meng, Harvard University*
- 1:00 p.m.–6:00 p.m. CC-Exhibit Hall 4A  
**EXPO 2006**  
**ASA Communities Booth #101**
- 1:00 p.m.–6:00 p.m. CC-Exhibit Hall 4B  
**Career Placement Service (Full Placement Service Open)**
- 2:00 p.m.–4:30 p.m. S-Willow Ballroom  
**Council of Sections Annual Business Meeting (closed)**  
*Chair(s): John E. Boyer, Kansas State University*
- 4:00 p.m.–5:30 p.m. S-Douglas Room  
**2006/2007 Committee Chairs Meeting (closed)**  
*Chair(s): Darryl Downing, GlaxoSmithKline*
- 4:00 p.m.–6:00 p.m. H-Stevens Boardroom & Foyer  
**Career Development Seminar - Snakes and Ladders: Building a Career in Statistics**  
*Chair(s): Janice Lent, Research and Innovative Technology Administration*
- 4:30 p.m.–8:00 p.m. H-Chatham  
**ENAR Executive Committee Meeting (by invitation only)**  
*Organizer(s): Kathy Hoskins, ENAR*
- 5:00 p.m.–6:00 p.m. CC-303  
**Volunteer Work in Statistics: The Second Year**  
*Chair(s): Fritz Scheuren, National Opinion Research Center*
- 5:00 p.m.–6:30 p.m. CC-305  
**Cancer Center Biostatistics Directors Annual Meeting**  
*Organizer(s): Terry Hyslop, Thomas Jefferson University*
- 5:00 p.m.–6:30 p.m. S-Cedar Room  
**Council of Section New Officer Orientation Meeting (closed)**  
*Chair(s): S. Lynne Stokes, Southern Methodist University*
- 5:00 p.m.–7:30 p.m. H-Blewett Suite  
**International Chinese Statistical Association (ICSA) Board Meeting (closed)**  
*Organizer(s): Ivan Chan, Merck & Co., Inc.*
- 5:30 p.m.–7:00 p.m. CC-302  
**Committee on Scientific Freedom and Human Rights Business Meeting**  
*Chair(s): Susan Hinkins, National Opinion Research Center*
- 6:00 p.m.–7:30 p.m. CC-4C-2  
**JSM First-Time Attendee Orientation and Reception**  
*Chair(s): Mary W. Gray, American University*
- 6:00 p.m.–7:30 p.m. CC-612  
**ASA Open Meeting (all welcome)**  
*Chair(s): Sallie Keller-McNulty, Rice University*
- 6:00 p.m.–7:30 p.m. S-Aspen Room  
**Christian Statisticians' Informal Discussion**  
*Organizer(s): Robert W. Mee, University of Tennessee*
- 6:30 p.m.–8:00 p.m. S-Douglas Room  
**Committee on Privacy and Confidentiality (closed)**  
*Chair(s): Kim McGuigan, Pfizer, Inc.*
- 6:30 p.m.–8:00 p.m. CC-4C-3  
**Purdue University Alumni and Friends Reception**  
*Organizer(s): Dana Neary, Director of Alumni Relations*
- 6:30 p.m.–8:30 p.m. off property  
**Section on Statistical Consulting Executive Committee Meeting (closed)**  
*Chair(s): Philip Dixon, Iowa State University*
- 6:30 p.m.–9:30 p.m. H-Douglas Boardroom & Foyer  
**Biometrics Section Executive Committee Meeting (closed)**  
*Chair(s): Karen Bandeen-Roche, The Johns Hopkins Bloomberg School of Public Health*



*American Statistical Association*

# OPEN MEETING

**Sallie Keller-McNulty, ASA President**

Sunday, August 6, 2006, 6:00 p.m.

Washington State Convention & Trade Center  
Room 612



## 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:

- ▶ 2006 State of the Association – *Sallie Keller-McNulty*
- ▶ Update on finances – *Sastry G. Pantula*
- ▶ Status of the ASA building – *William B. Smith*
- ▶ Summary of 2005 Board task forces – *Fritz J. Scheuren*
- ▶ Responses to 2005 Open Meeting questions – *Executive Committee*
- ▶ Reports on 2006 task forces (public policy, security, and interaction with other groups)

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



# GENERAL PROGRAM SCHEDULE

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

7:00 p.m.–8:00 p.m. CC-4C-1

## ACCE Presenters' Social (closed)

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

7:00 p.m.–9:00 p.m. CC-615

## Isolated Statisticians Meeting

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

8:00 p.m.–10:30 p.m. CC-Ballroom 6ABC

## JSM Opening Mixer (included in registration fee)

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## Continuing Education (Fee Events)

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CE\_01C CC-310

8:30 a.m.–5:00 p.m.

### Categorical Data Analysis (two-day course)

The ASA

*Instructor(s): Gary Koch, The University of North Carolina at Chapel Hill; Todd Schwartz, The University of North Carolina at Chapel Hill; Rebekkah Dann, The University of North Carolina at Chapel Hill*

CE\_07C CC-309

8:30 a.m.–5:00 p.m.

### Text Mining

The ASA, Section on Statistical Computing

*Instructor(s): David Madigan, Rutgers University; David D. Lewis, David D. Lewis Consulting LLC*

CE\_08C CC-305

8:30 a.m.–5:00 a.m.

### The Psychology of Survey Response

The ASA, Section on Survey Research Methods

*Instructor(s): Roger Tourangeau, University of Maryland*

CE\_09C CC-307

8:30 a.m.–5:00 p.m.

### Statistical Methods for the Confirmatory Analysis of Equivalence/Noninferiority Studies

The ASA

*Instructor(s): Stefan Wellek, University of Heidelberg*

CE\_10C CC-306

8:30 a.m.–5:00 p.m.

### Computational Statistics: Methods for Monte Carlo Integration and Optimization

The ASA, Section on Statistical Computing

*Instructor(s): Jennifer A. Hoeting, Colorado State University; Geof H. Givens, Colorado State University*

CE\_11C CC-308

8:30 a.m.–5:00 p.m.

### Regression Modeling Strategies

The ASA

*Instructor(s): Frank E. Harrell, Jr., Vanderbilt University School of Medicine*

CE\_12C CC-304

8:30 a.m.–5:00 p.m.

### Hierarchical Bayes Methods and Software for Data Analysis

The ASA, Section on Bayesian Statistical Science

*Instructor(s): Bradley P. Carlin, University of Minnesota; Thomas A. Louis, The Johns Hopkins University*

CE\_13C CC-303

8:30 a.m.–5:00 p.m.

### Generalized Linear Mixed Models: Theory and Applications

The ASA

*Instructor(s): Oliver Schabenberger, SAS Institute, Inc.*

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

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### 1 CC-4C-4 Introductory Overview Lectures: Genetic Association Studies—Other

The ASA, ENAR, IMS, SSC, WNAR

*Organizer(s): Jianwen Cai, The University of North Carolina at Chapel Hill*

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

2:05 p.m. Association Mapping of Human Disease Genes—  
◆ Bruce S. Weir, University of Washington

2:55 p.m. Statistical Analysis of Haplotype-Disease Association—  
◆ Danyu Lin, The University of North Carolina at Chapel Hill

3:45 p.m. Floor Discussion

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## Invited Sessions 2:00 p.m.–3:50 p.m.

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### 2 CC-206 Seasonal Time Series—Invited

Business and Economics Statistics Section

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

*Chair(s): Brian C. Monsell, U.S. Census Bureau*

2:05 p.m. Comparing MSEs for Finite X-11 and Model-Based Seasonal Adjustment Filters—  
◆ William R. Bell, U.S. Census Bureau; Yea-Jane Chu, SPSS Inc.; George C. Tiao, The University of Chicago

You are invited to the JSM  
**FIRST-TIME**  
**ATTENDEE**  
orientation and reception

Washington State Convention & Trade Center, Room 4C-2  
Sunday, August 6  
6:00 p.m.–7:30 p.m.

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:** Mary Gray, President, The Caucus for Women in Statistics
- **“Networking for Fun and Profit”** Monica Jackson, American University
- **Reception** *(light hors d’oeuvres to be served)*

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



# GENERAL PROGRAM SCHEDULE

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

2:30 p.m. **A Spectral Approach for Locally Assessing Model Misspecification**—Tucker S. McElroy, U.S. Census Bureau; ❖ Scott Holan, University of Missouri-Columbia

2:55 p.m. **Nonlinear Seasonal Adjustment in Unobserved Components Models**—❖ Siem Jan Koopman, Vrije Universiteit Amsterdam; Kai Ming Lee, Vrije Universiteit Amsterdam

3:20 p.m. Disc: Xichuan Zhang, Australian Bureau of Statistics

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

## 3 CC-615 ● ⊛ **Recent Advances in the Design and Analysis of Clinical Trials—Invited**

WNAR, Biometrics Section, ENAR

*Organizer(s): Lurdes Y. T. Inoue, University of Washington*

*Chair(s): Kenneth Rice, University of Washington*

2:05 p.m. **A Bayesian Seamless Design**—❖ Lurdes Y. T. Inoue, University of Washington

2:30 p.m. **A Geometric Approach to Comparing Treatments for Rapidly Fatal Diseases**—❖ Peter F. Thall, M. D. Anderson Cancer Center; Leiko H. Wooten, M. D. Anderson Cancer Center; Elizabeth J. Shpall, M. D. Anderson Cancer Center

2:55 p.m. **Advances in Simple Phase I Trials: Three Examples**—❖ Rick Chappell, University of Wisconsin-Madison

3:20 p.m. **Decision Analysis and Clinical Trial Design**—❖ Donald Berry, The University of Texas

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

## 4 CC-609 **Rapid Production of Small-Area Estimates Using the Behavioral Risk Factor Surveillance System—Invited**

Section on Survey Research Methods, Section on Health Policy Statistics

*Organizer(s): Paul S. Levy, RTI International*

*Chair(s): Babubhat V. Shah, SAFAL Institute Inc.*

2:05 p.m. **Rapid Response Health Surveillance and the Utility of Small-Area Estimates: Responding to the 2004–05 Influenza Vaccine Shortage**—❖ Michael W. Link, Centers for Disease Control and Prevention; Ali H. Mokdad, Centers for Disease Control and Prevention

2:30 p.m. **Development of Methodology for Production of Rapidly Available, County-Level, Small-Area Estimates To Monitor the Course of Influenza Vaccine Coverage**—❖ Haomiao Jia, Mercer University School of Medicine; Michael W. Link, Centers for Disease Control and Prevention; Ali H. Mokdad, Centers for Disease Control and Prevention; James Holt, Centers for Disease Control and Prevention; Lei Li, RTI International; Paul S. Levy, RTI International

2:55 p.m. **Evaluating the Small-Area Estimates of the 2004–05 County-Level Influenza Vaccination Rates**—❖ Lei Li, RTI International; Paul S. Levy, RTI International; Akhil Vaish, RTI International; Michael W. Link, Centers for Disease Control and Prevention; Ali H. Mokdad, Centers for Disease Control and Prevention; Lina Balluz, Centers for Disease Control and Prevention; Haomiao Jia, Mercer University School of Medicine

3:20 p.m. Disc: Tapabrata Maiti, Iowa State University

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

## 5 CC-3A ● ⊛ **Pipeline Issues in Recruiting Federal Statisticians—Invited**

Committee on Membership Retention and Recruitment, Section on Statistical Education, Committee on Career Development

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

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

2:05 p.m. **JPSM: 14 Years of Training Federal Statisticians**—❖ Richard Valliant, University of Michigan; Roger Tourangeau, University of Maryland

2:30 p.m. **Gulliver Tied down by Red Tape? The Federal Government's Challenges as an Employer of Statisticians**—❖ Janice Lent, Research and Innovative Technology Administration

2:55 p.m. **Federal Statisticians in the Physical and Engineering Sciences**—❖ William Guthrie, National Institute of Standards and Technology

3:20 p.m. Disc: David Marker, Westat

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



## 6 CC-3B

### ⊛ Surveillance Geoinformatics and Hotspot Dynamics for Prediction, Policy, and Management—Invited

Environmental and Ecological Statistics, Section on Statistics and the Environment

*Organizer(s): Ganapati P. Patil, The Pennsylvania State University*

*Chair(s): Ganapati P. Patil, The Pennsylvania State University*

- 2:05 p.m. Spatiotemporal Geoinformatic Disease Surveillance**—❖ Stephen L. Rathbun, University of Georgia; Ganapati P. Patil, The Pennsylvania State University
- 2:30 p.m. Crime Mapping and Hotspot Detection**—❖ Reza Modarres, The George Washington University; Ganapati P. Patil, The Pennsylvania State University
- 2:55 p.m. Applications of Hotspot Detection Analysis to Large-Scale Plant Disease Forecasting: Case Study of Fusarium Head Blight**—❖ Murali Haran, The Pennsylvania State University
- 3:20 p.m. Disc: Bo Ranney, Swedish University of Agricultural Sciences**
- 3:40 p.m. Floor Discussion**

## 7 CC-400

### ● Density-Based Clustering—Invited

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

*Organizer(s): David W. Scott, Rice University*

*Chair(s): Michael W. Trosset, The College of William & Mary*

- 2:05 p.m. Variable Bandwidth Mode Testing**—❖ Michael C. Minnotte, Utah State University
- 2:30 p.m. Generalized Single-Linkage Clustering**—❖ Werner Stuetzle, University of Washington; Rebecca Nugent, University of Washington
- 2:55 p.m. Mixture Model Building for High-Dimensional and Functional Data**—❖ Catherine Loader, The University of Auckland; Ramani S. Pilla, Case Western Reserve University
- 3:20 p.m. Disc: David W. Scott, Rice University**
- 3:40 p.m. Floor Discussion**

## 8 CC-614

### ● Statistical Methods for Oral Health Research—Invited

ENAR, Biometrics Section, WNAR

*Organizer(s): Jason Roy, University of Rochester*

*Chair(s): Julie Stoner, University of Nebraska Medical Center*

- 2:05 p.m. Analysis of Correlated Dental Data: Challenges and Recent Developments**—❖ Brian G. Leroux, University of Washington
- 2:30 p.m. Finding the Right Pair of Genes: Adding a Genetic Component to Existing Oral Health Studies**—❖ Deborah V. Dawson, The University of Iowa
- 2:55 p.m. A Flexible Model for Recurrent Event Outcomes in Oral Health**—❖ Elizabeth H. Slate, Medical University of South Carolina; Edsel A. Pena, University of South Carolina
- 3:20 p.m. Statistical Approaches for Dealing with Missing Tooth- and Surface-Level Data in Caries Research**—❖ Jason Roy, University of Rochester
- 3:45 p.m. Floor Discussion**

## 9 CC-620

### ● Empirical Likelihood-Based Semiparametric Inference—Invited

Biometrics Section, Section on Nonparametric Statistics

*Organizer(s): Hua Liang, University of Rochester Medical Center*

*Chair(s): Xiaogang (Steven) Wang, York University*

- 2:05 p.m. Empirical Likelihood-Based Inference for Comparison of Two Populations with Censored Data**—❖ Hua Liang, University of Rochester Medical Center
- 2:30 p.m. Empirical Likelihood-Based Inferences for Receiver Operating Characteristic Curves in the Presence of Verification Bias**—❖ Jing Qin, National Institute of Allergy and Infectious Diseases
- 2:55 p.m. Empirical Likelihood for Accelerated Failure Time Model**—❖ Mai Zhou, University of Kentucky
- 3:20 p.m. Nonparametric Imputation of Missing Values for Estimating Equation-Based Empirical Likelihood Inference**—Song X. Chen, Iowa State University; ❖ Dong Wang, University of Nebraska
- 3:45 p.m. Floor Discussion**

# GENERAL PROGRAM SCHEDULE

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

## 10 CC-203 ● **New Directions in Bayesian Joint Modeling of Longitudinal and Survival Data—Invited**

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

*Organizer(s): Timothy Hanson, University of Minnesota*

*Chair(s): Timothy Hanson, University of Minnesota*

- 2:05 p.m. **A Flexible B-Spline Model for Multiple Longitudinal Biomarkers and Survival—**  
❖ Elizabeth Brown, University of Washington
- 2:35 p.m. **Extensions of the Standard Joint Model—**  
❖ Jeremy M. G. Taylor, University of Michigan
- 3:05 p.m. **Bayesian Semiparametric Methods for Joint Modeling of Longitudinal and Survival Data—**  
❖ Adam Branscum, University of Kentucky;  
Timothy Hanson, University of Minnesota; Wesley O. Johnson, University of California, Irvine
- 3:35 p.m. **Floor Discussion**

## 11 CC-604 ● **Modern Monte Carlo Methods for Statistical Inference—Invited**

IMS, Section on Bayesian Statistical Science, Section on Nonparametric Statistics

*Organizer(s): Anthony Brockwell, Carnegie Mellon University*

*Chair(s): Arnaud Doucet, The University of British Columbia*

- 2:05 p.m. **An Overview of SMC and Adaptive MCMC—**  
❖ Anthony Brockwell, Carnegie Mellon University
- 2:35 p.m. **Simulated Tempering Made Easy—**❖ Yves Atchade, University of Ottawa
- 3:05 p.m. **Adaptive Monte Carlo Computing Methods—**  
❖ Christophe Andrieu, University of Bristol
- 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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## 12 CC-606 ● **Advances in Item Response Theory—Topic-Contributed**

Social Statistics Section

*Organizer(s): Sandip Sinharay, Educational Testing Service*

*Chair(s): Guowen Sun, sanofi-aventis*

- 2:05 p.m. **Limited Information Goodness-of-Fit Testing in Multidimensional Contingency Tables—**❖ Harry Joe, The University of British Columbia

- 2:25 p.m. **Sensitivity of Latent Trait Analysis to Highly Skewed Ability Distributions—**❖ David Dailey, Woodcock-Munoz Foundation; Elena Erosheva, University of Washington
- 2:45 p.m. **Checking the Appropriateness of the Statistical Model Used in National Assessment of Educational Progress—**❖ Sandip Sinharay, Educational Testing Service
- 3:05 p.m. **Improve Variance Estimation for the Assessments Based on the Plausible Values Approach—**❖ Jiahe Qian, Educational Testing Service; Shelby Haberman, Educational Testing Service
- 3:25 p.m. **Estimation of Measurement Errors at Observed and Scaled Scores—**❖ Michelle Liou, Academia Sinica; Philip E. Cheng, Academia Sinica
- 3:45 p.m. **Floor Discussion**

## 13 CC-619 ● **Bayesian Modeling of Biomedical Data—Topic-Contributed**

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

*Organizer(s): W. John Boscardin, University of California, Los Angeles*

*Chair(s): Joseph W. Hogan, Brown University*

- 2:05 p.m. **Analysis of Longitudinal Clinical Trial Data with Informative Dropout—**❖ Xiaohong Yan, University of California, Los Angeles; W. John Boscardin, University of California, Los Angeles
- 2:25 p.m. **Bayesian Approach to Multiple Changepoint with Application to HIV Immunologic Responses—**  
❖ Pulak Ghosh, Georgia State University; Kaushik Ghosh, New Jersey Institute of Technology; Ram Tiwari, National Institutes of Health
- 2:45 p.m. **Bayesian Model Checking for a Longitudinal Binary Variable—**❖ Catherine Crespi, University of California, Los Angeles; W. John Boscardin, University of California, Los Angeles; William G. Cumberland, University of California, Los Angeles
- 3:05 p.m. **Modeling Multivariate Biomedical Data with Polynomial Smoothing Splines—**❖ Hector Lemus, University of California, Los Angeles; W. John Boscardin, University of California, Los Angeles
- 3:25 p.m. **Real-Time Learning for Heterogeneous Multivariate Longitudinal Data—**❖ W. John Boscardin, University of California, Los Angeles; Hector Lemus, University of California, Los Angeles
- 3:45 p.m. **Floor Discussion**



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# GENERAL PROGRAM SCHEDULE

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

## 14 CC-401 ● **Planning Medical Device Studies—Topic-Contributed**

Biopharmaceutical Section, Biometrics Section, ENAR

*Organizer(s): Philip Lavin, Averion Inc.; Greg Campbell, U.S. Food and Drug Administration*

*Chair(s): Greg Campbell, U.S. Food and Drug Administration*

- 2:05 p.m. **Statistical Myths in the Design and Analysis of Clinical Trials**—◆Victor Hasselblad, Duke University
- 2:25 p.m. **New Medical Device? When Clinical Data Are Needed for a New Medical Device**—◆Jeng Mah, American Medical Systems Inc.
- 2:45 p.m. **Statistical Review Quality Assessment for Therapeutic PMA Submissions**—◆Lilly Yue, U.S. Food and Drug Administration
- 3:05 p.m. **What Device Pivotal Studies Have in Common: Recurring Themes in Study Planning**—◆Philip Lavin, Averion Inc.
- 3:25 p.m. **Floor Discussion**

## 15 CC-204 ● **Bayesian Student Paper Competition II—Topic-Contributed**

Section on Bayesian Statistical Science

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

*Chair(s): Steven L. Scott, University of Southern California*

- 2:05 p.m. **Statistical Inference for Nonlinear Models Involving Ordinary Differential Equations**—  
◆Lovely Goyal, North Carolina State University;  
Sujit Ghosh, North Carolina State University
- 2:25 p.m. **Weighted Model-Based Clustering for Remote Sensing Image Analysis**—◆Joseph Richards, Carnegie Mellon University; Johanna Hardin, Pomona College
- 2:45 p.m. **On Bayesian Analysis of Generalized Linear Models Using Jacobian Technique**—◆Sourish Das, University of Connecticut; Dipak Dey, University of Connecticut
- 3:05 p.m. **Using Incompatibility To Build Fast Gibbs Samplers**—◆Taeyoung Park, Harvard University; David A. van Dyk, University of California, Irvine
- 3:25 p.m. **Improving Classification When a Class Hierarchy Is Available Using a Hierarchy-Based Prior**—  
◆Babak Shahbaba, University of Toronto;  
Radford Neal, University of Toronto
- 3:45 p.m. **Floor Discussion**

## 16 CC-602 ● ⊕ **IT Process Monitoring and Planning—Topic-Contributed**

Section on Physical and Engineering Sciences

*Organizer(s): Yasuo Amemiya, IBM T. J. Watson Research Center*

*Chair(s): Yasuo Amemiya, IBM T. J. Watson Research Center*

- 2:05 p.m. **Fourier Domain Estimation for Network Tomography**—◆Jin Cao, Bell Labs, Lucent Technologies; Aiyou Chen, Bell Labs, Lucent Technologies; Tian Bu, Bell Labs, Lucent Technologies
- 2:25 p.m. **Robust Estimation for Zero-Inflated Longitudinal Data with Application to IT System Monitoring**—  
◆Jing Shen, University of Georgia/IBM; Daniel Hall, University of Georgia
- 2:45 p.m. **Some Statistical Problems in Capacity Management and Planning for on-Demand Computing Services**—◆Ta-Hsin Li, IBM T. J. Watson Research Center
- 3:05 p.m. **Modeling Multivariate Time Series with Application to Software Defects Data**—  
◆Mihaela Serban, Carnegie Mellon University;  
Wanli Min, IBM T. J. Watson Research Center
- 3:25 p.m. **Improving Service Delivery Process**—◆Wen-Hua Ju, Avaya Labs Research; Lorraine Denby, Avaya Labs Research; James M. Landwehr, Avaya Labs Research
- 3:45 p.m. **Floor Discussion**

## 17 CC-201 ● **Statistical and Quantitative Literacy 2006—Topic-Contributed**

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

*Organizer(s): Milo Schield, Augsburg College*

*Chair(s): Jerry Moreno, John Carroll University*

- 2:05 p.m. **Increasing Quantitative Literacy through the Mathematics across the Community College Curriculum Project**—◆Rebecca Hartzler, Seattle Central Community College; Kim Rheinlander, Dartmouth College
- 2:25 p.m. **Quirks of Rhetoric: a Quantitative Analysis of Quantitative Reasoning in Student Writing**—  
◆Neil Lutsky, Carleton College; Scott Bierman, Carleton College
- 2:45 p.m. **Common Misconceptions in Statistical Literacy**—  
◆Marc Isaacson, Augsburg College

- 3:05 p.m. **Statistical Literacy: Graphs, Studies, and Related Confounders**—❖Milo Schield, Augsburg College
- 3:25 p.m. **Pedagogical Challenges of Quantitative Literacy**—❖Bernard Madison, University of Arkansas
- 3:45 p.m. **Floor Discussion**

## 18 CC-205

### ⊛ **SAMSI Program on National Defense and Homeland Security: 2005–2006—Topic-Contributed**

Section on Statisticians in Defense and National Security

*Organizer(s): Michael Last, National Institute of Statistical Sciences*

*Chair(s): Michael Last, National Institute of Statistical Sciences*

- 2:05 p.m. **A Study of Data Swapping for Categorical Variables**—❖Lisa R. Denogean, SAMSI
- 2:25 p.m. **Anomaly Detection**—❖Francisco Vera, National Institute of Statistical Sciences
- 2:45 p.m. **New Measures of Data Utility**—❖Mi-Ja Woo, National Institute of Statistical Sciences
- 3:05 p.m. **Agent-Based Methods for Dynamic Social Networks**—❖Eric Vance, Duke University; David Banks, Duke University
- 3:25 p.m. **Disc: Alan Karr, National Institute of Statistical Sciences**
- 3:45 p.m. **Floor Discussion**

## 19 CC-613

### ● ⊛ **Estimation Techniques for Diagnostics Devices—Topic-Contributed**

Section on Statistics in Epidemiology, Biometrics Section, Section on Physical and Engineering Sciences

*Organizer(s): Roseann White, Guidant Corporation*

*Chair(s): David Snead, CORDIS*

- 2:05 p.m. **Evaluation of a Noninvasive Diagnostic Device Using Weighted Least Squares Approach**—❖Zhen Huang, Duke Clinical Research Institute; Huiman Barnhart, Duke University
- 2:25 p.m. **System Accuracy Requirements for Blood Glucose Monitors**—❖Nancy Schatz, Home Diagnostics, Inc.
- 2:45 p.m. **Bayesian Predictive Probability as a Diagnostic Assessment of the Likelihood of Coronary Artery Disease in Collateral Arteries**—❖Laura Thompson, U.S. Food and Drug Administration

- 3:05 p.m. **Disease Diagnosis Maximizing Effectiveness and Minimizing Cost of Health Care**—❖Jeffrey Vaks, Beckman Coulter, Inc.
- 3:25 p.m. **Use of Frequency Domain Measures Instead of Traditional Summary Statistics for Use in Diagnostic Devices**—❖Roseann White, Guidant Corporation
- 3:45 p.m. **Floor Discussion**

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

## 20 CC-607

### **Types of Modes and Effects on Response Rates and Performance—Contributed**

Social Statistics Section

*Chair(s): Kristin Stettler, U.S. Census Bureau*

- 2:05 p.m. **A Repeated Measures Design To Investigate Mode Effects in the Center for Epidemiologic Studies Depression Scale**—❖Richard Swartz, M. D. Anderson Cancer Center; Carl de Moor, Harvard Medical School; Karon Cook, University of Washington; Rachel T. Fouladi, Simon Fraser University; Karen Basen-Engquist, M. D. Anderson Cancer Center; Cathy Eng, M. D. Anderson Cancer Center
- 2:20 p.m. **Making Item Selection More Efficient in Computerized Adaptive Testing**—❖Hua-Hua Chang, University of Illinois; Zhiliang Ying, Columbia University
- 2:35 p.m. **Floor Discussion**

## 21 CC-618

### **Functional Data Analysis, Supervised Learning, and Dimension Reduction—Contributed**

Biometrics Section, Section on Nonparametric Statistics, ENAR

*Chair(s): Carsten Botts, Williams College*

- 2:05 p.m. **Functional Regression Analysis for Longitudinal Data with a Large Number of Repeated Measures**—❖Xiaowei Yang, University of California, Davis; Hongquan Xu, University of California, Los Angeles; Qing Shen, Edmonds.com
- 2:20 p.m. **Self-Modeling Regression with Application to Arterial Pulse Pressure Waveforms**—❖Lyndia Brumback, University of Washington; Doug



# GENERAL PROGRAM SCHEDULE

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

- Tommet, University of Washington; Richard Kronmal, University of Washington
- 2:35 p.m. **Classification and Gene Selection of Cancer Micro-Arrays by nu-Ridge Regression**—◆ Jun Luo, Michigan State University
- 2:50 p.m. **Boosting with Missing Predictors**—◆ Ching-Yun Wang, Fred Hutchinson Cancer Research Center; Ziding Feng, Fred Hutchinson Cancer Research Center
- 3:05 p.m. **Prediction Based on Two-Stage Modeling**—Amita K. Manatunga, Emory University; ◆ Jose N. G. Binongo, Emory University; Ming Yuan, Georgia Institute of Technology
- 3:20 p.m. **Steps Toward Individualized Treatment: a Double Supervised Machine-Learning Method**—◆ Steven Y. Cen, University of Southern California; Catherine Sugar, University of Southern California; Bryan Langholz, Keck School of Medicine of USC; David Conti, University of Southern California; Doug Stahl, City of Hope National Medical Center; Stanley P. Azen, University of Southern California
- 3:35 p.m. **On Reducing Multiple Outcomes into a Single Score**—◆ Hui Xie, Boston University

## 22 CC-617 ● Regression for Censored Data—Contributed

Biometrics Section, ENAR

*Chair(s): Debajyoti Sinha, Medical University of South Carolina*

- 2:05 p.m. **Regression Analysis for Long-Term Survival Rate**—◆ Yichuan Zhao, Georgia State University
- 2:20 p.m. **Accelerated Failure Time Model with Random Effects**—◆ Yaqin Wang, Iowa State University; Kenneth Koehler, Iowa State University
- 2:35 p.m. **Penalized Weighted Least Squares Method for Accelerated Failure Time Models with Gene Expression Data**—◆ Simin Hu, Case Western Reserve University; J. S. Rao, Case Western Reserve University
- 2:50 p.m. **On Linear Regression under the Partial Koziol-Green Model of Random Censorship**—◆ Ke Wu, California State University, Fresno
- 3:05 p.m. **Inference for Interval-Censored Data with Different Censoring Patterns among Treatment Groups**—◆ Guozhi Gao, Amgen Inc.; Xiang Zhang, Amgen Inc.; Steven Snapinn, Amgen Inc.; Qi Jiang, Amgen Inc.

- 3:20 p.m. **Additive Hazards Model for Case-2 Interval-Censored Failure Time Data**—◆ Lianming Wang, University of Missouri-Columbia; Jianguo Sun, University of Missouri-Columbia; Xingwei Tong, University of Missouri-Columbia
- 3:35 p.m. **Statistical Analysis of Multivariate Failure Time Data with Auxiliary Covariates**—◆ Zhaozhi Fan, Memorial University of Newfoundland

## 23 CC-616 ● Normalization and Analysis of Microarrays—Contributed

Biometrics Section, ENAR

*Chair(s): Dean Billheimer, Vanderbilt University*

- 2:05 p.m. **Two Extensions of the TW-SLM for Systematically Incorporating Control Genes and Spot Quality Information To Improve Normalization of cDNA Microarray Data**—◆ Deli Wang, The University of Alabama at Birmingham; Cun-Hui Zhang, Rutgers University; Marcelo B. Soares, Northwestern University; Jian Huang, The University of Iowa
- 2:20 p.m. **Using Cytogenetics Data To Guide the Normalization of SNP Microarray Signals**—◆ Stanley Pounds, St. Jude Children's Research Hospital; Cheng Cheng, St. Jude Children's Research Hospital; Charles Mullighan, St. Jude Children's Research Hospital; Salil Goorha, St. Jude Children's Research Hospital; Sheila Shurtleff, St. Jude Children's Research Hospital; Susana C. Raimondi, St. Jude Children's Research Hospital; James R. Downing, St. Jude Children's Research Hospital
- 2:35 p.m. **Category Analysis for Microarray Data**—◆ Zhen Jiang, Fred Hutchinson Cancer Research Center; Robert Gentleman, Fred Hutchinson Cancer Research Center
- 2:50 p.m. **Probe-Level Modeling and Multiple Testing of Microarray Gene Expression**—◆ Tao Wang, University of South Florida; Magali Mouy, deCODE genetics; Jason Hsu, The Ohio State University; Hakon Hakonarson, deCODE genetics; Kari Stefansson, deCODE genetics
- 3:05 p.m. **Application of Temporal Association Rules to a cDNA Microarray Experiment**—◆ Bruce Southey, University of Illinois; Sandra Rodriguez-Zas, University of Illinois; Younhee Ko, University of Illinois; Chengxiang Zhai, University of Illinois

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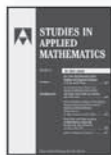
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# GENERAL PROGRAM SCHEDULE

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

3:20 p.m. **Quantitative Association Rules Applied to the Analysis of cDNA Microarray Experiments**—  
◆ Younhee Ko, University of Illinois; Bruce Southey, University of Illinois; Chengxiang Zhai, University of Illinois; Sandra Rodriguez-Zas, University of Illinois

3:35 p.m. **Strategies for Genome-Wide Family-Based Association Analysis for the Study of Integrative Genomics**—◆ James Degnan, Harvard University; Jessica Su, Harvard University; Cliona Molony, Rosetta Inpharmatics LLC; Eric Schadt, Rosetta Inpharmatics LLC/Merck Research Laboratories; Benjamin Raby, Harvard University; Christoph Lange, Harvard School of Public Health

## 24 CC-2A ● Pharmacokinetics and Crossover Trials—Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

*Chair(s): Jie Chen, Merck Research Laboratories*

- 2:05 p.m. **Assessing PK-AE Relationships Using Nonlinear Models**—◆ Haiyuan Zhu, Merck Research Laboratories
- 2:20 p.m. **Applications of Adapted Crossover Designs To Reduce Study Cost and Length in Phase I Clinical Trials**—◆ Fang Liu, Merck Research Laboratories
- 2:35 p.m. **Analysis of Replicated Crossover Designs for Average Bioequivalence**—◆ Donna Kowalski, Astellas Pharma Inc.; Devan V. Mehrotra, Merck Research Laboratories
- 2:50 p.m. **Assessing Treatment Differences Adjusted by Possible Carryover Effects in Crossover Clinical Trials**—◆ Ling Chen, U.S. Food and Drug Administration
- 3:05 p.m. **Factorial Crossover Designs with Fewer Periods and Fewer Subjects**—◆ Sourav Santra, Northern Illinois University
- 3:20 p.m. **Locally D-Optimal Designs for Pharmacokinetics Compartmental Models**—◆ Xin Fang, University of Illinois at Chicago
- 3:35 p.m. **The Hypothesis Testing behind Steady State Determination in Clinical Pharmacology Trials**—  
◆ Bingming Yi, Merck & Co., Inc.; Xun Chen, sanofi-aventis; Patrick Larson, Merck & Co., Inc.

## 25 CC-2B ● Multiple Trials and Multiple Endpoints—Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

*Chair(s): Shuguang Huang, Eli Lilly and Company*

- 2:05 p.m. **Analysis of a Composite Endpoint with Missing Data in Components**—◆ Hui Quan, sanofi-aventis; Daowen Zhang, sanofi-aventis; Ji Zhang, sanofi-aventis; Laure Devlamynck, sanofi-aventis
- 2:20 p.m. **A Multivariate Median-Based Robust Procedure To Analyze Multiple Endpoints**—◆ Kao-Tai Tsai, Organon; Harji Patel, Georgia Southern University
- 2:35 p.m. **On O'Brien's OLS and GLS Tests for Multiple Endpoints**—◆ Sergei Leonov, GlaxoSmithKline; James Roger, GlaxoSmithKline; Nigel Dallow, GlaxoSmithKline
- 2:50 p.m. **Tree-Structured Gatekeeping Procedures in Clinical Trials with Multiple Objectives**—◆ Alex Dmitrienko, Eli Lilly and Company; Brian L. Wiens, Myogen, Inc.; Ajit C. Tamhane, Northwestern University; Xin Wang, Northwestern University
- 3:05 p.m. **Control of Overall Type I Error in Clinical Trials with Both Surrogate and Final Endpoints**—  
◆ Chung-Kuei Chang, Cephalon, Inc.
- 3:20 p.m. **Monitoring Futility in Two-by-Two Factorial Studies**—◆ Leslie A. McClure, The University of Alabama at Birmingham; Christopher S. Coffey, The University of Alabama at Birmingham; George Howard, The University of Alabama at Birmingham
- 3:35 p.m. **Floor Discussion**

## 26 CC-210 ● Mortgages and Auctions—Contributed

Business and Economics Statistics Section

*Chair(s): J. Keith Ord, Georgetown University*

- 2:05 p.m. **Loss and Prepayment Modeling in the Context of Subprime Mortgage Loans**—Deniz Senturk, GE Global Research; ◆ Huaiyu Ma, GE Global Research; Greg Ratkovsky, WMC
- 2:20 p.m. **Credit Rating Transition of U.S. Corporate Bonds**—◆ Weijian Liang, New York University; Halina Frydman, New York University; Stephen Figlewski, New York University

- 2:35 p.m. **Credit Risk Analysis for Taiwan Electronic Industrial**—❖ Yi-Kuan Jong, St. John's University
- 2:50 p.m. **Statistical Validation of a Credit Risk Model**—  
❖ Lydian Medema, University of Groningen
- 3:05 p.m. **A Semiparametric Investigation of the Effect of Reserve Prices on Selling Prices Using Identical Auctioned Items from eBay**—❖ Dawit Zerom, University of Alberta; Peter Popkowski Leszczyc, University of Alberta
- 3:20 p.m. **A Statistical Approach to Controlling Sniping in Electronic Auctions**—❖ Dawn Porter, Georgetown University; J. Keith Ord, Georgetown University
- 3:35 p.m. **A New Model for Forecasting Credit Spread Changes: Model Estimation, Prediction, and Inference Procedures**—❖ Yang Wang, The Pennsylvania State University

## 27 CC-213 Software—Contributed

Section on Statistical Computing

*Chair(s): Morteza Marzjarani, Saginaw Valley State University*

- 2:05 p.m. **The Carapace Environment**—❖ Gary Oehlert, University of Minnesota
- 2:20 p.m. **Enterprise Automaton with R**—❖ Zubin Dowlaty, InterContinental Hotels Group; Dean Mao, InterContinental Hotels Group; Simon Urbanek, AT&T Labs-Research
- 2:35 p.m. **Estimation and Inference in Parametric Stochastic Frontier Models: a SAS/IML Procedure for a Maximum Likelihood Bootstrap Method**—❖ Sylvie Tchumtchoua, University of Connecticut
- 2:50 p.m. **A New Program for Computing Percentage Points for Pearson Distributions**—❖ Wei Pan, University of Cincinnati; Haiyan Bai, University of Cincinnati
- 3:05 p.m. **Statistical Inference Package (SIP)**—❖ Esa Uusipaikka, University of Turku
- 3:20 p.m. **Floor Discussion**

## 28 CC-214 Testing—Contributed

Section on Statistical Computing

*Chair(s): Faming Liang, Texas A&M University*

- 2:05 p.m. **Testing the Equality of Two Normally Distributed Populations**—❖ Charles Dunn, Miami University

- 2:20 p.m. **Generation of the Distribution of the Test for a Latin Square Design with Heterogeneous Variances**—❖ Miin-Jye Wen, National Cheng Kung University; Hubert Chen, National Cheng Kung University
- 2:35 p.m. **On Testing the Bioequivalence of Several Treatments Using the Measure of Distance**—  
❖ Hubert Chen, National Cheng Kung University; Miin-Jye Wen, National Cheng Kung University
- 2:50 p.m. **An Exact Test for Testing the Equality of Parameter Matrices in Two Multivariate Linear Models**—❖ Jinadasa K. Gamage, Illinois State University; Malwane M. A. Ananda, University of Nevada, Las Vegas
- 3:05 p.m. **Performance of Robust and Nonrobust Roy-Bargmann Stepdown Follow-up to a Significant MANOVA under a Variety of Conditions: a Simulation Study**—❖ Holmes Finch, Ball State University
- 3:20 p.m. **Comparisons of Sets of Multivariate Time Series**—❖ Jaydip Mukhopadhyay, University of Connecticut; Nalini Ravishanker, University of Connecticut; Jonathan Hosking, IBM Research
- 3:35 p.m. **Iterated BH Procedure**—❖ Nasrine Bendjilali, Lehigh University; Wei-Min Huang, Lehigh University

## 29 CC-603 Likelihood-Based Inference—Contributed

IMS

*Chair(s): Siobhan Everson-Stewart, University of Washington*

- 2:05 p.m. **Testing of Rate Ratio under Inverse Sampling**—  
❖ Hon Keung T. Ng, Southern Methodist University; Man Lai Tang, Hong Kong Baptist University; Yijie Liao, Hong Kong Baptist University; Ping Shing Chan, The Chinese University of Hong Kong
- 2:20 p.m. **A Bivariate Interval Censorship Model for Partnership Formation**—❖ Qiqing Yu, Binghamton University; Linda Wong, Binghamton University
- 2:35 p.m. **The Likelihood Ratio Test of Mixture Hypotheses and the Tube Volume Problem**—❖ Yong Lin, University of Medicine & Dentistry of New Jersey; Bruce G. Lindsay, The Pennsylvania State University

# GENERAL PROGRAM SCHEDULE

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

2:50 p.m. **On Hinkley's Estimator: Inference about the Change-Point**—◆ Stergios B. Fotopoulos, Washington State University; Venkata Jandhyala, Washington State University

3:05 p.m. **Conditional Properties of a Parametric Bootstrap**—◆ Russell Zaretski, University of Tennessee

3:20 p.m. **Summarizing and Interpreting Likelihood Functions as Functions**—◆ Michael Brimacombe, University of Medicine & Dentistry of New Jersey; Bo Peng, University of Medicine & Dentistry of New Jersey

3:35 p.m. **Testing for and against a Set of Linear Inequality Constraints in the Product Multinomial Setting**—◆ Hammou Elbarimi, Baruch College

## 30 CC-211 **Bayesian Biomedical Modeling—Contributed**

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

*Chair(s): Edwin S. Iversen, Jr., Duke University*

2:05 p.m. **Monitoring Event Times in Early-Phase Clinical Trials: Practical Issues**—◆ Leiko H. Wooten, M. D. Anderson Cancer Center; Peter F. Thall, M. D. Anderson Cancer Center; Nizar M. Tannir, M. D. Anderson Cancer Center

2:20 p.m. **Modeling Long-Term HIV Dynamics: a Bayesian Approach**—◆ Dacheng Liu, Boehringer Ingelheim; Hulin Wu, University of Rochester; Yangxin Huang, University of South Florida

2:35 p.m. **Prior Structures for Surrogate Endpoint Validation Using PTE**—◆ Chunyao Feng, Baylor University; John W. Seaman, Baylor University; Stacy Lindborg, Eli Lilly and Company

2:50 p.m. **A Bayesian Multivariate PK/PD Model for Analyzing Cortisol Circadian Rhythm in a Depression Study**—◆ Niko Kaciroti, University of Michigan; Trivellore E. Raghunathan, University of Michigan; Delia Vazquez, University of Michigan

3:05 p.m. **Bayesian Modeling of Correlated Binary Data from the Cryotherapy for Retinopathy of Prematurity (CRYO-ROP) Study**—◆ Claudia Pedroza, The University of Texas School of Public Health; Betty Tung, The University of Texas School of Public Health

3:20 p.m. **Bayesian Analysis of Age-Adjusted Cancer Rates Using Joinpoint Regression Model**—◆ Ram Tiwari, National Institutes of Health; Pulak Ghosh, Georgia State University

3:35 p.m. **Bayesian Modeling of Noncompliance in Folic Acid Dosing Studies**—◆ Owen Devine, Centers for Disease Control and Prevention

## 31 CC-605 **Consumer Prices and Expenditures—Contributed**

Section on Government Statistics

*Chair(s): Alan R. Tupek, U.S. Census Bureau*

2:05 p.m. **A Micro-Level Latent Class Analysis of Underreporting on the Consumer Expenditure Survey**—◆ Brian Meekins, Bureau of Labor Statistics; Clyde Tucker, Bureau of Labor Statistics; Paul Biemer, RTI International

2:20 p.m. **The Use of Geocoding to Locate Outlets Outside of Sample Area Boundaries to Determine Significant Areas of Commerce**—◆ John Schilp, Bureau of Labor Statistics; Fred Marsh, III, Bureau of Labor Statistics

2:35 p.m. **Internet Portals and Outlet Selection Issues in the Consumer Price Index**—◆ Charles Mason, Bureau of Labor Statistics; Roberta Sangster, Bureau of Labor Statistics; Madeleine Saxton, Bureau of Labor Statistics

2:50 p.m. **A Spatial Analysis of Price Change in CPI Housing Index**—◆ William Larson, Bureau of Labor Statistics

3:05 p.m. **Comparison of Chained CPI-U and Regular CPI-U All-U.S. Indexes in the Housing Sector (2000–2004)**—◆ Owen Shoemaker, Bureau of Labor Statistics

3:20 p.m. **Comparison between Newly Proposed Response Rates and Current Response Rates for the TPOP Survey**—◆ Fred Marsh, III, Bureau of Labor Statistics

3:35 p.m. **Effect of Computer-Assisted Personal Interviews in the U.S. Consumer Expenditure Interview Survey**—◆ Moon Jung Cho, Bureau of Labor Statistics; Carolyn Pickering, Bureau of Labor Statistics

## 32 CC-612 **Applications for Modeling Health Survey Data—Contributed**

Section on Health Policy Statistics

*Chair(s): David Blough, University of Washington*

2:05 p.m. **Modeling of Longitudinal Polytomous Outcomes from Complex Survey Data**—◆ Punam Pahwa, University of Saskatchewan; Chandima

- 2:20 p.m. Karunanayake, University of Saskatchewan; Helen H. McDuffie, University of Saskatchewan  
**Statistical Modeling of Longitudinal Mental Distress among the National Population Health Survey Participants: Missing Data Analysis**—❖ Chandima Karunanayake, University of Saskatchewan; Punam Pahwa, University of Saskatchewan; Helen H. McDuffie, University of Saskatchewan
- 2:35 p.m. **A Two-Phase Model To Study the Health Care-Seeking Behaviors for Common Cold of People in Taiwan**—❖ Hsing-Yi Chang, National Health Research Institutes; Yu-Wen Wen, National Health Research Institutes
- 2:50 p.m. **Alcohol Disorders and Employment Stability: a Longitudinal Study**—❖ Richard Bryant, University of Missouri-Rolla; V. A. R. Samaranyake, University of Missouri-Rolla

- 3:05 p.m. **Significance Analysis of Physician Photo Identification Cards Trial**—❖ Ye-Ying Cen, Hennepin County Medical Center; Jennings Ryan Staley, United States Air Force; Baolin Wu, University of Minnesota; Scott F. Davies, Hennepin County Medical Center
- 3:20 p.m. **Development, Scaling, and Implementation of a Patient Satisfaction Inventory for Organ Transplant Candidates and Recipients**—❖ Irene Feurer, Vanderbilt University Medical Center; Hongxia Liu, Vanderbilt University School of Nursing; Panarut Wisawatapnimit, Vanderbilt University School of Nursing; C. Wright Pinson, Vanderbilt University Medical Center
- 3:35 p.m. **Factor Analysis with Categorical Data: a Methodological Illustration with the GAZA Child Health Survey Data**—❖ Dongguang Li, National Cancer Institute of Canada; John D. Pringle, Queen's University; Julio Arboleda-Florez, Queen's University; Heather Stuart, Queen's University

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## 33 CC-212 ● **Nonparametric Approaches to Regression and Spatial Modeling—Contributed**

Section on Nonparametric Statistics

*Chair(s): Huiping Jiang, Columbia University*

- 2:05 p.m. **Regression Model-Fitting with Long Memory—**  
◆ Hongwen Guo, Michigan State University;  
Hira L. Koul, Michigan State University
- 2:20 p.m. **Multivariate Theil-Sen Estimators—**◆ Xin Dang, University of Mississippi; Hanxiang Peng, University of Mississippi; Xueqin Wang, Yale University School of Medicine
- 2:35 p.m. **A Goodness-of-Fit Test for Parametric Regression Models When Some Covariates Are Missing—**  
◆ Lei Jin, Texas A&M University; Suojin Wang, Texas A&M University
- 2:50 p.m. **Estimating Prediction Error in Linear Regression by Cross-Validation—**◆ Hui Shen, The University of British Columbia; William J. Welch, The University of British Columbia
- 3:05 p.m. **On Nonparametric Smoothing Methods for Assessing Climate Change—**◆ Patricia Menendez Galvan, Swiss Federal Research Institute WSL/ETHZ; Sucharita Ghosh, Swiss Federal Research Institute WSL
- 3:20 p.m. **Evaluation of Spatial Normalization Parameters for SPM: Application to Type 2 Diabetes Data—**  
◆ Bedda Rosario, University of Pittsburgh; Scott Ziolk, University of Pittsburgh; Lisa Weissfeld, University of Pittsburgh; Julie Price, University of Pittsburgh
- 3:35 p.m. **Statistical Methods for Proportional Hazards Regression with Missing Covariates—**◆ Lihong Qi, University of California, Davis; Ching-Yun Wang, Fred Hutchinson Cancer Research Center; Ross Prentice, Fred Hutchinson Cancer Research Center

## 34 CC-601 ● **Optimal Experimental Design—Contributed**

Section on Physical and Engineering Sciences

*Chair(s): Cheryl Dingus, Battelle Memorial Institute*

- 2:05 p.m. **A Catalog of Nonisomorphic Indicator Functions—**◆ Shao-Wei Cheng, Academia Sinica; Chien-Yu Peng, Academia Sinica
- 2:20 p.m. **Certain Orthogonal Arrays with Generalized Minimum Aberration—**◆ Aijun Zhang, University of Michigan

- 2:35 p.m. **Optimal Fold-over Designs for Three-Level Fractional Factorial Designs—**◆ Hong Zhou, University of Memphis; Manohar L. Aggarwal, University of Memphis; Lih Yuan Deng, University of Memphis; Dennis K. J. Lin, The Pennsylvania State University
- 2:50 p.m. **(M,S)-Optimality in Selecting Factorial Designs—**◆ Xianggui Qu, Oakland University; Robert Kushler, Oakland University; Theophilus Ogunyemi, Oakland University
- 3:05 p.m. **Algorithms for Generating Experimental Designs for Irregularly Shaped Regions—**◆ Greg Piepel, Battelle-PNNL; Nam-Ky Nguyen, University of New England
- 3:20 p.m. **Orthogonal-Maximin Latin Hypercube Designs—**  
◆ Ying Hung, Georgia Institute of Technology; Roshan J. Vengazhiyil, Georgia Institute of Technology
- 3:35 p.m. **Optimal Design of an Ion Trapping Experiment—**  
◆ Kevin Coakley, National Institute of Standards and Technology

## 35 CC-611 ● ⊕ **Causal Models and Causal Effects—Contributed**

Section on Statistics in Epidemiology, Biometrics Section, ENAR

*Chair(s): Abdus Wahed, University of Pittsburgh*

- 2:05 p.m. **On Informative Detection Bias in Screening Studies—**◆ Arvid Sjölander, Karolinska Institutet; Juni Palmgren, Karolinska Institutet
- 2:20 p.m. **Estimating a Class of Causal Treatment Effect for Survival Data—**◆ Jing Ning, The Johns Hopkins University; Mei-Cheng Wang, The Johns Hopkins University; Zhiqiang Tan, The Johns Hopkins University
- 2:35 p.m. **Path Analysis for Ordinal Variables—**◆ Haihong Li, University of Florida; P. V. Rao, University of Florida
- 2:50 p.m. **Approaches to Obtaining Standard Errors for Parameter Estimates in Latent Class Analysis—**  
◆ David M. Thompson, The University of Oklahoma
- 3:05 p.m. **An Application of Multivariate Path Models and the Calculus of Coefficients to Describe Effects of Health Behaviors on the Metabolic Syndrome—**◆ Youngju Pak, University at Buffalo; Randy L. Carter, University at Buffalo



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# GENERAL PROGRAM SCHEDULE

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

- 3:20 p.m. **Signed Directed Acyclic Graphs for Causal Inference**—◆ Tyler J. VanderWeele, Harvard School of Public Health; James Robins, Harvard School of Public Health

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

## 36 CC-608 ● **Unit Nonresponse in Surveys I—Contributed**

Section on Survey Research Methods

*Chair(s): Karol Krotki, RTI International*

- 2:05 p.m. **Nonresponse to a Computer-Assisted Self-Interviewing (CASI) Module**—◆ Mick Couper, University of Michigan; Eleanor Singer, University of Michigan; John Van Hoewyk, University of Michigan
- 2:20 p.m. **Assessing the Effectiveness of Weighting Cell Adjustments for Longitudinal Nonresponse**—◆ Leroy Bailey, U.S. Census Bureau
- 2:35 p.m. **Sample Reweighting To Reflect an Initial Population**—◆ 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
- 2:50 p.m. **Approaches to Nonresponse Bias Analysis in an Adult Literacy Survey**—◆ Wendy Van de Kerckhove, Westat; Thomas Krenzke, Westat; Leyla Mohadjer, Westat
- 3:05 p.m. **An Application of Propensity Modeling To Adjust Weights for Nonresponse: Effectiveness of Restricting Variables and Propensity Values**—◆ Frank Potter, Mathematica Policy Research, Inc.; Nuria Diaz-Tena, Mathematica Policy Research, Inc.; Stephen R. Williams, Mathematica Policy Research, Inc.
- 3:20 p.m. **Adjusting for Nonignorable Missing Data with Nonignorable Sampling Design in Longitudinal Sample Survey**—◆ Moh Yin Chang, University of Nebraska-Lincoln
- 3:35 p.m. **Estimated Response Propensities as a Means To Evaluate Error Effects Due to Nonresponse**—◆ Leela Aertker, The University of North Carolina at Chapel Hill; William D. Kalsbeek, The University of North Carolina at Chapel Hill

## 37 CC-610 ● **Estimation and Confidentiality—Contributed**

Section on Survey Research Methods, Section on Health Policy Statistics

*Chair(s): Andrew A. White, Institute of Education Sciences*

- 2:05 p.m. **Disclosure Avoidance for the 2007 ACS PUMS: a Model-Based Approach for Group-Quarters Data**—◆ Rolando Rodriguez, U.S. Census Bureau
- 2:20 p.m. **Reporting to Payers, Regulators, and Managers: Issues and Experiences with Confidentiality and Compliance**—◆ Richard Carlson, Medica
- 2:35 p.m. **The Change-of-Variance Function in Generalized Linear Mixed-Effect Models with Applications to Poisson-Gamma and Beta-Binomial Models**—◆ Gabriela Cohen-Freue, The University of British Columbia
- 2:50 p.m. **A Bridge between the Greg and the Linear Regression Estimators**—◆ Sarjinder Singh, St. Cloud State University; Raghunath Arnab, University of Botswana
- 3:05 p.m. **A Generalized Forced Quantitative Randomized Response Model**—◆ Oluseun Odumade, St. Cloud State University; Sarjinder Singh, St. Cloud State University
- 3:20 p.m. **Global and Hierarchical Linear Regression in Two-Stage Sampling**—◆ Dharendra Ghosh, Synectics for Management Decisions, Inc.; Andrew Vogt, Georgetown University
- 3:35 p.m. **Confidentiality in Survey Data: the Lack of Consistent Standards**—◆ M. Leeann Habte, University of California, Los Angeles; Hongjian Yu, University of California, Los Angeles; Jenny Chia, University of California, Los Angeles; Brandon Traudt, University of California, Los Angeles

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

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## 38 CC-4C-4 **Introductory Overview Lectures: Adaptive Designs/Interim Pilots and Regression Trees—Other**

The ASA, ENAR, IMS, SPAIG Committee, WNAR

*Organizer(s): Lisa M. LaVange, The University of North Carolina at Chapel Hill*

*Chair(s): Lisa M. LaVange, The University of North Carolina at Chapel Hill*

- 4:05 p.m. **Regression Trees**—◆ Wei-Yin Loh, University of Wisconsin-Madison

- 4:55 p.m. **Adaptive and Internal Pilot Designs—**  
❖ Christopher S. Coffey, The University of  
Alabama at Birmingham

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

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

### 39 CC-401 **Statistics in Biotechnology around the Puget Sound—Invited**

ASA, Puget Sound Chapter, Section on Statistical Graphics

*Organizer(s): Bruce Peterson, Terastat*

*Chair(s): Tim C. Hesterberg, Insightful Corporation*

- 4:05 p.m. **Reference Samples and Other Low-Level Choices  
for the Design and Analysis of Two-Color  
Microarray Experiments—**❖ Kathleen Kerr,  
University of Washington
- 4:35 p.m. **Graphs and Networks in Computational  
Biology—**❖ Robert Gentleman, Fred Hutchinson  
Cancer Research Center
- 5:05 p.m. **Statistical Methods for Integrating High-  
Dimensional Genotype, Molecular Profiling, and  
Clinical Data To Elucidate Human Disease—**  
❖ Eric Schadt, Rosetta Inpharmatics LLC/Merck  
Research Laboratories
- 5:35 p.m. **Floor Discussion**

### 40 CC-400 **Statistical Issues in Genetic Association Studies—Invited**

General Methodology, Biometrics Section, ENAR

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

*Chair(s): Daniel Schaid, Mayo Clinic College of Medicine*

- 4:05 p.m. **Family Studies in the Age of Association—**❖ Nan  
M. Laird, Harvard School of Public Health
- 4:30 p.m. **Hybrid Vigor: Family-Based and Population-  
Based Designs Can Work Together—**❖ Clarice R.  
Weinberg, National Institute of Environmental  
Health Sciences; David M. Umbach, National  
Institute of Environmental Health Sciences
- 4:55 p.m. **Analysis of Complex Pathways in Molecular  
Epidemiology—**❖ Duncan C. Thomas, University  
of Southern California
- 5:20 p.m. **Disc: David Clayton, University of Cambridge**
- 5:40 p.m. **Floor Discussion**

### 41 CC-203 **● ⊕ Statistical Effect Assessment of Environmental Exposure—Invited**

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

*Organizer(s): Li-Shan Huang, University of Rochester*

*Chair(s): Christopher Cox, The Johns Hopkins University*

- 4:05 p.m. **Bayesian Models for Multiple Outcomes  
Nested within Domains—**❖ Sally W. Thurston,  
University of Rochester Medical Center; David  
Ruppert, Cornell University
- 4:30 p.m. **Analysis of Multivariate Longitudinal Data Using  
Structural Equation Models—**❖ Esben Budtz-  
Jorgensen, University of Copenhagen; Philippe  
Grandjean, Harvard University; Frodi Debes,  
University of Southern Denmark; Pal Weihe,  
Faroese Hospital System
- 4:55 p.m. **Double-Smoothing Local Linear Estimation  
in Partial Linear Models with Application to  
Environmental Health Data—**❖ Li-Shan Huang,  
University of Rochester; Christopher Cox, The  
Johns Hopkins University
- 5:20 p.m. **Synthesizing Data from Multiple Sources for  
Environmental Risk Assessment—**❖ Louise Ryan,  
Harvard School of Public Health
- 5:45 p.m. **Floor Discussion**

### 42 CC-610 **Graphical Models and Variational Methods— Invited**

IMS, Section on Bayesian Statistical Science

*Organizer(s): Martin Wainwright, University of California, Berkeley*

*Chair(s): Martin Wainwright, University of California, Berkeley*

- 4:05 p.m. **Variational Methods for Dirichlet Process  
Mixtures—**❖ David M. Blei, Princeton  
University; Michael I. Jordan, University of  
California, Berkeley
- 4:35 p.m. **Structured Prediction, Dual Extragradient, and  
Bregman Projections—**❖ Ben Taskar, University  
of California, Berkeley
- 5:05 p.m. **A Variational Inference Procedure Allowing  
Internal Structure for Overlapping Clusters and  
Deterministic Constraints—**❖ Christopher Meek,  
Microsoft Research; Dan Geiger, Technion-Israel  
Institute of Technology
- 5:35 p.m. **Floor Discussion**

# GENERAL PROGRAM SCHEDULE

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

## 43 CC-213 ● **Statistical Methods in HIV/AIDS Research—Invited**

Section on Statistics in Epidemiology, Biometrics Section, ENAR

*Organizer(s): Michael G. Hudgens, The University of North Carolina at Chapel Hill*

*Chair(s): Michael G. Hudgens, The University of North Carolina at Chapel Hill*

- 4:05 p.m. **Methods for Determining the Accuracy of Quantitative PCR for Low Levels of HIV-1—**  
◆ Barbra Richardson, University of Washington
- 4:25 p.m. **A Bernoulli/Left-Censored Lognormal Mixture Model for Activity of the Protease of HIV-1 as a Function of Amino Acid Characteristics—**◆ Paul W. Stewart, The University of North Carolina at Chapel Hill
- 4:45 p.m. **Evaluating Linked Substitutions in HIV Genomic Sequences—**◆ Françoise Seillier-Moiseiwitsch, Georgetown University Medical Center; Huwaida Rabie, Georgetown University Medical Center; Rebecca Slack, Georgetown University Medical Center; JaeHyung Ahn, The University of North Carolina at Chapel Hill; Gary Koch, The University of North Carolina at Chapel Hill
- 5:05 p.m. **A Comprehensive Mathematical Model of HIV/STD Spread in Communities—**◆ Georgiy V. Bobashev, RTI International; Michael Goedecke, RTI International; Elizabeth Costenbader, RTI International; William Zule, RTI International
- 5:25 p.m. Disc: Sarah Holte, Fred Hutchinson Cancer Research Center
- 5:45 p.m. **Floor Discussion**

## 44 CC-201 ● **Global Views on the Role of Statistics in Medical Device Regulation—Invited**

Biopharmaceutical Section, ENAR

*Organizer(s): Gene Pennello, U.S. Food and Drug Administration*

*Chair(s): Gene Pennello, U.S. Food and Drug Administration*

- 4:05 p.m. **Statistical Regulations in the EU: Do They Exist for Medical Devices?—**◆ Bart Gerritse, Medtronic, Inc.
- 4:30 p.m. **Statistics in the Chinese Regulatory Environment of Medical Devices—**◆ Li Wei, Cardiovascular Institute and Fu Wai Hospital; Yao Chen, Peking University First Hospital
- 4:55 p.m. **The Global Harmonization Task Force—**◆ Larry G. Kessler, U.S. Food and Drug Administration

5:20 p.m. Disc: Greg Campbell, U.S. Food and Drug Administration

5:40 p.m. **Floor Discussion**

## 45 CC-3A **Statistical Learning and Data Mining—Invited**

International Chinese Statistical Association, Section on Nonparametric Statistics

*Organizer(s): Xiaotong Shen, University of Minnesota*

*Chair(s): Xiao-Li Meng, Harvard University*

- 4:05 p.m. **Image Denoising via Solution Paths—**◆ Ji Zhu, University of Michigan; Li Wang, University of Michigan; Hui Zou, University of Minnesota
- 4:35 p.m. **Using Input-Dependent Weights for Model Combination and Model Selection with Multiple Sources of Data—**◆ Wei Pan, University of Minnesota; Guanghua Xiao, University of Minnesota; Xiaohong Huang, University of Minnesota
- 5:05 p.m. **Binning in Gaussian Kernel Regularization—**  
◆ Bin Yu, University of California, Berkeley; Tao Shi, University of California, Berkeley
- 5:35 p.m. **Floor Discussion**

## 46 CC-614 **Statistical Graphics: from Playfair to Bertin and beyond—Invited**

Section on Statistical Graphics, Section on Statistical Education

*Organizer(s): Michael Friendly, York University*

*Chair(s): Antony Unwin, Universität Augsburg*

- 4:05 p.m. **Graphics in French Statistical Journals during the 19th Century—**◆ Antoine de Falguerolles, University Paul Sabatier (Toulouse III)
- 4:35 p.m. **Andre-Michel Guerry and the Rise of Moral Statistics—**◆ Michael Friendly, York University
- 5:05 p.m. **William Playfair and the Psychology of Graphs—**  
◆ Ian Spence, University of Toronto
- 5:35 p.m. **Floor Discussion**

## 47 CC-210 ● **Statistical Methods in Oral Health Research—Invited**

Biometrics Section, WNAR

*Organizer(s): Elizabeth G. Hill, Medical University of South Carolina*

*Chair(s): Elizabeth H. Slate, Medical University of South Carolina*

- 4:05 p.m. **A Semiparametric Bayesian Model for Inter-Rater Agreement of Probing Pocket Depth—**



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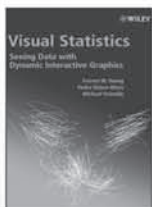
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## Visual Statistics:

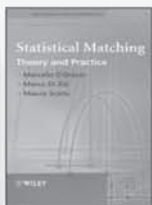
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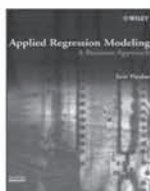


## Statistical Matching: Theory and Practice

Marcello D'Orazio, Marco Di Zio, Mauro Scanu

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## Applied Regression Modeling: A Business Approach

Iain Pardoe

*Applied Regression Modeling: A Business Approach* represents a consciously fused effort to put all the building blocks of regression modeling in one place (with chapters on statistical foundations and simple linear regression), before constructing a general framework for building multiple linear regression models. The emphasis is on interesting and challenging applications that provide a unified fabric for business settings. An abundant use of graphics is employed throughout the book in an effort to keep the verbiage to an absolute minimum. SPSS, Excel, and R software discussions are incorporated.

0-471-97033-6 8 • August 2006 • 320 pp. • Cloth • \$99.95



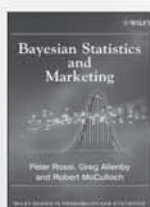
## Linear Model Theory:

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Keith E. Muller, Paul W. Stewart

*Fundamentals of Multivariate Linear Models: Theory and Application* consists of five parts. Part 1 centers on brief, clear mathematical statements of notation, assumptions, and formulas. Real data examples illustrate and motivate students. Part 2 consists of mathematical prerequisites (matrix algebra and the fundamentals of multivariate statistical theory) and is based on the assumption that some students either have not learned this material already or will need to review it. Part 3 contains chapters on the multivariate Gaussian distribution and quadratic forms. Part 4 focuses on estimation and inference. Part 5 concentrates on study planning. Each section of the book contains homework assignments and exams that instructors may use for their classes, or that students can use to test their own knowledge

0-471-21488-4 • July 2006 • 480 pp. • Cloth • \$84.95



## Bayesian Statistics and Marketing

Peter Rossi, Greg Allenby, Rob McCulloch

*Bayesian Statistics and Marketing* describes the basic advantages of the Bayesian approach, detailing the nature of the computational revolution. Examples contained include household and consumer panel data on product purchases and survey data, demand models based on micro-economic theory and random effect models used to pool data among respondents. The book also discusses the theory and practical use of MCMC methods.

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

❖ Elizabeth G. Hill, Medical University of South Carolina; Elizabeth H. Slate, Medical University of South Carolina

- 4:30 p.m. **Ensemble Models for Risk Prediction with Survey and Multilevel Data**—❖ Stuart A. Gansky, University of California, San Francisco; Nancy F. Cheng, University of California, San Francisco
- 4:55 p.m. **Spatial Analyses of Periodontal Data Using Conditionally Autoregressive Priors Having Two Classes of Neighbor Relations**—❖ Brian Reich, North Carolina State University; James Hodges, University of Minnesota; Bradley P. Carlin, University of Minnesota
- 5:20 p.m. Disc: Julie Stoner, University of Nebraska Medical Center
- 5:40 p.m. **Floor Discussion**

## Invited Panels 4:00 p.m.–5:50 p.m.

### 48 CC-617

#### ● ⊕ Minorities, Environment, and Statistics—Invited

Committee on Minorities in Statistics, Section on Statistical Education

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

*Chair(s): Calvin L. Williams, Clemson University*

- Panelists:** ❖ Nagambal Shah, Spelman College
- ❖ William Hunt, North Carolina State University
- ❖ Julia Bader, The University of Texas at El Paso
- ❖ Kishi Animashaun Ducre, Syracuse University

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

### 49 CC-3B

#### ● ⊕ 'Bad' Statistical Methods: What Are the Costs?—Invited

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

*Organizer(s): Peter Westfall, Texas Tech University*

*Chair(s): Peter Westfall, Texas Tech University*

- Panelists:** ❖ David Freedman, University of California, Berkeley
- ❖ S. Stanley Young, National Institute of Statistical Sciences
- ❖ Mary Foulkes, U.S. Food and Drug Administration
- ❖ Juliet Shaffer, University of California, Berkeley

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

## Topic-Contributed Sessions

4:00 p.m.–5:50 p.m.

### 50 CC-204

#### ● Strengths and Weaknesses of a Megatrial—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

*Organizer(s): Vipin Arora, Novartis Pharmaceuticals Corporation;*

*Tsushung A. Hua, Novartis Pharmaceuticals Corporation*

*Chair(s): John E. Connett, University of Minnesota*

- 4:05 p.m. **Megatrials: Not Necessarily Either/Or**—❖ Lloyd Fisher, University of Washington
- 4:25 p.m. **Issues in the Use of a Composite Endpoint in Megatrials**—❖ Steven Snapinn, Amgen Inc.
- 4:45 p.m. **Are Megatrials Worth It?**—❖ Barry Davis, The University of Texas School of Public Health
- 5:05 p.m. **Strengths and Weaknesses of a Megatrial: Complexity of Designing, Handling, and Implementing Megatrials**—❖ Timothy Church, University of Minnesota
- 5:25 p.m. Disc: Patrick O'Meara, Pat O'Meara Associates, Inc.
- 5:45 p.m. **Floor Discussion**

### 51 CC-613

#### ● ⊕ Issues with Open Source Statistical Software in Industry: Validation, Legal Issues, and Regulatory Requirements—Topic-Contributed

Section on Statistical Computing, Biopharmaceutical Section, Section on Statistical Consulting, Section on Statistical Graphics

*Organizer(s): Nicholas J. I. Lewin-Koh, Eli Lilly and Company*

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

- 4:05 p.m. **Open-Source Software and Pharma Development: Computer Systems Validation and Value**—❖ Anthony Rossini, Novartis Pharma AG
- 4:25 p.m. **Open-Source Software in Pharmaceutical Discovery**—❖ Gregory Warnes, Pfizer Inc.; A. Max Kuhn, Pfizer Global Research & Development; James Rogers, Pfizer Global Research & Development
- 4:45 p.m. **Use of Open-Source Software by an Academic Center in a Regulatory Environment**—❖ Thomas D. Cook, University of Wisconsin-Madison
- 5:05 p.m. **Times R A'changin': FDA Perspectives on Use of Open Source**—❖ B. Sue Bell, U.S. Food and



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

Drug Administration; Kathleen Morrish, U.S. Food and Drug Administration; Ferrin Harrison, U.S. Food and Drug Administration; David Petullo, U.S. Food and Drug Administration; Laura Thompson, U.S. Food and Drug Administration; Gerry W. Gray, U.S. Food and Drug Administration

5:25 p.m. **Software and Code Evaluation: Risk-Based Approaches to Software Integration**—◆ Nicholas J. I. Lewin-Koh, Eli Lilly and Company; Robert A. Myers, Eli Lilly and Company

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

## 52 CC-602 **Model-Based Seasonal Adjustment: Algorithms and Applications—Topic-Contributed**

Business and Economics Statistics Section

*Organizer(s): Brian C. Monsell, U.S. Census Bureau*

*Chair(s): Tucker S. McElroy, U.S. Census Bureau*

4:05 p.m. **Numerical Implementation of Kalman Filter/ Smoother for State Space Models with Partially Diffuse Initial Conditions**—◆ Rajesh Selukar, SAS Institute, Inc.

4:25 p.m. **Evaluation of Finite-Sample Diagnostics for Model-Based Seasonal Adjustments and Trends**—◆ David Findley, U.S. Census Bureau; Richard Gagnon, U.S. Census Bureau; Tucker S. McElroy, U.S. Census Bureau

4:45 p.m. **Aspects of Model Averaging for Seasonal Adjustment**—◆ John Aston, Academia Sinica

5:05 p.m. **Assessing Spectral Peaks in Economic Time Series**—◆ Thomas D. Evans, Bureau of Labor Statistics; Stuart Scott, Bureau of Labor Statistics; Scott Holan, University of Missouri-Columbia; Tucker S. McElroy, U.S. Census Bureau

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

## 53 CC-615 **● From Sharks to Salmon: Quantitative Tools in Marine Demography and Management for Puget Sound and Alaska Fisheries—Topic-Contributed**

Section on Statistics and the Environment

*Organizer(s): Loveday Conquest, University of Washington*

*Chair(s): Loveday Conquest, University of Washington*

4:05 p.m. **The Management Strategy Evaluation Approach and the Gulf of Alaska Walleye Pollock Fishery**—

◆ Teresa A'mar, University of Washington; Andre E. Punt, University of Washington; Martin W. Dorn, National Oceanic & Atmospheric Administration

4:25 p.m. **Using Mixture Models To Estimate Abundance of Patchy Species**—◆ Elizabeth Conners, National Oceanic & Atmospheric Administration

4:45 p.m. **Forecasts of Salmon Returns**—◆ Saang-Yoon Hyun, Columbia River Inter-Tribal Fish Commission; David H. Salinger, University of Washington

5:05 p.m. **Using Multivariate Statistics To Resolve Issues of Scale with Salmon Survival and Ocean Environmental Data**—◆ Rishi Sharma, University of Washington

5:25 p.m. **Reconciling Biological Realities with Statistical Requirements in Fitting Growth Curves with Emphasis on Growth Models for Sharks**—◆ Nicole Vega, University of Washington; Vincent Gallucci, University of Washington

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

## 54 CC-620 **● ⊕ Overview and Results from the 2005 National Census Test—Topic-Contributed**

Section on Survey Research Methods

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

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

4:05 p.m. **An Overview of the 2005 National Census Test**—◆ Jennifer Tancreto, U.S. Census Bureau

4:25 p.m. **Effect of Internet Response Mode Designs on Data Quality and Ease of Use**—◆ Kelly Allmang, U.S. Census Bureau; Kevin Zajac, U.S. Census Bureau

4:45 p.m. **Experimental Treatment Results of the Bilingual Census Form from the 2005 National Census Test**—◆ Julie Bouffard, U.S. Census Bureau; Jennifer Tancreto, U.S. Census Bureau

5:05 p.m. **Analysis of Self-Response Options and Respondent-Friendly Design from the 2005 National Census Test**—◆ Michael Bentley, U.S. Census Bureau

5:25 p.m. **Experimental Treatment Results for the Age, Relationship, and Tenure Items from the 2005 National Census Test**—◆ Joan Hill, U.S. Census Bureau; Jennifer Tancreto, U.S. Census Bureau; Cynthia A. Rothhaas, U.S. Census Bureau

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



## 55 CC-611 ● **Statistical Issues in Veterans Administration (VA) Health Services Research—Topic-Contributed**

Section on Health Policy Statistics

*Organizer(s): Roslyn A. Stone, Veteran's Affairs Pittsburgh Healthcare System*

*Chair(s): Xiao-Hua Andrew Zhou, University of Washington*

**4:05 p.m. Statistical Issues in Racial/Ethnic Disparities Research**—✦ Roslyn A. Stone, Veteran's Affairs Pittsburgh Healthcare System; Huanyu Chen, VA Pittsburgh Healthcare System; Xiangyan Xu, Veteran's Affairs Pittsburgh Healthcare System

**4:25 p.m. The Use of Hierarchical Linear Models To Evaluate Methods for the Delivery of Primary Care**—✦ Martin Lee, University of California, Los Angeles

**4:45 p.m. Understanding Variation in Patient Safety Measures in the VA: How Bayesian Methods Can Help**—✦ Cindy Christiansen, Boston University

**5:05 p.m. A Decision-Theoretic Approach to Identifying Future High-Cost Patients**—✦ Kenneth Pietz, U.S. Department of Veterans Affairs; Margaret

M. Byrne, University of Miami; Laura A. Petersen, U.S. Department of Veterans Affairs  
**5:25 p.m. Disc:** Stephan Fihn, University of Washington School of Public Health

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

## 56 CC-604 ● ⊕ **Bayesian Student Paper Competition I—Topic-Contributed**

Section on Bayesian Statistical Science

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

*Chair(s): Merlise Clyde, Duke University*

**4:05 p.m. Bayesian Synthesis**—✦ Qingzhao Yu, The Ohio State University; Steven N. MacEachern, The Ohio State University; Mario Peruggia, The Ohio State University

**4:25 p.m. A Bayesian Framework To Combine Multivariate Spatial Data and Physical Models for Hurricane Surface Wind Prediction**—✦ Kristen M. Foley, North Carolina State University; Montserrat Fuentes, North Carolina State University

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# GENERAL PROGRAM SCHEDULE

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

4:45 p.m. **A Bayesian Pooled Analysis of Doubly Censored HIV Data Using the Hierarchical Cox Model—**  
❖ Wei Zhang, Boehringer Ingelheim; Kathryn Chaloner, The University of Iowa; Ying Zhang, The University of Iowa; Mary K. Cowles, The University of Iowa

5:05 p.m. **An Adaptive Bayesian Approach to Jointly Modeling Response and Toxicity in Phase I Dose-Finding Trials—**❖ Meihua Wang, University of Pittsburgh; Roger Day, University of Pittsburgh

5:25 p.m. **Hierarchical State-Space Model for Microarray Short Time Course Experiments—**❖ Haiyan Wu, Emory University; Ming Yuan, Georgia Institute of Technology; Susan Kaech, Yale University; M. Elizabeth Halloran, Fred Hutchinson Cancer Research Center

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

## 57 CC-612 ● **Student Paper Competition Award Presentations—Topic-Contributed**

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

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

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

4:05 p.m. **Robust Model-Based Predictor of Finite Population Total—**❖ Yan Li, University of Maryland; Partha Lahiri, University of Maryland

4:25 p.m. **Causal Inference Based on Directed Acyclic Graphical Models and the Randomization Distribution: a Probability-Sampling Approach—**  
❖ Joel E. Hanson, University of California, Berkeley

4:45 p.m. **Small-Area Estimation for Business Surveys—**  
❖ Hukum Chandra, University of Southampton

5:05 p.m. **An Application of Parametric Bootstrap Method in Small-Area Estimation Problem—**❖ Huilin Li, University of Maryland

5:25 p.m. **Local Polynomial Regression for Small-Area Estimation—**❖ Pushpal Mukhopadhyay, Iowa State University; Tapabrata Maiti, Iowa State University

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

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

### 58 CC-608 ● ⊛ **Going beyond the Law: Ethical Aspects of Privacy in Surveys—Topic-Contributed**

Social Statistics Section

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

*Chair(s): Virginia A. de Wolf, Consultant*

**Panelists:** ❖ Gerald Gates, U.S. Census Bureau  
❖ Pamela White, Statistics Canada  
❖ Jeffery Rodamar, U.S. Department of Education

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

### 59 CC-609 ● **How Is the TI-83 Calculator Changing How We Teach the Introductory Course in Statistics? Or Is It?—Topic-Contributed**

Section on Statistical Education

*Organizer(s): Marjorie Bond, Monmouth College*

*Chair(s): Marjorie Bond, Monmouth College*

**Panelists:** ❖ Dexter Whittinghill, Rowan University  
❖ Christopher Mecklin, Murray State University  
❖ Carolyn P. Dobler, Gustavus Adolphus College  
❖ Madhuri Mulekar, University of South Alabama

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

### 60 CC-607 ● **The Nontechnical Side of Statistical Consulting: Reflections on Careers as Working Statisticians and Suggestions and Guidance for Those on the Way—Topic-Contributed**

Section on Statistical Consulting, Section on Statistical Education

*Organizer(s): John Bartko, Retired*

*Chair(s): Edward D. Rothman, University of Michigan*

**Panelists:** ❖ John Bartko, Retired  
❖ Thomas Boardman, Colorado State University  
❖ Ross Prentice, Fred Hutchinson Cancer Research Center  
❖ Gerald van Belle, University of Washington

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



## 61 CC-211 Statistical Aspects of Pharmaceutical Industry Proof-of-Concept Studies—Topic-Contributed

Biopharmaceutical Section

*Organizer(s): Alfred Balch, Novartis Pharmaceuticals Corporation*

*Chair(s): Joga Gobburu, U.S. Food and Drug Administration*

- Panelists:**
- ❖ Surya Mohanty, Johnson & Johnson  
Pharmaceutical R&D
  - ❖ Glen Laird, Novartis Pharmaceuticals  
Corporation
  - ❖ Alfred Balch, Novartis Pharmaceuticals  
Corporation
  - ❖ Jens Praestgaard, Novartis Pharmaceuticals  
Corporation

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

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

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## 62 CC-205 ● Measuring Gene Expression—Contributed

Biometrics Section, WNAR, ENAR

*Chair(s): Saonli Basu, University of Minnesota*

- 4:05 p.m. **Clustering of Time-Course Gene Expression Data Using Functional Data Analysis**—❖ Joon Jin Song, University of Arkansas; Ho-Jin Lee, Schering-Plough Corporation; Jeffrey S. Morris, M. D. Anderson Cancer Center; Sanghoon Kang, Oak Ridge National Laboratory
- 4:20 p.m. **Dynamic Network Analysis of Time-Course Gene Expression Data**—❖ Donatello Telesca, University of Washington; Lurdes Y. T. Inoue, University of Washington
- 4:35 p.m. **A Bayes Approach to Virus Gene Time Course Expression Data**—❖ I-shou Chang, National Health Research Institutes
- 4:50 p.m. **Comparing Distance Measures for Clustering Time-Course Microarray Data**—❖ Theresa Scharl, Vienna University of Technology; Friedrich Leisch, University of Munich
- 5:05 p.m. **Bayesian Markov Chain Monte Carlo and Restricted Maximum Likelihood Study of Gene Expression Patterns across Time**—❖ Feng Hong, University of Illinois; Sandra Rodriguez-Zas, University of Illinois

5:20 p.m. **Semiparametric Analysis of Gene Expression Patterns across Ages**—❖ Sandra Rodriguez-Zas, University of Illinois; Bruce Southey, University of Illinois; Gene Robinson, University of Illinois

5:35 p.m. **Connectivity, Module-Conformity, and Significance: Understanding Gene Coexpression Network Methods**—❖ Jun Dong, University of California, Los Angeles; Steve Horvath, University of California, Los Angeles; Andy Yip, National University of Singapore

## 63 CC-206 ● Advances in Analyzing fMRI Studies—Contributed

Biometrics Section, ENAR

*Chair(s): Ciprian M. Crainiceanu, The Johns Hopkins University*

- 4:05 p.m. **Intrinsic Voxel Correlation in fMRI**—❖ Daniel Rowe, Medical College of Wisconsin; Raymond G. Hoffmann, Medical College of Wisconsin
- 4:20 p.m. **Robust Independent Component Analysis in fMRI**—❖ Ping Bai, The University of North Carolina at Chapel Hill; Young Truong, The University of North Carolina at Chapel Hill
- 4:35 p.m. **A Semiparametric Approach To Estimate the Family-Wise Error Rate in fMRI Using Resting-State Data**—❖ Rajesh Nandy, University of California, Los Angeles
- 4:50 p.m. **Spatio-Temporal Modeling of Functional Magnetic Resonance Imaging Data**—❖ Qihua Lin, Southern Methodist University; Patrick S. Carmack, The University of Texas Southwestern Medical Center at Dallas; Richard F. Gunst, Southern Methodist University; William R. Schucany, Southern Methodist University; Jeffrey S. Spence, The University of Texas Southwestern Medical Center at Dallas
- 5:05 p.m. **Interpreting Experience-Based Cognition from fMRI**—❖ Rajan Patel, Rice University; F. DuBois Bowman, Emory University; Ying Guo, Emory University; Gordana Derado, Emory University; Lance Waller, Emory University; Amita K. Manatunga, Emory University
- 5:20 p.m. **Detecting Cerebral Activation from Functional Magnetic Resonance Imaging Data**—❖ William Baumann, Iowa State University; Ranjan Maitra, Iowa State University
- 5:35 p.m. **Floor Discussion**

# GENERAL PROGRAM SCHEDULE

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

## 64 CC-214 ● ⊛ **Methodological Issues in Genetics Studies—Contributed**

Section on Statistics in Epidemiology, Biometrics Section, ENAR

*Chair(s): Bryan Langholz, Keck School of Medicine of USC*

- 4:05 p.m. **An Importance Sampling Procedure for Obtaining Confidence Intervals of Disease Loci with General Pedigree Data**—◆ Shuyan Wan, The Ohio State University; Shili Lin, The Ohio State University
- 4:20 p.m. **Correcting for Measurement Errors in Structured Association Tests**—◆ Jasmin Divers, The University of Alabama at Birmingham; Laura K. Vaughan, The University of Alabama at Birmingham; David Redden, The University of Alabama at Birmingham; Jose R. Fernandez, The University of Alabama at Birmingham; David B. Allison, The University of Alabama at Birmingham
- 4:35 p.m. **Genomic Control for Association Studies When the Genetic Model Is Unknown**—◆ Gang Zheng, National Heart, Lung, and Blood Institute; Boris Freidlin, National Cancer Institute; Joseph Gastwirth, The George Washington University
- 4:50 p.m. **Pedigree Disequilibrium Test for X-Chromosome Markers**—◆ Jie Ding, The Ohio State University; Shili Lin, The Ohio State University
- 5:05 p.m. **Incorporating Endophenotypes into Allelic Association Studies**—◆ Chao Hsiung, National Health Research Institutes
- 5:20 p.m. **Allowing for Etiologic Heterogeneity by Disease Subtype Increases the Power of Tests for Genetic Association**—◆ Peter Kraft, Harvard University; Sholom Wacholder, National Cancer Institute; Nilanjan Chatterjee, National Cancer Institute
- 5:35 p.m. **A Multiple Test Procedure Controlling Type I Error for Genome Scan Association Studies Using HapMap Data**—◆ Renfang Jiang, Michigan Technological University; Jianping Dong, Michigan Technological University; Shuanglin Zhang, Michigan Technological University; Qiuying Sha, Michigan Technological University

## 65 CC-619 ● **Sample Survey Design I—Contributed**

Section on Survey Research Methods

*Chair(s): Soma Roy, The Ohio State University*

- 4:05 p.m. **Model-Based Sampling Designs for Optimum Estimation**—◆ Sun Woong Kim, Dongguk

University; Steven G. Heeringa, University of Michigan; Peter W. Solenberger, University of Michigan

- 4:20 p.m. **Optimum Allocation in Two-Stage and Stratified Two-Stage Sampling for Multivariate Surveys**—◆ M. G. M. Khan, The University of the South Pacific; Munish A. Chand, The University of the South Pacific
- 4:35 p.m. **An Application of Genetic Algorithms to Multivariate Optimal Allocation in Stratified Sample Designs**—◆ Charles Day, U.S. Internal Revenue Service
- 4:50 p.m. **The Effect of the Number Eligible and Number Selected within Households on Reported Income and Other Socioeconomic Characteristics in the 2004 NSDUH**—◆ Tania Robbins, RTI International
- 5:05 p.m. **NASS/USDA Area Frame Sample Allocation for Estimation of Number of Farms Not on the Ag Census Mailing List**—◆ Floyd Spears, Harding University; Raj S. Chhikara, University of Houston-Clear Lake; Charles R. Perry, National Agricultural Statistics Service; Phillip S. Kott, National Agricultural Statistics Service
- 5:20 p.m. **Simple Power Calculations: How Do We Know We Are Doing It the Right Way?**—◆ Michael Vorburger, RTI International
- 5:35 p.m. **Estimation in Network Populations**—◆ Mike Kwanisai, National Opinion Research Center

## 66 CC-618 ● **Sample Survey Quality I—Contributed**

Section on Survey Research Methods

*Chair(s): Michael P. Battaglia, Abt Associates Inc.*

- 4:05 p.m. **Nonresponse Bias Studies: 2003–2004 School and Staffing Survey**—◆ Robyn Sirkis, U.S. Census Bureau; Bac Tran, U.S. Census Bureau; Phyllis Singer, U.S. Census Bureau
- 4:20 p.m. **Call Efforts and Relational Estimates: Preliminary Findings**—◆ Chung-tung Lin, U.S. Food and Drug Administration
- 4:35 p.m. **Estimation of Low Incidence Rates under Selection Bias**—◆ Bin Wang, University of South Alabama; Jiayang Sun, Case Western Reserve University
- 4:50 p.m. **Assessment of Diagnostic Tests in the Presence of Verification Bias Using Multiple Imputation and Resampling Methods**—◆ Michael P. McDermott, University of Rochester Medical

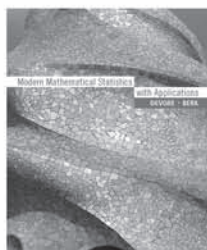
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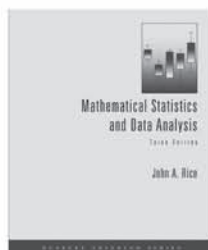
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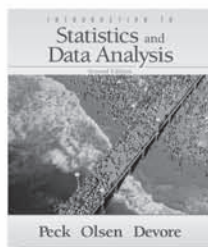
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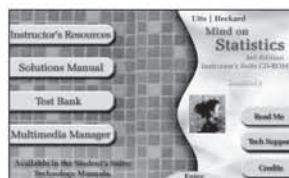
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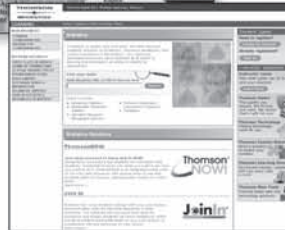
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# GENERAL PROGRAM SCHEDULE

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

Center; Hua He, University of Rochester Medical Center

5:05 p.m. **Treatment of Spatial Autocorrelation in Geocoded Crime Data**—◆ Krista Collins, Statistics Canada; Colin Babyak, Statistics Canada

5:20 p.m. **Assessing Population Coverage in a Health Survey**—◆ Karen Davis, National Center for Health Statistics; Chris Moriarity, National Center for Health Statistics

5:35 p.m. **A Study of IRS Administrative Payroll as a Substitute for Missing Payroll**—◆ Melvin McCullough, U.S. Census Bureau

## 67 CC-606 ● ⊛ **Industrial Applications—Contributed**

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

*Chair(s): Angela Patterson, GE Global Research*

4:05 p.m. **Hierarchical Modeling Using GLMs To Improve Yield**—◆ Christina Mastrangelo, University of Washington; Naveen Kumar, University of Washington

4:20 p.m. **Sequential Analysis on Misspecified Distributions**—◆ Theresa Utlaut, Intel Corporation; Kevin Anderson, Intel Corporation

4:35 p.m. **On Robust Statistics**—◆ Kevin Anderson, Intel Corporation

4:50 p.m. **Robust Analysis of Variance: Process Design and Quality Improvement**—◆ Avi Giloni, Yeshiva University; Sridhar Seshadri, New York University; Jeffrey Simonoff, New York University

5:05 p.m. **Statistical Quality Control of Loadboards for Electronic Package Testers**—◆ Meihui Guo, National Sun Yat-sen University; Yu-Jung Huang, I-Shou University; Ming-Kun Chen, I-Shou University

5:20 p.m. **Statistical Monitoring of Multistage Processes**—◆ Fugee Tsung, The Hong Kong University of Science and Technology

5:35 p.m. **Stochastic Models for Predicting Product Failure Rate of Parenterals Due to Particulate Matter**—◆ Chi-Hse Teng, Pfizer Inc.

## 68 CC-616 ● ⊛ **Risk Assessment in Business and Finance—Contributed**

Section on Risk Analysis, Section on Quality and Productivity

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

4:05 p.m. **On the Application of the Latent-Variable Model To Predict Business Default**—◆ K. Paul Chin, Dun & Bradstreet, Inc.; Edgar Ortiz, Dun & Bradstreet, Inc.; Jianjing Ling, Dun & Bradstreet, Inc.

4:20 p.m. **Mixture Models Applied To Reject Inference**—◆ Billie Anderson, The University of Alabama; J. Michael Hardin, The University of Alabama; Ana Landeros, The University of Alabama; Michael Conerly, The University of Alabama

4:35 p.m. **How To Address Click Fraud in Pay-per-Click Programs**—◆ Vincent Granville, Authenticlick

4:50 p.m. **Application of Kernel Methods to Fraud Detection**—◆ Ravi Mallela, Equibits

5:05 p.m. **Partial Hedging Using Malliavin Calculus**—◆ Lan Nygren, Rider University; Lakner Peter, New York University

5:20 p.m. **An Econometric Model for Insurance Underwriting Using Bivariate Zero-Inflated Count Models**—K. Paul Chin, Dun & Bradstreet, Inc.; ◆ Edgar Ortiz, Dun & Bradstreet, Inc.

5:35 p.m. **Investigating the Determinants of Financial Harm and Predatory Lending through RDD and Victim Population Surveys**—◆ Danna Moore, Washington State University

## 69 CC-601 ● ⊛ **Modeling—Contributed**

Section on Statistical Computing

*Chair(s): Wei Pan, University of Cincinnati*

4:05 p.m. **Finite Elements Methods for Density Estimation**—◆ George Terrell, Virginia Polytechnic Institute and State University

4:20 p.m. **On the Mixture of Multivariate Skew Normal Distributions**—◆ Jack C. Lee, National Chiao Tung University; Tsung-I Lin, National Chung Hsing University

4:35 p.m. **Latent Regression**—◆ Thaddeus Tarpey, Wright State University; Eva Petkova, Columbia University

4:50 p.m. **Estimation for Finite Mixture Multinomial Models**—◆ Nagaraj Neerchal, University of Maryland Baltimore County; Minglei Liu, Medtronic, Inc.; Jorge Morel, Procter & Gamble

5:05 p.m. **Predictive Discrepancy Using Full Cross-Validation for Regression Models**—❖ Mark Greenwood, Montana State University

5:20 p.m. **On the Nonnegative Garrote Estimator**—❖ Ming Yuan, Georgia Institute of Technology; Yi Lin, University of Wisconsin-Madison

5:35 p.m. **Latent Transition Analysis: Inference and Estimation**—❖ Hwan Chung, Michigan State University

## 70 CC-603 ● ⊕ **Bayesian Spatial and Spatio-Temporal Models—Contributed**

Section on Bayesian Statistical Science

*Chair(s): Peter F. Craigmile, The Ohio State University*

4:05 p.m. **Bayesian Change Point Analysis for Local Linear Regression: a New Approach to Prior Selection**—❖ Rajib Paul, The Ohio State University; L. Mark Berliner, The Ohio State University

4:20 p.m. **A Bayesian Dynamic Spatio-Temporal Interaction Model**—❖ Jacob Oleson, The University of Iowa; Hoon Kim, California State Polytechnic University, Pomona

4:35 p.m. **Multiresolution Hierarchical Dynamical Models for Spatio-Temporal Processes**—❖ Ali Arab, University of Missouri-Columbia; Christopher K. Wikle, University of Missouri-Columbia

4:50 p.m. **Spatial Bayesian Modeling of fMRI Data: a Multiple-Subject Analysis**—❖ Lei Xu, University of Michigan; Timothy D. Johnson, University of Michigan; Thomas Nichols, University of Michigan

5:05 p.m. **Bayesian Hierarchical Spatially Correlated Functional Data Analysis with Application to Colon Carcinogenesis**—❖ Veera Baladandayuthapani, M. D. Anderson Cancer Center; Raymond J. Carroll, Texas A&M University; Bani K. Mallick, Texas A&M University; Mee Young Hong, Texas A&M University

5:20 p.m. **Floor Discussion**

## 71 CC-605 ● **Designs for Clinical Trials and Other Studies—Contributed**

IMS, Biometrics Section, ENAR

*Chair(s): Rebecca Nugent, University of Washington*

4:05 p.m. **Identifiability of Placebo Responders via Potential Outcomes**—❖ Eva Petkova, Columbia University;

Thaddeus Tarpey, Wright State University; Yimeng Lu, Columbia University; Donald Klein, Columbia University

4:20 p.m. **Efficient Adaptive Designs for Clinical Trials**—❖ Jay Bartroff, Stanford University; Tze Leung Lai, Stanford University

4:35 p.m. **Remodified Continual Reassessment Method and the PBTC Experience**—❖ Arzu Onar, St. Jude Children's Research Hospital; Mehmet Kocak, St. Jude Children's Research Hospital; James Boyett, St. Jude Children's Research Hospital

4:50 p.m. **D-Optimal Designs for Compartmental Models**—❖ Gang Li, GlaxoSmithKline; Dibyen Majumdar, University of Illinois at Chicago

5:05 p.m. **Robust Designs for Binomial Data**—❖ Adeniyi Adewale, University of Alberta; Douglas P. Wiens, University of Alberta

5:20 p.m. **Exact D-Optimal Designs for Second-Order Response Surface Model on a Sphere and with Qualitative Factors**—❖ Chuan-Pin Lee, National Sun Yat-sen University; Mong-Na Lo Huang, National Sun Yat-sen University; Ray-Bing Chen, National University of Kaohsiung

5:35 p.m. **D-Optimal Designs for Combined Polynomial and Trigonometric Regression on a Partial Circle**—❖ Fu-Chuen Chang, National Sun Yat-sen University

## 72 CC-2A ● **Clinical Trial Design and Analysis—Contributed**

Biopharmaceutical Section, Biometrics Section, WNAR, ENAR

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

4:05 p.m. **Note on Randomization-Based Inferences for Randomized Clinical Trials**—❖ Guohua Pan, Johnson & Johnson Pharmaceutical R&D; Yibin Wang, Novartis Pharmaceuticals Corporation

4:20 p.m. **Four Types of Sums of Squares and Estimates of Treatment Differences in Multicenter Clinical Trials**—❖ Daozhi Zhang, DOV Pharmaceutical, Inc.

4:35 p.m. **Optimal Allocation of Units When Comparing k Treatments to Two Controls of Unequal Importance**—❖ Nairanjana Dasgupta, Washington State University

4:50 p.m. **A Method for Testing a Prespecified Subgroup in Clinical Trials**—❖ Yang Song, Johnson & Johnson Pharmaceutical R&D; George Chi, Johnson &



# GENERAL PROGRAM SCHEDULE

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

- Johnson Pharmaceutical R&D
- 5:05 p.m. **Some Issues in Fitting Clinical Count Data with Poisson Regression Model**—◆ Abdul Sankoh, sanofi-aventis
- 5:20 p.m. **Interval Estimation of Risk Ratio in the Simple Compliance Randomized Trial**—◆ Kung-Jong Lui, San Diego State University
- 5:35 p.m. **Floor Discussion**

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**CC-2B**

## ● Phase II Trials—Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

*Chair(s): Dennis Cosmatos, Wyeth Research*

- 4:05 p.m. **A Parallel Phase I/II Clinical Trial Design for Combination Therapies**—◆ Xuelin Huang, M. D. Anderson Cancer Center; Swati Biswas, University of North Texas Health Science Center; Yasuhiro Oki, M. D. Anderson Cancer Center; Jean-Pierre Issa, M. D. Anderson Cancer Center; Donald Berry, The University of Texas
- 4:20 p.m. **Three-Outcome Design for Randomized Comparative Phase II Clinical Trials**—◆ Shengyan Hong, Eli Lilly and Company; Yanping Wang, Eli Lilly and Company
- 4:35 p.m. **Optimal Trial Designs for Screening Cancer Therapeutic Agents**—◆ Vandana Mukhi, New York University School of Medicine; Yongzhao Shao, New York University; Judith D. Goldberg, New York University School of Medicine
- 4:50 p.m. **Optimal Adaptive Designs in Phase II Trials**—◆ Anindita Banerjee, North Carolina State University; Anastasios A. Tsiatis, North Carolina State University
- 5:05 p.m. **Optimal Two-Stage Designs for Phase II Clinical Trials for Continuous Endpoints**—◆ Chinfu Hsiao, National Health Research Institutes; Hsiao-Hui Tsou, National Health Research Institutes; Jen-pei Liu, National Taiwan University; Shein-Chung Chow, Duke University
- 5:20 p.m. **Critical Statistical Issues in the Design and Analysis of Proof-of-Concept Clinical Trials in Multiple Sclerosis**—◆ Chris Assaid, Merck & Co., Inc.
- 5:35 p.m. **Floor Discussion**

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**CC-212**

## ● Methods for Incomplete Data—Contributed

Biometrics Section

*Chair(s): Yichuan Zhao, Georgia State University*

- 4:05 p.m. **Semiparametric Models and Sensitivity Analysis of Longitudinal Data with Nonrandom Dropouts**—◆ David Todem, Michigan State University; Kyung Mann Kim, University of Wisconsin-Madison; Jason P. Fine, University of Wisconsin-Madison
- 4:20 p.m. **Methods on Longitudinal Data with Dropouts and Mismeasured Covariates**—◆ Grace Y. Yi, University of Waterloo
- 4:35 p.m. **Semiparametric Analysis of Longitudinal Data with Potential Right Censoring**—◆ Mengling Liu, New York University School of Medicine; Zhiliang Ying, Columbia University
- 4:50 p.m. **A Multiple Imputation Approach for Responders Analysis in Longitudinal Studies**—◆ Liqiu Jiang, North Carolina State University; Kaifeng Lu, Merck & Co., Inc.; Anastasios A. Tsiatis, North Carolina State University
- 5:05 p.m. **Estimation of Transition Probabilities in a Discrete-Time Markov Chain with Missing Observations**—◆ Hung-Wen Yeh, The University of Texas School of Public Health; Wenyaw Chan, The University of Texas School of Public Health
- 5:20 p.m. **Nonparametric Comparison of Two Survival Functions with Dependent Censoring via Nonparametric Multiple Imputation**—◆ Chiu-Hsieh Hsu, University of Arizona; Jeremy M. G. Taylor, University of Michigan
- 5:35 p.m. **Multivariate One-Sided Hypotheses Testing with Complete or Incomplete Data**—◆ Tao Wang, The University of British Columbia; Lang Wu, The University of British Columbia

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## Regular Contributed Posters

**4:00 p.m.–5:50 p.m.**

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**75**

**CC-Level 6 East Lobby**

## Contributed Posters—Contributed

Biometrics Section, Biopharmaceutical Section, General Methodology, Section on Nonparametric Statistics, Section on Physical and Engineering Sciences, Section on Survey Research Methods, Section on Quality and Productivity

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

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

## Biometrics, biostatistics, epidemiology

- 01 **Examining the Effect of Biomarkers in Terms of Pathological Compartmentalization and a Continuous Variable**—❖ Irene Helenowski, Northwestern University; Edward F. Vonesh, Baxter Healthcare Corporation; Ryan J. Deaton, University of Illinois at Chicago; Borko Jovanovic, Northwestern University; Alfred W. Rademaker, Northwestern University; Sally A. Freels, University of Illinois; Vijayalakshmi Ananthanarayanan, University of Illinois at Chicago; Peter H. Gann, University of Illinois at Chicago

## Clinical trials, drug discovery

- 02 **Minimum Sample Size in Control Group When Comparing Efficacy Rate with Several Treatment Groups**—❖ Alan Davis, Pharmanet; Inder J. Sharma, Sharma Associates, Inc.
- 03 **Exploring the Relationship between Extended Oral Anticoagulant Therapy after a First Episode of Venous Thrombosis and Mortality Using Meta-analysis**—❖ Brianna Miller, The University of Oklahoma
- 04 **Interval Estimation of Binomial Proportion in Clinical Trials with a Two-Stage Design**—❖ Chen Chia Min, National Cheng Kung University
- 05 **GLUMIP 2.0: Free SAS/IML<sup>®</sup> Software for Planning Internal Pilots**—❖ John Kairalla, The University of North Carolina at Chapel Hill; Christopher S. Coffey, The University of Alabama at Birmingham; Keith E. Muller, The University of North Carolina at Chapel Hill
- 06 **Stroke Clinical Trials and Response-Adaptive Randomization: an Ideal Match**—❖ Yuko Palesch, Medical University of South Carolina; Amy Bardeen, Medical University of South Carolina; Renee Martin, Medical University of South Carolina
- 07 **Multivariate Applications in Systems Biology**—❖ Amber Anderson, GlaxoSmithKline; Zhu Lei, GlaxoSmithKline; Edit Kurali, GlaxoSmithKline; Amit Bhattacharyya, GlaxoSmithKline; Kwan Lee, GlaxoSmithKline; Michael Durante, GlaxoSmithKline
- 08 **Comparing the Performance of Three Asymptotic Methods in Estimating the Sample Size for a Therapeutic Equivalence Study Based on Difference of Proportions**—❖ Xiaoning Li, The University of Oklahoma Health Sciences Center; Sara K. Vesely, The University of Oklahoma Health Sciences Center
- 09 **Recent Development in Exact Inference for Parallel Group Design with Repeated Binary Measurements**—❖ Dar-Shong Hwang, B.R.S.I.; James Lee, Sankyo Pharma Development

- 10 **Issues of Covariate Adjustments in Clinical Trials**—❖ Moh-Jee Ng, U.S. Food and Drug Administration; Tie-Hua Ng, U.S. Food and Drug Administration
- 11 **Can We Recruit Additional Subjects for a Failed Study?**—❖ Paul Hshieh, U.S. Food and Drug Administration; Tie-Hua Ng, U.S. Food and Drug Administration

## Incomplete data analysis, imputation methods

- 12 **Multiple Imputation by Chained Equations: Predictive Mean Matching**—❖ Gerald Kolm, Emory University; Deborah Ehrenthal, Christiana Care Health System; Edward Ewen, Christiana Care Health System
- 13 **Weighted Logrank-Type Tests Based on Doubly Truncated Data**—❖ Su Pei Fang, National Cheng Kung University
- 14 **Kernel-Assisted EM Algorithm**—❖ Suzanne Dubnicka, Kansas State University

## Pharmacokinetics and pharmacodynamics

- 15 **The Analysis of Mixed-Effects Compartmental Systems Using Bayesian and non-Bayesian Methods**—❖ Yi Wang, University of Nebraska-Lincoln; Kent M. Eskridge, University of Nebraska-Lincoln; Shunpu Zhang, University of Nebraska-Lincoln

## Reliability and survival modeling

- 16 **An Application of Accelerated Lifetime Design/Analysis for Estimating the Lifetime of CDs and DVDs**—❖ James J. Filliben, National Institute of Standards and Technology; Adriana Hornikova, National Institute of Standards and Technology; Frederick R. Byers, National Institute of Standards and Technology
- 17 **Parametric Distance Estimators versus Maximum Likelihood Estimators in Estimating Quantiles with Misclassified Data**—❖ Elliott Nebenzahl, California State University, East Bay; Dean Fearn, California State University, East Bay
- 18 **A Hyperbolastic Model for Survival Data**—❖ Zoran Bursac, University of Arkansas for Medical Sciences; Mohammad Tabatabai, Cameron University; David K. Williams, University of Arkansas for Medical Sciences; Karan P. Singh, University of North Texas Health Science Center
- 19 **Survival Analysis on Recurrent Event Data: an Application to Alcoholism Study**—❖ Jian Han, Bristol-Myers Squibb Company
- 20 **Exact Test for an Epidemic Chance in a Sequence of Exponentially Distributed Random Variables**—❖ Ping Shing Chan, The Chinese University of Hong Kong; Kim Fung Lai, The Chinese University of Hong Kong

# GENERAL PROGRAM SCHEDULE

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

## Semiparametric and nonparametric methods

- 21 **Locally Efficient Estimators for Semiparametric Models with Measurement Error**—◆ Yanyuan Ma, Texas A&M University; Raymond J. Carroll, Texas A&M University
- 22 **A Graphical Method for Testing the Equality of Regression Curves**—◆ Kee-Hoon Kang, Hankuk University of Foreign Studies; Cheolwoo Park, University of Georgia
- 23 **A Permutation Test for Compound Symmetry**—◆ Tracy Morris, Oklahoma State University; Mark Payton, Oklahoma State University

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

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### 76 **CC-Level 6 East Lobby Contributed Poster Session with Opening Mixer: a Look at the Richness of Statistical Interests— Contributed**

ENAR, Section on Statistical Computing, Section on Statistics in Epidemiology, Biometrics Section, Biopharmaceutical Section, Business and Economics Statistics Section, General Methodology, Section on Government Statistics, Section on Physical and Engineering Sciences, Social Statistics Section, Section on Survey Research Methods, Section on Statistical Education, Section on Statistics and the Environment

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

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

### Bayesian statistics, hierarchical models

- 01 **A Bayesian Approach to Semicontinuous Longitudinal Data**—◆ Bing Han, The Pennsylvania State University; Wei Huang, Temple University

### Biometrics, biostatistics, epidemiology

- 02 **Survival Instantaneous Log-Odds Ratio from Empirical Functions**—◆ JungAh Jung, Novartis Pharmaceuticals Corporation; J. Wanzer Drane, University of South Carolina
- 03 **LTAS.NET: a NIOSH Life Table Analysis System for the Windows Environment**—◆ Mary Schubauer-Berigan, National Institute for Occupational Safety and Health; William R. Raudabaugh, Constella, Inc.; Avima Ruder, National Institute for Occupational Safety and Health; Misty Hein, National Institute for Occupational Safety and Health; Sharon R. Silver, National Institute for Occupational Safety and Health; Patricia Laber, National Institute for Occupational Safety and Health; Kathleen Waters, National Institute for Occupational

Safety and Health; Jinghui Liu, Westat; Steven Spaeth, Kyle Steenland, Emory University

- 04 **Estimating Lifetime Prevalence Using Data from Disease Registries**—◆ Limin X. Clegg, National Cancer Institute
- 05 **Epidemiology of Herpes Zoster (Shingles)**—◆ Peter Wollan, Olmsted Medical Center; Patricia Saddier, Merck Research Laboratories; Lina Sy, Merck Research Laboratories; Barbara P. Yawn, Olmsted Medical Center

### Business, financial, marketing statistics

- 06 **What We Know about Unsuccessful and Successful High-Risk R&D Projects and What We Can Learn from Them**—◆ Stephanie Shipp, National Institute of Standards and Technology

### Clinical trials, drug discovery

- 07 **Data Simulation Methodologies for Determining Sample Size Requirements To Test Gene-Drug Interactions in Genetically Pre-Screened Populations**—◆ Kimberly Lowe, University of Arizona College of Public Health; James Ranger-Moore, University of Arizona College of Public Health; Patricia Thompson, Arizona Cancer Center

### Computational statistics, numerical methods

- 08 **Wavelet-Based Functional Mixed Model Data Analysis: Computational Considerations**—◆ Richard Herrick, M. D. Anderson Cancer Center; Jeffrey S. Morris, M. D. Anderson Cancer Center

### Engineering and physical sciences, chemometrics

- 09 **Hierarchical Bayesian Calibration of Untested Devices**—◆ Reid Landes, University of Arkansas for Medical Sciences

### Environmetrics, ecology, agriculture, wildlife management

- 10 **Strip Transect Sampling To Estimate Object Abundance in Homogeneous and Nonhomogeneous Poisson Fields: a Simulation Study of the Effects of Transect Width and Number**—◆ Timothy C. Coburn, Abilene Christian University; Sean A. McKenna, Sandia National Laboratories; Hirotaka Saito, University of California, Riverside; Orlando T. Garcia, Sandia National Laboratories

### General

- 11 **The Impact of Computer Programming Languages on Statistics**—◆ Morteza Marzjarani, Saginaw Valley State University

## Genetics, bioinformatics, computational biology

- 12 **Analyzing a Metabolomics Dataset**—❖ Teresa Norris
- 13 **Inferring Quantitative Trait Loci Using a Bayesian Variable Selection Model and Markov Chain Monte Carlo Convergence Diagnostics**—❖ Daniel Shriner, The University of Alabama at Birmingham; Nengjun Yi, The University of Alabama at Birmingham
- 14 **Estimating p-Values in Small Microarray Experiments**—❖ Hyuna Yang, The Jackson Lab; Gary Churchill, The Jackson Lab
- 15 **Multivariate Simulation of Gene Expression Data**—❖ Rudolph Parrish, University of Louisville; Horace J. Spencer, University of Arkansas for Medical Sciences

## Government statistics

- 16 **Treating Breaks in Time Series in the Current Employment Statistics State and Area Program**—❖ James White, Bureau of Labor Statistics; Kenneth Shipp, Bureau of Labor Statistics

## Linear models, GLMs, parametric methods

- 17 **On the Likelihood Ratio Test for the Numbers of Factors in Exploratory Factor Analysis**—❖ Kentaro Hayashi, University of Hawaii at Manoa; Peter M. Bentler, University of California, Los Angeles; Ke-Hai Yuan, University of Notre Dame

## Longitudinal data, repeated measurements, cluster data

- 18 **GEE Models for Longitudinal Analysis of Long-Term Occupational Radiation Exposures in Russian Nuclear Workers**—❖ Adina Soaita, University of Pittsburgh; Ada O. Youk, University of Pittsburgh; Richard Day, University of Pittsburgh; Tamara Azizova, Southern Ural Biophysics Institute; Niel Wald, University of Pittsburgh; Mike Kuniak, University of Pittsburgh; David M. Slaughter, University of Utah; Carol K. Redmond, University of Pittsburgh
- 19 **Antioxidant Use Predicts Transitions to Amnestic MCI and Dementia**—❖ Marta Mendiondo, University of Kentucky; Richard J. Kryscio, University of Kentucky; Fred A. Schmitt, University of Kentucky
- 20 **Structural Nested Mean Models for Assessing Time-Varying Effect Moderation: a Comparison of Two Estimation Methods**—❖ Daniel Almirall, University of Michigan

## Neuroscience, brain imaging

- 21 **Methods for Assessing Changes in the FMRI Visual Field Map after Surgery**—❖ Raymond G. Hoffmann, Medical College of Wisconsin; Paul Savarapian,

Marquette University; Mary Jo Maciejewski, Medical College of Wisconsin; Edward A. DeYoe, Medical College of Wisconsin; Daniel Rowe, Medical College of Wisconsin

## Sampling and survey methodology

- 22 **Design-Based versus Model-Based Methods: a Comparative Study Using Longitudinal Survey Data**—❖ Sunita Ghosh, University of Saskatchewan; Punam Pahwa, University of Saskatchewan; Geert Molenberghs, Limburgs Universitair Centrum
- 23 **Hierarchical Generalized Linear Models for Data from Complex Sampling Designs**—❖ Prabhu Bhagavatheeswaran, Southern Methodist University; Ian Harris, Southern Methodist University

## Social and behavioral science

- 24 **Mediation Analysis with Multilevel Data**—❖ Jungwha Lee, Institute for Health Research and Policy; Eisuke Segawa, Institute for Health Research and Policy; Sue Curry, University of Illinois at Chicago

## Spatial statistics, time series, spatio-temporal modeling

- 25 **The Application of the Kalman Filter to Nonstationary Time Series through Time Deformation**—❖ Zhu Wang, Fred Hutchinson Cancer Research Center; Henry L. Gray, Southern Methodist University; Wayne A. Woodward, Southern Methodist University

## Teaching, training, consulting

- 26 **Is It Normal? A Simulation Study of Properties of Some Normality Tests**—❖ Daniel M. Sultana, California State University, East Bay; Charlyn J. Suarez, California State University, East Bay; Bruce E. Trumbo, California State University, East Bay; Eric A. Suess, California State University, East Bay
- 27 **Classroom Simulation: False Indications of Outliers in Boxplots of Normal Data**—❖ Bruce E. Trumbo, California State University, East Bay; Eric A. Suess, California State University, East Bay; Jacob Colvin, California State University, East Bay





Call for articles for the issues: 2, 3 & 4 in 2006

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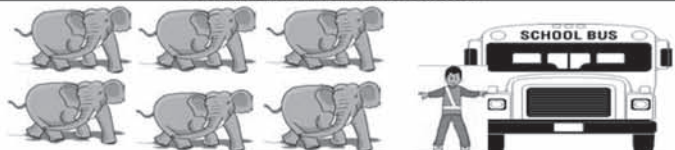
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## MONDAY, AUGUST 7

### Tours

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

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

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

### Committee/Business Meetings & Other Activities

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

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

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

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

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

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

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

7:00 a.m.–8:30 a.m. H-Chatham  
**Section on Government Statistics Executive Committee Meeting**  
*Chair(s): Stephanie Shipp, National Institute of Standards and Technology*

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

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

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

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

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

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

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

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

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

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



# SSC

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

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

## **Join us at the SSC Reception**

**Monday, August 7<sup>th</sup>, 2006**

**5:00P.M. – 7:00P.M.**

**Grand Hyatt Seattle - Princessa II Ballroom**

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# GENERAL PROGRAM SCHEDULE

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

7:30 a.m.–8:30 a.m. S-Ballard

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

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

7:30 a.m.–8:30 a.m. H-Chinook

**Deming Lectureship Committee Business Meeting (closed)**

*Chair(s): Lorraine Denby, Avaya Labs Research*

7:30 a.m.–8:30 a.m. S-Spruce Room

**Committee on Professional Ethics**

*Chair(s): Barbara Bailar, Consultant*

7:30 a.m.–9:00 a.m. S-Admiral

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

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

7:30 a.m.–9:00 a.m. S-Aspen Room

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

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

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

**JSM Main Registration  
ASA Membership/Special Assistance Desk**

8:00 a.m.–9:30 a.m. S-Willow A

**Communications in Statistics Editorial Meeting (closed)**

*Organizer(s): Narayanaswamy Balakrishnan, McMaster University*

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

**Career Placement Service**

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

**Exhibitor Lounge**

8:00 a.m.–6:00 p.m. CC-209

**Amgen Inc. Interview Room (by invitation only)**

*Organizer(s): Chander Varma, Amgen Inc.*

8:30 a.m.–9:30 a.m. S-Ballard

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

*Chair(s): Ronald Wasserstein, Washburn University*

8:30 a.m.–9:30 a.m. S-Ballard

**Council of Chapter Governing Board Status Committee Meeting (closed)**

*Chair(s): Joan Chmiel, Northwestern University*

9:00 a.m.–10:00 a.m. S-Willow B

**Transportation Statistics Interest Group Annual Meeting**

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

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

**Academic Program Representatives Meeting (closed)**

*Chair(s): John Stufken, University of Georgia*

9:00 a.m.–10:30 a.m. H-Chatham

**JASA Editors Meeting (closed)**

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

9:00 a.m.–11:00 a.m. CC-301

**Advisory Committee on Continuing Education Business Meeting (closed)**

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

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

**ASA Marketplace**

9:00 a.m.–5:00 p.m. CC-Level 1

**Citywide Concierge Center**

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

**EXPO 2006**

**ASA Communities Booth #101**

9:30 a.m.–12:30 p.m. H-Excelsior

**Current Index to Statistics Management Committee Meeting (closed)**

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

9:30 a.m.–2:00 p.m. S-Admiral

**Council of Chapters Governing Board Meeting (closed)**

*Chair(s): Ronald Wasserstein, Washburn University*

12:30 p.m.–1:50 p.m. H-Discovery

**Committee on Gay and Lesbian Concerns in Statistics Meeting**

*Chair(s): Barry Johnson, Internal Revenue Service*

Monday

JSM 2006

IMS

# Member Social



**When?**

Monday, August 7  
5:30–7:00 p.m.

**Where?**

Sheraton-Aspen  
Room

## *All IMS members are welcome*

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

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



*IMS members socializing in Barcelona*

JSM 2006

IMS

# Welcome Reception



**When?**

Tuesday, August 8  
5:30–6:30 p.m.

**Where?**

Sheraton-Willow A  
Room

## **New Members, New Graduates and Students**

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

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



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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

# GENERAL PROGRAM SCHEDULE

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

- 5:30 p.m.–7:00 p.m. S-Everett  
**Social Statistics Section Business Meeting**  
*Chair(s): Susan Schechter, Office of Management and Budget*
- 5:30 p.m.–7:00 p.m. S-Ballard  
**Section on Statistics in Epidemiology Executive Committee Meeting (closed)**  
*Chair(s): Sander Greenland, University of California, Los Angeles*
- 5:30 p.m.–7:00 p.m. H-Stevens Boardroom & Foyer  
**Caucus for Women in Statistics Reception**  
*Organizer(s): Mary W. Gray, American University*
- 5:30 p.m.–7:00 p.m. H-Leonesa Ballroom I  
**The University of North Carolina at Chapel Hill Department of Biostatistics Alumni Reception**  
*Organizer(s): Michael Kosorok, The University of North Carolina at Chapel Hill*
- 5:30 p.m.–7:00 p.m. S-Governors Suite  
**ASA/NSF Research Fellowship Reception (closed)**  
*Organizer(s): Carolyn Kesner, American Statistical Association*
- 5:30 p.m.–7:00 p.m. CC-602  
**Biometrics Section Annual Business Meeting**  
*Chair(s): Karen Bandeen-Roche, The Johns Hopkins Bloomberg School of Public Health*
- 5:30 p.m.–7:00 p.m. S-Spruce Room  
**Section on Health Policy Statistics Business Meeting**  
*Chair(s): Thomas McLaughlin, University of Massachusetts School of Medicine*
- 5:30 p.m.–7:00 p.m. S-Cedar Room  
**Section on Teaching Statistics in the Health Sciences Business Meeting and Mixer**  
*Chair(s): Cynthia Long, Palmer Center for Chiropractic Research*
- 5:30 p.m.–7:30 p.m. CC-307 & 308  
**Service-Oriented Consulting: What Can Students Do in the Community?**  
*Organizer(s): Gayla R. Olbricht, Purdue University*
- 6:00 p.m.–7:00 p.m. CC-4C-3  
**President's Invited Speaker Reception (by invitation only)**  
*Chair(s): Sallie Keller-McNulty, Rice University*
- 6:00 p.m.–7:00 p.m. CC-305  
**Russian and Former Soviet Union Statisticians Mixer**  
*Organizer(s): Stanislav Kolenikov, University of Missouri-Columbia*
- 6:00 p.m.–7:30 p.m. S-Metropolitan Ballroom B  
**JSM Student Mixer (students only, included in registration fee)**  
*Chair(s): Dayanand Naik, Old Dominion University*
- 6:00 p.m.–7:30 p.m. CC-601  
**CDC/ATSDR Statistical Advisory Group Open Meeting**  
*Organizer(s): Timothy Green, Centers for Disease Control and Prevention*
- 6:00 p.m.–7:30 p.m. CC-302  
**Committee on Minorities in Statistics Reception**  
*Chair(s): Nagambal Shah, Spelman College*
- 6:00 p.m.–7:30 p.m. H-Sherman  
**Committee on Gay and Lesbian Concerns in Statistics Social Meeting (with guest speaker)**  
*Chair(s): Barry Johnson, Internal Revenue Service*
- 6:00 p.m.–7:30 p.m. CC-603  
**Committee on Applied Statisticians Business Meeting**  
*Chair(s): Mani Lakshminarayanan, Pfizer Inc.*
- 6:00 p.m.–7:30 p.m. H-Leonesa Ballroom III  
**Pfizer Reception (by invitation only)**  
*Organizer(s): Carolyn Pittman, Pfizer, Inc.*
- 6:00 p.m.–8:00 p.m. H-Cayuse  
**Section on Survey Research Methods Executive Committee Meeting (closed)**  
*Chair(s): Roger Tourangeau, University of Maryland*
- 6:00 p.m.–8:00 p.m. CC-303  
**Korean Statisticians Annual Meeting**  
*Organizer(s): Sin-Ho Jung, Duke University*
- 6:00 p.m.–8:00 p.m. S-Willow B  
**Eli Lilly and Company Faculty Reception (closed)**  
*Organizer(s): Todd Sanger, Eli Lilly and Company*
- 6:00 p.m.–9:00 p.m. CC-605  
**Amgen Inc. (by invitation only)**  
*Organizer(s): Chander Varma, Amgen Inc.*

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

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

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

*Organizer(s): Beverly Jacobsen, Merck Research Laboratories*

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

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

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

*Organizer(s): Richard Gunst, Southern Methodist University*

## Continuing Education (Fee Events)

CE\_14C CC-305

8:00 a.m.–12:00 p.m.

### Spatial Survey Design with a Focus on Natural Resources

The ASA, Section on Statistics and the Environment

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

CE\_15C CC-304

8:00 a.m.–12:00 p.m.

### Analysis of Multivariate Failure Time Data

The ASA, Section on Nonparametric Statistics

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

CE\_16C CC-307 & 308

8:30 a.m.–5:00 p.m.

### Multiple Comparisons and Multiple Tests

The ASA

*Instructor(s): Peter Westfall, Texas Tech University*

## Longtime Member Reception

BY INVITATION ONLY

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

SHERATON – METROPOLITAN BALLROOM A

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

PLEASE JOIN US FOR A RECEPTION IN YOUR HONOR.

SPONSORED BY THE ASA MEMBERSHIP COMMITTEE.

# GENERAL PROGRAM SCHEDULE

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

CE\_17C CC-309

8:30 a.m.–5:00 p.m.

## Statistical Demography with Applications

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

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

CE\_18C CC-303

8:30 a.m.–5:00 p.m.

## Analysis of Clinical Trials: Theory and Applications

The ASA

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

CE\_19C CC-306

8:30 a.m.–5:00 p.m.

## Applied Bayesian Nonparametric Modeling

The ASA, Section on Bayesian Statistical Science

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

CE\_20C CC-310

8:30 a.m.–5:00 p.m.

## Generalized Linear and Latent Mixed Models

The ASA, Biometrics Section

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

CE\_21C CC-305

1:00 p.m.–5:00 p.m.

## Creating More Effective Graphs

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

*Instructor(s): Naomi B. Robbins, NBR*

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

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

Section on Statistical Consulting

*Organizer(s): Wendy Tseng, Procter & Gamble*

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

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

Section on Statistical Education

*Organizer(s): Patti Collings, Brigham Young University*

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

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

Section on Statistics and the Environment

*Organizer(s): Peter Guttorp, University of Washington*

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

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

Section on Statistical Graphics

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

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

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

Section on Physical and Engineering Sciences

*Organizer(s): Winson Taam, The Boeing Company*

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

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

Section on Teaching Statistics in the Health Sciences

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

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



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

### 83 CC-400

#### ● ⊕ Introductory Overview Lectures: Statistical Consulting—Other

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

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

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

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

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

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

## Invited Sessions 8:30 a.m.–10:20 a.m.

### 84 CC-614

#### ⊕ Statistical Models for Networks—Invited

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

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

*Chair(s): Michael Lavine, Duke University*

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

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

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

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

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

### 85 CC-213

#### ● Measurement Error Models—Invited

ENAR, Biometrics Section, WNAR

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

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

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

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

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

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

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

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

### 86 CC-608

#### ● Directions for the Second Statistics Course—Invited

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

*Organizer(s): Robert Dobrow, Carleton College*

*Chair(s): Rosemary Roberts, Bowdoin College*

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

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

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

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

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

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

# GENERAL PROGRAM SCHEDULE

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

## 87 CC-610

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

SSC, Section on Statistics and the Environment

*Organizer(s): Rick Routledge, Simon Fraser University*

*Chair(s): Rick Routledge, Simon Fraser University*

**8:35 a.m. Patterns of Biological Productivity in Saanich Inlet**—◆ Frank Whitney, Institute of Ocean Sciences; Ann Gargett, Institute of Ocean Sciences; Melissa McQuoid, Institute of Ocean Sciences

**9:05 a.m. Inference of Past Environmental Changes from Fossil Midges**—◆ Ian Walker, The University of British Columbia

**9:35 a.m. Forest Fires in Space and Time: Comparing Long Records of Forest Fires To Understand Their Climatic Controls**—◆ Dan Gavin, University of Vermont; Kenneth Lertzman, Simon Fraser University; Feng S. Hu, University of Illinois

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

## 88 CC-201

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

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

*Organizer(s): Mani Lakshminarayanan, Pfizer Inc.*

*Chair(s): Mani Lakshminarayanan, Pfizer Inc.*

**8:35 a.m. Secondary Analysis of Clinical Trials and Claims Data for Risk Minimization and Outcomes Evaluation**—◆ Michael O'Connell, Insightful Corporation

**9:00 a.m. Data Mining Trees: Mining Clinical Trials Data**—◆ Javier Cabrera, Rutgers University

**9:25 a.m. Logistic Regression on Autopilot**—◆ Trevor Hastie, Stanford University

**9:50 a.m. Disc: Ana Szarfman, U.S. Food and Drug Administration**

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

## 89 CC-602

### ● ⊕ Statistics and the Millennium Development Goals—Invited

Section on Government Statistics

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

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

**8:35 a.m. The Role of Monitoring and Evaluation in Development Programs**—◆ Paul Wassenich, Inter-American Development Bank

**9:00 a.m. Statisticians and the Millennium Development Goals**—◆ Paul Fields, Brigham Young University

**9:25 a.m. A Role for Experimental Evaluation in Efforts To Achieve Millennium Development Goals**—◆ David J. Fitch, Universidad del Valle de Guatemala

**9:50 a.m. Disc: Fritz J. Scheuren, National Opinion Research Center**

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

## 90 CC-4C-4

### Semisupervised Learning—Invited

IMS, Biometrics Section, Section on Nonparametric Statistics

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

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

**8:35 a.m. Semisupervised Learning: an Overview**—◆ Xiaojin Zhu, University of Wisconsin-Madison

**9:05 a.m. Statistical and Geometric Principles of Semisupervised Learning**—◆ Mikhail Belkin, The Ohio State University

**9:35 a.m. Variable Selection for Semisupervised Learning**—◆ Elizaveta Levina, University of Michigan; Ji Zhu, University of Michigan

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

## 91 CC-615

### ● ⊕ Some Current Issues in Industrial Statistics—Invited

Section on Physical and Engineering Sciences

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

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

**8:35 a.m. Use of Computer Simulation To Plan Complicated Industrial Experiments**—◆ William Q. Meeker, Jr., Iowa State University

**9:05 a.m. Forecasting Warranty Claims**—◆ Jerald F. Lawless, University of Waterloo; ◆ Marc Fredette, HEC Montréal

**9:35 a.m. Degradation-Based Models for Analyzing Repairable Systems**—◆ Vijay Nair, University of Michigan; Anupap Somboonsatdee, University of Michigan; Ananda Sen, University of Michigan

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

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

Biometrics Section, ENAR, WNAR

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

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

**8:35 a.m. On Estimation of Vaccine Efficacy Using Validation Samples with Selection Bias—**  
❖ Michael Daniels, University of Florida; Daniel Scharfstein, The Johns Hopkins Bloomberg School of Public Health; M. Elizabeth Halloran, Fred Hutchinson Cancer Research Center; Haitao Chu, The Johns Hopkins Bloomberg School of Public Health

**9:00 a.m. Accounting for Variability in Sample Size Estimation with Application to a Malaria Vaccine Phase II Trial—**❖ Michael P. Fay, National Institute of Allergy and Infectious Diseases; M. Elizabeth Halloran, Fred Hutchinson Cancer Research Center; Dean A. Follmann, National Institute of Allergy and Infectious Diseases

**9:25 a.m. Statistical Methods for Assessing HIV Vaccine Efficacy in Repeated Low-Dose Challenge Experiments—**❖ Michael G. Hudgens, The University of North Carolina at Chapel Hill; Peter Gilbert, Fred Hutchinson Cancer Research Center/University of Washington

**9:50 a.m. Disc:** Thomas A. Louis, The Johns Hopkins University

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

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

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

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

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

**8:35 a.m. Statistical Analysis of Spatial Patterns of Climate Variability—**❖ J. Michael Wallace, University of Washington

**9:00 a.m. Interpreting Recent Climate Change—**❖ Francis W. Zwiers, Canadian Centre for Climate Modelling and Analysis

**9:25 a.m. Statistical Problems in Climate Change and Geophysical Fluids—**❖ Carl Wunsch, Massachusetts Institute of Technology

**9:50 a.m. Disc:** Richard L. Smith, The University of North Carolina at Chapel Hill

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

## 94 CC-612 ● ⊕ SAMSJ Session on Statistical Issues in Metabolomics—Invited

Statistical and Applied Mathematical Sciences Institute, Biometrics Section

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

*Chair(s): James Berger, SAMSJ*

**8:35 a.m. Measurement Issues in Metabolomics Data—**  
❖ Xiaodong Lin, University of Cincinnati

**9:00 a.m. Exploring a Complex Metabolomics Dataset—**  
❖ Susan J. Simmons, The University of North Carolina at Wilmington; Xiaodong Lin, University of Cincinnati

**9:25 a.m. Pathway-Based Analysis of Metabolic Profiles—**  
❖ Jacqueline Hughes-Oliver, North Carolina State University

**9:50 a.m. Disc:** Clifford Spiegelman, Texas A&M University

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

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

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

Biopharmaceutical Section, Biometrics Section, ENAR

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

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

**8:35 a.m. Hypothesis Testing in Clinical Study with Mixed Patient Population—**❖ Yonghong Gao, U.S. Food and Drug Administration; Chul H. Ahn, U.S. Food and Drug Administration

**8:55 a.m. Placebo Control Group in Medical Device Clinical Trials—**❖ Sarah Kogut, W. L. Gore & Associates, Inc.

**9:15 a.m. To Pair or Not To Pair? Noninferiority Test for the Difference in Correlated Binary Outcomes—**  
❖ Dong Li, Guidant Corporation; David Breiter,

# GENERAL PROGRAM SCHEDULE

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

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

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

Business and Economics Statistics Section

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

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

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

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

ENAR

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

*Chair(s): Ji Zhang, sanofi-aventis*

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

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

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

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

*Organizer(s): Michael Porter, University of Virginia*

*Chair(s): Michael Porter, University of Virginia*

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



**9:35 a.m. Monitoring Safety of Food Supply by Analyzing Consumer Complaints**—❖ Artur Dubrawski, Carnegie Mellon University; Maheshkumar Sabhnani, Carnegie Mellon University; Andrew Moore, Carnegie Mellon University

**9:55 a.m. Logistic Joinpoint Models with Applications in Criminal Processes**—❖ Ryan Gill, University of Louisville

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

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

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

**8:35 a.m. Competing Risks Models in the Monogenic Cancer Susceptibility Syndromes**—❖ Philip S. Rosenberg, National Cancer Institute

**8:55 a.m. Analyzing Survival Data with Competing Risks**—❖ Leah Ben-Porat, Memorial Sloan-Kettering Cancer Center; Jaya M. Satagopan, Memorial Sloan-Kettering Cancer Center

**9:15 a.m. Bayesian Competing Risks Analysis of Cancer Survival Data from the SEER Program**—❖ Sanjib Basu, Northern Illinois University; Ram Tiwari, National Institutes of Health

**9:35 a.m. Competing Risks Analysis in Breast Cancer with Missing Cause of Death**—❖ Mousumi Banerjee, University of Michigan; Ananda Sen, University of Michigan

**9:55 a.m. Development of Cohort Life Tables for 'Other Causes' for Use in Simulation Modeling**—❖ Marjorie Rosenberg, University of Wisconsin-Madison

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

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

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

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

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

**8:55 a.m. Bayesian Inference for Derivative Prices**—❖ Jonathan Stroud, University of Pennsylvania; Nicholas Polson, The University of Chicago

**9:15 a.m. Reliability and Survival in Financial Risk**—❖ Nozer Singpurwalla, The George Washington University

**9:35 a.m. A Computational Approach to Bayesian Portfolio Selection**—❖ Refik Soyer, The George Washington University

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

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

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

**8:35 a.m. Stochastic ARMA Models**—❖ Bo Thiesson, Microsoft Research; Jesper Lind, Microsoft Research; David M. Chickering, Microsoft Research; David Heckerman, Microsoft Research; Christopher Meek, Microsoft Research

**8:55 a.m. Strategies for Online Inference with Dynamic Graphs**—❖ Makram Talih, City University of New York-Hunter College

**9:15 a.m. Network-Based Marketing**—❖ Shawndra Hill, New York University; Chris Volinsky, AT&T Labs-Research; Foster Provost, New York University

**9:35 a.m. Bayesian Analysis of Longitudinal Binary Data Using Markov Regression Models with Skewed Links**—Seongho Song, University of Cincinnati; ❖ Younshik Chung, Pusan National University; Dipak Dey, University of Connecticut; Alaattin Erkanli, Duke University Medical Center

**9:55 a.m. Disc:** Kevin Murphy, The University of British Columbia

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

# GENERAL PROGRAM SCHEDULE

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

## Topic-Contributed Panels

8:30 a.m.–10:20 a.m.

### 102 CC-607 ● Finite Population Correction Factors—Topic-Contributed

Section on Survey Research Methods

Organizer(s): Gary Shapiro, Westat

Chair(s): Gary Shapiro, Westat

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

10:15 a.m. Floor Discussion

## Regular Contributed Sessions

8:30 a.m.–10:20 a.m.

### 103 CC-206 ● Advances in Variable Selection—Contributed

Biometrics Section

Chair(s): Qin Yu, University of Rochester

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

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

10:05 a.m. Floor Discussion

### 104 CC-211 ● Proteomics—Contributed

Biometrics Section, ENAR

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

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

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

Social Statistics Section

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

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

## 106 CC-604 ● Sample Survey Quality II—Contributed

Section on Survey Research Methods

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

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

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

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

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

Section on Survey Research Methods

*Chair(s): Thanh Lê, Westat*

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

# GENERAL PROGRAM SCHEDULE

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

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CC-2B

## ● ⊛ Genetic Interactions/Genetic Imprinting—Contributed

Section on Statistics in Epidemiology, Biometrics Section, ENAR

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

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

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CC-611

## ● Nonstandard Regression and Correlation Problems with Environmental Data—Contributed

Section on Statistics and the Environment, WNAR

Chair(s): Bahman Shafii, University of Idaho

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

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

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CC-613

## ● Statistical Applications in Hydrology and Geosciences—Contributed

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

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

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



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

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

Biometrics Section, ENAR

*Chair(s): Song Wu, University of Florida*

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

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

## 112 CC-204 ● Bayesian Methods in Biopharmaceuticals—Contributed

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

*Chair(s): Priya Kulkarni, Merck Research Laboratories*

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

# GENERAL PROGRAM SCHEDULE

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

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

Biometrics Section, Section on Health Policy Statistics, ENAR

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

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

## 114 CC-620 Estimation—Contributed

Section on Statistical Computing

*Chair(s): Andrzej Galecki, University of Michigan*

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

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

## 115 CC-605 ● Statistical Methods and Applications— Contributed

General Methodology

*Chair(s): Lori Dodd, National Cancer Institute*

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

## 116 CC-401 Frontiers in Bioinformatics—Contributed

IMS, Biometrics Section, ENAR

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

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

## 117 CC-601 Frames—Contributed

Section on Government Statistics

*Chair(s): Leonard Gaines, Empire State Development*

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

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

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

## 118 CC-616 ● Process Monitoring—Contributed

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

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

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

# GENERAL PROGRAM SCHEDULE

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

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

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## ● Mixture Modeling—Contributed

Section on Nonparametric Statistics

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

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

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

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

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CC-3A

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

Section on Statistical Graphics, Biometrics Section

*Organizer(s): Stephen Kaluzny, Insightful Corporation*

*Chair(s): Stephen Kaluzny, Insightful Corporation*

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



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

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

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

*Chair(s): Elizaveta Levina, University of Michigan*

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

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

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

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

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

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

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

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

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

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

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

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

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

Section on Bayesian Statistical Science

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

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

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

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



**MONDAY, AUGUST 7**

**6:00 p.m.–7:00 p.m.**

Sheraton-Metropolitan B Ballroom

Monday

# GENERAL PROGRAM SCHEDULE

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

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

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

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CC-617

## ● ⊛ **Theory and Analysis of Complex Networks—Invited**

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

*Organizer(s): Cosma Shalizi, Carnegie Mellon University*

*Chair(s): Cosma Shalizi, Carnegie Mellon University*

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

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

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

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

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

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CC-2B

## ● **Real-Life Problems Advancing Missing Data Techniques—Invited**

Biopharmaceutical Section, Biometrics Section, Section on Health Policy Statistics

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

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

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

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

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

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

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

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CC-4C-4

## **JASA Theory and Methods Invited Paper Session—Invited**

JASA, Theory and Methods

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

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

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

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

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

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

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CC-619

## ● ⊛ **Spatial Modeling To Address Problems in Ecology—Invited**

Section on Statistics and the Environment, WNAR

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

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

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

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

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

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

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

## 128 CC-601 ● ⊕ **Cross-National Research on Immigration—Invited**

Social Statistics Section

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

*Chair(s): Pamela White, Statistics Canada*

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

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

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

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

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

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

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

ENAR, Biometrics Section, WNAR

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

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

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

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

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

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

## 130 CC-400 ● **Inference under Biased Sampling—Invited**

General Methodology

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

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

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

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

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

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

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

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## Invited Panels 10:30 a.m.–12:20 p.m.

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## 131 CC-401 ● ⊕ **Having an Impact in a Multidisciplinary Setting—Invited**

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

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

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

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

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

# GENERAL PROGRAM SCHEDULE

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

## Topic-Contributed Sessions

10:30 a.m.–12:20 p.m.

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CC-606

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

Section on Health Policy Statistics

Organizer(s): Joseph Cappelleri, Pfizer Inc.

Chair(s): Kye Gilder, Biogen Idec

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

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CC-602

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

Section on Survey Research Methods

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

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

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

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

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CC-603

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

Section on Survey Research Methods

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

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

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

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CC-609

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

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

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

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

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



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

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

Section on Statistics in Epidemiology

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

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

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

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

Section on Bayesian Statistical Science, Biometrics Section, ENAR

*Organizer(s): Lynn Kuo, University of Connecticut*

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

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

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

Biopharmaceutical Section, Biometrics Section, ENAR

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

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

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

# GENERAL PROGRAM SCHEDULE

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

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

## 139 CC-214 ● **Methods in Cancer Research—Topic-Contributed**

Biometrics Section, ENAR

*Organizer(s): Terry Hyslop, Thomas Jefferson University*

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

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

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

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

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### 140 CC-607 **Expanding Access to Research Data: Reconciling Risks and Opportunity—Topic-Contributed**

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

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

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

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

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

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

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### 141 CC-210 **Causal Inference and Noncompliance—Contributed**

Biometrics Section, Section on Health Policy Statistics, ENAR

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

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

- Pennsylvania; Thomas R. Ten Have, University of Pennsylvania; Zhiqiang Tan, The Johns Hopkins University
- 11:05 a.m. Nested Markov Compliance Class Model in the Presence of Time-Varying Noncompliance—**  
❖ Julia Lin, University of Pennsylvania; Thomas R. Ten Have, University of Pennsylvania; Michael R. Elliott, University of Michigan
- 11:20 a.m. Use of a Marginal Structural Model To Estimate the Causal Effect of Epoetin Use on Hematocrit Value among Hemodialysis Patients—**❖ Yi Zhang, Medical Technology and Practice Patterns Institute; Mae Thamer, Medical Technology and Practice Patterns Institute; Dennis J. Cotter, Medical Technology and Practice Patterns Institute; James Kaufman, U.S. Department of Veterans Affairs/VA Boston Healthcare System; Miguel A. Hernán, Harvard School of Public Health
- 11:35 a.m. The Causal Effect of Finasteride on the Severity of Prostate Cancer—**❖ Bryan Shepherd, Vanderbilt University; Mary W. Redman, Southwest Oncology Group; Donna P. Ankerst, University of Munich
- 11:50 a.m. Location Design in Location-Controlled Follow-up Studies—**❖ Fan Li, The Johns Hopkins Bloomberg School of Public Health
- 12:05 p.m. How To Make Inference from Experiments Conducted on Populations with Different Disease Determinants—**❖ Steven D. Mark, University of Colorado Health Sciences Center

## 142 **Nonparametric Regression Methods I—Contributed** CC-610

Section on Nonparametric Statistics

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

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

- 11:20 a.m. Boundary Kernel Method in Nonparametric Deconvolution—**❖ Shunpu Zhang, University of Nebraska-Lincoln
- 11:35 a.m. Double-Smoothing for Bias Reduction in Local Linear Regression—**❖ Hua He, University of Rochester Medical Center; Li-Shan Huang, University of Rochester
- 11:50 a.m. A Comparative Study of Stage-1 and Stage-2 Semiparametric Estimation of Hemodynamic Response Function for fMRI Data—**❖ Chunming Zhang, University of Wisconsin-Madison; Yuan Jiang, University of Wisconsin-Madison; Tao Yu, University of Wisconsin-Madison
- 12:05 p.m. Floor Discussion**

## 143 **Contributions in National Security—Contributed** CC-605

Section on Statisticians in Defense and National Security

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

- 10:35 a.m. Albert Einstein: Centennial Appreciation of a Master Statistician—**❖ Boris Iglewicz, Temple University
- 10:50 a.m. Toward Effective Anomaly Detection in Public Health Surveillance—**❖ Colin Goodall, AT&T Labs-Research; Sylvia Halasz, AT&T Labs-Research; Arnold Lent, AT&T Labs - Research; Simon Tse, AT&T Labs - Research; John Allegra, Emergency Medical Associates Research Foundation; Dennis Cochrane, Emergency Medical Associates Research Foundation
- 11:05 a.m. A Bayesian Approach to Radiographic Surveillance in Children—**❖ Namhee Kim, The Ohio State University; Prem K. Goel, The Ohio State University; Bema Bonsu, Columbus Children's Hospital; M. Marvin, Children's Hospital
- 11:20 a.m. Statistical Analysis of Department of Energy Safety Data—**❖ Rama Sastry, U.S. Department of Energy
- 11:35 a.m. Time Transformation Methods for Analyzing Time Series with Time-Varying Frequencies—**  
❖ James R. Haney, Southern Methodist University; Wayne A. Woodward, Southern Methodist University; Henry L. Gray, Southern Methodist University

# GENERAL PROGRAM SCHEDULE

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

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

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

## 144 CC-205 ● ⊛ **Epidemiologic Modeling—Contributed**

Section on Statistics in Epidemiology, ENAR

*Chair(s): Liang Li, The Cleveland Clinic*

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

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

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

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

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

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

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

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

## 145 CC-604 ● **Survey-Based Estimation I—Contributed**

Section on Survey Research Methods

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

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

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

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

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

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

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

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

## 146 CC-201 ● ⊛ **Disease Surveillance Methods—Contributed**

Section on Statistics in Epidemiology, Biometrics Section, ENAR

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

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

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



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

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

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

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

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

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

## 147 CC-620 Reliability and Life Testing—Contributed

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

*Chair(s): Peter Hovey, University of Dayton*

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

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

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

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

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

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

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

## 148 CC-613 ● Assessment of Student Performance—Contributed

Section on Statistical Education

*Chair(s): Joan Weinstein, Pine Manor College*

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

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

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

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

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

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

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

## 149 CC-614

### ● Insights for Advanced Undergraduate Statistics Courses—Contributed

Section on Statistical Education, Section on Statistical Consulting

*Chair(s): William Peterson, Middlebury College*

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

## 150 CC-612

### Mixture Models and Misspecified Models—Contributed

Section on Bayesian Statistical Science

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

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

### Measurement Error—

◆ Anna McGlothlin, Baylor University

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

## 151 CC-618

### Model Selection and Diagnostics—Contributed

IMS

*Chair(s): Albert Kim, University of Washington*

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

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

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

Biometrics Section, WNAR, ENAR

*Chair(s): Sebastien Haneuse, Group Health Cooperative*

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

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

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

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

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

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

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

## 153 CC-615 **Inference—Contributed**

Section on Statistical Computing

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

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

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

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

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

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

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

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

## 154 CC-2A ● **Adaptive Methods—Contributed**

Biopharmaceutical Section

*Chair(s): Wei Zhong, ICON Clinical Research*

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

# GENERAL PROGRAM SCHEDULE

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

- 10:50 a.m. **Confidence Intervals Following an Adaptive Group Sequential Design**—❖ Cyrus Mehta, Cytel Inc.
- 11:05 a.m. **Implementing Adaptive Designs in Clinical Trials: Risks and Benefits**—❖ Christopher Khedouri, U.S. Food and Drug Administration; Thamban Valappil, U.S. Food and Drug Administration; Mohammad Huque, U.S. Food and Drug Administration
- 11:20 a.m. **Dynamic Treatment Allocation and Randomization Tests in Clinical Trials**—  
❖ Lee-Lian Kim, Centocor R&D, Inc.;  
Yaung-Kaung Shen, Centocor R&D, Inc.;  
Jewel Johanns, Centocor R&D, Inc.; Aparna Raychaudhuri, Centocor R&D, Inc.
- 11:35 a.m. **Resampling Methods for Adaptive Designs**—  
❖ Hui Zhang, Bristol-Myers Squibb Company
- 11:50 a.m. **Evaluating Exploratory and Confirmatory Evidence Collectively**—❖ Qian Li, U.S. Food and Drug Administration
- 12:05 p.m. **Adjusted Two-Sided Combination Tests for Adaptive Clinical Trials**—❖ Zhilong Yuan, Johnson & Johnson Pharmaceutical R&D; Yang Song, Johnson & Johnson Pharmaceutical R&D; Xiaolong Luo, Johnson & Johnson Pharmaceutical R&D; George Chi, Johnson & Johnson Pharmaceutical R&D

## 155 CC-204 ● Analysis of Microarrays—Contributed

Biometrics Section, ENAR

*Chair(s): Xueli Liu, University of Florida*

- 10:35 a.m. **Biweight Correlation as a Measure of Distance between Genes on a Microarray**—❖ Aya Mitani, Pitzer College
- 10:50 a.m. **Modified Wilcoxon Mann-Whitney Methods for Identifying Functional Gene Categories in Microarray Experiments**—❖ Liu Hua, University of Kentucky; Constance Wood, University of Kentucky; Arnold J. Stromberg, University of Kentucky
- 11:05 a.m. **MicroRNA Regulation of mRNA Expression in Neuronal Development**—❖ Diane Richardson, Rutgers University; Rebecka Jornsten, Rutgers University
- 11:20 a.m. **Point and Interval Predictions of Protein Concentrations in ELISA Microarray Assays**—  
❖ Don S. Daly, Pacific Northwest National

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

- 11:35 a.m. **A Nonparametric Likelihood Ratio Test To Identify Differentially Expressed Genes from Microarray Data**—❖ Sunil Mathur, University of Mississippi; Sankar Bokka, University of Mississippi
- 11:50 a.m. **A Statistical Framework To Infer Functional Gene Associations from Multiple Biologically Dependent Microarray Experiments**—  
❖ Siew-Leng Teng, University of California, Berkeley
- 12:05 p.m. **Cluster Analysis for Gene Expression Data with Liquid Association Structure**—❖ Yijing Shen, University of California, Los Angeles; Ker-Chau Li, University of California, Los Angeles; Shinsheng Yuan, University of California, Los Angeles

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

Biometrics Section

*Chair(s): Patrick Heagerty, University of Washington*

- 10:35 a.m. **Analysis of Mixture Random Effects Models for Longitudinal Data**—❖ Yimeng Lu, Columbia University; Hongtu Zhu, Columbia University and New York State Psychiatric Institute; Thaddeus Tarpey, Wright State University; Eva Petkova, Columbia University
- 10:50 a.m. **Nonparametric Inference for High-Dimensional Longitudinal Data**—❖ Ke Zhang, Kansas State University; Haiyan Wang, Kansas State University
- 11:05 a.m. **Violating the Assumption of Independence of the Error Components in the Linear Mixed Model for Longitudinal Data**—❖ Matthew Gurka, University of Virginia; Lloyd Edwards, The University of North Carolina at Chapel Hill; Keith E. Muller, The University of North Carolina at Chapel Hill
- 11:20 a.m. **A Marginal Model for Multistate Panel Data under Heterogeneity**—❖ Wei-Ting Hwang, University of Pennsylvania School of Medicine



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

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

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

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

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

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

#### Graphics, visualization

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

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

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

### 158 **CC-Level 6 East Lobby** **Contributed Posters—Contributed**

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

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

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

#### Cognitive science, linguistics, artificial intelligence

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

#### Computational statistics, numerical methods

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

#### Data mining and knowledge discovery, machine learning

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

# GENERAL PROGRAM SCHEDULE

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

## Graphics, visualization

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

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## Speaker Luncheon 12:30 p.m.–1:50 p.m.

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

Section on Statistics in Sports

*Organizer(s): Scott Berry, Berry Consultants*

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

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

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

Section on Bayesian Statistical Science

*Organizer(s): Merlise Clyde, Duke University*

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

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

Biopharmaceutical Section

*Organizer(s): Amit Bhattacharyya, GlaxoSmithKline*

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

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

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

Business and Economics Statistics Section

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

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

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

Section on Statisticians in Defense and National Security

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

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

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

Section on Statistical Education

*Organizer(s): Patti Collings, Brigham Young University*

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

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

Section on Statistics in Epidemiology

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

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

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

Section on Government Statistics

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

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

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

Section on Health Policy Statistics

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

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

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

Section on Physical and Engineering Sciences

*Organizer(s): Winson Taam, The Boeing Company*

- ML31 Using All Them Machines: Grid Computing for Statistical

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

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

Section on Quality and Productivity

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

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

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

Section on Risk Analysis

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

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

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

Section on Survey Research Methods

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

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

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

Social Statistics Section

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

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

# GENERAL PROGRAM SCHEDULE

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

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

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

The ASA, ENAR, IMS, SSC, WVAR

*Organizer(s): Hulin Wu, University of Rochester*

*Chair(s): Andrei Yakovlev, University of Rochester*

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

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

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

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

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

## Invited Sessions 2:00 p.m.–3:50 p.m.

### 174 CC-205 Bayesian Finance—Invited

Business and Economics Statistics Section, Section on Bayesian Statistical Science

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

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

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

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

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

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

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

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

Section on Statistics in Sports, Section on Statistical Education

*Organizer(s): Kara Morgan*

*Chair(s): Kara Morgan*

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

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

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

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

### 176 CC-3B ⊕ Forensic Statistics—Invited

Section on Statisticians in Defense and National Security

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

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

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

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

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

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

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

Section on Survey Research Methods

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

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



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

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

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

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

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

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

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

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

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

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

Biometrics Section

*Organizer(s): Joseph W. Hogan, Brown University*  
*Chair(s): Michael Daniels, University of Florida*

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

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

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

*Organizer(s): Sarah Kalicin, Intel Corporation*  
*Chair(s): Sarah Kalicin, Intel Corporation*

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

# GENERAL PROGRAM SCHEDULE

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

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

## 182 CC-3A ● ⊕ **Genome-Wide Association Studies—Invited**

Section on Statistical Computing, Biometrics Section, ENAR, WNAR

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

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

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

## 183 CC-619 **Regression Models with Functional Predictors—Invited**

Section on Nonparametric Statistics

*Organizer(s): Philip Reiss, Columbia University*

*Chair(s): Philip Reiss, Columbia University*

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

## 184 CC-611 **Threshold Regression Models and Applications—Invited**

Section on Statistics in Epidemiology

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

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

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

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

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

Biometrics Section, Section on Nonparametric Statistics, ENAR

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

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

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

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

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

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

Biopharmaceutical Section

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

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

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

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

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

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

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

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

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

Section on Bayesian Statistical Science, Biometrics Section, ENAR

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

*Gosford Sawyerr, Medtronic, Inc.*

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

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

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

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

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

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

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

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

Section on Health Policy Statistics

*Organizer(s): Marc Elliott, RAND Corporation*

*Chair(s): Marika Suttorp, RAND Corporation*

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

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

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

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

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

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

# GENERAL PROGRAM SCHEDULE

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

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

Section on Nonparametric Statistics

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

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

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

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

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

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

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

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

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

Section on Government Statistics

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

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

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

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

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

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

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

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

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

Section on Survey Research Methods

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

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

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

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

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

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

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

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

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

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

Section on Statistical Consulting, Section on Statistical Education

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

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

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



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

3:45 p.m. Floor Discussion

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

Social Statistics Section

*Organizer(s): Charles Hirschman, University of Washington*

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

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

3:45 p.m. Floor Discussion

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

Section on Statistical Education

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

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

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

3:35 p.m. Floor Discussion

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

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**195** **CC-603**  
**● Sample Survey Design II—Contributed**

Section on Survey Research Methods

*Chair(s): Michael E. Jones, Westat*

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

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

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

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

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

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

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

Section on Survey Research Methods

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

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

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

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

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

# GENERAL PROGRAM SCHEDULE

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

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

## 197 CC-203 ● ⊛ **Challenges and Innovative Methods for Teaching Biostatistics in the Health Sciences—Contributed**

Section on Teaching Statistics in the Health Sciences

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

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

## 198 CC-614 ● **Advances in Graphical Methods—Contributed**

Section on Statistical Graphics

*Chair(s): Li Li, George Mason University*

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

## 199 CC-612 ● ⊛ **Longitudinal Models—Contributed**

Section on Statistics in Epidemiology, Biometrics Section, ENAR

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

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

2:50 p.m. **Analysis of Longitudinal Trinomial Outcome through a Surrogate Variable**—❖ Wenyaw Chan, The University of Texas School of Public Health; Yen-Peng Li, The University of Texas Health Science Center at Houston; Hung-Wen Yeh, The University of Texas School of Public Health

3:05 p.m. **The Log Multinomial Regression Model for Nominal Outcomes with More Than Two Attributes**—❖ Leigh Blizzard, Menzies Research Institute; David W. Hosmer, University of Massachusetts

3:20 p.m. **Bayesian Hierarchical Models for Racial and Socioeconomic Predictors of Mortality in a Sample of the U.S. Medicare Population**—❖ Yijie Zhou, The Johns Hopkins University; Francesca Dominici, The Johns Hopkins University; Thomas A. Louis, The Johns Hopkins University

3:35 p.m. **Bayesian Estimation for Epidemic Models on a Social Network**—❖ Crystal Linkletter, Simon Fraser University; Randy R. Sitter, Simon Fraser University; Nicolas Hengartner, Los Alamos National Laboratory

## 200 CC-605 Choice Experiments in Marketing—Contributed

Section on Statistics and Marketing

*Chair(s): Arindam RoyChoudhury, University of Washington*

2:05 p.m. **Managing Large Conjoint Studies**—❖ Ulderico Santarelli, Consultant

2:20 p.m. **Designing a Stated Choice Survey To Study Food Product Eco-Labels**—❖ Iain Pardoe, University of Oregon

2:35 p.m. **Fusing Best/Worst Choices and Ratings Data for Comparisons on a Common Scale**—❖ Lynd D. Bacon, Sighthound Solutions, Inc.; Peter J. Lenk, University of Michigan; Katya Seryakova, Knowledge Networks, Inc.

2:50 p.m. **The Impact of Choice Set Complexity on Respondent Screening Behavior**—❖ Joseph Retzer, Maritz Research

3:05 p.m. **Misspecification and Decision Strategies in Choice Design Parameter Assumptions**—❖ Jennifer Golek, DuPont; Robert W. Mee, University of Tennessee

3:20 p.m. **Thurstone Scaling via Maximum Likelihood in Order Statistics**—❖ Stan Lipovetsky, GfK-CRI

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

## 201 CC-213 ● Statistical Methods and Ecological Applications—Contributed

Section on Statistics and the Environment

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

2:05 p.m. **Choice of Weights in Meta-analysis of Mark-Recapture Survival Studies**—❖ James R. Faulkner, U.S. Department of Commerce; Steven G. Smith, U.S. Department of Commerce

2:20 p.m. **Trend Estimation in a Periodic Survey of North-American Waterfowl**—❖ Mark Otto, U.S. Fish and Wildlife Service

2:35 p.m. **Bayesian Spatio-Temporal Models for Radio-Telemetry Contacts**—❖ Albert N. Hendrix, R2 Resource Consultants, Inc.; Rip Shively, U.S. Geological Survey; Barbara Adams, U.S. Geological Survey

2:50 p.m. **Evaluating Sampling Approaches for Monitoring Chronic Wasting Disease (CWD) in Deer Populations**—❖ Ling Huang, Iowa State University; Sarah M. Nusser, Iowa State University; William R. Clark, Iowa State University; David L. Otis, Iowa State University

3:05 p.m. **The Federally Threatened Plant Species, Missouri Bladderpod: Model Selection and Validation**—❖ William Leeds, Truman State University; Hyun-Joo Kim, Truman State University; Corey Elledge, Truman State University; Michael Kelrick, Truman State University; Elizabeth Bobzien, Truman State University; James Franklin, Truman State University

3:20 p.m. **Effects of Sample Survey Design on the Accuracy of Classification Tree Models in Ecology**—❖ Thomas C. Edwards, U.S. Geological Survey; D. Richard Cutler, Utah State University; Gretchen Moisen, U.S. Forest Service; Niklaus E. Zimmermann, Swiss Federal Research Institute WSL; Linda Geiser, U.S. Department of Agriculture

3:35 p.m. **Spatio-Temporal Analysis Incorporating a Spatial Correlation Structure on a Long-Term Forestry Field Research Dataset**—❖ Bronson Bullock, North Carolina State University; Edward Boone, The University of North Carolina at Wilmington

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

- 202** **CC-616**  
**● Biostatistical Modeling—Contributed**  
Biometrics Section, Section on Bayesian Statistical Science, ENAR  
*Chair(s): Louise Ryan, Harvard School of Public Health*
- 2:05 p.m.** **Inter-Rater Reliability of Pressure Ulcer Staging: Ordinal Probit Bayesian Hierarchical Model That Allows for Uncertain Rater Response**—◆ Byron Gajewski, The University of Kansas Medical Center; Sara Hart, The University of Kansas Medical Center; Sandra Bergquist-Beringer, The University of Kansas Medical Center; Nancy Dunton, The University of Kansas Medical Center
- 2:20 p.m.** **A Random-Effects Four-Part Model for Longitudinal Medical Costs**—◆ Lei Liu, University of Virginia; Mark R. Conaway, University of Virginia
- 2:35 p.m.** **Bayesian Analysis of Repeated Data with Many Zeros: Application to the Longitudinal Adolescent Substance Abuse Study**—◆ Hyonggin An, The University of Iowa
- 2:50 p.m.** **Repeated Measures Mixture Modeling with Applications to Postmortem Tissue Studies in Schizophrenia**—◆ Zhuoxin Sun, Dana-Farber Cancer Institute; Ori Rosen, The University of Texas at El Paso; Allan R. Sampson, University of Pittsburgh
- 3:05 p.m.** **A Hidden Markov Model To Describe Responses to Alcoholism Treatment**—◆ Kenneth Shirley, University of Pennsylvania; Dylan S. Small, University of Pennsylvania
- 3:20 p.m.** **Mixture Gaussian Model-Based Bayesian Clustering**—◆ Wei Zhang, Harvard University
- 3:35 p.m.** **Modeling Distortion Product Otoacoustic Emissions Using Noncentral-F Mixed Effects Models**—◆ Lai Wei, The Ohio State University; Peter F. Craigmile, The Ohio State University; Wayne M. King, The Ohio State University; Stephanie Jones, The Ohio State University
- 2:20 p.m.** **Predict Survival Using Gene Expression Data under Cox PH Models**—◆ Wenqing He, University of Western Ontario; Grace Y. Yi, University of Waterloo
- 2:35 p.m.** **Model Combining in Survival Analysis**—◆ Lihua Chen, The University of Toledo
- 2:50 p.m.** **Median Regression Analysis from Doubly Censored Data**—◆ Sundar Subramanian, University of Maine
- 3:05 p.m.** **Smoothed Bootstrap-Based Bandwidth Estimation**—◆ Derek Bean, University of Maine; Sundar Subramanian, University of Maine
- 3:20 p.m.** **Equivalences of Nonparametric Estimators and Noninformative Censoring Conditions**—◆ Yingfu Li, University of Houston-Clear Lake; Jiantian Wang, Kean University
- 3:35 p.m.** **Floor Discussion**
- 204** **CC-400**  
**Mixed Models and Data Mining—Contributed**  
Section on Statistical Computing  
*Chair(s): Hasan Hamdan, James Madison University*
- 2:05 p.m.** **A Comparison of the Reporting of Problems Encountered in the Estimation of Covariance Parameters in Linear Mixed Models Using SAS, SPSS, R, Stata, and HLM**—◆ Brady West, University of Michigan; Kathy Welch, University of Michigan; Andrzej Galecki, University of Michigan
- 2:20 p.m.** **A Note on Testing of Hypothesis of Kronecker Product Covariance Structure in Doubly Multivariate Data**—◆ Anuradha Roy, The University of Texas at San Antonio
- 2:35 p.m.** **On Hierarchical Linear Mixed Modeling Using the Multivariate t Distribution with Missing Information**—◆ Tsung-I Lin, National Chung Hsing University; Jack C. Lee, National Chiao Tung University
- 2:50 p.m.** **Automatic Approximation of the Marginal Likelihood in Non-Gaussian Hierarchical Models**—◆ Hans J. Skaug, University of Bergen; David A. Fournier, Otter Research Ltd.
- 3:05 p.m.** **Adversarial Learning**—◆ Bawei Xi, Purdue University; Murat Kantarcioglu, The University of Texas at Dallas; Chris Clifton, Purdue University
- 203** **CC-617**  
**● Methodology for Survival and Censored Data—Contributed**  
Biometrics Section, WNAR, ENAR  
*Chair(s): Sudipto Banerjee, University of Minnesota*
- 2:05 p.m.** **Constructing Multivariate Prognostic Expression Profiles for Survival Endpoints**—◆ Derick R. Peterson, University of Rochester; Alexander Pearson, University of Rochester



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

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

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

Business and Economics Statistics Section

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

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

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

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

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

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

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

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

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

Biometrics Section

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

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

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

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

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

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

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

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

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

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

IMS, Biometrics Section, Section on Nonparametric Statistics, ENAR

*Chair(s): Qunhua Li, University of Washington*

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

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

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

# GENERAL PROGRAM SCHEDULE

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

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

## 208 CC-204 Advances in Bayesian Computation— Contributed

Section on Bayesian Statistical Science

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

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

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

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

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

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

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

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### 210 CC-Level 6 East Lobby Contributed Posters—Contributed

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

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

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

### Business, financial, marketing statistics

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

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

## General

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

## Health policy, public health

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

## Social and behavioral science

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

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

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

## Teaching, training, consulting

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



# GENERAL PROGRAM SCHEDULE

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

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

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

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

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

The ASA, ENAR, WNAR, SSC, IMS

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

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

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

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

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## TUESDAY, AUGUST 8

### Tours

9:00 a.m.–1:00 p.m. CC-Convention Place  
**TR06 - Historical Seattle Tour (fee event)**

1:00 p.m.–5:00 p.m. CC-Convention Place  
**TR07 - Glassblowing Tour (fee event)**

### Committee/Business Meetings & Other Activities

5:15 a.m.–7:00 a.m. Off Property  
**Gertrude Cox Scholarship Race**

7:00 a.m.–8:30 a.m. S-Cedar Room  
**Section on Statisticians in Defense and National Security Business Meeting**  
*Chair(s): Ron Fricker, Naval Postgraduate School*

7:00 a.m.–8:30 a.m. H-Excelsior  
**Technometrics Editorial Board Meeting (closed)**  
*Chair(s): Randy R. Sitter, Simon Fraser University*

7:00 a.m.–8:30 a.m. S-Spruce Room  
**Business and Economics Statistics Section Executive Committee Meeting (closed)**  
*Chair(s): Paul Shaman, University of Pennsylvania*

7:00 a.m.–8:30 a.m. H-Discovery  
**Section on Quality and Productivity Executive Meeting (closed)**  
*Chair(s): Christine M. Anderson-Cook, Los Alamos National Laboratory*

7:00 a.m.–8:30 a.m. CC-302  
**Committee on Statistics and Disability Annual Meeting (closed)**  
*Chair(s): Joan Turek, U.S. Department of Health and Human Services*

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

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

7:00 a.m.–10:00 a.m. S-Metropolitan Ballroom A  
**Council of Chapters Business Meeting and Breakfast (closed)**  
*Chair(s): Ronald Wasserstein, Washburn University*

7:00 a.m.–10:00 a.m. S-Ballard  
**Section on Physical and Engineering Sciences Executive Committee Meeting (closed)**  
*Chair(s): Robert Wilkinson, Lubrizol*

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

7:30 a.m.–9:00 a.m. H-Cayuse  
**Project on Filming of Distinguished Statisticians (closed)**  
*Organizer(s): Nitis Mukhopadhyay, University of Connecticut*

7:30 a.m.–12:00 p.m. S-Aspen Room  
**Biopharmaceutical Section Executive Committee Meeting (closed)**  
*Chair(s): Stacy Lindborg, Eli Lilly and Company*

7:30 a.m.–4:30 p.m. CC-Level 4 South Lobby  
**JSM Main Registration  
 ASA Membership/Special Assistance Desk**

8:00 a.m.–9:30 a.m. H-Portland  
**Section on Risk Analysis Executive Committee Meeting (closed)**  
*Chair(s): Susan Sereika, University of Pittsburgh*

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

8:00 a.m.–4:00 p.m. S-Admiral  
**ASA/NCTM Beyond AP Statistics (closed)**  
*Chair(s): Roxy Peck, California Polytechnic State University, San Luis Obispo*

8:00 a.m.–6:00 p.m. CC-Exhibit Hall 4B  
**Career Placement Service**

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

# GENERAL PROGRAM SCHEDULE

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

- 8:00 a.m.–6:00 p.m. CC-209  
**Amgen Inc. Interview Room (by invitation only)**  
*Organizer(s): Chander Varma, Amgen Inc.*
- 8:30 a.m.–10:00 a.m. S-Juniper  
**Section on Statistical Education Executive Committee Meeting (closed)**  
*Chair(s): Christine Franklin, University of Georgia*
- 9:00 a.m.–10:00 a.m. CC-302  
**Mu Sigma Rho Executive Committee**  
*Organizer(s): Marcia Gumpertz, North Carolina State University*
- 9:00 a.m.–5:00 p.m. CC-Level 4 South Lobby  
**ASA Marketplace**
- 9:00 a.m.–5:00 p.m. CC-Level 1  
**Citywide Concierge Center**
- 9:00 a.m.–6:00 p.m. CC-Exhibit Hall 4A  
**EXPO 2006**  
**ASA Communities Booth #101**
- 10:15 a.m.–12:15 p.m. H-Cayuse  
**Introduction to Statistics Focus Group**  
*Organizer(s): Liliana Molina, Pearson Education*
- 10:30 a.m.–1:00 p.m. S-Willow A  
**New Chapter Officers Meeting with Council of Chapters Vice Chairs**  
*Chair(s): Ronald Wasserstein, Washburn University*
- 12:00 p.m.–1:30 p.m. H-Excelsior  
**JCGS Management Committee Meeting (closed)**  
*Chair(s): Dianne Cook, Iowa State University*
- 12:30 p.m.–2:00 p.m. H-Blewett Suite  
**The American Statistician Editorial Board Meeting (closed)**  
*Chair(s): Peter Westfall, Texas Tech University*
- 12:30 p.m.–2:00 p.m. H-Discovery  
**ASA Defense and Security Task Force Meeting (closed)**  
*Chair(s): Alyson Wilson, Los Alamos National Laboratory*
- 12:30 p.m.–2:00 p.m. S-Douglas Room  
**Open Source Textbook Project Planning Meeting**  
*Organizer(s): Beatrix Jones, Massey University*
- 12:30 p.m.–2:00 p.m. CC-302  
**Interface Foundation of North America Board Meeting (closed)**  
*Organizer(s): Tim C. Hesterberg, Insightful Corporation*
- 12:30 p.m.–2:00 p.m. H-Portland  
**Deming Lectureship Committee Speaker Luncheon (closed)**  
*Chair(s): Lorraine Denby, Avaya Labs Research*
- 12:30 p.m.–4:30 p.m. H-Stevens Boardroom & Foyer  
**ENAR RAB/RECOM Luncheon Meeting (by invitation only)**  
*Organizer(s): Kathy Hoskins, ENAR*
- 2:00 p.m.–3:30 p.m. S-Everett  
**Council of Chapters Traveling Course**  
*Chair(s): Delray Schultz, Millersville University*
- 2:00 p.m.–3:30 p.m. S-Spruce Room  
**ASA Committee Organization and Management Task Force (closed)**  
*Chair(s): Susan J. Devlin, The Artemis Group LLC*
- 2:30 p.m.–4:00 p.m. H-Cayuse  
**JBES Editorial Board Meeting**  
*Chair(s): Torben G. Andersen, Northwestern University*
- 3:40 p.m.–4:00 p.m. CC-3B  
**Presentation of 2006 Roger Herriot Award with Reception (open)**  
*Chair(s): Lawrence H. Cox, National Center for Health Statistics*
- 4:00 p.m.–5:00 p.m. H-Sherman  
**JASA Reviews Assistant Editors Meeting (closed)**  
*Chair(s): Robert Lund, Clemson University*
- 4:00 p.m.–6:00 p.m. S-Metropolitan Ballroom A  
**Council of Chapters Workshop and Reception: New and Not So New Methods of Communications for Chapters Featuring Wiki Pages (closed)**  
*Chair(s): J. Lynn Palmer, M. D. Anderson Cancer Center*
- 4:30 p.m.–6:00 p.m. S-Cedar Room  
**Biometrics Editorial Board (closed)**  
*Organizer(s): Marie Davidian, North Carolina State University*
- 5:00 p.m.–6:00 p.m. CC-602  
**Caucus for Women in Statistics Business Meeting**  
*Organizer(s): Mary W. Gray, American University*

- 5:00 p.m.–6:00 p.m. CC-601  
**Business and Economics Statistics Section Business Meeting**  
*Chair(s): Paul Shaman, University of Pennsylvania*
- 5:00 p.m.–6:30 p.m. CC-609  
**Section on Survey Research Methods Business Meeting**  
*Chair(s): Roger Tourangeau, University of Maryland*
- 5:00 p.m.–6:30 p.m. CC-605  
**JSM 2008 Program Committee Orientation Meeting (closed)**  
*Chair(s): Russell V. Lenth, University of Iowa*
- 5:00 p.m.–7:00 p.m. S-Willow B  
**North Carolina State University Reception for Alumni and Friends**  
*Organizer(s): Tom Gerig, North Carolina State University*
- 5:00 p.m.–7:00 p.m. S-Douglas Room  
**Friends and Alumni of UCLA**  
*Organizer(s): Jason Mesa, University of California, Los Angeles*
- 5:30 p.m.–6:30 p.m. CC-607  
**Section on Statistics and Marketing Business Meeting**  
*Chair(s): Alan Montgomery, Carnegie Mellon University*
- 5:30 p.m.–6:30 p.m. S-Willow A  
**Institute of Mathematical Statistics New Member and Student Reception**  
*Organizer(s): Elyse Gustafson, IMS*
- 5:30 p.m.–7:00 p.m. CC-603  
**Section on Statistical Consulting Business Meeting**  
*Chair(s): Philip Dixon, Iowa State University*
- 5:30 p.m.–7:00 p.m. CC-604  
**ENAR Business Meeting (open to all ENAR members)**  
*Organizer(s): Kathy Hoskins, ENAR*
- 5:30 p.m.–7:00 p.m. CC-613  
**Section on Nonparametric Statistics Business Meeting**  
*Chair(s): Pranab K. Sen, The University of North Carolina at Chapel Hill*
- 5:30 p.m.–7:00 p.m. Off Property  
**University of Washington Department of Biostatistics Alumni Meeting**  
*Organizer(s): Xiao-Hua Andrew Zhou, University of Washington*
- 5:30 p.m.–7:00 p.m. S-Cirrus Ballroom  
**Section on Bayesian Statistical Science Open Meeting**  
*Chair(s): Dalene Stangl, Duke University*
- 5:30 p.m.–7:00 p.m. CC-4C-1  
**Section on Government Statistics Business Meeting**  
*Chair(s): Stephanie Shipp, National Institute of Standards and Technology*
- 5:30 p.m.–7:30 p.m. CC-4C-3  
**Joint Section on Physical and Engineering Sciences and Section on Quality and Productivity Business Meeting and Mixer**  
*Chair(s): Christine M. Anderson-Cook, Los Alamos National Laboratory; Robert Wilkinson, Lubrizol*
- 5:30 p.m.–7:30 p.m. CC-606  
**Biopharmaceutical Section Business Meeting**  
*Chair(s): Stacy Lindborg, Eli Lilly and Company*
- 5:30 p.m.–7:30 p.m. H-Princessa II Ballroom  
**University of Michigan Biostatistics and Statistics Departments Joint Alumni Reception**  
*Organizer(s): Jack Kalbfleisch, University of Michigan*
- 5:30 p.m.–7:30 p.m. CC-610  
**Section on Statistics in Epidemiology Social Mixer**  
*Chair(s): Sander Greenland, University of California, Los Angeles*
- 6:00 p.m.–6:30 p.m. CC-Ballroom 6ABC  
**2006 ASA New Fellows Group Picture (closed)**  
*Chair(s): M. Elizabeth Halloran, Fred Hutchinson Cancer Research Center*
- 6:30 p.m.–7:30 p.m. CC-607  
**Joint Mixer for Section on Statistics and Marketing and the Business & Economics Section**  
*Chair(s): Alan Montgomery, Carnegie Mellon University; Paul Shaman, University of Pennsylvania*
- 6:00 p.m.–7:30 p.m. CC-302  
**Insightful Reception**  
*Organizer(s): Gina Buzzelle, Insightful Corporation*
- 6:00 p.m.–8:00 p.m. H-Leonesa Ballroom I  
**University of Wisconsin-Madison Department of Statistics Reception**  
*Organizer(s): Jun Shao, University of Wisconsin-Madison*

# GENERAL PROGRAM SCHEDULE

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

6:30 p.m.–7:30 p.m. CC-4C-2

## 2006 ASA New Fellows Reception (by invitation only)

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

6:30 p.m.–8:00 p.m. S-Aspen Room

## Bristol-Myers Squibb Company Presentation and Reception (closed)

Organizer(s): Denise Houghton, Bristol-Myers Squibb Company

6:30 p.m.–8:00 p.m. S-Ballard

## CRC Press/Taylor & Francis Reception (by invitation only)

Organizer(s): David Grubbs, CRC Press

9:30 p.m.–12:00 a.m. CC-4C-3

## JSM Informal Dance Party (all welcome, included in registration fee)

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## Continuing Education (Fee Events)

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CE\_23C CC-310

8:00 a.m.–12:00 p.m.

## Adaptive Tests of Significance and Confidence Intervals

The ASA

Instructor(s): Thomas W. O’Gorman, Northern Illinois University

CE\_24C CC-306

8:30 a.m.–5:00 p.m.

## Bayesian Analysis of Case-Control Data

The ASA, Section on Bayesian Statistical Science

Instructor(s): Malay Ghosh, University of Florida; Bhramar Mukherjee, University of Florida; Samiran Sinha, Texas A&M University

CE\_25C CC-309

8:30 a.m.–5:00 p.m.

## Analysis of Environmental Data with Nondetects

The ASA, Section on Statistics and the Environment

Instructor(s): Dennis R. Helsel, U.S. Geological Survey; Lopaka Lee, U.S. Geological Survey

CE\_26C CC-307 & 308

8:30 a.m.–5:00 p.m.

## Models for Discrete Repeated Measures

The ASA, Section on Statistics in Epidemiology

Instructor(s): Geert Verbeke, K.U. Leuven; Geert Molenberghs, Limburgs Universitair Centrum

CE\_27C CC-305

8:30 a.m.–5:00 p.m.

## Effective Scientific Writing

The ASA

Instructor(s): Judith A. Swan, Princeton University

CE\_28C CC-304

8:30 a.m.–5:00 p.m.

## Bioequivalence and Statistics in Clinical Pharmacology

The ASA

Instructor(s): Scott Patterson, GlaxoSmithKline; Byron Jones, Pfizer Inc.

CE\_29C CC-303

8:30 a.m.–5:00 p.m.

## Methods and Computational Tools for the Screening and Classification of Microarray Gene Expression Data

The ASA, Biopharmaceutical Section

Instructor(s): Geoff McLachlan, University of Queensland; Kim-Anh Do, M. D. Anderson Cancer Center

CE\_30C CC-310

1:00 p.m.–5:00 p.m.

## Meta-analysis: Statistical Methods for Combining the Results of Independent Studies

The ASA

Instructor(s): Ingram Olkin, Stanford University

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

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212 CC-4C-1

## Section on Bayesian Statistical Science Roundtable with Coffee (fee event)

Section on Bayesian Statistical Science

Organizer(s): Merlise Clyde, Duke University

TL01 Can and Should We Teach Bayesian Inference in Stat 101?—◆ Jerome Reiter, Duke University

213 CC-4C-1

## Section on Statistical Consulting Roundtable with Coffee (fee event)

Section on Statistical Consulting

Organizer(s): Phillip Chapman, Colorado State University

TL02 Bioinformatics Consulting: Keeping up to Date—◆ Ann Hess, Colorado State University



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

Section on Statistical Education

Organizer(s): Patti Collings, Brigham Young University

- TL03 Motivating the Math Major To Consider a Career in Statistics—❖ Carolyn Cuff, Westminster College

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

Section on Statistics and the Environment

Organizer(s): Peter Guttorp, University of Washington

- TL04 Bayesian Applications in Environmental Science—❖ Eric P. Smith, Virginia Polytechnic Institute and State University; Keying Ye, The University of Texas at San Antonio

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

Section on Physical and Engineering Sciences

Organizer(s): Winson Taam, The Boeing Company

- TL05 Weibull Analysis—❖ Fritz Scholz, The Boeing Company

## 217 CC-4C-1 Section on Risk Analysis Roundtable with Coffee (fee event)

Section on Risk Analysis

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

- TL06 Estimation of Health Risk from Fish Consumption Associated with Fishing in an Urban Industrial Setting—  
❖ Rose Ray, Exponent, Inc.

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

Section on Teaching Statistics in the Health Sciences

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

- TL07 Productivity versus Professionalism in Biostatistics—  
❖ Lemuel Moye, The University of Texas Health Science Center at Houston

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

### 219 CC-4C-4 Introductory Overview Lectures: Computer Experiments—Other

The ASA, ENAR, IMS, SSC, WNAR, Section on Physical and Engineering Sciences

Organizer(s): Thomas M. Loughin, Kansas State University

Chair(s): Andrew J. Booker, The Boeing Company

- 8:35 a.m. What Are Computer Experiments, and How Do We Design Them?—❖ William Notz, The Ohio State University
- 9:25 a.m. The Modeling and Analysis of Data from Computer Experiments—❖ Thomas Santner, The Ohio State University
- 10:15 a.m. Floor Discussion

## Invited Sessions 8:30 a.m.–10:20 a.m.

### 220 CC-619 JBES Invited Session—Invited

JBES-Journal of Business and Economic Statistics

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

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

- 8:35 a.m. On the Fit and Forecasting Performance of New Keynesian Models—❖ Frank Schorfheide, University of Pennsylvania; Marco Del Negro, Federal Reserve Bank of Atlanta; Frank Smets, European Central Bank; Raf Wouters, National Bank of Belgium
- 9:20 a.m. Disc: Larry Christiano, Northwestern University
- 9:35 a.m. Disc: A. Ronald Gallant, Duke University
- 9:50 a.m. Disc: Christopher Sims, Princeton University
- 10:05 a.m. Floor Discussion

### 221 CC-2B ● ⊕ Six Sigma: What's Missing—Invited

Section on Quality and Productivity, Section on Statistical Education

Organizer(s): Ramon Leon, University of Tennessee

Chair(s): Roger W. Hoerl, GE Global Research

- 8:35 a.m. Improving the Six Sigma Toolkit—❖ Gerald J. Hahn, GE Global Research/RPI; ❖ Necip Doganaksoy, GE Global Research
- 9:05 a.m. Six Sigma: What Is Missing?—❖ William C. Parr, University of Tennessee

# GENERAL PROGRAM SCHEDULE

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

9:35 a.m. **Making Six Sigma Work: Statistics, Semi-Statistics, and Soft Stuff**—◆ Blanton Godfrey, North Carolina State University

10:05 a.m. **Floor Discussion**

222

CC-3A

## ● ⊕ **Bayesian Methods in Computational Biology—Invited**

Section on Bayesian Statistical Science, Biometrics Section, WNAR, ENAR  
*Organizer(s): Joseph G. Ibrahim, The University of North Carolina at Chapel Hill*

*Chair(s): Joseph G. Ibrahim, The University of North Carolina at Chapel Hill*

- 8:35 a.m. **Evolutionary Sparse Factor Modeling for Subpathway Identification and Characterization**—◆ Mike West, Duke University; Carlos Carvalho, Duke University; Quanli Wang, Duke University; Joseph Lucas, Duke University; Joseph Nevins, Duke University; Jeffrey Chang, Duke University
- 9:00 a.m. **Bayesian Inference for Biochemical Network Dynamics**—◆ Darren J. Wilkinson, University of Newcastle upon Tyne
- 9:25 a.m. **Bayesian One-Way and Two-Way Clustering Methods for Genomic Data**—◆ Jun Liu, Harvard University
- 9:50 a.m. **Statistical Methods for Motif Detection Incorporating Structural Features of DNA**—◆ Mayetri Gupta, The University of North Carolina at Chapel Hill
- 10:15 a.m. **Floor Discussion**

223

CC-400

## ● **Alternative Approaches for Sample Size Planning—Invited**

Section on Statistical Consulting, Section on Statistical Education  
*Organizer(s): Peter Bacchetti, University of California, San Francisco*  
*Chair(s): Stuart A. Gansky, University of California, San Francisco*

- 8:35 a.m. **Estimating the Minimally Significant Difference for a Clinical Study**—◆ Robert A. Parker, Harvard School of Public Health
- 9:00 a.m. **A Completely Different Approach to Sample Size Planning**—◆ Peter Bacchetti, University of California, San Francisco; Charles E. McCulloch, University of California, San Francisco; Mark R. Segal, University of California, San Francisco

9:25 a.m. **Sample Size and the Value of Information**—◆ Kimberly M. Thompson, Harvard School of Public Health

9:50 a.m. **Disc:** Stephen Senn, University of Glasgow

10:10 a.m. **Floor Discussion**

224

CC-608

## ● ⊕ **Statistical Methods for Integrative Genomics—Invited**

Biometrics Section, WNAR, ENAR

*Organizer(s): Giovanni Parmigiani, The Johns Hopkins University*

*Chair(s): Kim-Anh Do, M. D. Anderson Cancer Center*

- 8:35 a.m. **Integrative Correlation: a Gene-Level Measure of Cross-Study Reproducibility**—◆ Leslie Cope, The Johns Hopkins University; Liz Garrett-Mayer, The Johns Hopkins University; Edward Gabrielson, The Johns Hopkins University School of Medicine; Giovanni Parmigiani, The Johns Hopkins University
- 9:00 a.m. **A Bayesian Model for Cross-Study Differential Expression**—◆ Andrew Nobel, The University of North Carolina at Chapel Hill; Haakon Tjelmeland, Norwegian University of Science and Technology; Rob Scharpf, The Johns Hopkins University; Giovanni Parmigiani, The Johns Hopkins University
- 9:25 a.m. **Statistical Methods for Analysis of Copy Number and Expression Transcript Data**—◆ Debashis Ghosh, University of Michigan
- 9:50 a.m. **Integrative Homologous Regulation Analysis between Mouse and Human**—◆ Jae K. Lee, University of Virginia
- 10:15 a.m. **Floor Discussion**

225

CC-603

## ● **Network Visualization—Invited**

Section on Statistical Graphics, Section on Statisticians in Defense and National Security

*Organizer(s): Deborah F. Swayne, AT&T Labs-Research*

*Chair(s): Leland Wilkinson, SPSS Inc.*

- 8:35 a.m. **Scaling up Graph Visualization**—◆ Stephen North, AT&T Labs-Research
- 9:05 a.m. **Scalable Drawing of Trees and Graphs**—◆ Tamara Munzner, The University of British Columbia

9:35 a.m. **Visualizing Evolving Graphs by Simultaneous Embeddings**—❖ Stephen G. Kobourov, University of Arizona

10:05 a.m. **Floor Discussion**

## 226 CC-617

### ● Teaching Biostatistics without Equations to Health Care Professionals—Invited

Section on Teaching Statistics in the Health Sciences, Section on Statistical Education, Section on Statistical Graphics

*Organizer(s): Janet A. Tooze, Wake Forest University School of Medicine*

*Chair(s): Janet A. Tooze, Wake Forest University School of Medicine*

8:35 a.m. **Teaching Research Design to Health Sciences Professionals**—❖ Stephen W. Looney, LSU Health Sciences Center

9:00 a.m. **Teaching Statistical Concepts through Visualization**—❖ Edward H. Ip, Wake Forest University School of Medicine; Gary Wolgast, Wake Forest University School of Medicine

9:25 a.m. **Effective Teaching of Applied Biostatistics for Clinicians Enrolled in a Research Training Program**—❖ Jodi Lapidus, Oregon Health & Science University

9:50 a.m. Disc: Ralph O'Brien, The Cleveland Clinic

10:10 a.m. **Floor Discussion**

## 227 CC-607

### ● Statistical Issues in Diagnostic Medicine—Invited

Section on Statistics in Epidemiology, Biometrics Section, Section on Health Policy Statistics, ENAR

*Organizer(s): Estelle Russek-Cohen, U.S. Food and Drug Administration*

*Chair(s): Estelle Russek-Cohen, U.S. Food and Drug Administration*

8:35 a.m. **Evaluating the Predictiveness of a Continuous Marker**—❖ Margaret S. Pepe, Fred Hutchinson Cancer Research Center/University of Washington; Ying Huang, University of Washington; Ziding Feng, Fred Hutchinson Cancer Research Center

9:00 a.m. **Double-Semiparametric ROC Regression Analysis**—❖ Xiao-Hua Andrew Zhou, University of Washington; Huazhen Lin, University of Washington

9:25 a.m. **Evaluation of Diagnostic Tests in Studies with Verification Bias**—❖ Marina Kondratovich, U.S. Food and Drug Administration

9:50 a.m. Disc: Colin B. Begg, Memorial Sloan-Kettering Cancer Center

10:10 a.m. **Floor Discussion**

## 228 CC-618

### ● ⊕ Statistical Responses to Legislation: the Privacy Rule—Invited

Committee on Privacy and Confidentiality, Section on Health Policy Statistics

*Organizer(s): Alvan O. Zarate, National Center for Health Statistics*

*Chair(s): Laura Zayatz, U.S. Census Bureau*

8:35 a.m. **The Statistician's Role in Developing the HIPAA De-identification Standard**—❖ Alvan O. Zarate, National Center for Health Statistics

9:00 a.m. **The Federal Statisticians' Response to the HIPAA Privacy Rule**—❖ Jacob Bournazian, Energy Information Administration

9:25 a.m. **Statistical Deidentification and the HIPAA Rule**—❖ Patrick Baier, National Opinion Research Center

9:50 a.m. Disc: J. Neil Russell, National Center for Education Statistics

10:10 a.m. **Floor Discussion**

## 229 CC-602

### Recent Developments in Nonparametric Survival Analysis Methods—Invited

ENAR, Biometrics Section, WNAR, Section on Nonparametric Statistics

*Organizer(s): Haibo Zhou, The University of North Carolina at Chapel Hill*

*Chair(s): Jianqing Fan, Princeton University*

8:35 a.m. **Partially Linear Hazard Regression for Multivariate Survival Data**—❖ Jianwen Cai, The University of North Carolina at Chapel Hill; Jianqing Fan, Princeton University; Jiancheng Jiang, Princeton University; Haibo Zhou, The University of North Carolina at Chapel Hill

8:55 a.m. **A General Imputation Methodology for Nonparametric Regression with Censored Data**—❖ Daniel Rubin, University of California, Berkeley; Mark van der Laan, University of California, Berkeley



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# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

9:15 a.m. **Kernel-Smoothed Profile Likelihood Function in Accelerated Failure Time Model**—◆ Donglin Zeng, The University of North Carolina at Chapel Hill; Danyu Lin, The University of North Carolina at Chapel Hill

9:35 a.m. **Nonparametric Analysis of Multivariate Competing Risks Data**—◆ Jason P. Fine, University of Wisconsin-Madison

9:55 a.m. **An Additive Modulated Renewal Process**—◆ Dorota Dabrowska, University of California, Los Angeles

10:15 a.m. **Floor Discussion**

## 230 CC-206

### ● Client-Oriented Perspectives on Small-Area Estimation—Invited

Section on Survey Research Methods, Section on Physical and Engineering Sciences

*Organizer(s): Avinash C. Singh, Statistics Canada*

*Chair(s): Graham Kalton, Westat*

8:35 a.m. **Characterization of Cost Structures, Perceived Value, and Optimization Issues in Small-Domain Estimation**—◆ John L. Eltinge, Bureau of Labor Statistics

9:00 a.m. **A Small-Area Estimation Approach in Reducing Survey Costs**—◆ Partha Lahiri, University of Maryland; Paul D. Williams, National Center for Health Statistics

9:25 a.m. **Some Problems and Possible Solutions in Developing a Small-Area Estimation Product for Clients**—◆ Avinash C. Singh, Statistics Canada

9:50 a.m. Disc: Jon N. K. Rao, Carleton University

10:10 a.m. **Floor Discussion**

## Topic-Contributed Sessions

8:30 a.m.–10:20 a.m.

## 231 CC-609

### ● Missing Data in Clinical Trials: Can We Do Better Than LOCF?—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

*Organizer(s): Bret Musser, Merck Research Laboratories*

*Chair(s): Bret Musser, Merck Research Laboratories*

8:35 a.m. **Is It Better To Use Random Effects Models in Analysis of Repeated Binary Responses with**

**Missing Data?**—◆ Guanghan Liu, Merck Research Laboratories

8:55 a.m. **An Analytic Road Map for Incomplete Longitudinal Clinical Trial Data**—◆ Craig Mallinckrodt, Eli Lilly and Company; Shuyi Shen, Eli Lilly and Company; Caroline Beucnkens, Limburgs Universitair Centrum; Geert Molenberghs, Limburgs Universitair Centrum

9:15 a.m. **Mixed-Effects Latent Curve Modeling of Incomplete Longitudinal Cognitive Data**—◆ John J. McArdle, University of Southern California

9:35 a.m. **Scope of the Problem, Options Available, and Empirical Performance of Techniques for Handling Missing Data in Randomized Clinical Trials: Focus on Weight Loss Trials**—◆ David B. Allison, The University of Alabama at Birmingham

9:55 a.m. Disc: Fanhui Kong, U.S. Food and Drug Administration

10:15 a.m. **Floor Discussion**

## 232 CC-615

### Applications in Seasonal Adjustment—Topic-Contributed

Business and Economics Statistics Section

*Organizer(s): Benoit Quenneville, Statistics Canada*

*Chair(s): Peter Kenny, PBK Research*

8:35 a.m. **Balancing SA Series as a Complement to the Direct and Indirect SA of Series**—◆ Benoit Quenneville, Statistics Canada

8:55 a.m. **Computing Tasks Associated with Seasonal Adjustment at Statistics Canada: Methods and Software**—◆ Susie Fortier, Statistics Canada; Benoit Quenneville, Statistics Canada

9:15 a.m. **Exploring Model-Based Seasonal Adjustment for Industry Employment Statistics**—◆ Christopher Manning, Bureau of Labor Statistics; Jeffrey A. Smith, Bureau of Labor Statistics

9:35 a.m. **Variance Estimation for Noise Components in Time Series from a Survey**—◆ Daniell Toth, Bureau of Labor Statistics; Stuart Scott, Bureau of Labor Statistics

9:55 a.m. Disc: Estela BeeDagum, University of Bologna

10:15 a.m. **Floor Discussion**

## 233 CC-210

### ⊛ New Methods for Testing Sensitive Questions Using the National Health Interview Survey—Topic-Contributed

Section on Survey Research Methods

*Organizer(s): Peter Meyer, National Center for Health Statistics*

*Chair(s): Julie Trépanier, Statistics Canada*

**8:35 a.m. Developing New Methods and Questions for Improving Response and Measurement on Sensitive Questions on the National Health Interview Survey—**❖ Peter Meyer, National Center for Health Statistics; James Dahlhamer, National Center for Health Statistics; John Pleis, National Center for Health Statistics

**8:55 a.m. Sampling and Oversampling in the National Health Interview Survey—**❖ Chris Moriarity, National Center for Health Statistics

**9:15 a.m. Unfolding the Answers? Income Brackets and Income Nonresponse in the National Health Interview Survey (NHIS)—**❖ John Pleis, National Center for Health Statistics

**9:35 a.m. Questions People Don't Like To Answer: Wealth and Social Security Numbers—**❖ James Dahlhamer, National Center for Health Statistics; Peter Meyer, National Center for Health Statistics; John Pleis, National Center for Health Statistics

**9:55 a.m. Disc:** James Chromy, RTI International

**10:15 a.m. Floor Discussion**

## 234 CC-211

### ● ⊛ Frontiers in Demographic Coverage Measurement—Topic-Contributed

Social Statistics Section

*Organizer(s): Dean H. Judson, U.S. Census Bureau*

*Chair(s): Jeremy Wu, U.S. Census Bureau*

**8:35 a.m. Demographic Coverage Measurement: Can Information Integration Theory Help?—**❖ Dean H. Judson, U.S. Census Bureau

**8:55 a.m. Demographic Analysis in the UK Census: a Look Back to 2001 and Looking Forward to 2011—**Owen Abbott, Office for National Statistics; ❖ Garnett Compton, Office for National Statistics

**9:15 a.m. Coverage Assessment and Adjustment in the 2011 UK Census—**❖ Owen Abbott, Office for National Statistics

**9:35 a.m. Using the Audit Trail Data To Evaluate the Quality of Collection of the Canadian National Longitudinal Survey of Children and Youth—**❖ Bruno Lapierre, Statistics Canada; Scott Meyer, Statistics Canada

**9:55 a.m. Floor Discussion**

## 235 CC-214

### Climate, Weather, and Spatial-Temporal Models—Topic-Contributed

Section on Statistics and the Environment, Section on Statisticians in Defense and National Security, Section on Bayesian Statistical Science, WNAR

*Organizer(s): Stephan Sain, University of Colorado at Denver and Health Sciences Center*

*Chair(s): Douglas W. Nychka, National Center for Atmospheric Research*

**8:35 a.m. Models for Multivariate Spatial Lattice Data and Assessing Climate Change—**❖ Stephan Sain, University of Colorado at Denver and Health Sciences Center

**8:55 a.m. Spatial Patterns of Global Climate Change Fields—**❖ Reinhard Furrer, Colorado School of Mines; Reto Knutti, National Center for Atmospheric Research

**9:15 a.m. Modeling Precipitation Network Data When Station Reporting Times Are Misaligned—**❖ Jarrett Barber, Montana State University; Alan E. Gelfand, Duke University; Douglas W. Nychka, National Center for Atmospheric Research

**9:35 a.m. Spatial and Temporal Models for Evaluating IPCC Climate Model Outputs—**❖ Mikyoung Jun, Texas A&M University; Douglas W. Nychka, National Center for Atmospheric Research; Reto Knutti, National Center for Atmospheric Research

**9:55 a.m. A Hierarchical Bayesian Spatio-Temporal Model for Tropospheric Carbon Monoxide—**❖ Anders Malmberg, National Center for Atmospheric Research

**10:15 a.m. Floor Discussion**

## 236 CC-3B

### Spatial Modeling—Topic-Contributed

Section on Bayesian Statistical Science, Section on Nonparametric Statistics

*Organizer(s): Herbert Lee, University of California, Santa Cruz*

*Chair(s): Christopher Hans, The Ohio State University*

**8:35 a.m. Gaussian Processes and Limiting Linear Models—**Robert Gramacy, University of

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- Cambridge; ❖ Herbert Lee, University of California, Santa Cruz
- 8:55 a.m. **Bayesian Model for Dependent Nonparametric Regressions**—❖ Abel Rodriguez, Duke University; Alan E. Gelfand, Duke University; David B. Dunson, National Institute of Environmental Health Sciences
- 9:15 a.m. **Sampling Importance Resampling for Computer Model Inverse Problems**—❖ Matt Taddy, University of California, Santa Cruz; Bruno Sanso, University of California, Santa Cruz; Herbert Lee, University of California, Santa Cruz
- 9:35 a.m. **Bayesian Computational Methods for Models in Geosciences**—❖ Alejandro Villagran, University of New Mexico; Gabriel Huerta, University of New Mexico
- 9:55 a.m. **The Effect of Collinearity on Parameter Estimation in Bayesian Spatially Varying Coefficient Models**—❖ David Wheeler, The Ohio State University
- 10:15 a.m. **Floor Discussion**

## 237 CC-401 ● **Fostering Active Learning in Statistics—Topic-Contributed**

Section on Statistical Education, Section on Teaching Statistics in the Health Sciences

*Organizer(s): Carl Lee, Central Michigan University*

*Chair(s): Carl Lee, Central Michigan University*

- 8:35 a.m. **How Do You Come up with These Things?**—❖ André Michelle Lubecke, Lander University
- 8:55 a.m. **Using Simulation To Introduce Inference**—❖ Sharon Lane-Getaz, University of Minnesota/Cal Poly; Andrew Zieffler, University of Minnesota
- 9:15 a.m. **Active Learning in an Online Introductory Statistics Course**—❖ Michelle Everson, University of Minnesota
- 9:35 a.m. **Designing Classroom Activities for Student Learning**—❖ Allan Rossman, California Polytechnic State University, San Luis Obispo; Beth Chance, California Polytechnic State University, San Luis Obispo
- 9:55 a.m. **Evaluation of Students' Learning in Real-Time Online Activities Environment**—❖ Felix Famoye, Central Michigan University; Carl Lee, Central Michigan University
- 10:15 a.m. **Floor Discussion**

## 238 CC-204 **Health Policy Student Paper Awards—Topic-Contributed**

Section on Health Policy Statistics

*Organizer(s): Bonnie Ghosh-Dastidar, RAND Corporation*

*Chair(s): Bonnie Ghosh-Dastidar, RAND Corporation*

- 8:35 a.m. **Understanding Self-Reported Disability among the Elderly: a Novel Use of Anchoring Vignettes**—❖ Kate Stewart, Harvard University; Mary Beth Landrum, Harvard Medical School; David M. Cutler, Harvard University
- 8:55 a.m. **Hierarchical and Joint Site-Edge Methods for Medicare Hospice Service Region Boundary Analysis**—❖ Haijun Ma, University of Minnesota; Bradley P. Carlin, University of Minnesota; Sudipto Banerjee, University of Minnesota
- 9:15 a.m. **Extending the Capture-Recapture Methodology To Estimate Disease Subpopulation Sizes in the Presence of Cross-Classification**—❖ Ulysses Diva, University of Connecticut; Dipak Dey, University of Connecticut; Timothy Morse, University of Connecticut Health Center
- 9:35 a.m. **Methods for Profiling the Value of Hospital Care Following Acute Myocardial Infarction**—❖ Justin Timbie, Harvard University
- 9:55 a.m. **Nonparametric Statistical Methods for a Cost-Effectiveness Analysis**—❖ Phillip Dinh, University of Washington; Xiao-Hua Andrew Zhou, University of Washington
- 10:15 p.m. **Floor Discussion**

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## Topic-Contributed Panel 8:30 a.m.–10:20 a.m.

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## 239 CC-2A ● ⊕ **Responding to Emergency Needs for Data: Developing Population Estimates in the Wake of Hurricane Katrina—Topic-Contributed**

Section on Government Statistics

*Organizer(s): Wendy Alvey, U.S. Census Bureau; Lisa Blumberman, U.S. Census Bureau*

*Chair(s): Edward Spar, Council of Professional Associations on Federal Statistics*

- Panelists:** ❖ Thomas Nardone, Bureau of Labor Statistics  
❖ Christa Jones, U.S. Census Bureau



- ❖ Lisa Blumerman, U.S. Census Bureau
- ❖ Marc Roemer, U.S. Census Bureau
- ❖ Sally Obenski, 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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#### 240 CC-205

### Methods for High-Dimensional Data—Contributed

IMS

*Chair(s): Elizabeth Koehler, University of Washington*

- 8:35 a.m. **Constrained Dimension Reduction Based on Canonical Correlation**—❖ Jianhui Zhou, University of Virginia
- 8:50 a.m. **Sliced Inverse Regression under Data Contamination**—❖ Ulrike Genschel, Iowa State University
- 9:05 a.m. **Significance and Recovery of Block Structures in Binary and Real Matrices with Noise**—❖ Xing Sun, The University of North Carolina at Chapel Hill; Andrew Nobel, The University of North Carolina at Chapel Hill
- 9:20 a.m. **Some Extensions of a Two-Sample Test under the Effect of High Dimension**—❖ Yingli Qin, Iowa State University; Song X. Chen, Iowa State University; Liang Peng, Iowa State University
- 9:35 a.m. **Detecting Sparse Signals with a Large Scale of SPRTs**—❖ Yanhong Wu, University of the Pacific
- 9:50 a.m. **On the Accuracy of Data Squashing**—❖ Atsuyuki Kogure, Keio University; Masahiko Sagae, Gifu University
- 10:05 a.m. **New Tools for Sparse Inference: the Regime of Moderate Significances**—❖ Jiashun Jin, Purdue University

#### 241 CC-601

### Construction of Prior Distributions—Contributed

Section on Bayesian Statistical Science

*Chair(s): Raphael Gottardo, The University of British Columbia*

- 8:35 a.m. **An Asymptotic Viewpoint on High-Dimensional Bayesian Testing**—❖ Dan Spitzner, Virginia Polytechnic Institute and State University

- 8:50 a.m. **Novel Bayesian Variable-Selection Priors for “Large p Small n” Data Analysis**—❖ Joseph Lucas, Duke University
- 9:05 a.m. **New Priors for Complex System Reliabilities and Trends**—❖ Earl Lawrence, Los Alamos National Laboratory; Scott Vander Wiel, Los Alamos National Laboratory
- 9:20 a.m. **Reference Priors in Linear Models with General Covariance Structures**—❖ Xin Zhao, Merck & Co., Inc.; Martin T. Wells, Cornell University
- 9:35 a.m. **Bayesian Interval Estimation of Attributable Risk Using Probability Matching Prior**—❖ Bin Huang, Cincinnati Children’s Hospital Medical Center; Siva Sivaganisan, University of Cincinnati
- 9:50 a.m. **Bayesian Inference with Matching Priors**—❖ Ana-Maria Staicu, University of Toronto
- 10:05 a.m. **A General Approach for Constructing Normalizing Constants for Parameter Selection Priors**—❖ Christopher Carter, University of New South Wales

#### 242 CC-213

### Classification and Other Correlated Data Problems—Contributed

Section on Physical and Engineering Sciences

*Chair(s): EunJoo Lee, Advanced Micro Devices, Inc.*

- 8:35 a.m. **InfoEvolve(TM): a Data Mining Tool Combining Information Theory and Genetic Algorithms**—❖ Aaron J. Owens, DuPont; Karen M. Bloch, DuPont
- 8:50 a.m. **Analysis of Handwritten ZIP Code Digits Using OBSTree**—❖ Atina Dunlap Brooks, North Carolina State University; Jacqueline Hughes-Oliver, North Carolina State University
- 9:05 a.m. **A Nonparametric Approach Based on a Like Markov Property for Classification**—❖ Eun Sug Park, Texas Transportation Institute; Clifford Spiegelman, Texas A&M University
- 9:20 a.m. **Sensitivity Analysis with Correlated Inputs: Application to Kinetic Models**—❖ Sebastien Da Veiga, Institut Français du Pétrole; Francois Wahl, Institut Français du Pétrole; Fabrice Gamboa, Université Paul Sabatier
- 9:35 a.m. **A Structural Equation Method for Modeling Data Center Thermal Distribution**—❖ Zhiguang Qian, Georgia Institute of Technology; Yasuo Amemiya, IBM T. J. Watson Research Center

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

9:50 a.m. **Improved Tolerance Factors for Multivariate Normal**—❖ Sumona Mondal, University of Louisiana at Lafayette; Kalimuthu Krishnamoorthy, University of Louisiana at Lafayette

10:05 a.m. **K-Means Clustering: a Novel Probabilistic Formulation, with Some Applications**—  
❖ Samiran Ghosh, University of Connecticut; Dipak Dey, University of Connecticut

## 243 CC-605 **Missing or Censored Data—Contributed**

Section on Statistical Computing, Biometrics Section, ENAR

*Chair(s): George Terrell, Virginia Polytechnic Institute and State University*

8:35 a.m. **Counting the Homeless in Los Angeles County**—  
❖ Brian Kriegler, University of California, Los Angeles; Richard Berk, University of California, Los Angeles; Don Ylvisaker, University of California, Los Angeles

8:50 a.m. **An Investigation of Missing Data Methods for Decision Trees**—❖ Yufeng Ding, New York University; Jeffrey Simonoff, New York University

9:05 a.m. **Nonlinear Neural Network Imputation**—❖ Safaa Amer, National Opinion Research Center

9:20 a.m. **Using Objective Measures in Combination with Self-Report To Estimate Adherence**—❖ Richard Thompson, The Johns Hopkins Bloomberg School of Public Health; Michael Griswold, The Johns Hopkins Bloomberg School of Public Health; Arlene Butz, The Johns Hopkins University; Michele Donithan, The Johns Hopkins Bloomberg School of Public Health

9:35 a.m. **Test of Independence with Incomplete Contingency Table**—❖ Shin-Soo Kang, Iowa State University; Kenneth Koehler, Iowa State University; Michael D. Larsen, Iowa State University

9:50 a.m. **A Comparison of Parametric and Semiparametric Methods for Predicting Limited Dependent Variables**—❖ Maya Sternberg, Centers for Disease Control and Prevention; Alula Hadgu, Centers for Disease Control and Prevention; Suephy Chen, Emory University School of Medicine

10:05 a.m. **Estimation of Correlation Coefficient in Bivariate Normal Population Based on Concomitants of Order Statistics**—❖ Qinying He, The Ohio State University; H. N. Nagaraja, The Ohio State University

## 244 CC-212 **● ⊛ Risk Assessment: Disease, Health, and Harm—Contributed**

Section on Risk Analysis, Biometrics Section, ENAR

*Chair(s): Brian Caffo, The Johns Hopkins University*

8:35 a.m. **Characterization of Occupant Anthropometry and Clearance Measures in Passenger Cars**—  
❖ Duane Steffey, Exponent, Inc.; Robert Bove, Jr., Exponent, Inc.; Jacob Fisher, Exponent, Inc.; Lauren Ciccarelli, Exponent, Inc.; Robert Cargill, Exponent, Inc.; Tara Moore, Exponent, Inc.

8:50 a.m. **Smallpox and Pandemic Influenza: Modeling Potential Challenges for the U.S. Blood Supply**—❖ Steven Anderson, U.S. Food and Drug Administration

9:05 a.m. **A Comparison of Bayesian Networks and MCMC Techniques for Quantitative Risk Assessment**—  
❖ Paola Berchiolla, University of Torino; Silvia Snidero, University of Torino; Alexandru Stancu, University of Torino; Cecilia Scarinzi, University of Torino; Roberto Corradetti, University of Torino; Dario Gregori, University of Torino

9:20 a.m. **Risk Assessment of *Listeria Monocytogenes* on Frankfurters with Organic Acid Salts Surface Treatments**—❖ Zheng Lu, Iowa State University; Chunwang Gao, Iowa State University

9:35 a.m. **Generalized Residual Sojourns under Truncation and Censoring**—❖ John Hsieh, University of Nevada, Reno

9:50 a.m. **General Indexes for Spatial-Temporal Population Risk Assessment**—❖ Chu-Chih Chen, National Health Research Institutes

10:05 a.m. **Public Health Interventions and Transition Probabilities**—❖ Paula Diehr, University of Washington

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### ● Misspecifications, Data Quality, and Improvements—Contributed

Business and Economics Statistics Section

*Chair(s): Michael Smith, University of Sydney*

- 8:35 a.m. **Sons, Daughters, and Parents' Labor Supply: New Evidence from Matched CPS Data**—❖ James Vere, The University of Hong Kong
- 8:50 a.m. **Statistical Modeling: Science versus Business and Domain Expertise**—❖ Igor Mandel, Media Planning Group; David Hauser, Media Planning Group
- 9:05 a.m. **Estimating Signatures on a Petition with Cis**—❖ Mary M. Whiteside, The University of Texas at Arlington; Mark E. Eakin, The University of Texas
- 9:20 a.m. **Estimation of Industry Distribution of Statistical Discrepancy in National Income and Product Accounts**—❖ Baoline Chen, Bureau of Economic Analysis
- 9:35 a.m. **Quantifying the Quality of Macroeconomic Variables**—❖ Alex Teterukovsky, Statistics Sweden; Lars-Erik Öller, Statistics Sweden/Stockholm University
- 9:50 a.m. **Incorporating EITC Participation into the SAIGE Program's County Poverty Model**—❖ Wesley Basel, U.S. Census Bureau; Brian J. O'Hara, U.S. Census Bureau
- 10:05 a.m. **Misspecification of Cointegrating Ranks in Seasonal Models**—❖ Byeongchan Seong, Pohang University of Science and Technology; Sinsup Cho, Seoul National University; Sung K. Ahn, Washington State University; S. Y. Hwang, Sookmyung Women's University

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### ● Nonclinical, Nonbiological Drug Development—Contributed

Biopharmaceutical Section

*Chair(s): Yanping Wang, Eli Lilly and Company*

- 8:35 a.m. **Statistical Issues of Two-Stage Delivery Dose Uniformity Test of Orally Inhaled and Nasal Drug Products**—❖ Meiyu Shen, U.S. Food and Drug Administration; Yi Tsong, U.S. Food and Drug Administration
- 8:50 a.m. **Practical Considerations on Lot Acceptance Sampling Procedures**—❖ Boguang Zhen, U.S. Food and Drug Administration

CC-616

- 9:05 a.m. **Assessing the Reproducibility of an Analytical Method**—❖ Jason Liao, Merck Research Laboratories
- 9:20 a.m. **Imputing Nonignorable Missing Data on Clinical Laboratory Assessments**—❖ Kapildeb Sen, Bristol-Myers Squibb Company; Chen-Sheng Lin, Bristol-Myers Squibb Company; Kannan Natarajan, Novartis Pharmaceuticals Corporation; Jun Xing, Bristol-Myers Squibb Company
- 9:35 a.m. **Web-Based Interactive Bayesian Multiple-Objective Optimal Designs for Dose Response Studies with Constraints**—❖ Xiang-feng Wu, Stony Brook University; Wei Zhu, Stony Brook University; Holger Dette, Ruhr-Universität Bochum; Weng Kee Wong, University of California, Los Angeles
- 9:50 a.m. **Teaching Statistics to Clinical Research Staff in a Pharmaceutical Company**—❖ Sunil Dhar, New Jersey Institute of Technology; Farid Kianifard, Novartis Pharmaceuticals Corporation
- 10:05 a.m. **Floor Discussion**

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### ● Methods for Agreement and Paired Data—Contributed

Biometrics Section, ENAR

*Chair(s): Michael Haber, Emory University*

- 8:35 a.m. **Concordance Correlation Coefficient for Ordinal Data**—❖ Jingyun Yang, The Pennsylvania State University
- 8:50 a.m. **Paradoxes Revisited: Comparison of B-Statistic with Kappa**—❖ Shankar Viswanathan, The University of North Carolina at Chapel Hill; Shrikant I. Bangdiwala, The University of North Carolina at Chapel Hill
- 9:05 a.m. **Interobserver Variability and Intraobserver Variability**—❖ Jing Han, St. Francis Hospital
- 9:20 a.m. **Assessing Rater Exchangeability and Identifying an Atypical Rater Using a Log-Linear Modeling Approach**—❖ Kari Kastango, University of Pittsburgh; Roslyn A. Stone, Veteran's Affairs Pittsburgh Healthcare System
- 9:35 a.m. **The Test-Based Exact Confidence Intervals of the Difference between Two Proportions for Small-Sample Paired Binary Data**—❖ Hong-Long Wang, National Taipei University; Shiu-Ying Lin, National Taipei University; Xiao-Hua Andrew Zhou, University of Washington

CC-612

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

9:50 a.m. **Problems Related to Effect Size Measurement and Analysis**—◆Sibabrata Banerjee, New Jersey Institute of Technology

10:05 a.m. **Confidence Interval of Effect Size in Paired and Parallel-Group Study**—◆Jianrong Wu, St. Jude Children's Research Hospital; Guoyong Jiang, Cephalon, Inc.

## 248 CC-614 ● Inference for Categorical Data—Contributed

Biometrics Section

*Chair(s): Kenneth Koehler, Iowa State University*

8:35 a.m. **Exact Inference for Contingency Tables with Correlated Data**—◆Chris Corcoran, Utah State University

8:50 a.m. **Exact Unconditional Inference for Multinomial Likelihoods with an Example Using 2x3 Contingency Tables**—◆Gerald Crans, Eli Lilly and Company; Jonathan J. Shuster, University of Florida

9:05 a.m. **Measuring Association in Contingency Tables**—◆Shailendra Banerjee, Centers for Disease Control and Prevention

9:20 a.m. **Data Information with the Cochran-Mantel-Haenszel Test**—◆Philip E. Cheng, Academia Sinica

9:35 a.m. **Modified Maximum Likelihood Estimation of the Proportional Odds Model**—◆Evrin Oral, Middle East Technical University

9:50 a.m. **Using Variation Reduction Point To Remove Extraneous Effect in Modeling**—◆Chong Yau Fu, National Yang-Ming University; Shih-Hua Liu, National Yunlin University of Science & Technology

10:05 a.m. **Floor Discussion**

## 249 CC-610 ● Design of Power and Sample Size in Clinical Trials—Contributed

Biometrics Section, ENAR

*Chair(s): James F. Ward, Sand Point Statistics Group*

8:35 a.m. **Blinded Sample-Size Re-estimation in Randomized Block Trials with Continuous Endpoint**—◆Biao Xing, Genentech, Inc.; Jitendra Ganju, BiostatWorks

8:50 a.m. **Sample Size Re-estimation for Time-to-Event Studies**—◆Erinn Hade, The Ohio State University; Soledad Fernandez, The Ohio State University; David Jarjoura, The Ohio State University

9:05 a.m. **Sample Size and Power Calculation with Generalized Mixed Effects Model**—◆Qianyu Dang, University of Pittsburgh; Sati Mazumdar, University of Pittsburgh

9:20 a.m. **Design of Clinical Trials with Flexible Sample Size**—◆Lu Cui, sanofi-aventis; Fang Liu, Merck Research Laboratories; Ray Zhu, sanofi-aventis

9:35 a.m. **Approximate Confidence Intervals for Power in UNIREP Analyses**—◆Matthew Gribbin, The University of North Carolina at Chapel Hill; Keith E. Muller, The University of North Carolina at Chapel Hill; Jacqueline Johnson, The University of North Carolina at Chapel Hill

9:50 a.m. **Designing Standardly Tailored Multicomponent Intervention Trials in Medicine To Yield Unbiased Effect Estimates**—◆Heather G. Allore, Yale University

10:05 a.m. **Evaluation of Several Multiple Comparison Procedures for Noninferiority Trials with Two Doses of a Treatment and a Control with a Binary Success Rate Endpoint**—◆Hongling Zhou, U.S. Food and Drug Administration; Mohammad Huque, U.S. Food and Drug Administration

## 250 CC-606 ⊛ Censoring and Modeling with Censoring—Contributed

Section on Statistics in Epidemiology, Biometrics Section, ENAR

*Chair(s): Kiros Berhane, University of Southern California*

8:35 a.m. **Interval Estimation for a Measure of Stochastic Superiority**—◆Euijung Ryu, University of Florida

8:50 a.m. **Estimating Equation Approach for Regression Analysis of Interval-Censored Failure Time Data**—◆HeeJeong Lim, California State University, Fullerton; Xingqiu Zhao, McMaster University; Jianguo Sun, University of Missouri-Columbia

9:05 a.m. **Sensitivity of the Kaplan-Meier Estimate to Nonignorable Censoring**—◆Tao Liu, University of Pennsylvania School of Medicine; Daniel F. Heitjan, University of Pennsylvania

9:20 a.m. **Censoring Point in Logistic ELISA Standard Curves**—◆Ryan E. Wiegand, Medical University of South Carolina; Elizabeth H. Slate, Medical



- University of South Carolina; Elizabeth G. Hill, Medical University of South Carolina; Jyotika K. Fernandes, Medical University of South Carolina
- 9:35 a.m. **Biases Due to Left Censoring and Left Truncation in Estimating Menopausal Transition Stages from Menstrual Cycle Data**—Kevin Cain, University of Washington; ✦ Bin Nan, University of Michigan
- 9:50 a.m. **Predicting Exposure at a Specified Time Based on an Extended Randomized Regression Model for Interval-Censored Data**—✦ Robert Lyles, Emory University; Amita K. Manatunga, Emory University; Renee Moore, Emory University; Michele Marcus, Emory University
- 10:05 a.m. **Inference for Partially Observed Systems with an Application to Cholera**—Edward L. Ionides, University of Michigan; ✦ Carles Breto, University of Michigan; Aaron A. King, University of Michigan

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CC-604

● ⊕ **Design and Analysis Issues in Epidemiological Modeling—Contributed**

Section on Statistics in Epidemiology

*Chair(s): Jonathan Mahnken, The University of Kansas Medical Center*

- 8:35 a.m. **Data Analysis under Case-Cohort Designs with Clustered Binary Outcome Data**—✦ Shou-En Lu, University of Medicine & Dentistry of New Jersey; Yong Lin, University of Medicine & Dentistry of New Jersey; Joanna H. Shih, National Cancer Institute
- 8:50 a.m. **Early, Cost-Effective Identification of High-Risk/Priority Control Areas in Foot-and-Mouth Disease Epidemics**—✦ Steven Schwager, Cornell University; Ariel Rivas, Cornell University; Stephen Smith, Cornell University; Antoni Magri, Cornell University
- 9:05 a.m. **Capture-Recapture Revisited**—✦ Lawrence Lessner, SUNY University at Albany

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# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

9:20 a.m. **Heterogeneity on Estimation Size of Hard-to-Reach Population Using Capture-Recapture Data**—◆ Shenghai Zhang, Public Health Agency of Canada

9:35 a.m. **Analysis of a Disease and Probability of Exposure Association Using a Replicated Error-Prone Exposure Assessment**—◆ Chengxing Lu, Emory University; Robert Lyles, Emory University

9:50 a.m. **A Two-Phase Analysis of Air Pollution and Adverse Birth Outcomes**—◆ Katherine Hoggatt, University of Michigan; Sander Greenland, University of California, Los Angeles; Beate Ritz, University of California, Los Angeles

10:05 a.m. **Floor Discussion**

## 252 CC-201 ● **Survey-Based Variance Estimation I—Contributed**

Section on Survey Research Methods

*Chair(s): Keith Rust, Westat/University of Maryland*

8:35 a.m. **Confidence Intervals for Quantile Estimation from Complex Survey Data**—◆ Babubhai V. Shah, SAFAL Institute Inc.; Akhil Vaish, RTI International

8:50 a.m. **Estimating Prevalence When a Subset of the Sample Requires Further Evaluation**—◆ David C. Hoaglin, Abt Associates Inc.; K. P. Srinath, Abt Associates Inc.

9:05 a.m. **Variance Estimation for Ordered Categories**—◆ Steven Pedlow, National Opinion Research Center; Yongyi Wang, National Opinion Research Center; Kirk Wolter, National Opinion Research Center

9:20 a.m. **Variance Estimation in a Survey for Iowa's State Board of Education**—Michael D. Larsen, Iowa State University; ◆ Lu Lu, Iowa State University

9:35 a.m. **Variance Estimation in Complex Survey Sampling for Generalized Linear Models**—◆ Sundar Natarajan, New York University Medical Center; Stuart Lipsitz, Brigham and Women's Hospital; Garrett Fitzmaurice, Harvard University; Charity G. Moore, University of South Carolina

9:50 a.m. **Variance Estimation of the Survey-Weighted Kappa Measure of Agreement**—◆ Moshe Feder, RTI International

10:05 a.m. **Improved Confidence Intervals for the Bernoulli Parameter**—Wheyming Tina Song, National Tsing Hua University; ◆ Chia-Jung Chang, National Tsing Hua University

## 253 CC-203 ● **Survey-Based Estimation II—Contributed**

Section on Survey Research Methods

*Chair(s): Elizabeth R. Zell, Centers for Disease Control and Prevention*

8:35 a.m. **Methods for Birth Cohort Analysis for the National Immunization Survey**—◆ Phil Smith, Centers for Disease Control and Prevention; Kirk Wolter, National Opinion Research Center; James Singleton, Centers for Disease Control and Prevention

8:50 a.m. **Estimation of Regression Coefficients with Unequal Probability Samples**—◆ Yu Wu, Iowa State University; Wayne Fuller, Iowa State University

9:05 a.m. **Indirect Sampling and the Problem of Identification of Links**—◆ Pierre Lavallée, Statistics Canada; Xiaojian Xu, University of Alberta

9:20 a.m. **A Comparison between Ratio Estimation and Post-Stratification**—◆ Chang-Tai Chao, National Cheng Kung University; Tzu-Ching Chiang, National Cheng Kung University

9:35 a.m. **Using Income as an Auxiliary Variable To Improve the Design of Household Expenditure Surveys**—◆ Charles Mitchell, Statistics Canada; Christian Nadeau, Statistics Canada

9:50 a.m. **Model Averaging in Survey Estimation**—◆ Xiaoxi Li, Iowa State University; Jean D. Opsomer, Iowa State University

10:05 a.m. **Integrating Person and Housing Unit Weighting for the Current Population Survey**—◆ Andrew Zbikowski, U.S. Census Bureau; Phawn Letourneau, U.S. Census Bureau

## 254 CC-620 ● **Nonparametric Regression Methods II—Contributed**

Section on Nonparametric Statistics

*Chair(s): Yolanda Munoz Maldonado, The University of Texas School of Public Health*

8:35 a.m. **Spline Single-Index Prediction Model**—◆ Li Wang, Michigan State University; Lijian Yang, Michigan State University

- 8:50 a.m. **Testing Lack-of-Fit of Heteroscedastic Nonlinear Regression Models with Local Linear Smoothers**—❖Chin-Shang Li, St. Jude Children's Research Hospital
- 9:05 a.m. **Local Analytic Curve Estimation**—❖Richard Charnigo, University of Kentucky; Cidambi Srinivasan, University of Kentucky
- 9:20 a.m. **Nonparametric Regression with Coarsened Predictors**—❖Aurore Delaigle, University of California, San Diego
- 9:35 a.m. **Asymptotic Approximation to a Nonparametric Regression Experiment with Unknown Variance**—❖Andrew Carter, University of California, Santa Barbara
- 9:50 a.m. **Floor Discussion**

- 255** **● Biomarkers and Joint Models—Contributed** **CC-611**  
 Biometrics Section, WNAR, ENAR  
*Chair(s): Elizabeth Brown, University of Washington*
- 8:35 a.m. **Mixtures-of-Experts Joint Model for Longitudinal Biomarkers and Recurrent Events**—❖Jun Han, Georgia State University; Elizabeth H. Slate, Medical University of South Carolina; Edsel Peña, University of South Carolina
- 8:50 a.m. **Joint Analysis of Longitudinal Measurements and Competing Risks Failure Time Data**—❖Ning Li, University of California, Los Angeles; Robert Elashoff, University of California, Los Angeles; Gang Li, University of California, Los Angeles
- 9:05 a.m. **Joint Modeling of Survival and Longitudinal Data**—Jimin Ding, University of California, Davis
- 9:20 a.m. **Type I and II Error of Joint Multimarkers Cox Models To Predict Chronic Disease Outcomes**—❖Philimon Gona, Boston University

Tuesday

## STATISTICIANS WANTED — ALL LEVELS

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# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 9:35 a.m. **Robust Analysis of Biomarker Data with Informative Missingness Using a Two-Stage Hypothesis Test in an HIV Treatment Interruption Trial: AIEDRP AIN503 /ACTG A5217**—◆ Karen Messer, University of California, San Diego; Florin Vaida, University of California, San Diego; Christine Hogan, Columbia University
- 9:50 a.m. **Evaluating Causal Effect Predictiveness of Candidate Surrogate Endpoints**—◆ Peter Gilbert, Fred Hutchinson Cancer Research Center/University of Washington; Michael G. Hudgens, The University of North Carolina at Chapel Hill
- 10:05 a.m. **A Novel Approach for Proteomic Biomarker Identification Using Mass Spectrometry**—◆ Chen Ji, Stony Brook University; Yeming Ma, Brookhaven National Laboratory; Xuena Wang, University of Hawaii; Esther Arkin, Stony Brook University; Joseph Mitchell, Stony Brook University; Wei Zhu, Stony Brook University

## Special Presentation 10:30 a.m.–12:20 p.m.

### 256 CC-400 ASA Stat Bowl Session 1—Other

The ASA, ENAR, IMS, SSC, WNAR

*Organizer(s): Mark Payton, Oklahoma State University*

*Chair(s): Mark Payton, Oklahoma State University*

- Game 1**—◆ Upasana Santra, University of Florida; ◆ Samiran Ghosh, University of Connecticut; ◆ Susanta Tewari, University of Georgia; ◆ Xinwei Deng, Georgia Institute of Technology
- Game 2**—◆ Vivekananda Roy, University of Florida; ◆ Ying Hung, Georgia Institute of Technology; ◆ Dipankar Bandyopadhyay, University of Georgia; ◆ Jeffrey Lidicker, Temple University
- Game 3**—◆ Fang Yu, University of Connecticut; ◆ Alicia Graziosi, Temple University; ◆ Arunava Chakravartty, University of California, Riverside; ◆ Rajarshi Dey, Kansas State University
- Game 4**—◆ Ke Zhang, Kansas State University; ◆ Tanujit Dey, Case Western Reserve University; ◆ Christopher Rigdon, Southern Illinois University; ◆ Satrajit Roychoudhury, New Jersey Institute of Technology

## Invited Sessions 10:30 a.m.–12:20 p.m.

### 257 CC-4C-4

#### ● ⊛ Hurricane Katrina and Economic Data—Invited

Business and Economics Statistics Section

*Organizer(s): John L. Eltinge, Bureau of Labor Statistics*

*Chair(s): John L. Eltinge, Bureau of Labor Statistics*

- 10:35 a.m. **Current Population Survey Response to the Hurricane Katrina Disaster**—◆ Edwin L. Robison, Bureau of Labor Statistics; Anne Polivka, Bureau of Labor Statistics; Diane Herz, Bureau of Labor Statistics; Lawrence Cahoon, U.S. Census Bureau; Richard Ning, U.S. Census Bureau; Maria Reed, U.S. Census Bureau; Greg Weyland, U.S. Census Bureau
- 11:00 a.m. **Accounting for Katrina Effects in State Labor Force Estimates**—◆ Richard Tiller, Bureau of Labor Statistics; Sharon Brown, Bureau of Labor Statistics
- 11:25 a.m. **Effects of Hurricane Katrina on the BLS Payroll Survey**—◆ Patricia Getz, Bureau of Labor Statistics; Richard Rosen, Bureau of Labor Statistics; Larry Huff, Bureau of Labor Statistics; Angela Clinton, Bureau of Labor Statistics
- 11:50 a.m. **Analysis and Procedures in the Census Bureau's Trade Surveys after Hurricane Katrina**—◆ Jock R. Black, U.S. Census Bureau; Ruth E. Detlefsen, U.S. Census Bureau
- 12:15 p.m. **Floor Discussion**
- 
- ### 258 CC-607
- #### ● ⊛ Estimation of Treatment Effect for Clinical Trials with Group Sequential Designs—Invited
- Biopharmaceutical Section, Biometrics Section, ENAR
- Organizer(s): Michael W. Lee, Johnson & Johnson Pharmaceutical R&D; Hui Quan, sanofi-aventis*
- Chair(s): Daowen Zhang, sanofi-aventis*
- 10:35 a.m. **Estimation Following Group Sequential Trials: a Bayesian View**—◆ Gary L. Rosner, M. D. Anderson Cancer Center
- 11:10 a.m. **Conditional Estimation of Treatment Effects for Clinical Trials with Group Sequential Designs**—◆ Michael W. Lee, Johnson & Johnson Pharmaceutical R&D; Hui Quan, sanofi-aventis
- 11:45 a.m. **Disc: Weichung J. Shih, University of Medicine & Dentistry of New Jersey**
- 12:05 p.m. **Floor Discussion**



## 259 CC-2B

### ● ⊕ **Advances in Phylogenetic Inference—Invited**

IMS, WNAR

*Organizer(s): Bret Larget, University of Wisconsin-Madison*

*Chair(s): Bret Larget, University of Wisconsin-Madison*

- 10:35 a.m. **Analysis of Comparative Data with Hierarchical Autocorrelation**—❖ Cecile Ane, University of Wisconsin-Madison
- 11:00 a.m. **Using Bootstrap Support for Splits To Construct Confidence Regions for Trees**—❖ Edward Susko, Dalhousie University
- 11:25 a.m. **The Threshold Model: an Underutilized Resource in Phylogenetic Inference**—❖ Joseph Felsenstein, University of Washington
- 11:50 a.m. **Algebraic Statistics and Phylogenetic Inference: Establishing Identifiability of Mutation Models**—❖ Elizabeth S. Allman, University of Alaska, Fairbanks; John A. Rhodes, University of Alaska, Fairbanks
- 12:15 p.m. **Floor Discussion**

## 260 CC-210

### ● **Personal Networks: Applications Using Data on Social Relationships—Invited**

Section on Statistical Computing, Section on Statisticians in Defense and National Security, Section on Statistical Graphics

*Organizer(s): Chris Volinsky, AT&T Labs-Research*

*Chair(s): Deepak K. Agarwal, AT&T Labs-Research*

- 10:35 a.m. **Design and Analysis of ‘How Many Xs Do You Know?’ Surveys**—❖ Tian Zheng, Columbia University; Andrew Gelman, Columbia University
- 11:00 a.m. **Data Mining in Networks**—❖ David Jensen, University of Massachusetts
- 11:25 a.m. **The Dynamics of Viral Marketing**—Jure Leskovec, Carnegie Mellon University; ❖ Lada A. Adamic, University of Michigan; Bernardo Huberman, Hewlett Packard Labs
- 11:50 a.m. **Modeling Massive Dynamic Graphs**—❖ Chris Volinsky, AT&T Labs-Research
- 12:15 p.m. **Floor Discussion**

## 261 CC-206

### ● **Modeling Behavioral Data from Clinical Research on Smoking—Invited**

Section on Health Policy Statistics, Biometrics Section

*Organizer(s): E. Paul Wileyto, University of Pennsylvania*

*Chair(s): Joseph L. Schafer, The Pennsylvania State University*

- 10:35 a.m. **Modeling Heaping in Self-Reported Cigarette Counts**—❖ Daniel F. Heitjan, University of Pennsylvania
- 11:00 a.m. **A Cure Mixture Model for Multivariate Time-to-Event Data**—❖ E. Paul Wileyto, University of Pennsylvania
- 11:25 a.m. **Modeling Variation in the Effects of Smoking Using Intensive Longitudinal Data**—❖ Donald Hedeker, University of Illinois at Chicago
- 11:50 a.m. **Exploring the Relationship between Adverse Events, Compliance, Dropout, and Abstinence in Pharmacotherapy Smoking Cessation Trials**—❖ Joel A. Dubin, University of Waterloo
- 12:15 p.m. **Floor Discussion**

## 262 CC-603

### ● ⊕ **Complex Data Structures—Invited**

SSC

*Organizer(s): James Stafford, University of Toronto*

*Chair(s): James Stafford, University of Toronto*

- 10:35 a.m. **Issues Relating to Methods for Analysis of Survey Data**—❖ David Binder, Statistical Society of Canada; Georgia Roberts, Statistics Canada
- 11:05 a.m. **Spatial-Temporal Modeling for Marine Ecological Systems**—❖ Joanna M. Flemming, Dalhousie University
- 11:35 a.m. **A Stochastic Model for Forest Fire Growth**—❖ Willard J. Braun, University of Western Ontario
- 12:05 p.m. **Floor Discussion**

## 263 CC-3A

### ● ⊕ **Effective Leadership for Statistical Thinking and Impact—Invited**

Council of Chapters, Section on Statistical Education, Section on Statistical Consulting

*Organizer(s): James Kenyon, Bristol-Myers Squibb Company*

*Chair(s): James Kenyon, Bristol-Myers Squibb Company*

- 10:35 a.m. **Building Statistical Thinking into the School Curriculum: Obstacles and Opportunities**—❖ Richard L. Scheaffer, University of Florida

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

11:05 a.m. **Seven Habits of Highly Effective Statisticians in Pharmaceutical Industry**—❖ Frank Shen, Bristol-Myers Squibb Company

11:35 a.m. **Effective Statistical Leadership in Government and Industry**—❖ Fritz J. Scheuren, National Opinion Research Center

12:05 p.m. **Floor Discussion**

## 264 CC-604

### ● **Bombs to Bullets, People to Planets: Exploring Imaging Applications with a Statistician's Eye—Invited**

Section on Physical and Engineering Sciences, Section on Statisticians in Defense and National Security, Section on Statistical Graphics

*Organizer(s): Kary Myers, Los Alamos National Laboratory*

*Chair(s): Kary Myers, Los Alamos National Laboratory*

10:35 a.m. **Do Guns Transfer Their DNA to Bullets?**—  
❖ William F. Eddy, Carnegie Mellon University

11:00 a.m. **Using Image Grand Tour To Explore Multiangle, Multispectral Satellite Imagery**—❖ Amy Braverman, Jet Propulsion Laboratory; Edward Wegman, George Mason University; Wendy Martinez, Office of Naval Research; Juergen Symanzik, Utah State University; Brad Wallet, Automated Decisions

11:25 a.m. **Tomographic Imaging Using Background Cosmic Radiation**—❖ Nicolas Hengartner, Los Alamos National Laboratory

11:50 a.m. **Using Statistics To Search and Annotate Pictures**—  
❖ Nuno Vasconcelos, University of California, San Diego; Pedro J. Moreno, Google, Inc.

12:15 p.m. **Floor Discussion**

## 265 CC-616

### ● **Bayesian Spatio-Temporal Models—Invited**

WNAR, Biometrics Section, Section on Bayesian Statistical Science, Section on Statistics and the Environment

*Organizer(s): Bruno Sanso, University of California, Santa Cruz*

*Chair(s): Catherine A. Calder, The Ohio State University*

10:35 a.m. **Spatial Dynamic Factor Models**—❖ Hedibert F. Lopes, The University of Chicago; Esther S. Salazar, Instituto de Matemática-UFRJ; Dani Gamerman, Instituto de Matemática-UFRJ

11:00 a.m. **Characterizing Invasions with Hierarchical, Rule-Based Systems**—❖ Mevin B. Hooten, University of Missouri-Columbia; Christopher K. Wikle, University of Missouri-Columbia

11:25 a.m. **Spatially Varying AR Processes Based on Discrete Convolutions**—❖ Bruno Sanso, University of California, Santa Cruz; Alexandra Schmidt, Universidade Federal de Rio de Janeiro; Aline Nobre, Universidade Federal de Rio de Janeiro

11:50 a.m. **Using Computer Models To Inform about Space-Time Fields**—❖ Dave Higdon, Los Alamos National Laboratory

12:15 a.m. **Floor Discussion**

## 266 CC-211

### ● **Challenges Facing the Next Generation of Applied Statisticians—Invited**

Social Statistics Section, Committee on Applied Statisticians, Committee on Women in Statistics, Committee on Law and Justice Statistics, Section on Statistical Education, Section on Statistical Consulting

*Organizer(s): Kelly H. Zou, Harvard Medical School*

*Chair(s): Alan M. Zaslavsky, Harvard Medical School*

10:35 a.m. **Motivations and Challenges Facing Women Statisticians**—❖ Kelly H. Zou, Harvard Medical School

11:00 a.m. **Statistical Tools Employed in Legal Settings**—  
❖ Mary W. Gray, American University

11:25 a.m. **Professional Accreditation for Statisticians**—  
❖ Mary Batcher, Ernst & Young LLP

11:50 a.m. **Disc: Kimberly F. Sellers, Georgetown University**

12:10 p.m. **Floor Discussion**

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## Invited Panels 10:30 a.m.–12:20 p.m.

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## 267 CC-2A

### ● **Practical Issues in Conducting Statistics Education Research—Invited**

Section on Statistical Education

*Organizer(s): Joan Garfield, University of Minnesota*

*Chair(s): Joan Garfield, University of Minnesota*

**Panelists:** ❖ Robert DelMas, University of Minnesota  
❖ Beth Chance, California Polytechnic State University, San Luis Obispo  
❖ Sterling Hilton, Brigham Young University  
❖ Lawrence M. Lesser, The University of Texas at El Paso  
❖ Andrew Zieffler, University of Minnesota

12:15 p.m. **Floor Discussion**

## Topic-Contributed Sessions

### 10:30 a.m.–12:20 p.m.

#### 268 CC-601

### ● Nonparametric Statistical Process Control Methods—Topic-Contributed

Section on Quality and Productivity, Section on Nonparametric Statistics

*Organizer(s): Subha Chakraborti, The University of Alabama*

*Chair(s): Subha Chakraborti, The University of Alabama*

- 10:35 a.m. **Minimum Control Charts**—❖ Willem Albers, University Twente
- 10:55 a.m. **Distribution-Free Quality Control Charts Based on Signed-Rank-Like Statistics**—❖ Saad Bakir, Alabama State University
- 11:15 a.m. **Dispersion Control Charts Based on Ranks**—❖ Raid Amin, University of West Florida
- 11:35 a.m. **Distribution-Free Multivariate Process Control Based on Log-Linear Modeling**—❖ Peihua Qiu, University of Minnesota
- 11:55 a.m. **A Bayesian Approach in Modeling Shifts of the Mean/Variance of Count Data**—❖ Panagiotis Tsiamirtzis, Athens University of Economics and Business; Douglas M. Hawkins, University of Minnesota
- 12:15 p.m. **Floor Discussion**

#### 269 CC-609

### ● ⊕ Bayesian Computational Methods for Biomedical Applications—Topic-Contributed

Section on Bayesian Statistical Science, Biometrics Section, ENAR

*Organizer(s): Sujit Ghosh, North Carolina State University*

*Chair(s): Marina Vannucci, Texas A&M University*

- 10:35 a.m. **Bayesian Hidden Markov Modeling of Array CGH Data**—❖ Subharup Guha, Harvard School of Public Health
- 10:55 a.m. **A Hierarchical Bayesian Analysis of Longitudinal Frequency Data Using Piecewise Linear Regression**—❖ John Kern, Duquesne University; Nicholas Bernini, Duquesne University; Sujit Ghosh, North Carolina State University
- 11:15 a.m. **Bayesian Spatial Modeling of Data from Bird Surveys**—❖ Raymond Webster, North Carolina State University; Kenneth Pollock, North Carolina State University; Theodore Simons, North Carolina State University

- 11:35 a.m. **Bayesian Inference for NLME Models Involving ODEs**—❖ Sujit Ghosh, North Carolina State University; Lovely Goyal, North Carolina State University
- 11:55 a.m. **Bayesian Modeling of Longitudinal Data with Nonignorable Missing Data**—❖ Liansheng Zhu, North Carolina State University; Sujit Ghosh, North Carolina State University; Subhashis Ghosal, North Carolina State University
- 12:15 p.m. **Floor Discussion**

#### 270 CC-617

### ● Recent Advances in Analyzing Agreement Data—Topic-Contributed

Biometrics Section, ENAR

*Organizer(s): Ananda Sen, University of Michigan*

*Chair(s): Ananda Sen, University of Michigan*

- 10:35 a.m. **Bivariate Modeling of Interobserver Agreement Coefficients**—❖ Mohamed Shoukri, King Faisal Specialist Hospital; Allan Donner, University of Western Ontario
- 10:55 a.m. **A Weighted Kappa for Agreement between Two Ratings with Different Ordinal Scales**—❖ Stuart Lipsitz, Brigham and Women's Hospital
- 11:15 a.m. **Coefficient of Agreement for Binary Data with Replications**—❖ Huiman Barnhart, Duke University; Michael Haber, Emory University; Andrzej Kosinski, Duke University
- 11:35 a.m. **A Permutation Test for Dependent Concordance Correlation Coefficients**—❖ John M. Williamson, Centers for Disease Control and Prevention; Hung-Mo Lin, The Pennsylvania State University; Sara Crawford, The Rollins School of Public Health of Emory University
- 11:55 a.m. **Disc: Allan Donner, University of Western Ontario**
- 12:15 p.m. **Floor Discussion**

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 271 CC-602 ● ⊛ **Extremes: Methods for Environmental and Meteorological Studies—Topic-Contributed**

WNAR

*Organizer(s): Daniel Cooley, Colorado State University*

*Chair(s): Daniel Cooley, Colorado State University*

- 10:35 a.m. **How Good Are the Air Quality Standards?—**  
❖ Sofia Aberg, Lund University; Peter Guttorp, University of Washington
- 10:55 a.m. **A Statistical Approach to North American Rainfall—**❖ Jie Zhou, The University of North Carolina at Chapel Hill
- 11:15 a.m. **Bayesian Hierarchical Modeling for Extreme Values in Spatio-Temporal Data—**❖ Huiyan Sang, Duke University; Alan E. Gelfand, Duke University
- 11:35 a.m. **Predicting Extreme Hurricane Winds in the United States—**❖ Thomas Jagger, Florida State University
- 11:55 a.m. **Statistical Analysis of a POT Model with Time-Varying Extreme Parameters—**❖ Marta Nogaj, Commission of Atomic Energy
- 12:15 p.m. **Floor Discussion**

## 272 CC-611 ● ⊛ **Outcome-Dependent Sampling—Topic-Contributed**

Section on Statistics in Epidemiology

*Organizer(s): Jonathan Wakefield, University of Washington*

*Chair(s): James Lynch, University of Nebraska Medical Center*

- 10:35 a.m. **The Combination of Ecological and Individual-Level Data—**❖ Jonathan Wakefield, University of Washington; Sebastien Haneuse, Group Health Cooperative
- 10:55 a.m. **Two-Phase Methods for Ecological Studies—**  
❖ Sebastien Haneuse, Group Health Cooperative; Jonathan Wakefield, University of Washington
- 11:15 a.m. **The Optimal Ratio of Cases to Controls for Estimating the Classification Accuracy of a Biomarker—**❖ Holly E. Janes, The Johns Hopkins University; Margaret S. Pepe, Fred Hutchinson Cancer Research Center/University of Washington
- 11:35 a.m. **An Efficient Outcome-Dependent Sampling Design for Longitudinal Binary Response Data—**❖ Jon Schildcrout, Vanderbilt University Medical Center; Patrick Heagerty, University of Washington

- 11:55 a.m. **Disc:** Patrick Heagerty, University of Washington  
12:15 p.m. **Floor Discussion**

## 273 CC-201 ● **The Transition from the Long Form to the American Community Survey: Findings from The National Academies Panel—Topic-Contributed**

Section on Survey Research Methods

*Organizer(s): Michael L. Cohen, Committee on National Statistics*

*Chair(s): Michael L. Cohen, Committee on National Statistics*

- 10:35 a.m. **Functionality and Usability of Information from the American Community Survey—**❖ Connie Citro, Committee on National Statistics; Graham Kalton, Westat; Michael L. Cohen, Committee on National Statistics
- 10:55 a.m. **The ACS and the Data User Community—**  
❖ Joseph Salvo, New York City Department of City Planning; Nancy Dunton, The University of Kansas Medical Center; Charles Purvis, Oakland Metro Transportation Commission
- 11:15 a.m. **Methodological Issues in the ACS—**❖ Graham Kalton, Westat; Tim Holt, Retired; Sharon Lohr, Arizona State University; Hal Stern, University of California, Irvine
- 11:35 a.m. **Disc:** Jay Waite, U.S. Census Bureau
- 11:55 a.m. **Disc:** Allen Schirm, Mathematica Policy Research, Inc.
- 12:15 p.m. **Floor Discussion**

## 274 CC-212 **Student Paper Award Winners—Topic-Contributed**

Section on Statistical Computing, Section on Statistical Graphics

*Organizer(s): Jose Pinheiro, Novartis Pharmaceuticals Corporation*

*Chair(s): Jose Pinheiro, Novartis Pharmaceuticals Corporation*

- 10:35 a.m. **Efficient Computation and Variable Selection for the L1-Norm Quantile Regression—**❖ Youjuan Li, University of Michigan; Ji Zhu, University of Michigan
- 10:55 a.m. **An Algorithm for Regression of Scalars on Images—**❖ Philip Reiss, Columbia University; R. Todd Ogden, Columbia University
- 11:15 a.m. **Clustering with Confidence—**❖ Rebecca Nugent, University of Washington; Werner Stuetzle, University of Washington



- 11:35 a.m. Kernel Regularization and Dimension Reduction**—Fan Lu, University of Wisconsin-Madison; Grace Wahba, University of Wisconsin-Madison; Yi Lin, University of Wisconsin-Madison; Sunduz Keles, University of Wisconsin-Madison; Stephen J. Wright, University of Wisconsin-Madison
- 11:55 a.m. Disc:** Charles Roosen, Insightful Corporation
- 12:15 p.m. Floor Discussion**

**275 CC-205**

**● Measuring and Improving Data Quality—Topic-Contributed**

Section on Government Statistics

*Organizer(s): Nancy M. Gordon, U.S. Census Bureau*

*Chair(s): Nancy M. Gordon, U.S. Census Bureau*

- 10:35 a.m. How Do We Know If We Aren't Looking? An Investigation of Data Quality in the SCF**—❖ Arthur Kennickell, Federal Reserve Board
- 10:55 a.m. An Economic Analysis of Survey Response Quality**—❖ Julia Lane, National Opinion

Research Center; Leslie Athey, National Opinion Research Center; Suzanne Bard, National Opinion Research Center; Judith Petty, National Opinion Research Center

- 11:15 a.m. Effects of Late-Stage Completions on Data Quality**—❖ Karen Grigorian, National Opinion Research Center; Thomas B. Hoffer, National Opinion Research Center; Ronald S. Fecso, National Science Foundation

**11:35 a.m. Disc:** Cheryl R. Landman, U.S. Census Bureau

**11:55 a.m. Floor Discussion**

**276 CC-608**


**High-Dimensional Modeling and Model Selection—Topic-Contributed**

Section on Bayesian Statistical Science

*Organizer(s): Christopher Hans, The Ohio State University*

*Chair(s): Herbert Lee, University of California, Santa Cruz*

- 10:35 a.m. Priors for High-Dimensional Covariance Models**—❖ Charles Curry, University of California, Santa Cruz



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Image: Protein crystals of consensus interferon

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 10:55 a.m. **High-Dimensional Modeling and Model Selection**—◆ Carlos Carvalho, Duke University
- 11:15 a.m. **Sparsity in Linear Regression for High-Dimensional Problems**—◆ Christopher Hans, The Ohio State University
- 11:35 a.m. **A Bayesian Nonparametric Approach for Expression Proteomic Analyses**—◆ Leanna House, Duke University; Merlise Clyde, Duke University; Robert Wolpert, Duke University
- 11:55 a.m. **Making Sense of Estimating Integrated Likelihoods: Bridges, Paths, and Other Routes**—◆ Russell Steele, McGill University
- 12:15 p.m. **Floor Discussion**

## 277 CC-615 ⊛ **Topics in Function Estimation Using Isotonization and Smoothing Techniques—Topic-Contributed**

IMS, Section on Nonparametric Statistics

*Organizer(s): Moulinath Banerjee, University of Michigan*

*Chair(s): Jon A. Wellner, University of Washington*

- 10:35 a.m. **Nonparametric Density Estimation from Covariate Information**—◆ Ryan Elmore, Colorado State University; Peter G. Hall, Australian National University; Vladimir Troynikov, Department of Primary Industries
- 10:55 a.m. **Limiting Distribution of the NPMLE for Current Status Data with Competing Risks**—◆ Marloes Maathuis, University of Washington
- 11:15 a.m. **Penalized Likelihood Ratio Method for the Spiking Problem in Nonincreasing Density Estimation**—◆ Jayanta Pal, University of Michigan
- 11:35 a.m. **Fractile Graphical Analysis with Multiple Covariates**—◆ Bodhisattva Sen, University of Michigan
- 11:55 a.m. **Disc: Moulinath Banerjee, University of Michigan**
- 12:15 p.m. **Floor Discussion**

## Regular Contributed Sessions 10:30 a.m.–12:20 p.m.

### 278 CC-203 ● **Sample Survey Quality III—Contributed**

Section on Survey Research Methods

*Chair(s): David Dolson, Statistics Canada*

- 10:35 a.m. **An Evaluation of Methods To Compensate for Noncoverage of Phoneless Households Using Information on Interruptions in Telephone Service and Presence of Wireless Phones**—◆ Meena Khare, National Center for Health Statistics; Sadeq Chowdhury, National Opinion Research Center; Kirk Wolter, National Opinion Research Center; Karen Wooten, National Immunization Program; Stephen Blumberg, National Center for Health Statistics
- 10:50 a.m. **Using Record Linkage Techniques To Improve Online Genealogical Research with Census Records**—◆ John Lawson, Brigham Young University
- 11:05 a.m. **Integrating Culture Industries into Canada's National Economic Surveys Program**—◆ Mary March, Statistics Canada; Paddison Wong, Statistics Canada
- 11:20 a.m. **The Internet Response Method: Impact on the Canadian Census of Population Data**—◆ Laurent Roy, Statistics Canada
- 11:35 a.m. **Good Item or Bad: Can Latent Class Analysis Tell? Examining the Effectiveness of the Latent Class Analysis Approach to Item Evaluation**—◆ Frauke Kreuter, University of Maryland; Roger Tourangeau, University of Maryland; Ting Yan, Institute for Social Research
- 11:50 a.m. **Population Coverage in the National Survey on Drug Use and Health**—Susan R. Hunter, RTI International; ◆ Katherine B. Morton, RTI International; James Chromy, RTI International; Peilan C. Martin, RTI International
- 12:05 p.m. **Floor Discussion**

### 279 CC-204 ● **Survey-Based Estimation III—Contributed**

Section on Survey Research Methods

*Chair(s): Bryan Sayer, Social & Scientific Systems, Inc.*

- 10:35 a.m. **New Cell Collapsing Strategies Based on Collapsing Adjustment Factor**—◆ Jay J. Kim, National Center for Health Statistics; Richard

Valliant, University of Michigan; Wenxing Zha, National Institutes of Health

**10:50 a.m. Stratification for Radio Listening Estimation—**  
❖ Richard Griffiths, Arbitron Inc.

**11:05 a.m. Calculating Effect Sizes Using Survey Data—**  
❖ Jun Liu, Research Triangle Institute

**11:20 a.m. Estimation for Two-Phase Panel Surveys—**  
❖ Jason Legg, Iowa State University; Wayne Fuller, Iowa State University; Sarah M. Nusser, Iowa State University

**11:35 a.m. Evaluation of Collapsing Criteria in Sample Weighting—**❖ Linda Tompkins, National Center for Health Statistics; Jay J. Kim, National Center for Health Statistics; Wenxing Zha, National Institutes of Health

**11:50 a.m. A Pseudo-Empirical Likelihood Approach for Stratified Samples with Nonresponse—**❖ Fang Fang, University of Wisconsin-Madison; Quan Hong, Eli Lilly and Company; Jun Shao, University of Wisconsin-Madison

**12:05 p.m. Estimation Methods To Produce Preliminary Statistics in an Employment Survey—**❖ Anders Holmberg, Statistics Sweden; Natalie Jansson, Statistics Sweden; Martin Odencrants, Statistics Sweden

## 280 **Hot Topics in Sports—Contributed** CC-3B

Section on Statistics in Sports, Section on Statistical Education

*Chair(s): Michael Anderson, Battelle*

**10:35 a.m. A Compound Logistic Regression Model for Third Down Efficiency in the NFL—**❖ Christopher Rigdon, Southern Illinois University; Steve Rigdon, Southern Illinois University

**10:50 a.m. Using Spatial Analysis as a Coaching Tool in Ice Hockey—**❖ Robin Lock, St. Lawrence University; Travis Gingras, St. Lawrence University; Chris Wells, St. Lawrence University; Michael Schuckers, St. Lawrence University

**11:05 a.m. An Interesting Classroom Exercise—**❖ Laurence Robinson, Ohio Northern University

**11:20 a.m. Identifying and Evaluating Contrarian Strategies for NCAA Tournament Pools—**❖ Jarad Niemi, Duke University; Bradley P. Carlin, University of Minnesota; Jonathan Alexander, Duke University

**11:35 a.m. Improved College Football Scheduling Using a Pseudo-Swiss System—**❖ David Annis, Naval

Postgraduate School; Samuel Wu, University of Florida

**11:50 a.m. Regression Modeling Using Multiple Sources To Detect Group-Level Differences in Pitching Performance—**❖ Liam O'Brien, Colby College; Matthew Aschaffenburg, Colby College

**12:05 p.m. A Cross-Country Comparison of Efficiency of Soccer-Betting Markets—**❖ Ruud H. Koning, University of Groningen

## 281 **Pedigree/Population Analyses—Contributed** CC-614

Section on Statistics in Epidemiology, Biometrics Section, ENAR

*Chair(s): Jinbo Chen, University of Pennsylvania*

**10:35 a.m. Family-Based Liquid Association Analysis on Atherosclerosis in C3H/HeJ.ApoE-/- x C57BL/6J. ApoE-/- Cross—**❖ Tun-Hsiang Yang, University of California, Los Angeles; Ker-Chau Li, University of California, Los Angeles; Shinseng Yuan, University of California, Los Angeles; Aldons J. Lusis, University of California, Los Angeles; Wei Sun, University of California, Los Angeles; Susanna Wang, University of California, Los Angeles

**10:50 a.m. Evaluating the Impact of Family Structure on Estimating Genetic Association Parameters in Family Studies—**❖ Stefan Boehringer, National Cancer Institute; Ruth Pfeiffer, National Cancer Institute

**11:05 a.m. Evaluation of Three Approaches To Correct for Ascertainment of Pedigrees for Random-Effects Cox Proportional Hazard Linkage Analysis—**❖ Susan Slager, Mayo Clinic College of Medicine; Shannon K. McDonnell, Mayo Clinic College of Medicine; Vernon S. Pankratz, Mayo Clinic College of Medicine; Antje Hoering, Cancer Research and Biostatistics; Terry M. Therneau, Mayo Clinic College of Medicine; Mariza de Andrade, Mayo Clinic College of Medicine

**11:20 a.m. A Probability Model for Recent Tb Transmissions in Genetic Clusters—**❖ Nong Shang, Centers for Disease Control and Prevention

**11:35 a.m. Human Population Structure Detection via Multilocus Genotype Clustering—**❖ Xiaoyi Gao, North Carolina State University; Bruce S. Weir, University of Washington

**11:50 a.m. Testing for Familial Aggregation When the Population Size Is Known—**❖ Yixin Fang, Columbia University

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

12:05 p.m. **A Study of an Allele-Sharing Statistic on Extended Pedigrees**—◆Saonli Basu, University of Minnesota

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**CC-613**

## ● ⊛ **Disease Modeling: Theory and Applications—Contributed**

Section on Statistics in Epidemiology, Biometrics Section, ENAR

*Chair(s): Eric Siegel, University of Arkansas for Medical Sciences*

10:35 a.m. **Model Choice in Time Series Studies of Air Pollution and Mortality**—◆Roger Peng, The Johns Hopkins University; Francesca Dominici, The Johns Hopkins University; Thomas A. Louis, The Johns Hopkins University

10:50 a.m. **A Generalized Threshold Mixed Model for Analyzing Non-Normal Nonlinear Time Series: Plague in Kazakhstan as an Illustration**—◆Noelle I. Samia, The University of Iowa; Kung-Sik Chan, The University of Iowa; Nils C. Stenseth, The University of Oslo

11:05 a.m. **Statistical Determination of the Length of Quarantine Periods in an Epidemic**—◆Xiaojun You, The Johns Hopkins University

11:20 a.m. **Bayesian Analysis of the 1918 Influenza Pandemic in Baltimore, MD**—◆Yue Yin, The Johns Hopkins University

11:35 a.m. **Changes in Infant Mortality by Socioeconomic Status: U.S. Residents, 1995–2000**—◆Jay H. Kim, Centers for Disease Control and Prevention; Joe Fred Gonzalez, Jr., National Center for Health Statistics; Paul D. Williams, National Center for Health Statistics

11:50 a.m. **BMI, Race, and Prostate Cancer**—◆Negasi Beyene, National Center for Health Statistics

12:05 p.m. **Standardized Risk and Description of Results from Multivariable Modeling of a Binary Response**—Bong-Rae Kim, University of Florida; ◆Randy L. Carter, University at Buffalo; P. V. Rao, University of Florida

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**CC-401**

## **Portfolios and Derivations—Contributed**

Business and Economics Statistics Section

*Chair(s): Paul Shaman, University of Pennsylvania*

10:35 a.m. **Mimicking Portfolios with Conditioning Information**—◆Andrew Siegel, University of Washington

10:50 a.m. **Population Segmentation for Portfolio Strategies**—◆Timothy H. Lee; Otto Schwalb

11:05 a.m. **Synthesis-Efficient Portfolio of Investment Projects**—◆Alex Fedorov, Novosibirsk State Technical University; Dmitri Shubin, Novosibirsk State Technical University; Anatoly Naumov, Novosibirsk State Technical University

11:20 a.m. **Assessing the Effects of Variability in Interest Rate Derivative Pricing**—◆Michael Crotty, North Carolina State University; Peter Bloomfield, North Carolina State University

11:35 a.m. **Structural Models of Corporate Bond Yields by Nonconvex Penalized Least Squares**—◆Yuejiao Ma, The Pennsylvania State University

11:50 a.m. **Toward Identification of Shocks in State-Space Models: Application to Stochastic Volatility**—◆Nour Meddahi, Montréal University; Stéphane Gregoir, CREST/INSEE

12:05 p.m. **Estimating the Commonality in Volatility-Volume Relationship**—◆Lei Zhang, Syracuse University; Raja Velu, Syracuse University; Tze Leung Lai, Stanford University; Haipeng Xing, Columbia University

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**CC-606**

## ● **Preclinical Design and Analysis—Contributed**

Biopharmaceutical Section, ENAR

*Chair(s): Kannan Natarajan, Novartis Pharmaceuticals Corporation*

10:35 a.m. **Some Results Concerning Multiplicities in Animal Carcinogenicity Studies**—◆Mohammad Rahman, U.S. Food and Drug Administration; Karl Lin, U.S. Food and Drug Administration

10:50 a.m. **Predictive Fingerprint Modeling in Systems Biology**—◆Lei Zhu, GlaxoSmithKline; Daniel Parks, GlaxoSmithKline; Xiwu Lin, GlaxoSmithKline; Kwan Lee, GlaxoSmithKline; Amit Bhattacharyya, GlaxoSmithKline; Edit Kurali, GlaxoSmithKline; Amber Anderson, GlaxoSmithKline; Dilip Rajagopalan, GlaxoSmithKline

11:05 a.m. **Evaluation of a Novel Metric for Quality Control in an RNA Interference High-Throughput Assay**—◆Xiaohua Zhang, Merck Research Laboratories; Namjin Chung, Merck Research Laboratories; Amy Espeseth, Merck Research Laboratories; Marc Ferrer, Merck Research Laboratories



- 11:20 a.m. **On Methods To Utilize HIV-RNA Data Measured by Two PCR Assays**—❖Joshua Chen, Merck & Co., Inc.; Chunpeng Fan, University of Wisconsin-Madison; Jing Zhao, Merck & Co., Inc.
- 11:35 a.m. **Consideration of Parallel-Line and Logistic Models for Potency Estimation**—❖Bill Pikounis, Centocor R&D, Inc.; Ken Goldberg, Centocor R&D, Inc.
- 11:50 a.m. **A Linear Model Approach To Detect Outliers in Quantitative PCR**—❖Michael Man, Pfizer Inc.
- 12:05 p.m. **Quantification Limits in HIV Clinical Trials**—  
❖Michael Nessly, Merck Research Laboratories

## 285 CC-612

### ● Sample Size—Contributed

Biopharmaceutical Section

*Chair(s): Tom Kelleher, Bristol-Myers Squibb Company*

- 10:35 a.m. **Sample Size Considerations in Noninferiority Trials**—❖Qi Jiang, Amgen Inc.; Steven Snapinn, Amgen Inc.
- 10:50 a.m. **Determining Sample Size for Proportions When the Information on a Prognostic Factor Is Unavailable**—❖Bong S. Kim, Neumann College
- 11:05 a.m. **Sample Size Re-estimation in a Dose-Response Study**—❖Kazuhiko Kuribayashi, Pfizer Inc.; Mike D. Smith, Pfizer Inc.
- 11:20 a.m. **Sample-Size Estimation for Repeated Measures Analysis in Randomized Clinical Trials with Missing Data**—Kaifeng Lu, Merck & Co., Inc.; Xiaohui Luo, Merck & Co., Inc.; ❖Pei-Yun Chen, Merck & Co., Inc.
- 11:35 a.m. **Sample-Size Calculations in Logistic Regression: Comments on Hsieh, Bloch, and Larsen's Method**—❖Mohammed K. Alam, University of Cincinnati; Marepalli Rao, University of Cincinnati; Rupa Mitra, Minnesota State University
- 11:50 a.m. **Extracting Information from an Ongoing Blinded Trial**—❖Jitendra Ganju, BiostatWorks
- 12:05 p.m. **Floor Discussion**

## 286 CC-619

### ● Clinical Trial and Microarray Design—Contributed

Biometrics Section, ENAR

*Chair(s): Daniel Sargent, Mayo Clinic College of Medicine*

- 10:35 a.m. **Adaptive Design on Adjusting Sample Size without Inflating Type I Error**—❖Jialu Zhang,

- U.S. Food and Drug Administration; John Lawrence, U.S. Food and Drug Administration
- 10:50 a.m. **Designs for Phase I Clinical Trials with Multiple Courses of Subjects at Different Doses**—  
❖Shenghua Fan, California State University, East Bay; You-Gan Wang, CSIRO Mathematical and Information Sciences
- 11:05 a.m. **Bayesian Decision-Theoretic Adaptive Designs for Clinical Trials**—❖Yi Cheng, Indiana University South Bend
- 11:20 a.m. **Use of Hadamard Matrices in Designs for Two-Color Factorial Microarray Experiments**—❖Yu Ding, Temple University; Damaraju Raghavarao, Temple University
- 11:35 a.m. **Minimax Estimation of Means in Large-Scale Experiments**—❖Tiejun Tong, Yale University; Liang Chen, Yale University; Hongyu Zhao, Yale University
- 11:50 a.m. **Tradeoffs between Power and 'Confounding' in a Small Microarray Experiment**—❖Mary Putt, University of Pennsylvania; Thomas Cappola, University of Pennsylvania
- 12:05 p.m. **Likelihood Inference for Survival Analysis in Two-Stage Randomization Designs**—❖Abdus Wahed, University of Pittsburgh

## 287 CC-618

### ● Statistical Methods in Assays and Cell Line Experiments—Contributed

Biometrics Section, ENAR

*Chair(s): Jayawant Mandrekar, Mayo Clinic College of Medicine*

- 10:35 a.m. **Evaluation Parallelism Testing Methods in Immunoassay**—❖Lanju Zhang, MedImmune, Inc.; Harry Yang, MedImmune, Inc.; Iksung Cho, MedImmune, Inc.
- 10:50 a.m. **Censored Poisson Regression with Normal Random Effects with an Application to a Dilution Assay**—❖Jorge Quiroz, Wyeth Research; Jeffrey R. Wilson, Arizona State University
- 11:05 a.m. **LD50/IC50 Estimation for in vitro Cytotoxicity**—  
❖Wenquan Wang, The University of Alabama at Birmingham
- 11:20 a.m. **Application of Pharmacokinetic Modeling To Guide Clinical Sample Testing**—❖Andrew Chen, MedImmune, Inc.; Harry Yang, MedImmune, Inc.; Lanju Zhang, MedImmune, Inc.; Iksung Cho, MedImmune, Inc.; Ed O'Connor, MedImmune, Inc.

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

**11:35 a.m. Error Variance Estimation with Few Replicates in Cell Line Experiments**—◆ David Jarjoura, The Ohio State University; Soledad Fernandez, The Ohio State University; Keding Hua, The Ohio State University

**11:50 a.m. Theoretical Relationship between Direct and Indirect Potency Assays for Biological Product of Live Virus**—◆ Harry Yang, MedImmune, Inc.; Iksung Cho, MedImmune, Inc.

**12:05 p.m. Floor Discussion**

## **288** **Analysis of Imaging and Spatial Data—Contributed** **CC-620**

Biometrics Section, ENAR

*Chair(s): Diana Miglioretti, Group Health Cooperative*

**10:35 a.m. Applications of Copulas To Improve Covariance Estimation for PLS**—◆ Gina D'Angelo, University of Pittsburgh; Lisa Weissfeld, University of Pittsburgh; Scott Ziolk, University of Pittsburgh; Chester Mathis, University of Pittsburgh; William Klunk, University of Pittsburgh; Steven DeKosky, University of Pittsburgh; Julie Price, University of Pittsburgh

**10:50 a.m. Establishing the Utility of MRI Parameters in Predicting Disease Activity in RRMS Patients Using GMDM**—◆ Welfredo R. Patungan, University of the Philippines; Daniel Bonzo, Serono, Inc.

**11:05 a.m. Application of Randomized Singular Value Decomposition Techniques to the Analysis of Imaging Data Using Partial Least Squares**—◆ Scott Ziolk, University of Pittsburgh; Lisa Weissfeld, University of Pittsburgh; Chester Mathis, University of Pittsburgh; William Klunk, University of Pittsburgh; Steven DeKosky, University of Pittsburgh; Julie Price, University of Pittsburgh

**11:20 a.m. A Comparison of Different Methods for Identifying Outliers in MRS Data**—◆ Sandra B. Hall, The University of Kansas Medical Center; Mihai Popescu, The University of Kansas Medical Center; Anda Popescu, The University of Kansas Medical Center; Niaman Nazir, The University of Kansas Medical Center; Thomas Malone, The University of Kansas Medical Center; Robin Aupperle, The University of Kansas Medical Center; Allan Schmitt, The

University of Kansas Medical Center; JoAnn Lierman, The University of Kansas Medical Center; William M. Brooks, The University of Kansas Medical Center

**11:35 a.m. A Central Limit Theorem for High-Dimensional Spatially Correlated Processes**—◆ Danielle Harvey, University of California, Davis; Qian Weng, University of California, Davis; Evan Fletcher, University of California, Davis; Charles DeCarli, University of California, Davis; Laurel Beckett, University of California, Davis

**11:50 a.m. Image Analysis by Spatial Point Process Modeling in Irregular Area**—◆ Weimin Zhang, Texas A&M University; Suojin Wang, Texas A&M University

**12:05 p.m. Identifying Risk Factors for Encephalitis from West Nile Virus Infection Using Scan Statistics**—◆ Sarah Baraniuk, The University of Texas School of Public Health; Kristy Lillibridge, The University of Texas School of Public Health

## **289** **Robust Methods—Contributed** **CC-213**

Section on Statistical Computing

*Chair(s): H. N. Nagaraja, The Ohio State University*

**10:35 a.m. On Weighted Least Squares for Missing Data**—◆ Sergey Tarima, Medical College of Wisconsin

**10:50 a.m. Testing Equality of Covariance Matrices When Data Are Incomplete**—◆ Mortaza Jamshidian, California State University, Fullerton; James Schott, University of Central Florida

**11:05 a.m. Robust Diagnostics for Multivariate Mixed Continuous and Categorical Data**—◆ Tsung-Chi Cheng, National Chengchi University; Atanu Biswas, Indian Statistical Institute

**11:20 a.m. A Markov Chain Monte Carlo Approach for Finding the Minimum Volume Ellipsoid**—◆ J. Brian Gray, The University of Alabama; Eric B. Howington, Coastal Carolina University

**11:35 a.m. Clustering of Outlier Structure Using Minimal Spanning Tree Rankings and Minimum Volume Ellipsoids**—◆ Mark W. Lukens, George Mason University; James Gentle, George Mason University

**11:50 a.m. Spanning Trees as Data Analysis Tools**—◆ Adam Petrie, Rensselaer Polytechnic Institute; Thomas R. Willemain, Rensselaer Polytechnic Institute

12:05 p.m. **A Nonparametric Approach to Descriptive Measures of Multivariate Massive Data Based on Convex Hull Peeling Depth**—❖ Hyunsook Lee, The Pennsylvania State University

**290** **● Analysis of Factorial Experiments—Contributed** **CC-605**

Section on Physical and Engineering Sciences, Section on Quality and Productivity

*Chair(s): Christopher Malone, Winona State University*

10:35 a.m. **Iterative Stepdown Tests: Analysis of Orthogonal Saturated Factorial Designs**—❖ Daniel Voss, Wright State University

10:50 a.m. **Error Sum of Squares Comparison for Model Search, Identification, and Discrimination**—❖ Hongjie Deng, University of California, Riverside; Subir Ghosh, University of California, Riverside

11:05 a.m. **Power Comparisons for Model Search, Identification, and Discrimination**—❖ Ying Luan, University of California, Riverside; Subir Ghosh, University of California, Riverside

11:20 a.m. **A Comparison of Three Approaches to Modeling a Multivariate Response in a Designed Experiment**—❖ Steven LaLonde, Rochester Institute of Technology; Peter Bajorski, Rochester Institute of Technology

11:35 a.m. **Bayesian Analysis of Split Plot Failure Amplification Experiments**—❖ Oksoun Yee, Schering-Plough Corporation; Robert W. Mee, University of Tennessee

11:50 a.m. **Deriving Optimal Conditions for Large-Scale Controlled Synthesis of Nanostructures Using Statistical Methods**—❖ Tirthankar Dasgupta, Georgia Institute of Technology; Christopher Ma, Georgia Institute of Technology; Roshan J. Vengazhiyil, Georgia Institute of Technology; Zhong L. Wang, Georgia Institute of Technology; C. F. Jeff Wu, Georgia Institute of Technology

12:05 p.m. **Application of Two-Level Unreplicated Factorial Designs in Agricultural Field Experiments**—❖ Tessema Astatkie, Nova Scotia Agricultural College

**291** **● Spline-Based Methods—Contributed** **CC-214**

Section on Nonparametric Statistics, Biometrics Section

*Chair(s): Dongfeng Wu, Mississippi State University*

10:35 a.m. **Log-Density Functional ANOVA Model Estimation and Nonparametric Graphical Model Building**—❖ Yongho Jeon, University of Wisconsin-Madison

10:50 a.m. **Model Selection in Accelerated Failure Time Models with Nonlinear Covariate Effects**—❖ Chenlei Leng, National University of Singapore; Shuangge Ma, University of Washington

11:05 a.m. **Efficient Polynomial Spline Estimation of Partially Linear Models for Clustered Data**—❖ Lan Xue, Oregon State University; Li Wang, Oregon State University; Lijian Yang, Michigan State University

11:20 a.m. **Shape-Restricted Spline Regression**—❖ Xiao Wang, University of Maryland Baltimore County

11:35 a.m. **Smoothing Spline Estimation for Skew-Symmetric Density Function**—❖ Sheng-Mao Chang, North Carolina State University; Hao Zhang, North Carolina State University

11:50 a.m. **Multivariate Time-Dependent Spectral Analysis Using Cholesky**—❖ Ming Dai, The University of North Carolina at Charlotte; Wensheng Guo, University of Pennsylvania

12:05 p.m. **Bivariate Binomial Spatial Modeling of Loa Loa Prevalence in Tropical Africa**—❖ Ciprian M. Crainiceanu, The Johns Hopkins University; Peter Diggle, University of Lancaster; Barry Rowlingson, University of Lancaster

**292** **The Interface of Bayesian and Frequentist Methods—Contributed** **CC-610**

Section on Bayesian Statistical Science

*Chair(s): Qingzhao Yu, The Ohio State University*

10:35 a.m. **Admissibility and Minimality of Generalized Bayes Estimators for Spherically Symmetric Family**—❖ Yuzo Maruyama, University of Tokyo; Akimichi Takemura, University of Tokyo

10:50 a.m. **Adjusting Frequentist Results for Previous Information by Combining Prior and Objective Posterior Distributions**—❖ David Bickel, Pioneer Hi-Bred International, Inc.

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

11:05 a.m. **Relationships between Frequentist and Bayesian Prediction Limits of the Poisson Process: Noninformative Priors**—❖ Valbona Bejleri, University of District of Columbia

11:20 a.m. **Reconciling Bayesian and Frequentist Evidence in the One-Sided Scale Parameter Testing Problem**—❖ Athanasios Micheas, University of Missouri-Columbia; Dipak Dey, University of Connecticut

11:35 a.m. **Combining Bootstrap and Bayesian Inferences**—❖ Yan Zhou, University of Michigan

11:50 a.m. **Higher Order Semiparametric Frequentist Inference Based on the Profile Sampler**—❖ Guang Cheng, University of Wisconsin-Madison; Michael Kosorok, University of Wisconsin-Madison

12:05 p.m. **Floor Discussion**

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## Regular Contributed Posters

10:30 a.m.–12:20 p.m.

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### 293 CC-Level 6 East Lobby Contributed Posters—Contributed

General Methodology, WNAR, Biometrics Section, Biopharmaceutical Section, Section on Statistics and the Environment, Section on Survey Research Methods

*Organizer(s): Maura E. Stokes, SAS Institute, Inc.*

*Chair(s): Maura E. Stokes, SAS Institute, Inc.*

#### Genetics, bioinformatics, computational biology

01 **Sample Size and Power Calculations in Case-Control Designs for Detecting Gene-Environment Interaction in the Presence of Environmental Correlation**—❖ Amy Murphy, Harvard School of Public Health; Peter Kraft, Harvard University

02 **Examining the Multiple Dye-Swap Design for Efficient and Effective Microarray Studies**—❖ Theresa Kim, University of Washington

03 **Using the Maximum Cross-Correlation Statistic To Find Significant Voxel-Wise Activations in fMRI Experiments**—❖ Kinfemichael Gedif, Southern Methodist University; Richard F. Gunst, Southern Methodist University; Qihua Lin, Southern Methodist University; William R. Schucany, Southern Methodist University

04 **Predict Gene Expression Using Logistic Regression**—❖ Lei Guo, Harvard University; Yuan Yuan, Harvard

University; Lei Shen, GlaxoSmithKline; Jun Liu, Harvard University

05 **A Nonparametric Method of Background Correction for Microarray Data Analysis**—❖ Zhongxue Chen, Southern Methodist University; Monnie McGee, Southern Methodist University; Richard Scheuermann, The University of Texas Southwestern Medical Center at Dallas

06 **A Case Study for Finding Condition-Specific cis-Regulatory Motifs and Modules in the Mouse Genome**—❖ Dongseok Choi, Oregon Health & Science University; Yuan Fang, Oregon Health & Science University; William Mathers, Oregon Health & Science University

07 **Identifying Responder Cells in High-Content Imaging**—❖ Shuguang Huang, Eli Lilly and Company; Adeline Yeo, Eli Lilly and Company

08 **Simulation Study Investigating Nonrandom Recombination Events on Single Point LOD Scores**—❖ Derek Blankenship, The University of Oklahoma Health Sciences Center

09 **A Method for Computing the Overall Statistical Significance of a Treatment Effect among a Group of Genes**—❖ Taewon Lee, National Center for Toxicological Research; Robert Delongchamp, National Center for Toxicological Research; Cruz Velasco, Louisiana State University Health Sciences Center

10 **An Alternative Approach To Estimate Averages in Affymetrix Chips**—❖ William R. Schucany, Southern Methodist University; Md. Jobayer Hossain, Southern Methodist University; Julia V. Kozlitina, Southern Methodist University; Kinfemichael Gedif, Southern Methodist University

11 **Near-Infrared (NIR) Spectroscopy Coupled with Molecular Marker Data as a Tool for Gene Discovery**—❖ Mervyn Marasinghe, Iowa State University; Paul Scott, Iowa State University/USDA-ARS

#### Sampling and survey methodology

12 **A Matrix Approach for Comparing Estimates of a Population Total under a Many-to-Many Frame Structure**—Martin Levy, University of Cincinnati; ❖ ZhiYuan Dong, University of Cincinnati

13 **Comparison of Alternatives for Controlling Group Quarters Person Estimates in the American Community Survey**—❖ Lynn Weidman, U.S. Census Bureau; Michael Ikeda, U.S. Census Bureau; Julie Tsay, U.S. Census Bureau



- 14 **American Community Survey (ACS) Variance Reduction of Small Areas via Coverage Adjustment Using an Administrative Records Match**—❖ Donald Malec, U.S. Census Bureau; Elizabeth Huang, U.S. Census Bureau; Jerry J. Maples, U.S. Census Bureau; Lynn Weidman, U.S. Census Bureau
- 15 **A Comparison of Strategies for Reducing Item Nonresponse in a Web Survey**—❖ Jeffrey Kerwin, Westat; Kerry Levin, Westat; Andrew Wang, National Institute of Standards and Technology; Stephen Campbell, National Institute of Standards and Technology; Stephanie Shipp, National Institute of Standards and Technology
- 16 **Estimating Variance of Double Sampling Using Jackknife and Bootstrap Methods**—❖ Jing Wang, Sam Houston State University; Ferry Butar Butar, Sam Houston State University

## Speaker Luncheon 12:30 p.m.–1:50 p.m.

### 294 CC-4C-1 Business and Economics Statistics Section Speaker with Lunch (fee event)—Speaker with Lunch

Business and Economics Statistics Section

Organizer(s): Paul Shaman, University of Pennsylvania

- TL08 Housing Correction or Crash—❖ Mark McMullen, Moody's Economy.com

## Roundtables with Lunch 12:30 p.m.–1:50 p.m.

### 295 CC-4C-2 Section on Bayesian Statistical Science Roundtable with Lunch (fee event)

Section on Bayesian Statistical Science

Organizer(s): Merlise Clyde, Duke University

- TL09 Objective Bayes Model Selection—❖ M. J. Bayarri, University of Valencia

### 296 CC-4C-2 Biopharmaceutical Section Roundtables with Lunch (fee event)

Biopharmaceutical Section

Organizer(s): Amit Bhattacharyya, GlaxoSmithKline

- TL10 Contemporary Issues in Data Monitoring Committees—  
❖ David Kerr, Axio Research
- TL11 Controlling Error Rate in Safety Assessments from a Regulatory Perspective—❖ Qian Li, U.S. Food and Drug Administration
- TL12 The Use of Targeted Designs in Clinical Trials—❖ Gerald Crans, Eli Lilly and Company; Matthew Rotelli, Eli Lilly and Company
- TL13 Statistical Concerns and Methodology Regarding Cognitive and Psychomotor Endpoints in Early Development (Phase I Trials)—❖ Cynthia Gargano, Merck & Co., Inc.
- TL14 Preferred Methods of Dealing with Missing Data in Clinical Trials—❖ Rukmini Rajagopalan, Abbott Laboratories
- TL15 Decision Rules Based on Multiple Endpoints in Clinical Trials—❖ Alex Dmitrienko, Eli Lilly and Company
- TL16 Patient-Reported Outcomes: Issues Related to the Collection and Analysis, Including Measurement Reliability and Sensitivity—❖ Tammy J. Massie, U.S. Food and Drug Administration
- TL17 Statistician's Role in PK/PD Modeling and Clinical Trial Simulation—❖ Haiyuan Zhu, Merck Research Laboratories
- TL18 Retrospective Testing for Baseline Variables Comparability and Subsequent Covariate Adjustments for Significant Imbalance: Good Clinical Practice or Bad Statistical Practice?—❖ Abdul Sankoh, sanofi-aventis
- TL19 Statistical Issues Regarding Experimental Medicine—  
❖ James Bolognese, Merck Research Laboratories
- TL20 Bayesian Dose-Finding Strategies for Phase I Oncology Trials—❖ Glen Laird, Novartis Pharmaceuticals Corporation
- TL21 On the Evaluation of Benefit and Risk: the Tools We Have and How They Help—❖ Yili Pritchett, Abbott Laboratories
- TL22 Use of Adaptive Clinical Trial Designs in Clinical Development for Product Registration—❖ Laura Meyerson, Biogen Idec

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 297 CC-4C-3 Section on Statistical Consulting Roundtable with Lunch (fee event)

Section on Statistical Consulting

*Organizer(s): Todd Nick, Cincinnati Children's Hospital Medical Center*

- TL23 Extreme Consulting: a Novel Method of Improving Efficiency of Biostatistical Analysis—◆ Daniel Byrne, Vanderbilt University

## 298 CC-4C-3 Section on Statisticians in Defense and National Security Roundtable with Lunch (fee event)

Section on Statisticians in Defense and National Security

*Organizer(s): Lara S. Schmidt, RAND Corporation*

- TL24 Epidemiology and Education: Using Public Health and National Security in Statistics Education—◆ Henry Rolka, Centers for Disease Control and Prevention; Donna Stroup, Centers for Disease Control and Prevention

## 299 CC-4C-3 Section on Statistical Education Roundtables with Lunch (fee event)

Section on Statistical Education

*Organizer(s): Patti Collings, Brigham Young University*

- TL25 Using Technology in the Classroom and for Distance Education—◆ Michael Speed, Texas A&M University
- TL26 Teaching Introductory Statistics with (All) Sports Examples—◆ Robin Lock, St. Lawrence University

## 300 CC-4C-3 Section on Statistics in Epidemiology Roundtable with Lunch (fee event)

Section on Statistics in Epidemiology

*Organizer(s): Jennifer Clark Nelson, Group Health Cooperative*

- TL27 Design and Analytic Challenges of Conducting Biomedical Research with Older Populations: Steps Toward a Gerontologic Biostatistics—◆ Peter H. Van Ness, Yale University; Heather G. Allore, Yale University

## 301 CC-4C-3 Section on Government Statistics Roundtables with Lunch (fee event)

Section on Government Statistics, Section on Health Policy Statistics, Committee on Gay and Lesbian Concerns in Statistics

*Organizer(s): Roberta Sangster, Bureau of Labor Statistics*

- TL28 Including Sexual Orientation Questions in Surveys: Issues and Approaches—◆ Sarah Boslaugh, Washington University in St. Louis
- TL29 ASA and Volunteerism: New Special-Interest Group—◆ Roberta Sangster, Bureau of Labor Statistics

## 302 CC-4C-3 Section on Statistical Graphics Roundtable with Lunch (fee event)

Section on Statistical Graphics

*Organizer(s): Simon Urbanek, AT&T Labs-Research*

- TL30 Are Graphics/Interactive Graphics Useful for Getting Your Work Done?—◆ Matthias Schonlau, RAND Corporation; Martin Theus, University of Augsburg

## 303 CC-4C-3 Section on Health Policy Statistics Roundtables with Lunch (fee event)

Section on Health Policy Statistics

*Organizer(s): Bonnie Ghosh-Dastidar, RAND Corporation*

- TL31 The Role of Prescription Drugs in Health and Disability—◆ Michele Connolly, U.S. Social Security Administration
- TL32 Peer Grouping Methodology in Hospital Profiling—◆ Chintamani Rairikar, BlueCross BlueShield of Illinois

## 304 CC-4C-3 Section on Physical and Engineering Sciences Roundtable with Lunch (fee event)

Section on Physical and Engineering Sciences

*Organizer(s): Winson Taam, The Boeing Company*

- TL33 What's the Difference between Collaborative Research and Consulting?—◆ Roger W. Hoerl, GE Global Research

## 305 CC-4C-3 Section on Quality and Productivity Roundtable with Lunch (fee event)

Section on Quality and Productivity

*Organizer(s): William R. Myers, Procter & Gamble*

- TL34 Graphical and Numeric Approaches to Selecting Effects in Two-Level Factorial Models—◆ Wayne Adams, Stat-Ease

*American Statistical Association*

# Presidential Address & Awards Session

**Sallie Keller-McNulty, ASA President**

*Tuesday, August 8, 2006, 8:00 p.m.*

*Washington State Convention & Trade Center,  
Ballroom 6ABC*



*Is your associate, professor, student, colleague, friend, or organization  
being recognized at the Joint Statistical Meetings in Seattle?*



**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.*

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 306 CC-4C-3 Section on Survey Research Methods Roundtables with Lunch (fee event)

Section on Survey Research Methods

Organizer(s): Steven G. Heeringa, University of Michigan

TL35 Sharing Frame Information To Improve Coverage and Reduce Cost and Duplication of Effort—◆Paula Weir, Energy Information Administration

TL36 Bayesian Inference for Complex Sample Surveys—◆Roderick J. Little, University of Michigan

## 307 CC-4C-3 Social Statistics Section Roundtable with Lunch (fee event)

Social Statistics Section

Organizer(s): Allen Schirm, Mathematica Policy Research, Inc.

TL37 Telephone Surveys: Where Do We Go from Here?—◆Clyde Tucker, Bureau of Labor Statistics

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## Special Presentation 2:00 p.m.–3:50 p.m.

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## 308 CC-400 ASA Stat Bowl Session 2—Other

The ASA, ENAR, IMS, SSC, WVAR

Organizer(s): Mark Payton, Oklahoma State University

Chair(s): Mark Payton, Oklahoma State University

Round 2—◆Winners from Session 1, Six players will advance from Round 1 to Round 2

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## Invited Sessions 2:00 p.m.–3:50 p.m.

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## 309 CC-3A ● Modern Statistics at Land Grant Institutions: Memorial Session for Holly Fryer—Invited

Memorial, Section on Statistical Education

Organizer(s): Thomas M. Loughin, Kansas State University

Chair(s): Thomas M. Loughin, Kansas State University

2:05 p.m. The Life and Times of Holly Fryer—◆John E. Boyer, Kansas State University

2:30 p.m. Recent Developments on Multiplicative Interaction Models—◆Dallas E. Johnson, Kansas State University

2:55 p.m. Estimating Genetic Relatedness—◆Bruce S. Weir, University of Washington

3:20 p.m. Signals and Noises: Statistical Models Based on Fundamental Tenets of the Environmental and Ecological Sciences—◆Mark S. Kaiser, Iowa State University

3:45 p.m. Floor Discussion

## 310 CC-602 ⊕ Recent Advances in Resampling Methods for Complex Data Structures—Invited

Section on Nonparametric Statistics

Organizer(s): Soumendra N. Lahiri, Iowa State University

Chair(s): Shuxia Sun, Wright State University

2:05 p.m. A Nonparametric Plug-in Rule for Smoothing Parameter Selection—◆Soumendra N. Lahiri, Iowa State University

2:30 p.m. A Blockwise Empirical Likelihood for Spatial Data—◆Daniel J. Nordman, Iowa State University

2:55 p.m. The Limit of Finite Sample Size and a Problem with Subsampling—◆Donald W. K. Andrews, Yale University

3:20 p.m. Unit Root Testing via the Tapered Block Bootstrap—◆Cameron Parker, University of San Diego; Dimitris Politis, University of California, San Diego

3:45 p.m. Floor Discussion

## 311 CC-606 ● ⊕ Computational Challenges of Massive Datasets and Sources—Invited

Section on Statistical Computing, Section on Statisticians in Defense and National Security, Section on Statistical Graphics

Organizer(s): Karen Kafadar, University of Colorado

Chair(s): Karen Kafadar, University of Colorado

2:05 p.m. Statistical and Computational Issues Associated with Massive Public Health Databases for Detecting Adverse Events—◆Kathe E. Bjork, Colorado Department of Public Health and Environment

2:35 p.m. Dimension Reduction of Large Datasets in the Atmospheric Sciences—◆Barbara A. Bailey, University of Colorado

3:05 p.m. Automated Metadata—Edward Wegman, George Mason University; ◆Faleh Alshameri, George Mason University

3:35 p.m. Floor Discussion



### 312 CC-4C-4 ● ⊕ **Statistical Models in Evolutionary Biology—Invited**

IMS, Biometrics Section, WNAR

*Organizer(s): Christopher Genovese, Carnegie Mellon University*

*Chair(s): Cecile Ane, University of Wisconsin-Madison*

- 2:05 p.m. Introductory Discussion—**❖ Christopher Genovese, Carnegie Mellon University
- 2:25 p.m. Mathematical Models of Speciation—**❖ Sergey Gavrillets, University of Tennessee
- 3:05 p.m. Fitness Value of Information—**❖ Carl Bergstrom, University of Washington; Michael Lachmann, Max Planck Institute for Mathematics in the Sciences
- 3:45 p.m. Floor Discussion**

### 313 CC-611 **Biometrics Editor Invited Session—Invited**

ENAR, WNAR

*Organizer(s): Xihong Lin, Harvard School of Public Health; Mike Kenward, University of London*

*Chair(s): Naisyin Wang, Texas A&M University*

- 2:05 p.m. Are Flexible Designs Sound?—**❖ Carl-Fredrik Burman, AstraZeneca Pharmaceuticals; ❖ Christian Sonesson, AstraZeneca Pharmaceuticals
- 2:45 p.m. Disc:** Christopher Jennison, University of Bath
- 2:55 p.m. Disc:** Michael Proschan, Biostatistics Research Branch, NIAID
- 3:05 p.m. Disc:** Peter Bauer, University of Vienna
- 3:15 p.m. Disc:** Marianne Frisén, Göteborg University
- 3:25 p.m. Rejoiner(s):** Carl-Fredrik Burman, AstraZeneca Pharmaceuticals; Christian Sonesson, AstraZeneca Pharmaceuticals
- 3:40 p.m. Floor Discussion**

### 314 CC-607 ● **Challenges for Early Detection of Cancer Using Genomic or Proteomic Profiles—Invited**

General Methodology, Biometrics Section, WNAR, ENAR

*Organizer(s): Larry G. Kessler, U.S. Food and Drug Administration*

*Chair(s): Larry G. Kessler, U.S. Food and Drug Administration*

- 2:05 p.m. Analytic Opportunities: Moving New Diagnostics to the Clinic—**❖ Robert Lipshutz, Affymetrix

- 2:35 p.m. Platforms for the Early Detection of Cancer—**❖ Andrew Quong, Thomas Jefferson University
- 3:05 p.m. Comparing Adaptive and Nonadaptive Algorithms for Cancer Early Detection with Novel Biomarker—**❖ Martin W. McIntosh, Fred Hutchinson Cancer Research Center
- 3:35 p.m. Floor Discussion**

### 315 CC-3B ● ⊕ **Statistical Careers in Government Agencies—Invited**

Section on Government Statistics, Section on Statistical Education

*Organizer(s): John L. Eltinge, Bureau of Labor Statistics*

*Chair(s): Carol C. House, National Agricultural Statistics Service*

- 2:05 p.m. Growing Challenges Facing Federal Statisticians and Agencies—**❖ William G. Barron, Princeton University
- 2:30 p.m. Recruitment, Training, and Retention of Government Statisticians—**❖ Clyde Tucker, Bureau of Labor Statistics
- 2:55 p.m. Meeting the Challenges of Science at the Frontiers: Statistics in a Government Science Agency—**❖ Nell Sedransk, National Institute of Statistical Sciences
- 3:20 p.m. Disc:** John L. Eltinge, Bureau of Labor Statistics
- 3:40 p.m. Floor Discussion**

### 316 CC-203 ● **Multilevel Modeling of Complex Survey Data—Invited**

Section on Survey Research Methods, Section on Health Policy Statistics

*Organizer(s): Milorad Kovacevic, Statistics Canada*

*Chair(s): David Binder, Statistical Society of Canada*

- 2:05 p.m. Multilevel Modeling with Multistage Survey Samples—**❖ Tihomir Asparouhov, Muthén & Muthén; Bengt Muthén, University of California, Los Angeles
- 2:30 p.m. Adjusting for Unequal Selection Probability in Multilevel Models: a Comparison of Software Packages—**❖ Kim Chantala, The University of North Carolina at Chapel Hill; C. M. Suchindran, The University of North Carolina at Chapel Hill
- 2:55 p.m. Bootstrapping for Variance Estimation in Multilevel Models Fitted to Survey Data—**❖ Milorad Kovacevic, Statistics Canada; Rong Huang, Statistics Canada; Yong You, Statistics Canada

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

3:20 p.m. Disc: Michael Sverchkov, Bureau of Labor  
Statistics/BAE Systems IT

3:40 p.m. Floor Discussion

## 317 CC-610 ● ⊕ The Use of Quality Control Charts in Biosurveillance and Prospective Public Health Surveillance—Invited

Section on Statistics in Epidemiology, ENAR

*Organizer(s): William H. Woodall, Virginia Polytechnic Institute and  
State University; J. Michael Hardin, The University of Alabama*

*Chair(s): Landon Sego, Virginia Polytechnic Institute and State University*

2:05 p.m. **The Use of Control Charts in Health Care  
Monitoring and Public Health Surveillance—**  
◆ William H. Woodall, Virginia Polytechnic  
Institute and State University

2:30 p.m. **Cumulative Sum Methods for Spatial Surveillance—**  
◆ Peter A. Rogerson, University of Buffalo

2:55 p.m. **Performance of Residual-Based Control Charts  
Using Generalized Exponential Smoothing  
of Syndromic Data for Routine Health  
Surveillance—**◆ Howard S. Burkom, The Johns  
Hopkins University Applied Physics Laboratory;  
Galit Shmueli, University of Maryland; Sean  
Murphy, The Johns Hopkins University Applied  
Physics Laboratory

3:20 p.m. **A Neural Network Approach to Control Charts with  
Applications to Health Surveillance—**◆ Benjamin  
M. Adams, The University of Alabama; Kidakan  
Saithanu, The University of Alabama; J. Michael  
Hardin, The University of Alabama

3:45 p.m. Floor Discussion

## 318 CC-401 ● Technometrics Invited Session—Invited

Technometrics, Section on Physical and Engineering Sciences

*Organizer(s): Randy R. Sitter, Simon Fraser University*

*Chair(s): Randy R. Sitter, Simon Fraser University*

2:05 p.m. **Simultaneous Variable Selection—**◆ Berwin A.  
Turlach, The University of Western Australia;  
William N. Venables, CSIRO Mathematical  
and Information Sciences; Stephen J. Wright,  
University of Wisconsin-Madison

2:55 p.m. **A New Strategy for Variable Selection—**Xiaohui  
Luo, Merck & Co., Inc.; Leonard A. Stefanski,  
North Carolina State University; ◆ Dennis A.  
Boos, North Carolina State University

3:45 p.m. Floor Discussion

## 319 CC-617 ● ⊕ Statistical Challenges in Natural Resource Management—Invited

Section on Statistics and the Environment

*Organizer(s): Estelle Russek-Cohen, U.S. Food and Drug Administration*

*Chair(s): Gretchen Moisen, U.S. Forest Service*

2:05 p.m. **Bayesian Analysis of Animal Community  
Structure—**◆ Jeffrey A. Royle, U.S. Geological  
Survey/Patuxent Wildlife Research Center

2:30 p.m. **A Vision for Forest Inventory—**◆ Ronald E.  
McRoberts, U.S. Department of Agriculture

2:55 p.m. **Challenges in Modeling Associations between  
Streams and Their Watersheds—**◆ John Van  
Sickle, U.S. Environmental Protection Agency

3:20 p.m. **What Is a Realistic Fisheries Stock Assessment  
Model?—**◆ Terrance Quinn, University of Alaska

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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## 320 CC-613 ● Beyond Your Parents' Models: Latent Variables as You May Not Yet Have Thought of Them— Topic-Contributed

Biometrics Section, ENAR

*Organizer(s): Karen Bandeen-Roche, The Johns Hopkins Bloomberg  
School of Public Health*

*Chair(s): Bradley P. Carlin, University of Minnesota*

2:05 p.m. **Latent Variable Mixture Modeling with Genetic  
Applications—**◆ Bengt Muthen, University of  
California, Los Angeles

2:25 p.m. **Latent Variable Modeling—**◆ Katherine Masyn,  
University of California, Davis; Tihomir  
Asparouhov, Muthén & Muthén; Bengt Muthen,  
University of California, Los Angeles

2:45 p.m. **Semiparametric Bayesian Structural Equation  
Models—**◆ David B. Dunson, National Institute  
of Environmental Health Sciences

3:05 p.m. **Penalized Latent Class Regression: Incorporating  
Scientific Knowledge into Measurement  
Models—**◆ Jeannie-Marie Sheppard, The Johns  
Hopkins Bloomberg School of Public Health;  
Karen Bandeen-Roche, The Johns Hopkins  
Bloomberg School of Public Health; Peter Zandi,

- The Johns Hopkins Bloomberg School of Public Health; William Eaton, The Johns Hopkins Bloomberg School of Public Health
- 3:25 p.m. **Principal Stratification Designs To Estimate Outcomes Missing Due to Death**—❖Constantine Frangakis, The Johns Hopkins Bloomberg School of Public Health; Donald Rubin, Harvard University; Ming-Wen An, The Johns Hopkins University
- 3:45 p.m. **Floor Discussion**

**321** **CC-201**  
**● ⊕ Innovative Uses of the Survey of Income and Program Participation for Social Program Evaluation—Topic-Contributed**

Social Statistics Section

*Organizer(s): Carole L. Popoff, U.S. Census Bureau*

*Chair(s): John Czajka, Mathematica Policy Research, Inc.*

- 2:05 p.m. **Assessing the Effect of Allocated Data on the Estimated Value of Total Household Income in the Survey of Income and Program Participation (SIPP)**—❖Patricia Fisher, U.S. Census Bureau
- 2:25 p.m. **Welfare Reform Revisited: Leavers and Cyclers—How Are They Doing under the New Restrictive Time Limits?**—❖Carole L. Popoff, U.S. Census Bureau; Qi Wang, U.S. Census Bureau
- 2:45 p.m. **Assessing Estimates of Program Participation: an Analysis of Matched SIPP and Administrative Data**—❖Scott Cody, Mathematica Policy Research, Inc.; Julie Sykes, Mathematica Policy Research, Inc.
- 3:05 p.m. **Accounting for SIPP Design Effects: Testing Four Approaches with the 2004 Panel**—❖Arthur F. Jones, U.S. Census Bureau; Robert Nielsen, U.S. Census Bureau; Michael Davern, University of Minnesota; John Boies, U.S. Census Bureau
- 3:25 p.m. **Floor Discussion**

**322** **CC-608**  
**POC/Adaptive Design—Topic-Contributed**

Biopharmaceutical Section

*Organizer(s): James Bolognese, Merck Research Laboratories*


*Chair(s): James Bolognese, Merck Research Laboratories*

- 2:05 p.m. **Impact of Pharmacometrics Reviews on Drug Approval and Labeling Decisions**—❖Joga Gobburu, U.S. Food and Drug Administration
- 2:25 p.m. **Adaptive by Design in Exploratory Development**—❖Brenda Gaydos, Eli Lilly and Company

- 2:45 p.m. **Comparison of Bayesian and Frequentist Adaptive Designs for Combination Proof-of-Concept/Dose Response Modeling Trials in Phase II**—❖Nitin Patel, Cytel Inc.; James Bolognese, Merck Research Laboratories; Jerald Schindler, Cytel Inc.; Scott Berry, Berry Consultants; Yanniss Jemai, Cytel Inc.; Vipul Suru, Cytel Inc.
- 3:05 p.m. **Bayesian Modeling of Safety Data Using Databases of Placebo Patients**—❖Jose Pinheiro, Novartis Pharmaceuticals Corporation; Chyi-Hung Hsu, Novartis Pharmaceuticals Corporation
- 3:25 p.m. **Disc:** Sue-Jane Wang, U.S. Food and Drug Administration
- 3:45 p.m. **Floor Discussion**

## JSM INFORMAL DANCE PARTY

Tuesday, August 8, 9:30 p.m. – midnight  
CC-4C-3



# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 323 CC-205 ● **Quality Initiatives in Establishment Surveys— Topic-Contributed**

Section on Survey Research Methods

*Organizer(s): Shawna Waugh, Energy Information Administration*

*Chair(s): Nicolas Hengartner, Los Alamos National Laboratory*

- 2:05 p.m. **A Methodology for Evaluating Sufficiency of Survey Frames**—◆ Howard Bradsher-Fredrick, Energy Information Administration
- 2:25 p.m. **An Evaluation of the 2002 MECS Measure of Size**—◆ William Gifford, Energy Information Administration
- 2:45 p.m. **Quality Issues in a Regulatory Data Collection System**—◆ Alan K. Jeeves, Bureau of Transportation Statistics
- 3:05 p.m. Disc: Eugene Burns, Bureau of Transportation Statistics
- 3:25 p.m. **Floor Discussion**

## 324 CC-214 ⊛ **Statistical Methods on Networks and Graphs—Topic-Contributed**

Section on Statisticians in Defense and National Security, Section on Statistical Graphics

*Organizer(s): Patricia H. Carter, Naval Surface Warfare Center*

*Chair(s): David Marchette, Naval Surface Warfare Center*

- 2:05 p.m. **Graphs for Streaming Text**—◆ Elizabeth Hohman, Naval Surface Warfare Center
- 2:25 p.m. **Graph Theoretic Methods for the Identification of Article Associations**—◆ Jeffrey L. Solka, Naval Surface Warfare Center; Ivory Bryant, Naval Surface Warfare Center; Nicholas Tucey, Naval Surface Warfare Center
- 2:45 p.m. **Anomaly Detection in Genetic Networks**—  
◆ Christopher Overall, George Mason University; Jeffrey L. Solka, Naval Surface Warfare Center; J. W. Weller, George Mason University; Carey Priebe, The Johns Hopkins University
- 3:05 p.m. **Network Traffic Profiling**—◆ Patricia H. Carter, Naval Surface Warfare Center
- 3:25 p.m. Disc: John Rigsby, Naval Surface Warfare Center
- 3:45 p.m. **Floor Discussion**

## 325 CC-2B ⊛ **Spatial and Spatio-Temporal Bayesian Inference—Topic-Contributed**

Section on Bayesian Statistical Science

*Organizer(s): Michele Guindani, M. D. Anderson Cancer Center*

*Chair(s): Christopher Carter, University of New South Wales*

- 2:05 p.m. **Multivariate Spatial Modeling in Bayesian Hierarchical Settings**—◆ Sudipto Banerjee, University of Minnesota
- 2:25 p.m. **Flexible Spatial Modeling for Multivariate Geological Data Using Convolved Covariance Functions**—◆ Anandamayee Majumdar, Arizona State University; Alan E. Gelfand, Duke University
- 2:45 p.m. **Gaussian Process Models for a Sphere with Application to Faraday Rotation Measures**—  
◆ Margaret Short, Los Alamos National Laboratory; Dave Higdon, Los Alamos National Laboratory; Philipp Kronberg, Los Alamos National Laboratory
- 3:05 p.m. **A Comprehensive Spatial-Temporal Analysis of Breast Cancer: First Primary, Second Primary, and Breast Cancer Survival**—◆ Song Zhang, M. D. Anderson Cancer Center
- 3:25 p.m. **Bayesian Nonparametric Mixture Modeling for Spatial Processes**—◆ Michele Guindani, M. D. Anderson Cancer Center; Alan E. Gelfand, Duke University; Sonia Petrone, Università Commerciale Luigi Bocconi
- 3:45 p.m. **Floor Discussion**

## 326 CC-604 **Least Angle Regression—Topic-Contributed**

Section on Statistical Computing

*Organizer(s): Tim C. Hesterberg, Insightful Corporation*

*Chair(s): Trevor Hastie, Stanford University*

- 2:05 p.m. **New Methods and Software for Variable Selection in Regression**—◆ Chris Fraley, Insightful Corporation; Tim C. Hesterberg, Insightful Corporation
- 2:25 p.m. **Penalized Cox Regression Analysis in the High-Dimensional and Low Sample Size Settings with Application to Microarray Gene Expression Data**—◆ Jiang Gui, University of Pennsylvania; Hongzhe Li, University of Pennsylvania
- 2:45 p.m. **Grouped and Hierarchical Model Selection through Composite Absolute Penalties (CAPs)**—  
◆ Guilherme Rocha, University of California,



Berkeley; Peng Zhao, University of California, Berkeley; Bin Yu, University of California, Berkeley

- 3:05 p.m. **Determination of Regularization Parameter Using L-Curve by LARS-LASSO Algorithm**—❖ Leming Qu, Boise State University; Partha Routh, Boise State University
- 3:25 p.m. Disc: Greg Ridgeway, RAND Corporation
- 3:45 p.m. **Floor Discussion**

## 327 CC-211 **Proper Compensation for Statistical Consulting Services Provided in a University Setting—Topic-Contributed**

Section on Statistical Consulting, Section on Statistical Education  
*Organizer(s): H. Dean Johnson, Washington State University*  
*Chair(s): H. Dean Johnson, Washington State University*

- 2:05 p.m. **Successes (and Challenges) in Funding Campus Consulting Facilities**—❖ Murray Clayton, University of Wisconsin-Madison
- 2:25 p.m. **An Overview of The Ohio State University Statistical Consulting Service**—❖ Christopher Holloman, The Ohio State University
- 2:45 p.m. **Multiple Solutions to Funding Statistical Consulting within a University**—❖ Linda Young, University of Florida
- 3:05 p.m. **Compensation Is More Than Money: Life as an Internal Statistical Consultant in a Medical School**—❖ Sarah Boslaugh, Washington University in St. Louis
- 3:25 p.m. Disc: Barbara Mann, Wright State University
- 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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## 328 CC-612 ● ⊕ **Approaches for Handling Missing Data and Measurement Issues—Contributed**

Section on Statistics in Epidemiology, Biometrics Section  
*Chair(s): Betsy Gunnels, Centers for Disease Control and Prevention*

- 2:05 p.m. **Missingness Screens and Regression Modeling in Clinical Aging Research**—❖ Peter H. Van Ness, Yale University

- 2:20 p.m. **Deletion Approach To Handling Missing Data in Longitudinal Data**—❖ Cuiling Wang, Albert Einstein College of Medicine; Myunghee C. Paik, Columbia University
- 2:35 p.m. **Impact of Missing Data on Building Prognostic Models and Summarizing Models across Studies**—❖ Mahtab Munshi, Takeda Global Research and Development Center; Daniel McGee, Sr., Florida State University
- 2:50 p.m. **Using Multiple Imputation To Improve Race-Specific Disease Rate Reporting in a National Active Surveillance System**—❖ Elizabeth R. Zell, Centers for Disease Control and Prevention
- 3:05 p.m. **Efficacy Studies of Malaria Treatments in Africa: Efficient Estimation with Missing Indicators of Failure**—❖ Rhoderick Machekano, University of California, Berkeley; Alan Hubbard, University of California, Berkeley
- 3:20 p.m. **Application of Errors-in-Variables to Model Variation between Studies in Regression Equations for GFR**—❖ Tom Greene, The Cleveland Clinic; Liang Li, The Cleveland Clinic
- 3:35 p.m. **Dose-Response Errors and Detection of Biological Thresholds**—❖ Michael E. Ginevan, Exponent, Inc.; Deborah K. Watkins, Exponent, Inc.

## 329 CC-204 ● **Mode Considerations—Contributed**

Section on Survey Research Methods  
*Chair(s): Sarah M. Nusser, Iowa State University*

- 2:05 p.m. **Color, Labels, and Interpretive Heuristics for Response Scales**—❖ Roger Tourangeau, University of Maryland; Mick Couper, University of Michigan; Frederick G. Conrad, Institute for Social Research
- 2:20 p.m. **Efficient Multimode Data Collection**—❖ David Dolson, Statistics Canada
- 2:35 p.m. **Improved Evaluation of the Quantitative Survey Response Variance**—❖ Patrick Flanagan, U.S. Census Bureau
- 2:50 p.m. **Comparing Performance and Self-Reported Data on Ease of Use of Surveys**—❖ Christine Rho, Bureau of Labor Statistics
- 3:05 p.m. **Estimation of Measurement Error and Identification of Causes in the Absence of Validation Data**—❖ Andy Peytchev, University of Michigan

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

3:20 p.m. **An Alternative Estimator for Multi-Frame Sample Designs**—◆ Charles D. Palit, University of Wisconsin

3:35 p.m. **Is There a Homogeneity in Value Orientations within European Societies?**—◆ Peter P. Mohler, ZUMA

## 330 CC-2A ● ⊛ **Bayesian Methods in the Social Sciences—Contributed**

Section on Bayesian Statistical Science

*Chair(s): Sanjib Basu, Northern Illinois University*

2:05 p.m. **Latent Space Models for Irish Voting Data**—  
◆ Isobel Claire Gormley, Trinity College Dublin;  
Thomas B. Murphy, Trinity College Dublin

2:20 p.m. **A Bayesian Approach to Correct Sample Selection Bias in Hierarchical Linear Models**—  
◆ Jun Lu, American University; Labeed Mokatrin, American University

2:35 p.m. **Exploring Teacher by Student Interactions in Longitudinal Achievement Data**—  
◆ J. R. Lockwood, RAND Corporation; Daniel McCaffrey, RAND Corporation

2:50 p.m. **An Item Response Model for Balancing Personalization and Privacy in Online Browsing**—◆ Steven L. Scott, University of Southern California; Ramnath Chellappa, Emory University

3:05 p.m. **Modeling Student Ability in Low-Stakes Settings**—◆ Eric Loken, The Pennsylvania State University

3:20 p.m. **A Bayesian Approach to the Calibration of New Test Items**—◆ Tiandong Li, Westat; Chinfang Wong, University of Maryland; Ru Lu, University of Maryland

3:35 p.m. **Floor Discussion**

## 331 CC-618 **Distribution and Robustness Theory—Contributed**

IMS, Section on Nonparametric Statistics

*Chair(s): Debashis Mondal, University of Washington*

2:05 p.m. **A New Approach to Robust Parameter Estimation against Heavy Contamination**—  
◆ Hironori Fujisawa, The Institute of Statistical Mathematics

2:20 p.m. **Minimax Asymptotic Mean-Squared-Error of L-estimators of Scale Parameter**—◆ Daniela Szatmari-Voicu, The University of Texas at El Paso

2:35 p.m. **Order Statistics of Concomitants of Subsets of Order Statistics and Applications**—◆ Ke Wang, The Ohio State University; H. N. Nagaraja, The Ohio State University

2:50 p.m. **Power Transformation Toward a Linear Regression Quantile**—◆ Yunming Mu, Texas A&M University

3:05 p.m. **Some Moment Relationships for Skew-Symmetric Distributions**—◆ Dale Umbach, Ball State University

3:20 p.m. **On the Decomposition of the Skew-Symmetric Family of Probability Distributions**—◆ Jose A. Sanqui, Appalachian State University; Arjun K. Gupta, Bowling Green State University; Truc T. Nguyen, Bowling Green State University

3:35 p.m. **Floor Discussion**

## 332 CC-210 **Estimation for Government Data Collection—Contributed**

Section on Government Statistics

*Chair(s): Frank Potter, Mathematica Policy Research, Inc.*

2:05 p.m. **New Models for Estimating Health Insurance Coverage for Small Areas**—◆ Donald M. Bauder, U.S. Census Bureau

2:20 p.m. **Small-Area Estimation of Health Insurance Coverage at the Sub-State Level: a Hierarchical Bayes Model**—◆ Steven Riesz, U.S. Census Bureau; Robin Fisher, U.S. Census Bureau

2:35 p.m. **Estimation of Standardized State-Level Food Stamp Participation Rates**—◆ Elizabeth Stuart, Mathematica Policy Research, Inc.; Allen Schirm, Mathematica Policy Research, Inc.; Alan M. Zaslavsky, Harvard Medical School; Laura Castner, Mathematica Policy Research, Inc.; Scott Cody, Mathematica Policy Research, Inc.

2:50 p.m. **Estimating School District Poverty with Free and Reduced Priced Lunch Data**—◆ Craig Cruse, U.S. Census Bureau; David S. Powers, U.S. Census Bureau

3:05 p.m. **An Analysis of Gender Differences in Vehicle Miles Traveled Using Nonparametric Methods**—  
◆ Brian Sloboda, Bureau of Transportation

Statistics; Wenxiong V. Yao, University of Arkansas at Little Rock

**3:20 p.m. Improved Preliminary Estimation of Total Employment Change for the U.S. Current Employment Statistics Survey**—❖Bogong Li, Bureau of Labor Statistics; Partha Lahiri, University of Maryland

**3:35 p.m. Analysis of Recall Effect on the Reporting of Expenditures for the Consumer Expenditure Interview Survey**—❖Barry Steinberg, Bureau of Labor Statistics; Boriana Chopova, Bureau of Labor Statistics; Lucilla Tan, Bureau of Labor Statistics; Jared Ogden, Bureau of Labor Statistics; Pierre Bahizi, Bureau of Labor Statistics; Geoffrey Paulin, Bureau of Labor Statistics

### 333 CC-206 ● **New Approaches to Modeling Costs and Other Health Outcomes—Contributed**

Section on Health Policy Statistics, Biometrics Section

*Chair(s): Mark Glickman, Boston University*

**2:05 p.m. Performance of Statistical Models To Predict Mental Health and Substance Abuse Cost**—❖Maria Montez, Boston University; Cindy Christiansen, Boston University; Susan L. Ettner, University of California, Los Angeles; Susan Loveland, Boston University; Amy K. Rosen, Boston University

**2:20 p.m. Use of Risk-Adjustment Models To Predict Future High Medical Cost Cases: Is the Model Performance Sensitive to the Time Intervals in Claims Data?**—❖Ya-Chen Tina Shih, M. D. Anderson Cancer Center; Lirong Zhao, M. D. Anderson Cancer Center; Ying Xu, M. D. Anderson Cancer Center

**2:35 p.m. Two-Stage Samples and the Minimum Sum Method for Medicare Fraud Investigations**—❖Iliana Ignatova, University of South Carolina

**2:50 p.m. Experiences with a Virtual Regionalization Model for Cardiac Surgery**—❖Edward Wegman, George Mason University; Yasmin H. Said, The Johns Hopkins University; Shabib A. Alhadheri, SUNY Upstate Medical University

**3:05 p.m. The LASSO-Patternsearch Algorithm and Its Application to Data from the Beaver Dam Eye Study**—❖Weiliang Shi, University of Wisconsin-Madison; Grace Wahba, University

of Wisconsin-Madison; Kristine Lee, University of Wisconsin-Madison; Ronald Klein, University of Wisconsin-Madison; Barbara E. K. Klein, University of Wisconsin-Madison

**3:20 p.m. On the Equivalence of Medical Cost Estimators with Censored Data**—Heejung Bang, Cornell University; ❖Hongwei Zhao, University of Rochester; Phillip E. Pfeifer, University of Virginia; Hongkun Wang, University of Virginia

**3:35 p.m. Floor Discussion**

### 334 CC-620 ⊕ **Degradation Models and Other Topics in Reliability—Contributed**

Section on Physical and Engineering Sciences

*Chair(s): Jave Pascual, Washington State University*

**2:05 p.m. A Statistical Method for Crack Detection in Thermal Acoustics Nondestructive Evaluation Data**—❖Chunwang Gao, Iowa State University; William Q. Meeker, Jr., Iowa State University

**2:20 p.m. Estimation of Flaw Size Distribution Parameters under Correlated Random Censoring**—❖Peter Hovey, University of Dayton; Alan Berens, Retired

**2:35 p.m. Modeling Unit Degradation from Exceedance Time Data**—❖Hui Fan, Rensselaer Polytechnic Institute; Brock Osborn, GE Global Research; Thomas R. Willemain, Rensselaer Polytechnic Institute; Pasquale Sullo, Rensselaer Polytechnic Institute

**2:50 p.m. A Discrete Degradation Model for Ultra-Thin Gate Oxide Data**—❖Shuen-Lin Jeng, Tunghai University; Min-Hsiung Hsien, Tunghai University

**3:05 p.m. Bayesian Degradation Modeling with Covariate-Dependent Box-Cox Transformation of the Response Variable**—❖Fridtjof Thomas, VTI; Arzu Onar, St. Jude Children's Research Hospital; Bouzid Choubane, Florida Department of Transportation; Tom Byron, Florida Department of Transportation

**3:20 p.m. Recurrent Events: Modeling and Inference**—❖Edsel A. Peña, University of South Carolina

**3:35 p.m. Floor Discussion**

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 335 CC-601 ● Classification Methods and Functional Data Analysis—Contributed

Section on Nonparametric Statistics

*Chair(s): Martina Pavlicova, Columbia University*

- 2:05 p.m. **Scrambling Method for Cluster Analysis Using Supervised Learning**—◆ Oksana Shcherbak, Union Bank of California
- 2:20 p.m. **Finding an Approximate Solution Path of Support Vector Machines for Large Datasets**—◆ Zhenhuan Cui, The Ohio State University; Yoonkyung Lee, The Ohio State University
- 2:35 p.m. **Bandwidth Selection for RBF Kernel in Kernel-Based Classification**—◆ Jeongyoun Ahn, The University of North Carolina at Chapel Hill
- 2:50 p.m. **Multivariate Functional ANOVA for Kriging Model in Computer Experiments**—◆ Zhe Zhang, The Pennsylvania State University
- 3:05 p.m. **Bootstrap Investigation of the Median Curve of a Functional Dataset**—◆ David B. Hitchcock, University of South Carolina
- 3:20 p.m. **Analysis of Panic-Relevant Experimental Tidal Volume Curves: Wavelet-Based Functional Hypothesis Testing**—◆ Sang Han Lee, Texas A&M University; Marina Vannucci, Texas A&M University; Eva Petkova, Columbia University; Maurice Preter, Columbia University; Donald Klein, Columbia University
- 3:35 p.m. **Floor Discussion**

## 336 CC-605 Categorical Data and Experimental Design—Contributed

Section on Statistical Computing, Section on Quality and Productivity

*Chair(s): Zenaida F. Mateo, University of Manitoba*

- 2:05 p.m. **A Simple Method for Generating Multivariate Categorical Variates**—◆ Hyunjip Choi, Kyonggi University
- 2:20 p.m. **Testing Multinomial Categories with Sequential Sampling: Is a Wheel of Fortune Fair?**—◆ Hokwon Cho, University of Nevada, Las Vegas; Hai Zhen, University of Nevada, Las Vegas
- 2:35 p.m. **A Comparison of Approximations for Logistic Regression**—◆ Charity J. Morgan, Harvard University; Donald Rubin, Harvard University

- 2:50 p.m. **Construction Methods for Balanced Incomplete Block Designs**—◆ Jeffrey Shaffer, Tulane University; Sudesh Srivastav, Tulane University
- 3:05 p.m. **Asymptotic Properties of Effective Experimenting Strategies**—◆ Anatoly Naumov, Novosibirsk State Technical University
- 3:20 p.m. **Misspecification Tests for Binomial and Beta-Binomial Models**—◆ Marinela Capanu, Memorial Sloan-Kettering Cancer Center; Brett Presnell, University of Florida
- 3:35 p.m. **Floor Discussion**

## 337 CC-212 ● Teaching Statistics to Specific Audiences—Contributed

Section on Statistical Education, Section on Statistical Graphics

*Chair(s): Marvin Gruber, Rochester Institute of Technology*

- 2:05 p.m. **Teaching Effective Graph and Table Construction Needs More Attention in Statistical Education**—◆ Thomas E. Bradstreet, Merck Research Laboratories; Michael Nessly, Merck Research Laboratories; Thomas H. Short, Indiana University of Pennsylvania
- 2:20 p.m. **What Do M&Ms, Dahlias, Soil Erosion, and Data Analysis across the Curriculum Have in Common?**—◆ Jerry Moreno, John Carroll University
- 2:35 p.m. **Instructional Tools in Educational Measurement and Statistics (ITEMS) for School Personnel: Evaluation of Two Web-Based Training Modules**—◆ Rebecca Zwick, University of California, Santa Barbara; Jeffrey C. Sklar, California Polytechnic State University, San Luis Obispo; Graham Wakefield, University of California, Santa Barbara
- 2:50 p.m. **Interactive Animation for Learning IRT and Misfit Identification in Item Response Theory**—◆ Chong Ho Yu, Arizona State University; Roger Freeman, Paradise Valley Unified School District; Angel Jannasch-Pennell, Arizona State University; Samuel DiGangi, Arizona State University; Chang Kim, Arizona State University; Victoria Stay, Arizona State University; Wenjuo Lo, Arizona State University; Lori Long, Arizona State University
- 3:05 p.m. **An Education Model for Secondary Students**—John Aleong, University of Vermont; ◆ Chandra Aleong, Delaware State University



- 3:20 p.m. **A Pilot Survey on Ways Practicing Engineers Learn Statistics**—❖ Jorge Romeu, Syracuse University
- 3:35 p.m. **Presenting Statistics Online to Nontraditional Business Students**—❖ William Livingston, Baker College Center for Graduate Studies

### 338 CC-213

#### ● Innovative Approaches to Introductory Statistics—Contributed

Section on Statistical Education

*Chair(s): James Grady, The University of Texas Medical Branch*

- 2:05 p.m. **Statistics: Telling the Whole Story**—❖ Nancy Pfenning, University of Pittsburgh
- 2:20 p.m. **Teaching a Writing-Centered Course in Introductory Statistics**—❖ Deborah Lurie, Saint Joseph's University
- 2:35 p.m. **Assessing the Gains from Concept Mapping in Introductory Statistics**—❖ David Doorn, University of Minnesota, Duluth; Maureen O'Brien, University of Minnesota, Duluth
- 2:50 p.m. **Further Assessment of Materials for Engaging Students in Statistical Discovery**—❖ W. Robert Stephenson, Iowa State University; Amy Froelich, Iowa State University; William M. Duckworth, Iowa State University
- 3:05 p.m. **Sequencing of Topics in an Introductory Course: Does Order Make a Difference?**—❖ Christopher Malone, Winona State University; John Gabrosek, Grand Valley State University
- 3:20 p.m. **A Geometrical Approach to Introductory Statistics**—❖ Daniel Kaplan, Macalester College
- 3:35 p.m. **Toward Statistical Literacy: Statistics in Everyday Life**—❖ Hoke Hill, Jr., Clemson University; William Bridges, Jr., Clemson University; Rose Martinez-Dawson, Clemson University

### 339 CC-603

#### Regression and Time Series—Contributed

Section on Statistical Computing

*Chair(s): Brian Gray, The University of Alabama*

- 2:05 p.m. **Automatic Detection of Outliers Based on the Forward Search**—Matilde Bini, University of Florence; Bruno Bertaccini, University of Florence; ❖ Franco Polverini, University of Florence

- 2:20 p.m. **A Novel Statistical Approach to Identifying and Limiting the Effect of Influential Observations**—❖ Tamekia Jones, The University of Alabama at Birmingham; David Redden, The University of Alabama at Birmingham
- 2:35 p.m. **Robust Winsorized Regression Using Bootstrap Approach**—Deo Kumar Srivastava, St. Jude Children's Research Hospital; ❖ Jianmin Pan, St. Jude Children's Research Hospital; Ila Sarkar, Louisiana Health Care Review, Inc.
- 2:50 p.m. **Bent-Cable Regression with Autoregressive Noise**—❖ Grace Chiu, University of Waterloo; Richard Lockhart, Simon Fraser University
- 3:05 p.m. **Multiresolution Outlier Detection for Long-Range Dependent Time Series**—❖ Lingsong Zhang, The University of North Carolina at Chapel Hill; Zhengyuan Zhu, The University of North Carolina at Chapel Hill
- 3:20 p.m. **Restricted Error Regression**—❖ James Cochran, Louisiana Tech University
- 3:35 p.m. **Local Linear Estimation for Single-Index Conditional Quantiles**—❖ Zhou Wu, University of Cincinnati; Yan Yu, University of Cincinnati; Keming Yu, Brunel University

### 340 CC-614

#### ● Misclassification and Measurement Error: Problems and Solutions—Contributed

Biometrics Section, ENAR

*Chair(s): Tom Braun, University of Michigan*

- 2:05 p.m. **Measurement Error Correction Methods Based on Cumulative Average Intake for Nutritional Data**—❖ Weiliang Qiu, Harvard Medical School; Bernard Rosner, Harvard Medical School
- 2:20 p.m. **A Robust Likelihood-Based Approach to Nonlinear Measurement Error Models with Application to Radiation Dose Effects on Leukemia-Specific Hazard Rate among A-Bomb Survivors**—❖ Antara Majumdar, University at Buffalo; Randy L. Carter, University at Buffalo
- 2:35 p.m. **Varying Coefficient Model with Measurement Error**—❖ Liang Li, The Cleveland Clinic; Tom Greene, The Cleveland Clinic
- 2:50 p.m. **Conditional Score Methods for Regression Models with Poisson Surrogates**—❖ Alvin Van Orden, North Carolina State University; Leonard A. Stefanski, North Carolina State University

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

3:05 p.m. **Effects of Misclassification on Exposure-Disease Association with Odds Ratio**—◆Jun-mo Nam, National Cancer Institute

3:20 p.m. **Adjusting for Misclassification in Binary Response Variables**—◆Jun Zhai, Duke University; John Olson, Duke University; Mike West, Duke University

3:35 p.m. **Floor Discussion**

## 341 ● QT/QTc—Contributed

Biopharmaceutical Section

*Chair(s): Yun-Ling Xu, U.S. Food and Drug Administration*

2:05 p.m. **Noninferiority Testing in Thorough QT/QTc Studies**—◆Balakrishna Hosmane, Northern Illinois University; Charles Locke, Abbott Laboratories

2:20 p.m. **Bias in Estimates of QTc Prolongation by Timepoint-Wise Treatment Comparison**—◆Yibin Wang, Novartis Pharmaceuticals Corporation; Guohua Pan, Johnson & Johnson Pharmaceutical R&D

2:35 p.m. **Tolerance Regions for Multivariate Random Effects Model with Application to Beat-to-Beat QT-TQ Interval Data**—◆Kimberly Crimin, Pfizer Inc.; Joseph McKean, Western Michigan University

2:50 p.m. **A New Method for Sample Size Calculation of the Thorough QT/QTc Study**—◆Shu Zhang, Sepracor, Inc.

3:05 p.m. **Bayesian Measurement Error Approach to QT Interval Correction/Prolongation**—◆Jie Chen, Merck Research Laboratories; Xin Zhao, Merck & Co., Inc.

3:20 p.m. **Designing and Analyzing Covariate-Adjusted Response Adaptive Randomized Clinical Trials**—◆Ayanbola Ayanlowo, The University of Alabama at Birmingham; David Redden, The University of Alabama at Birmingham

3:35 p.m. **Floor Discussion**

## 342 ● Methods for Design and Analysis of Microarrays—Contributed

Biometrics Section, ENAR

*Chair(s): Wei Zhao, University of California, Los Angeles*

2:05 p.m. **Detecting Differential Expressions in GeneChip Microarray Studies: a Quantile Approach**—◆Huixia Wang, University of Illinois at Urbana-Champaign

2:20 p.m. **Gene Selection Using a Modified Mahalanobis Distance**—◆Xiwen Ma, University of Wisconsin-Madison

2:35 p.m. **Analysis of Microarray Data: Two Examples**—◆Meng Du, University of Toronto; Muni Srivastava, University of Toronto

2:50 p.m. **Multidimensional Local False Discovery Rate for Microarray Studies**—◆Yudi Pawitan, Karolinska Institutet; Alex Ploner, Karolinska Institutet

3:05 p.m. **Optimal Cross-Validation for Estimating Small Sample Classification Error Rate**—◆Wenjiang Fu, Michigan State University; Suojin Wang, Texas A&M University

3:20 p.m. **Gene Expression (Microarray) Analysis by Neural Networks**—◆David Booth, Kent State University; David Zhu, Kent State University; Richard Geoke, Kent State University; David Baker, Kent State University; James Hamburg, Kent State University

3:35 p.m. **Floor Discussion**

## 343 ● Analysis of Correlated Data and Mixed Models—Contributed

Biometrics Section

*Chair(s): Jon Schildcrout, Vanderbilt University Medical Center*

2:05 p.m. **Regression Analysis of Panel Count Data with Dependent Observation Times**—◆Xin He, University of Missouri-Columbia; Jianguo Sun, University of Missouri-Columbia; Xingwei Tong, University of Missouri-Columbia

2:20 p.m. **Modeling Variability in Longitudinal Data Using Random Change-point Models**—◆Annica Dominicus, Karolinska Institutet; Samuli Ripatti, Karolinska Institutet; Juni Palmgren, Karolinska Institutet

2:35 p.m. **Semiparametric Modeling with Correlated Data**—◆Chun Han, The University of Kansas

2:50 p.m. **Marginal Mixture Analysis of Correlated Bounded-Response Data with an Application to Ultrasound Risk Assessment**—◆Yan Yang, University of Illinois at Urbana-Champaign; Douglas Simpson, University of Illinois at Urbana-Champaign

3:05 p.m. **On the Analysis of Mouse Preference Data**—◆Yang Yang, University of Western Ontario; Willard J. Braun, University of Western Ontario

- 3:20 p.m. **Equality of REML and ANOVA Estimators of Variance Components in Unbalanced Models—**  
❖ Shaun Wulff, University of Wyoming
- 3:35 p.m. **Measuring the Mean Squared Error of the EBLUP in Linear Mixed Models—**❖ Jamie McClave Baldwin, Info Tech, Inc.; Ramon Littell, University of Florida

**344** **CC-619**  
● ⊕ **Quality Applications and Approaches—Contributed**

Section on Quality and Productivity, Section on Physical and Engineering Sciences

*Chair(s): Jennifer Van Mullekom, DuPont Quality Management and Technology*

- 2:05 p.m. **Economic Decisionmaking Challenges in Quality Applications—**❖ John Barrett, University of North Alabama
- 2:20 p.m. **Methods of Data Quality—**❖ Thomas Herzog, U.S. Department of Housing and Urban Development; William E. Winkler, U.S. Census Bureau; Fritz J. Scheuren, National Opinion Research Center
- 2:35 p.m. **Quality Techniques in the Mill Benefit Young Trees in the Field—**❖ Bonnie P. Dumas, MeadWestvaco Corporation
- 2:50 p.m. **Interlaboratory Study of DEA Proficiency Test Using RExcel—**❖ Hung-kung Liu, National Institute of Standards and Technology; Adriana Hornikova, National Institute of Standards and Technology
- 3:05 p.m. **Statistical Data Processing of GC-MS Data—**❖ Shiyong Wu, RTI International; Jun Liu, Research Triangle Institute; Robert J. Morris, RTI International; James Raymer, RTI International; Ye Hu, RTI International; Larry Michael, RTI International
- 3:20 p.m. **Dynamic Calibration for Instruments—**❖ Charles Hagwood, National Institute of Standards and Technology
- 3:35 p.m. **Floor Discussion**

## Regular Contributed Posters 2:00 p.m.–3:50 p.m.

**345** **CC-Level 6 East Lobby**  
**Contributed Posters—Contributed**

Section on Physical and Engineering Sciences, Section on Statistics in Epidemiology, Section on Statistics and the Environment, Biopharmaceutical Section, Business and Economics Statistics Section, Section on Statistical Computing, IMS, Section on Survey Research Methods

*Organizer(s): Maura E. Stokes, SAS Institute, Inc.*

*Chair(s): Maura E. Stokes, SAS Institute, Inc.*

### Engineering and physical sciences, chemometrics

- 01 **A Monte Carlo Method To Simulate the Stochastic Behavior of a Field of Forces—**❖ Elizabeth Martinez Gomez, National Autonomous University of Mexico; Hector A. Perez de Tejada Jaime, National Autonomous University of Mexico; Hector J. Durand Manterola, National Autonomous University of Mexico
- 02 **Examples of Estimating Confidence Intervals for the Arithmetic Means of Lognormally Distributed Data from Mixed or Random Effects Linear Models—**  
❖ Stanley Shulman, National Institute for Occupational Safety and Health
- 03 **Statistical Design of Computer Experiments for a 3D Chemical Microanalysis Imaging System—**❖ Juan Soto, National Institute of Standards and Technology; James J. Filliben, National Institute of Standards and Technology; John H. Scott, National Institute of Standards and Technology

### Environmetrics, ecology, agriculture, wildlife management

- 04 **A Study of the Type I and Type II Error Rates of Tests for Species Diversity Based on Shannon and Simpson's Indexes of Diversity—**❖ Lewis VanBrackle, Kennesaw State University; Kristina Corts, Kennesaw State University
- 05 **Projecting the Risk of Future Climate Shifts—**❖ Luis Cid, Universidad de Concepción; David B. Enfield, National Oceanic & Atmospheric Administration

### Experimental design

- 06 **Equivalence of Fractional Factorial Designs—**❖ Tena Katsaounis, The Ohio State University; Angela Dean, The Ohio State University
- 07 **The Oklahoma Oral Health Needs Assessment: Comparison of Sampling Methods Using Monte Carlo Simulations—**❖ Emily Leary, The University of Oklahoma Health Sciences Center

# GENERAL PROGRAM SCHEDULE

◆ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

08 **Design of Experiments for Parameter Estimation in Compartmental Models**—◆ Michael DeVasher, The University of Alabama; J. Michael Hardin, The University of Alabama

## QC, operation research, risk assessment

09 **Validation of the K-Statistic for Accelerometer Data Quality**—◆ James Slaven, National Institute for Occupational Safety and Health; Michael Andre, National Institute for Occupational Safety and Health; John Violanti, SUNY University at Buffalo; Cecil Burchfiel, National Institute for Occupational Safety and Health; Bryan Vila, Washington State University

10 **The Relationship between the T-Square Statistics of a Phase I and Phase II Operation**—◆ John Young, McNeese State University; Robert L. Mason, Southwest Research Institute; Youn-Min Chou, The University of Texas at San Antonio

11 **Number of Replications Required in Control Chart Monte Carlo Simulation Studies**—◆ Jay Schaffer, University of Northern Colorado; Myoung-Jin Kim, University of Northern Colorado

12 **Is Average Run Length a Good Measure of Performance?**—Jay Schaffer, University of Northern Colorado; ◆ Chad Eshelman, University of Northern Colorado

## Spatial statistics, time series, spatio-temporal modeling

13 **A MATLAB Software Implementation for Time-Series Analysis by State-Space Methods**—◆ Jyh-Ying Peng, Academia Sinica; John Aston, Academia Sinica

14 **An Interpolated Periodogram-Based Metric for Comparison of Time Series with Unequal Lengths**—◆ Jorge Caiado, CEMAPRE/ISEG and IPS; Nuno Crato, CEMAPRE/Technical University of Lisbon; Daniel Peña, Universidad Carlos III de Madrid

15 **Recent Developments in Seasonal Adjustment Software at the U.S. Census Bureau**—◆ Brian C. Monsell, U.S. Census Bureau

16 **Elevators as an Excitation Source for Structural Health Monitoring in Buildings**—◆ Jong-ho Baek, University of California, Los Angeles

17 **Predicting Integrals of Transformed Gaussian Random Fields**—◆ Zhengyuan Zhu, The University of North Carolina at Chapel Hill; Alf Harbitz, Institute of Marine Research, Observation Methodology

18 **Analysis of Mixed Frequency Data: a Bayesian Model Averaging Approach**—◆ Gavino Puggioni, Duke University; Abel Rodriguez, Duke University

19 **Data Augmentation within a Conditionally Specified Gaussian Spatial Model**—◆ Brooke Fridley, Mayo Clinic College of Medicine; Philip Dixon, Iowa State University

20 **Spatio-Temporal Precipitation Modeling Based on a Hidden Random Field**—◆ Oleg Makhnin, New Mexico Tech

21 **Real-Time Multivariate Analysis Onboard a Wi-Fi-Controlled Vehicle**—◆ Jason Minter, Sam Houston State University; Cecil Hallum, Sam Houston State University

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## Invited Sessions 4:00 p.m.–5:50 p.m.

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CC-Ballroom 6ABC

### Deming Lecture—Invited

Deming Lectureship Committee, The ASA, ENAR, WVAR, IMS, SSC, Section on Statistical Consulting

*Organizer(s): Lorraine Denby, Avaya Labs Research*

*Chair(s): Lorraine Denby, Avaya Labs Research*

4:05 p.m. **Making Another World: a Holistic Approach to Performance Improvement**—◆ Ronald D. Snee, Tunnell Consulting

5:35 p.m. **Floor Discussion**

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## Invited Sessions 8:00 p.m.–9:30 p.m.

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CC-Ballroom 6ABC

### ASA Presidential Address and Awards—Invited

The ASA

*Organizer(s): Sallie Keller-McNulty, Rice University*

*Chair(s): Fritz J. Scheuren, National Opinion Research Center*

8:00 p.m. **Presentation of Awards**—◆ Fritz J. Scheuren, National Opinion Research Center

8:30 p.m. **From Data to Policy: Scientific Excellence Is Our Future**—◆ Sallie Keller-McNulty, Rice University

9:00 p.m. **Presentation of Founders Awards and New ASA Fellows**—◆ Fritz J. Scheuren, National Opinion Research Center



## WEDNESDAY, AUGUST 9

### Tours

2:00 p.m.–5:00 p.m. CC-Convention Place  
**TR08 - Seattle City Highlights Tour (fee event)**

3:00 p.m.–6:00 p.m. CC-Convention Place  
**TR09 - Lifestyles and Lakes Cruise (fee event)**

### Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. CC-301  
**Committee on Career Development Meeting (closed)**  
*Chair(s): Janice Lent, Research and Innovative Technology Administration*

7:00 a.m.–8:30 a.m. S-Everett  
**ASA/AMATYC Joint Committee Meeting**  
*Chair(s): Robert Del Mas, University of Minnesota*

7:00 a.m.–8:30 a.m. S-Aspen Room  
**Journal of Computational and Graphical Statistics Editorial Board Meeting (closed)**  
*Chair(s): Luke Tierney, University of Iowa*

7:00 a.m.–8:30 a.m. CC-306  
**Friends and Alumni of Brigham Young University Open House/Breakfast**  
*Organizer(s): Del Scott, Brigham Young University*

7:00 a.m.–8:30 a.m. H-Chatham  
**Committee of Representatives to AAAS Business Meeting**  
*Organizer(s): Michael P. Cohen, Bureau of Transportation Statistics*

7:00 a.m.–6:00 p.m. CC-507, CC-508  
**Speaker Work Rooms**

7:00 a.m.–10:00 p.m. CC-Level 4 South Lobby  
**Cyber Center**

7:30 a.m.–9:30 a.m. S-Cedar Room  
**Statistics in Biopharmaceutical Research Advisory Committee (closed)**  
*Chair(s): Karen Kafadar, University of Colorado*

7:30 a.m.–9:30 a.m. S-Douglas Room  
**Sequential Analysis Journal Editorial Board's Breakfast Meeting (closed)**  
*Organizer(s): Nitis Mukhopadhyay, University of Connecticut*

7:30 a.m.–9:30 a.m. S-Spruce Room  
**ASA Engagement with Other Organizations Task Force (closed)**  
*Chair(s): Darryl Downing, GlaxoSmithKline*

7:30 a.m.–4:30 p.m. CC-Level 4 South Lobby  
**JSM Main Registration  
 ASA Membership/Special Assistance Desk**

8:00 a.m.–9:00 a.m. CC-302  
**Noether Award Committee Business Meeting (closed)**  
*Chair(s): Regina Liu, Rutgers University*

8:00 a.m.–2:00 p.m. CC-Exhibit Hall 4A  
**Exhibitor Lounge**

8:00 a.m.–6:00 p.m. CC-Exhibit Hall 4B  
**Career Placement Service**

8:00 a.m.–6:00 p.m. CC-209  
**Amgen Inc. Interview Room (by invitation only)**  
*Organizer(s): Chander Varma, Amgen Inc.*

9:00 a.m.–11:00 a.m. CC-301  
**Committee on Outreach Education (closed)**  
*Chair(s): Wendy Martinez, Office of Naval Research*

9:00 a.m.–11:00 a.m. S-Aspen Room  
**Focus Group To Explore the Introductory Statistics Course (by invitation only)**  
*Organizer(s): Angela Battle, John Wiley & Sons*

9:00 a.m.–11:00 a.m. S-Juniper  
**Council of Sections Publication and Newsletter Editors Meeting**  
*Chair(s): E. Jacquelin Dietz, Meredith College*

9:00 a.m.–2:00 p.m. CC-Exhibit Hall 4A  
**EXPO 2006  
 ASA Communities Booth #101**

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

9:00 a.m.–5:00 p.m. CC-Level 4 South Lobby  
**ASA Marketplace**

9:00 a.m.–5:00 p.m. CC-Level 1  
**Citywide Concierge Center**

11:30 a.m.–2:00 p.m. CC-302  
**Committee on Meetings (closed)**  
*Chair(s): Xiao-Li Meng, Harvard University*

12:00 p.m.–1:30 p.m. S-Cedar Room  
**Noether Award Committee Luncheon (closed)**  
*Chair(s): Regina Liu, Rutgers University*

12:00 p.m.–2:00 p.m. S-Aspen Room  
**Focus Group to Explore the Introductory Statistics Course (by invitation only)**  
*Organizer(s): Angela Battle, John Wiley & Sons*

12:00 p.m.–2:30 p.m. H-Chatham  
**ENAR 2006 Spring Meetings Planning Committee Meeting (by invitation only)**  
*Organizer(s): Kathy Hoskins, ENAR*

12:30 p.m.–1:30 p.m. CC-401  
**Making the Most of Your Degree: Opportunities and Obstacles**  
*Chair(s): Dayanand Naik, Old Dominion University*

2:00 p.m.–8:00 p.m. CC-Exhibit Hall 4A  
**Exhibitor Move Out**

3:00 p.m.–5:00 p.m. S-Aspen Room  
**Focus Group To Explore the Engineering Statistics Course (by invitation only)**  
*Organizer(s): Jennifer Welter, John Wiley & Sons*

4:00 p.m.–6:00 p.m. CC-302  
**ICES III Program Committee (closed)**  
*Chair(s): Eva Elvers, Statistics Sweden*

5:30 p.m.–7:00 p.m. CC-606  
**Section on Statistical Education Business Meeting**  
*Chair(s): Christine Franklin, University of Georgia*

5:45 p.m.–6:45 p.m. CC-603  
**International Chinese Statistical Association (ICSA) Annual Members Meeting**  
*Organizer(s): Ivan Chan, Merck & Co., Inc.*

6:00 p.m.–7:30 p.m. S-Governors Suite  
**JSM 2006 Program Committee/ACCE/COM Reception (by invitation only)**  
*Chair(s): William Smith, American Statistical Association*

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## Continuing Education (Fee Events)

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CE\_31T CC-305

8:30 a.m.–10:15 a.m.  
**Time Series in SPSS: Automatic Model Selection and Outlier Detection**  
 The ASA  
*Instructor(s): Dongping Fang, SPSS Inc.*

CE\_32T CC-304

8:30 a.m.–10:15 a.m.  
**Meta-analysis: Concepts and Applications**  
 The ASA  
*Instructor(s): Michael Borenstein, Biostat, Inc.; Hannah R. Rothstein, Biostat, Inc.*

CE\_33T CC-303

8:30 a.m.–10:15 a.m.  
**Power and Sample Size Analysis Using SAS/STAT Software**  
 The ASA  
*Instructor(s): John Castelloe, SAS Institute, Inc.*

CE\_34T CC-305

10:30 a.m.–12:15 p.m.  
**Introduction to CART: Data Mining with Decision Trees**  
 The ASA  
*Instructor(s): Mikhail Golovnya, Salford Systems*

CE\_35T CC-304

10:30 a.m.–12:15 p.m.  
**Power Analysis: a Simple and Effective Approach**  
 The ASA  
*Instructor(s): Michael Borenstein, Biostat, Inc.*

CE\_36T CC-303

10:30 a.m.–12:15 p.m.  
**Modern Regression Analysis in SAS Software**  
 The ASA  
*Instructor(s): Robert Cohen, SAS Institute, Inc.*

CE\_37T CC-305  
 2:00 p.m.–3:45 p.m.  
**Advances in Data Mining: Jerome Friedman's TreeNet/MART and Leo Breiman's Random Forests**  
 The ASA  
*Instructor(s): Mikhail Golovnya, Salford Systems*

CE\_40T CC-305  
 4:00 p.m.–5:45 p.m.  
**Introduction to MARS: Predictive Modeling with Nonlinear Automated Regression Tools**  
 The ASA  
*Instructor(s): Mikhail Golovnya, Salford Systems*

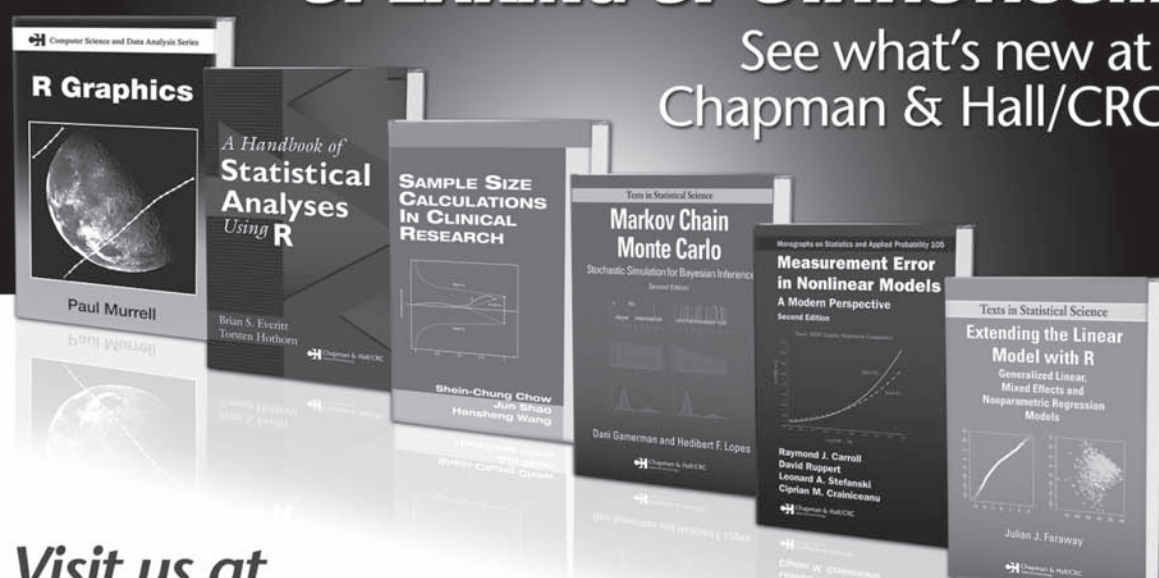
CE\_38T CC-304  
 2:00 p.m.–3:45 p.m.  
**East 4: a Comprehensive Package for Adaptive and Group Sequential Design, Interim Monitoring, and Simulation**  
 The ASA  
*Instructor(s): Cyrus Mehta, Cytel Inc.*

CE\_41T CC-303  
 4:00 p.m.–5:45 p.m.  
**From Software to Solutions in Statistics and Risk Analysis**  
 The ASA  
*Instructor(s): Shawn Harahush, Palisade Corporation*


CE\_39T CC-303  
 2:00 p.m.–3:45 p.m.  
**Quantile Regression Using the SAS QUANTREG Procedure**  
 The ASA  
*Instructor(s): Colin Chen, SAS Institute, Inc.*

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# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

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## Roundtables with Coffee 7:00 a.m.–8:15 a.m.

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### 348 CC-4C-1 Section on Bayesian Statistical Science Roundtable with Coffee (fee event)

Section on Bayesian Statistical Science

*Organizer(s): Merlise Clyde, Duke University*

- WL01 Model Selection in Hierarchical Models—◆David B. Dunson, National Institute of Environmental Health Sciences

### 349 CC-4C-1 Section on Statistical Education Roundtable with Coffee (fee event)

Section on Statistical Education

*Organizer(s): Patti Collings, Brigham Young University*

- WL02 An Open Discussion about Quantitative and Qualitative Research in Statistics Education—◆Jackie Miller, The Ohio State University

### 350 CC-4C-1 Section on Statistics and the Environment Roundtables with Coffee (fee event)

Section on Statistics and the Environment

*Organizer(s): Peter Guttorp, University of Washington*

- WL03 Keeping Our Jobs: Relevance of Statistical Research in a Production Environment—◆Gretchen Moisen, U.S. Forest Service
- WL04 Current Issues in Space-Time Modeling of Environmental Data—◆Montserrat Fuentes, North Carolina State University

### 351 CC-4C-1 Section on Statistics in Epidemiology Roundtable with Coffee (fee event)

Section on Statistics in Epidemiology, Section on Statistical Consulting

*Organizer(s): Jennifer Clark Nelson, Group Health Cooperative*

- WL05 Developing and Cultivating Successful Collaborations—◆Robert F. Woolson, Medical University of South Carolina

### 352 CC-4C-1 Section on Physical and Engineering Sciences Roundtable with Coffee (fee event)

Section on Physical and Engineering Sciences

*Organizer(s): Winson Taam, The Boeing Company*

- WL06 Catching up on Wavelets: Recent Advances, Future Directions—◆Donald B. Percival, University of Washington

### 353 CC-4C-1 Statistical Society of Canada Roundtable with Coffee (fee event)

SSC, Section on Statistical Consulting

*Organizer(s): X. Joan Hu, Simon Fraser University*

- WL07 Tips for Academic Medical Statisticians—◆Karen Kopciuk, Alberta Cancer Board; Rhonda Rosychuk, University of Alberta

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## Special Presentation 8:30 a.m.–10:20 a.m.

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### 354 CC-400 Late-Breaking Session #2: What Is the Role of Statistics in Public Policy Debates about Climate Change?—Other

The ASA, ENAR, IMS, SSC, WNAS

*Organizer(s): Edward Wegman, George Mason University; Richard L. Smith, The University of North Carolina at Chapel Hill*

*Chair(s): Douglas W. Nychka, National Center for Atmospheric Research*

- 8:40 a.m. **The Kyoto Accord, the 2001 IPCC Third Assessment Report, and the Academic Papers Underpinning Them**—◆Edward Wegman, George Mason University
- 9:05 a.m. **National Research Council Report on the 'Hockey Stick Controversy'**—◆J. Michael Wallace, University of Washington
- 9:30 a.m. **The CCSP Report on Temperature Trends in the Lower Atmosphere**—◆Richard L. Smith, The University of North Carolina at Chapel Hill
- 9:55 a.m. **Floor Discussion**



### 355 CC-4C-4 Introductory Overview Lectures: Image Statistics and Bootstrap—Other

The ASA, ENAR, IMS, SSC, WNAR

*Organizer(s): Jianwen Cai, The University of North Carolina at Chapel Hill*

*Chair(s): Chris Fraley, Insightful Corporation*

8:35 a.m. **Introduction to Bootstrapping**—❖ Tim C. Hesterberg, Insightful Corporation

9:25 a.m. **Image Statistics**—❖ Eugene Demidenko, Dartmouth Medical School

10:15 a.m. **Floor Discussion**

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### Invited Sessions 8:30 a.m.–10:20 a.m.

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### 356 CC-614 Estimation and Inference for Models with Many Parameters—Invited

Business and Economics Statistics Section

*Organizer(s): Robert J. Kohn, University of New South Wales*

*Chair(s): Thomas S. Shively, The University of Texas at Austin*

8:35 a.m. **Objective Bayesian Analysis for Multivariate Dynamic Models**—❖ Dongchu Sun, Virginia Polytechnic Institute and State University/ University of Missouri-Columbia; Shawn Ni, University of Missouri-Columbia

9:00 a.m. **Bayesian Inference for Gaussian Copula Models**—❖ Robert J. Kohn, University of New South Wales

9:25 a.m. **Spatial Bayesian Variable Selection with Application to Functional Magnetic Resonance Imaging**—❖ Michael Smith, University of Sydney; Daniel Smith, University of Sydney

9:50 a.m. **Statistical Inference for Highly Parameterized Models for Discrete-Valued Data**—❖ Sylvia Frühwirth-Schnatter, Johannes Kepler University

10:15 a.m. **Floor Discussion**

### 357 CC-203 ● ⊕ **Statistical Models in Computational Biology—Invited**

WNAR, Biometrics Section, ENAR

*Organizer(s): Raquel Prado, University of California, Santa Cruz*

*Chair(s): Daniel Merl, University of California, Santa Cruz*

8:35 a.m. **Spatial Smoothing To Map HIV Recombination Hotspots: Associations with RNA Secondary**

**Structure**—❖ Marc A. Suchard, University of California, Los Angeles; Vladimir N. Minin, University of California, Los Angeles; Karin S. Dorman, Iowa State University

8:55 a.m. **Computational and Statistical Algorithms for Parentage Inference with Single Nucleotide Polymorphisms**—❖ Eric C. Anderson, Southwest Fisheries Science Center

9:15 a.m. **Detecting Positive Selection in Protein-Coding DNA Sequences in Absence of Substantial Phylogenetic Information**—❖ Raquel Prado, University of California, Santa Cruz; Daniel Merl, University of California, Santa Cruz

9:35 a.m. **Inferring Maximum-Likelihood Species Phylogenies under Coalescence**—❖ Laura S. Kubatko, University of New Mexico

9:55 a.m. **A Bayesian Approach to Gene Tree Concordance**—❖ Bret Larget, University of Wisconsin-Madison

10:15 a.m. **Floor Discussion**

### 358 CC-201 ● **Complex Sampling Designs and Related Inference Issues in Epidemiologic Studies— Invited**

Section on Statistics in Epidemiology

*Organizer(s): Bhramar Mukherjee, University of Florida*

*Chair(s): Malay Ghosh, University of Florida*

8:35 a.m. **Complex Case-Control Sampling Methods: Solutions to Some Diverse Problems in Epidemiological Research**—❖ Bryan Langholz, Keck School of Medicine of USC

9:00 a.m. **Confounding of Genetic Association Studies by Population Structure**—❖ Alice S. Whittemore, Stanford University

9:25 a.m. **Case-Control Studies of Gene-Environment Interaction: a Bayesian Approach**—❖ Bhramar Mukherjee, University of Florida; Li Zhang, University of Florida; Malay Ghosh, University of Florida

9:50 a.m. **Disc:** Peter Kraft, Harvard University

10:10 a.m. **Floor Discussion**

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 359** **● Rare Trait Inference—Invited** **CC-602**
- Section on Survey Research Methods  
*Organizer(s): Myron J. Katzoff, National Center for Health Statistics*  
*Chair(s): Myron J. Katzoff, National Center for Health Statistics*
- 8:35 a.m. Network Sampling: a Potential Tool for Survey Estimates about Rare Populations—**◆ Iris M. Shimizu, National Center for Health Statistics; Monroe G. Sirken, National Center for Health Statistics
- 9:00 a.m. Design and Likelihood-Based Inference for Sample Surveys on Rare Traits—**◆ Steve Thompson, Simon Fraser University
- 9:25 a.m. Testing Logistic Regression Coefficients with Clustered Data and Few Positive Outcomes—**◆ Sally Hunsberger, National Cancer Institute; Barry I. Graubard, National Cancer Institute; Edward Korn, National Cancer Institute
- 9:50 a.m. Analytic Issues for Rare Events in the NHANES Survey—**◆ Lester R. Curtin, Centers for Disease Control and Prevention
- 10:15 a.m. Floor Discussion**
- 360** **● ⊕ New Directions in Statistical Machine Learning—Invited** **CC-612**
- Section on Statistical Computing, Section on Statisticians in Defense and National Security, Section on Nonparametric Statistics  
*Organizer(s): Yufeng Liu, The University of North Carolina at Chapel Hill*  
*Chair(s): Yufeng Liu, The University of North Carolina at Chapel Hill*
- 8:35 a.m. Margin-Based, Semisupervised Learning—**Junhui Wang, University of Minnesota; ◆ Xiaotong Shen, University of Minnesota
- 9:05 a.m. Classification and Feature Selection for High-Dimensional Data—**◆ Hao Zhang, North Carolina State University
- 9:35 a.m. Bias and Variance of Bagging Based on Subsampling with and without Replacement—**◆ Andreas Buja, University of Pennsylvania
- 10:05 a.m. Floor Discussion**
- 361** **● Causal Inference and the Estimation of Neighborhood Health Effects—Invited** **CC-607**
- Section on Health Policy Statistics, Biometrics Section  
*Organizer(s): Bob Gerzoff, Centers for Disease Control and Prevention*  
*Chair(s): Bob Gerzoff, Centers for Disease Control and Prevention*
- 8:35 a.m. The (Mis)estimation of Neighborhood Effects: Identification Problems and the Multilevel Model—**◆ J. Michael Oakes, University of Minnesota
- 9:00 a.m. Response to 'The (Mis)estimation of Neighborhood Effects'—**◆ Jay S. Kaufman, The University of North Carolina at Chapel Hill
- 9:25 a.m. Forming Better Guesses about Neighborhood Effects on Health—**◆ Brian Krauth, Simon Fraser University
- 9:50 a.m. Causal Diagrams To Express Identification of Place Effects Using Multilevel Models—**◆ M. Maria Glymour, Harvard School of Public Health; S. V. Subramanian, Harvard School of Public Health
- 10:15 a.m. Floor Discussion**
- 362** **⊕ Detecting Anomalies in Dynamic Multivariate Data—Invited** **CC-401**
- Section on Statisticians in Defense and National Security, Section on Physical and Engineering Sciences, Section on Statistical Graphics  
*Organizer(s): Deepak K. Agarwal, AT&T Labs-Research*  
*Chair(s): Chuanhai Liu, Purdue University*
- 8:35 a.m. Aggregation Queries at Streaming Speeds—**◆ Divesh Srivastava, AT&T Labs-Research
- 9:00 a.m. Dynamic Thresholds: Monitoring Streams of Counts Online—**◆ Diane Lambert, Google, Inc.; Chuanhai Liu, Purdue University
- 9:25 a.m. Monitoring Massive Streams Simultaneously: a Holistic Approach—**◆ Deepak K. Agarwal, AT&T Labs-Research
- 9:50 a.m. Two-Dimensional Variable Window Scan Statistics—**◆ Joseph Glaz, University of Connecticut
- 10:15 a.m. Floor Discussion**

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# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

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CC-617

## ● Design and Analysis of Experiments for Complex Computer Simulators—Invited

Section on Physical and Engineering Sciences

Organizer(s): Derek Bingham, Simon Fraser University

Chair(s): Derek Bingham, Simon Fraser University

8:35 a.m. **Designs for Integrated Computer and Physical Experiments**—❖ C. Shane Reese, Brigham Young University; Derek Bingham, Simon Fraser University; Wilson Lu, Simon Fraser University

9:05 a.m. **Sequential Experiment Design for Contour Estimation from Complex Computer Codes**—❖ Pritam Ranjan, Simon Fraser University

9:35 a.m. **Uncertainty Quantification for Combining Experimental Data and Computer Simulations from Multiple Data Sources**—❖ Brian J. Williams, Los Alamos National Laboratory; Dave Higdon, Los Alamos National Laboratory; Jim Gattiker, Los Alamos National Laboratory

10:05 a.m. **Floor Discussion**

## Invited Panels 8:30 a.m.–10:20 a.m.

364

CC-206

## ● Status of Disability Information in Surveys—Invited

Committee on Statistics and Disability

Organizer(s): Michele Connolly, U.S. Social Security Administration

Chair(s): Michele Connolly, U.S. Social Security Administration

**Panelists:** ❖ Susan Schechter, Office of Management and Budget  
❖ Jennifer Madans, National Center for Health Statistics  
❖ Martin Gould, National Council for Disability  
❖ Philip Rones, Bureau of Labor Statistics  
❖ Mary Grace Kovar, National Opinion Research Center

10:15 a.m. **Floor Discussion**

365

CC-3B

## National Science Foundation Invited Session—Invited

National Science Foundation, Section on Statistical Education

Organizer(s): Grace Yang, National Science Foundation

Chair(s): Grace Yang, National Science Foundation

**Panelists:** ❖ Cheryl Eavey, National Science Foundation  
❖ Dean Evasius, National Science Foundation  
❖ Wen C. Masters, National Science Foundation  
❖ Ronald S. Fecso, National Science Foundation

10:15 a.m. **Floor Discussion**

## Topic-Contributed Sessions

8:30 a.m.–10:20 a.m.

366

CC-618

## ⊕ Sparse Inference and Multiple Comparisons—Topic-Contributed

IMS

Organizer(s): Jiashun Jin, Purdue University

Chair(s): Pei Wang, Fred Hutchinson Cancer Research Center

8:35 a.m. **False Discovery Rates for Spatial Signals**—❖ Ruth Heller, Tel-Aviv University; Yoav Benjamini, Tel-Aviv University

8:55 a.m. **Large Dimensional Covariance Matrix Estimation Using a Factor Model**—❖ Jinchi Lv, Princeton University

9:15 a.m. **A Bayesian Approach for Incomplete Paired Data**—❖ Feng Liang, Duke University; Woncheol Jang, Duke University; Fei Liu, Duke University

9:35 a.m. **Quantile Coupling for Median and Its Application to Nonparametric Robust Estimation**—❖ Harrison Zhou, Yale University

9:55 a.m. **Sparse Principal Component Analysis**—❖ Hui Zou, University of Minnesota

10:15 a.m. **Floor Discussion**

367

CC-2B

## Adaptive Dose Response—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

Organizer(s): Jose Pinheiro, Novartis Pharmaceuticals Corporation

Chair(s): Jeffrey Maca, Novartis Pharmaceuticals Corporation

8:35 a.m. **Implementing Bayesian Adaptive Dose-Response Finding Studies: a Clinical Perspective**—❖ Michael Krams

8:55 a.m. **Adaptive Dose-Response Phase II Trials for Clinical Development**—❖ Qing Liu, Johnson & Johnson

9:15 a.m. **Evaluating Rolling Dose Designs and Methods**—❖ Amit Roy, Bristol-Myers Squibb Company; Frank Shen, Bristol-Myers Squibb Company



- 9:35 a.m. Disc: Greg Enas, Eli Lilly and Company
- 9:55 a.m. Disc: Jerald Schindler, Cytel Inc.
- 10:15 a.m. Floor Discussion

## 368 CC-2A Biomarker—Topic-Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

*Organizer(s): Viswanath Devanarayan, Merck Research Laboratories*

*Chair(s): Christopher Tong, Merck Research Laboratories*

- 8:35 a.m. **Biomarker Analysis of Medical Imaging and Radiotelemetry Signals**—❖ Christopher Tong, Merck Research Laboratories; Yevgen Tymofyeyev, Merck Research Laboratories; Karim Azer, Merck Research Laboratories; Philip E. Brandish, Merck Research Laboratories; Hongxing Chen, Merck Research Laboratories; James C. Hershey, Merck Research Laboratories; Matthew Walker, III, Merck Research Laboratories; Barry R. Campbell, Merck Research Laboratories; Kaijie Fang, Merck Research Laboratories; Donald S. Williams, Merck Research Laboratories; Alexandre Coimbra, Merck Research Laboratories
- 8:55 a.m. **Statistical Considerations for Protein Biomarker Discovery from Human Plasma and Cerebrospinal Fluid**—❖ Richard Higgs, Eli Lilly and Company
- 9:15 a.m. **Model Selection and Cross-Validation for Biomarker Discovery and Validation**—❖ Annette Molinaro, Yale University School of Medicine
- 9:35 a.m. **Application of RandomForest as a Variable Selection Tool on Biomarker Data**—❖ Katja Remlinger, GlaxoSmithKline
- 9:55 a.m. Floor Discussion

## 369 CC-615 ● Ranked Set Sampling II—Topic-Contributed

Section on Nonparametric Statistics

*Organizer(s): Omer Ozturk, The Ohio State University*

*Chair(s): Omer Ozturk, The Ohio State University*

- 8:35 a.m. **Confidence Intervals for Quantiles Based on Ranked Set Samples**—❖ Tao Li, St. Francis Xavier University; Narayanaswamy Balakrishnan, McMaster University
- 8:55 a.m. **Missing Data and Consequences in Ranked Set Sampling**—❖ Jessica Kohlschmidt, The Ohio State University; Elizabeth Stasny, The Ohio

State University; Douglas Wolfe, The Ohio State University

- 9:15 a.m. **Ranked Set Sampling for Ordered Categorical Variables**—❖ Haiying Chen, Wake Forest University; Elizabeth Stasny, The Ohio State University; Douglas Wolfe, The Ohio State University
- 9:35 a.m. **Order-Restricted, Randomized Designs for Linear Models Using L1 Norm**—❖ Shannon Markiewicz, The Ohio State University; Omer Ozturk, The Ohio State University
- 9:50 a.m. **Two-Sample, Ranked-Sum Test for Order-Restricted Randomized Designs**—❖ Yiping Sun, The Ohio State University; Omer Ozturk, The Ohio State University
- 10:15 a.m. Floor Discussion

## 370 CC-604 From Policy to Application: a Health and Mortality Case Study—Topic-Contributed

Section on Government Statistics

*Organizer(s): Wendy Alvey, U.S. Census Bureau; Norman Johnson, U.S. Census Bureau*

*Chair(s): Paul D. Sorlie, National Heart, Lung, and Blood Institute/NIH*

- 8:35 a.m. **The National Longitudinal Mortality Study**—❖ Norman Johnson, U.S. Census Bureau
- 8:55 a.m. **The National Death Index: an Overview**—❖ Robert Bilgrad, National Center for Health Statistics
- 9:15 a.m. **The NLMS: Data Stewardship Policies at Work**—❖ Wendy Alvey, U.S. Census Bureau
- 9:35 a.m. **U.S. Census Bureau Administrative Record Data Stewardship Policies for Administrative Records Use**—❖ Patricia Melvin, U.S. Census Bureau
- 9:55 a.m. Disc: Daniel J. Wilson, Federal Reserve Bank of San Francisco
- 10:15 a.m. Floor Discussion

## 371 CC-619 ● Visual Sampling Plan Software for Designing Environmental Sampling Plans for Chem/Bio/Rad and Munitions Contamination—Topic-Contributed

Section on Statistics and the Environment

*Organizer(s): Richard Gilbert, Pacific Northwest National Laboratory*

*Chair(s): Richard Gilbert, Pacific Northwest National Laboratory*

- 8:35 a.m. **Visual Sample Plan (VSP) Software: What Is It, and How To Use It?**—❖ John Wilson, Pacific

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⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

Northwest National Laboratory; Lisa Nuffer, Pacific Northwest National Laboratory; Brent A. Pulsipher, Battelle-PNNL

- 8:55 a.m. **Sampling Designs for Surfaces within Buildings—**  
◆ Brett D. Matzke, Battelle-PNNL; Brent A. Pulsipher, Battelle-PNNL; John Wilson, Pacific Northwest National Laboratory; Richard Gilbert, Pacific Northwest National Laboratory; Lisa Nuffer, Pacific Northwest National Laboratory; Nancy Hassig, Pacific Northwest National Laboratory; John Hathaway, Battelle-PNNL

- 9:15 a.m. **Geophysical Survey Designs To Aid the Identification and Remediation of Ordnance-Related Contaminants—**◆ John Hathaway, Battelle-PNNL; Brent A. Pulsipher, Battelle-PNNL; John Wilson, Pacific Northwest National Laboratory; Richard Gilbert, Pacific Northwest National Laboratory; Brett D. Matzke, Battelle-PNNL

- 9:35 a.m. **A Practical Application of VSP to an Environmental Question: Abraham's Creek—**  
◆ Kelly Black, Neptune & Company; Michele Wolf, Neptune & Company  
Disc: Nagaraj Neerchal, University of Maryland Baltimore County

- 9:55 a.m. **Floor Discussion**

## 372 CC-310 ● ⊛ **Statistics in the Aerospace Industry: Human Factor Studies—Topic-Contributed**

Biometrics Section, Section on Statisticians in Defense and National Security, Section on Physical and Engineering Sciences

*Organizer(s): I-Li Lu, The Boeing Company*

*Chair(s): Winson Taam, The Boeing Company*

- 8:35 a.m. **Using Statistical Methods in the Design of the 787 Cabin Environment—**◆ Martin Meckesheimer, The Boeing Company
- 8:55 a.m. **Predicted Arterial Oxygenation at Commercial Aircraft Cabin Altitudes—**◆ Mike Muhm, The Boeing Company
- 9:15 a.m. **Protocol Development of the Cabin Altitude Study—**◆ Dianne McMullin, The Boeing Company; Mike Muhm, The Boeing Company; Stephen P. Jones, The Boeing Company; I-Li Lu, The Boeing Company; Paul Rock, Oklahoma State University
- 9:35 a.m. **Statistical Methods in Cabin Altitude Study—**  
◆ Stephen P. Jones, The Boeing Company

- 9:55 a.m. **Applications of Structural Equation Models: Case Studies in Biomedical and Aerospace Engineering Research—**◆ I-Li Lu, The Boeing Company

- 10:15 a.m. **Floor Discussion**

## 373 CC-603 ● ⊛ **Medical Expenditures: Data Collection, Estimation, and Evaluations—Topic-Contributed**

Section on Survey Research Methods, Section on Health Policy Statistics, Biometrics Section, ENAR

*Organizer(s): Trena Ezzati-Rice, Agency for Healthcare Research and Quality*

*Chair(s): Steven B. Cohen, Agency for Healthcare Research and Quality*

- 8:35 a.m. **Evaluation of the Completeness of Household Reports of Medical Expenditures for Visits to Physician Offices—**Steven R. Machlin, Agency for Healthcare Research and Quality; ◆ Diana Wobus, Westat; David Kashihara, Agency for Healthcare Research and Quality
- 8:55 a.m. **Evaluation of the Accuracy of Household Reports of Medical Expenditures for Visits to Physician Offices—**Steven R. Machlin, Agency for Healthcare Research and Quality; ◆ David Kashihara, Agency for Healthcare Research and Quality; Diana Wobus, Westat
- 9:15 a.m. **The Impact of Medical Expenditure Predictors in MEPS Nonresponse Adjustments—**  
◆ Lap-Ming Wun, Agency for Healthcare Research and Quality; Trena Ezzati-Rice, Agency for Healthcare Research and Quality; Steven B. Cohen, Agency for Healthcare Research and Quality; William Yu, Agency for Healthcare Research and Quality
- 9:35 a.m. **Evaluation of Expenditure Estimates When Including a High-Expenditure Predictor in Nonresponse Adjustments—**Lap-Ming Wun, Agency for Healthcare Research and Quality; Steven B. Cohen, Agency for Healthcare Research and Quality; ◆ Trena Ezzati-Rice, Agency for Healthcare Research and Quality; William Yu, Agency for Healthcare Research and Quality
- 9:55 a.m. **Approximation of Skewed Health Care Expenditure Distribution Using a Mixture Model—**◆ William Yu, Agency for Healthcare Research and Quality
- 10:15 a.m. **Floor Discussion**





# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 374 CC-205 ⊛ **Analyses of Studies Using Biomarkers—Topic-Contributed**

Section on Statistics in Epidemiology, Biometrics Section, ENAR

*Organizer(s): Estelle Russek-Cohen, U.S. Food and Drug Administration*

*Chair(s): Alex Bajamonde, Genentech, Inc.*

8:35 a.m. **Array Spatial Variability and Normalization Techniques for Microarray Gene Expression Signals**—❖ Samir Lababidi, U.S. Food and Drug Administration; Daya Ranamukhaarachchi, U.S. Food and Drug Administration

8:55 a.m. **Statistical Issues in Incorporating and Testing Biomarkers in Clinical Trials**—❖ Daniel Sargent, Mayo Clinic College of Medicine; Sumithra Mandrekar, Mayo Clinic College of Medicine

9:15 a.m. **Statistical Design and Multiple Testing Analysis of Microarray**—❖ Jane Chang, Bowling Green State University; Jason Hsu, The Ohio State University

9:35 a.m. **Prediction Modeling Using Survival Data for Gene Expression Prognostic Test for Breast Cancer**—❖ Kit Lau, Celera Diagnostics; Alice Wang, Celera Diagnostics; John Sninsky, Celera Diagnostics; Trevor Hastie, Stanford University

9:55 a.m. Disc: Estelle Russek-Cohen, U.S. Food and Drug Administration

10:05 a.m. Floor Discussion

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## Topic-Contributed Panels 8:30 a.m.–10:20 a.m.

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## 375 CC-606 ● ⊛ **What Is Feminist Statistics?—Topic-Contributed**

Social Statistics Section, Caucus for Women in Statistics, Section on Government Statistics, Section on Statistical Education

*Organizer(s): Mary W. Gray, American University*

*Chair(s): Mary W. Gray, American University*

**Panelists:** ❖ Martha Aliaga, American Statistical Association  
❖ Arlene Ash, Boston University  
❖ Eduardas Valaitis, American University

10:15 a.m. Floor Discussion

## 376 CC-609 ● **Mentoring Statisticians—Topic-Contributed**

Section on Statistical Education, Committee on Career Development

*Organizer(s): Snehalata Huzurbazar, University of Wyoming*

*Chair(s): Snehalata Huzurbazar, University of Wyoming*

**Panelists:** ❖ Amy Froelich, Iowa State University  
❖ Sastry Pantula, North Carolina State University  
❖ Sally C. Morton, RTI International  
❖ Cynthia Clark, U.K. Office for National Statistics  
❖ Ronald Menton, Wyeth Research

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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## 377 CC-309 ● **Capture-Recapture and Other Problems in Environmental and Ecological Statistics—Contributed**

Biometrics Section, ENAR

*Chair(s): Linda Young, University of Florida*

8:35 a.m. **Semiparametric Models for Capture-Recapture Experiments with Behavioral Response**—  
❖ Wen-Han Hwang, Feng Chia University;  
Richard Huggins, University of Melbourne

8:50 a.m. **Population Estimation for Noninvasive Trapping**—❖ Emily Murphree, Miami University

9:05 a.m. **Assessing Similarity of Two Assemblages with Unseen Species in Samples**—❖ Tsung-Jen Shen, National Chung Hsing University; Anne Chao, National Tsing Hua University; Robin L. Chazdon, University of Connecticut; Robert L. Colwell, University of Connecticut

9:20 a.m. **Estimating the Species Richness by a Poisson-Compound Gamma Model**—❖ Ji-Ping Wang, Northwestern University

9:35 a.m. **Mixtures of Exponential Distributions To Describe the Distribution of Poisson Means in Estimating the Number of Unobserved Classes**—  
❖ Kathryn Barger, Cornell University

9:50 a.m. **Principle Component Analysis as a Statistical Tool To Investigate the Role of Specific Habitat Variables in Lyme Disease Ecology**—❖ Haiyan Chen, Dana-Farber Cancer Institute

10:05 a.m. Floor Discussion



## 378 CC-308 ● Models for Multivariate (Longitudinal) Data—Contributed

Biometrics Section, ENAR

*Chair(s): Armando Teixeira-Pinto, Harvard School of Public Health*

**8:35 a.m. Alternative Structural Models for Analyzing Multivariate Longitudinal Data**—❖ Feng Gao, Washington University School of Medicine; Paul Thompson, Washington University School of Medicine; Chengjie Xiong, Washington University School of Medicine; J. Philip Miller, Washington University School of Medicine

**8:50 a.m. Unconstrained Models for the Covariance Structure of Multivariate Longitudinal Data**—❖ Chulmin Kim, University of Minnesota, Morris; Dale Zimmerman, The University of Iowa

**9:05 a.m. Multilevel Flexible Models for Mixed Longitudinal Data**—❖ Nuoo-Ting Molitor, University of Southern California; Kiros Berhane, University of Southern California

**9:20 a.m. Conditional Estimation for Joint Models for a Primary Endpoint and Multivariate Longitudinal Data**—❖ Erning Li, Texas A&M University; Naisyin Wang, Texas A&M University; Nae-Yuh Wang, The Johns Hopkins University School of Medicine

**9:35 a.m. A Bayesian Approach to Modeling Associations between Pulsatile Hormones**—❖ Nichole Carlson, Oregon Health & Science University; Timothy D. Johnson, University of Michigan; Morton B. Brown, University of Michigan

**9:50 a.m. Floor Discussion**

## 379 CC-608 ● Robust Solutions—Contributed

Business and Economics Statistics Section

*Chair(s): Michael Sverchkov, Bureau of Labor Statistics/BAE Systems IT*

**8:35 a.m. On Robust Forecasting in Dynamic Vector Time Series Models**—❖ Pierre Duchesne, Université de Montréal; Christian Gagné, Université de Montréal

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# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 8:50 a.m. **A Test of the Modality of the Variance Function in Modulated Autoregressive Models**—◆Gabe Chandler, Connecticut College
- 9:05 a.m. **Multiple Imputation of Right-Censored Data: an Application to Wage Data and Understanding the Changing Wage Gap by Gender in Germany**—◆Hermann Gartner, Institute for Employment Research
- 9:20 a.m. **A New Approach to Univariate Unit Root Tests Robust to Structural Change**—◆Seong-Tae Kim, North Carolina State University
- 9:35 a.m. **Testing for Threshold Moving Average with Conditional Heteroscedasticity**—◆Guodong Li, The University of Hong Kong; Wai K. Li, The University of Hong Kong
- 9:50 a.m. **A New Approach for Calculating Sample Size To Detect Desired Difference between Treatment Groups with Intended Power**—◆Seemit Sheth, Capital One Financial Corporation
- 10:05 a.m. **Competitiveness Analysis of the Italian Firms: Use of Robust Classification Methods**—◆Matilde Bini, University of Florence; Luigi Biggeri, Italian National Statistical Institute

## 380 CC-204 ● Flexible Methods for Longitudinal Data—Contributed

ENAR, Biometrics Section

*Chair(s): Andres Houseman, Harvard School of Public Health*

- 8:35 a.m. **Efficient Estimation in Semiparametric Generalized Linear Model for Longitudinal Data**—◆Lu Wang, Harvard University; Xihong Lin, Harvard School of Public Health; Andrea Rotnitzky, Harvard University
- 8:50 a.m. **Varying-Coefficient Model with Unknown within-Subject Covariance for the Analysis of Tumor Growth Curves**—◆Robert Krafty, University of Pennsylvania; Wensheng Guo, University of Pennsylvania; Phyllis Gimotty, University of Pennsylvania; George Coukos, University of Pennsylvania
- 9:05 a.m. **Modeling Plasma HIV Viral Load by a Piecewise Polynomial Linear Mixed Model**—◆Hsiao-Chuan Tien, The University of North Carolina at Chapel Hill; Pai-Lien Chen, Family Health International
- 9:20 a.m. **Nonparametric Inference in the Heteroscedastic Two-Way Random Effects Model Based on Ranks**—◆Zhe Shang, Wyeth Research

- 9:35 a.m. **Marginal Regression Modeling under Irregular, Biased Sampling**—◆Petra Buzkova, The University of North Carolina at Chapel Hill; Thomas Lumley, University of Washington
- 9:50 a.m. **Projected Multivariate Linear Mixed-Effects Models for Clustered Angular Data**—◆Daniel Hall, University of Georgia; Lewis Jordan, University of Georgia; Jinae Lee, University of Georgia
- 10:05 a.m. **Optimal Estimators from Generalized Estimating Equations (GEE) for Longitudinal Data**—◆Ioana Schiopu-Kratina, Statistics Canada; Raluca M. Balan, University of Ottawa

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CC-3A

### ● Survival, Time to Event—Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

*Chair(s): B. Christine Clark, ICON Clinical Research*

- 8:35 a.m. **Predicting Time of Completion in Multiphase Survival Trials**—◆Dennis Sweitzer, AstraZeneca Pharmaceuticals
- 8:50 a.m. **Power Calculation for Log-Rank Test under a Nonproportional Hazards Model**—◆Daowen Zhang, sanofi-aventis; Hui Quan, sanofi-aventis
- 9:05 a.m. **Use of Life Tables To Extrapolate Survival from Clinical Trial Data**—◆W. J. Hall, University of Rochester Medical Center; Hongyue Wang, University of Rochester Medical Center
- 9:20 a.m. **Analyzing Change in Hazard for Time-to-Event Endpoints in Clinical Trials**—◆Rafia Bhore, U.S. Food and Drug Administration; Sandra Gardner, Sunnybrook Health Sciences Centre
- 9:35 a.m. **Time to Rescue as a Surrogate Endpoint for Analgesic Efficacy in Acute Pain Studies**—◆Julia Wang, Johnson & Johnson Pharmaceutical R&D; Akiko Okamoto, Johnson & Johnson Pharmaceutical R&D; Surya Mohanty, Johnson & Johnson Pharmaceutical R&D
- 9:50 a.m. **On Analysis of Time to Progression**—◆Zhiping Sun, Merck & Co., Inc.; Cong Chen, Merck & Co., Inc.
- 10:05 a.m. **Testing for Change-Points in Waiting Time Distributions**—◆Thomas Hammerstrom, U.S. Food and Drug Administration; Rafia Bhore, U.S. Food and Drug Administration

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CC-307

● **Clustering and Classification—Contributed**

Biometrics Section, ENAR

*Chair(s): David B. Hitchcock, University of South Carolina*

- 8:35 a.m. **Classification by Ensembles from Random Partitions of High-Dimensional Genomic Data**—✦Hojin Moon, U.S. Food and Drug Administration; Hongshik Ahn, Stony Brook University; James J. Chen, U.S. Food and Drug Administration; Ralph L. Kodell, U.S. Food and Drug Administration
- 8:50 a.m. **Ensemble Methods for Classifying an Ordinal Response**—✦Kellie J. Archer, Virginia Commonwealth University
- 9:05 a.m. **Tree-Based Integration of One-versus-Some Classifiers for Multiclass Classification**—✦Yuejing Ding, Columbia University; Tian Zheng, Columbia University
- 9:20 a.m. **Clustering Genes in Genetical Genomics Experiments**—✦Joshua Sampson, University of Washington; Steve Self, University of Washington
- 9:35 a.m. **A Divisive Method via Multivariate Hypothesis Testing for Clustering Gene Expression Patterns**—✦Haiyan Wang, Kansas State University
- 9:50 a.m. **On Comparing the Clustering of Regression Models Method with K-Means Clustering**—✦Li-Xuan Qin, Memorial Sloan-Kettering Cancer Center; Steve Self, University of Washington
- 10:05 a.m. **Floor Discussion**

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CC-616

● **Clustering—Contributed**

Section on Statistical Computing, Section on Nonparametric Statistics

*Chair(s): Guei-Feng Tsai, Northwestern University*

- 8:35 a.m. **Clustering by Intersection-Merging**—✦Qunhua Li, University of Washington; Marina Meila, University of Washington
- 8:50 a.m. **Strategies for Scaling and Weighting Variables in Cluster Analysis**—✦Srinivas Maloor, Rutgers University; Ramanathan Gnanadesikan, Rutgers University; Jon Kettenring, Drew University
- 9:05 a.m. **Model-Based Projection Pursuit Clustering**—✦Jie Ding, GlaxoSmithKline

- 9:20 a.m. **Estimating the Number of Data Clusters via Agreement Measure-Based Statistics**—✦Heng Liu, University of Illinois at Urbana-Champaign; Michelle Wang, University of Illinois at Urbana-Champaign; Douglas Simpson, University of Illinois at Urbana-Champaign
- 9:35 a.m. **Clustering of Longitudinal Data: a Functional Data Approach**—✦Jeng-Min Chiou, Academia Sinica; Pai-Ling Li, National Tsing Hua University
- 9:50 a.m. **Initializing Optimization Partition Algorithms**—✦Ranjan Maitra, Iowa State University
- 10:05 a.m. **A Scale-Independent Clustering Method with Automatic Variable Selection Based on Trees**—✦Samuel Buttrey, Naval Postgraduate School

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CC-610

● **Examples for the Statistics Classroom—Contributed**

Section on Statistical Education

*Chair(s): Tena Katsaounis, The Ohio State University*

- 8:35 a.m. **Making Babies by the Flip of a Coin?**—✦Matthew Carlton, California Polytechnic State University, San Luis Obispo
- 8:50 a.m. **Illuminating the Confidence Interval Concept Activity**—✦Alicia Graziosi, Temple University; Jeffrey Lidicker, Temple University
- 9:05 a.m. **Learning Activities for Large Classes**—✦Patti Collings, Brigham Young University
- 9:20 a.m. **How Low Can You Go?**—✦Paul Stephenson, Grand Valley State University; Mary Richardson, Grand Valley State University; John Gabrosek, Grand Valley State University
- 9:35 a.m. **Conditional Probability and 'Who Wants To Be a Millionaire?'**—✦Diane Evans, Rose-Hulman Institute of Technology
- 9:50 a.m. **Post-Hoc Analysis for a Class of Chi-Square Tests**—✦Edward Markowski, Old Dominion University; Carol A. Markowski, Old Dominion University
- 10:05 a.m. **Keeping an Introductory Statistics Course Interesting: Use of Demonstrations, Examples, Rewards, and a Little Humor**—✦Harry Norton, Carolinas Medical Center

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 385 CC-611 Bayesian Design and High-Dimensional Inference—Contributed

Section on Bayesian Statistical Science

*Chair(s): Ming Yuan, Georgia Institute of Technology*

- 8:35 a.m. **Automatic Estimation of Multivariate Spectra via Smoothing Splines**—◆ Ori Rosen, The University of Texas at El Paso; David Stoffer, University of Pittsburgh
- 8:50 a.m. **Bayesian Curve Estimation with Overcomplete Wavelet Dictionary**—◆ Jen-hwa Chu, Duke University; Merlise Clyde, Duke University; Feng Liang, Duke University
- 9:05 a.m. **Bayesian LAGO for Statistical Detection Problems**—◆ Wanhua Su, University of Waterloo; Mu Zhu, University of Waterloo; Hugh A. Chipman, Acadia University
- 9:20 a.m. **Avoiding Bias from Feature Selection in Classification and Regression Models**—  
◆ Longhai Li, University of Toronto; Jianguo Zhang, University of Toronto; Radford Neal, University of Toronto
- 9:35 a.m. **Dose-Schedule Finding in Phase I/II Clinical Trials Using Bayesian Isotonic Transformation**—  
◆ Yisheng Li, M. D. Anderson Cancer Center; Nebiyou B. Bekele, M. D. Anderson Cancer Center; Yuan Ji, M. D. Anderson Cancer Center; John Cook, M. D. Anderson Cancer Center
- 9:50 a.m. **Bayesian Two-Stage Optimal Design for Generalized Linear Models**—◆ Ying Zhang, Virginia Polytechnic Institute and State University
- 10:05 a.m. **Floor Discussion**

## 386 CC-613 ● ⊕ Bayesian Applications to Genetics—Contributed

Section on Bayesian Statistical Science, Biometrics Section, ENAR

*Chair(s): Leanna House, Duke University*

- 8:35 a.m. **The Evolutionary Forest Algorithm**—◆ Scotland Leman, Duke University
- 8:50 a.m. **Bayesian Inference for Estimating Migration Rate, Mutation Rate, and Population Size in Microsatellite Loci**—◆ Seongho Song, University of Cincinnati; Dipak Dey, University of Connecticut; Kent E. Holsinger, University of Connecticut

- 9:05 a.m. **Bayesian Discovery of Regulatory Motifs Using Reversible Jump Markov Chain Monte Carlo**—  
◆ Min Li, University of Washington
- 9:20 a.m. **Detection of Quantitative Trait Loci on Multiple Linkage Groups**—◆ Patrick Gaffney, ImClone Systems
- 9:35 a.m. **Bayesian Clustering of SNP Genotypes**—  
◆ Guohua Yan, The University of British Columbia; William J. Welch, The University of British Columbia; Ruben H. Zamar, The University of British Columbia
- 9:50 a.m. **Bayesian Clustering of Short Temporal Gene Expression Dynamics**—◆ Ling Wang, Boston University; Paola Sebastiani, Boston University; Marco Ramoni, Harvard Medical School
- 10:05 a.m. **A Bayesian Retrospective Classification Model**—  
◆ Jingqin Luo, Duke University

## 387 CC-601 ● Sample Survey Quality IV—Contributed

Section on Survey Research Methods

*Chair(s): Rita Petroni, U.S. Census Bureau*

- 8:35 a.m. **Changing to Register-Based Statistics**—◆ Anders Wallgren, Statistics Sweden; Britt Wallgren, Statistics Sweden
- 8:50 a.m. **Longitudinal Evaluation of Point and Variance Estimates in an Establishment Survey after Ratio Imputation**—◆ Adriana Perez, The University of Texas Health Science Center at Houston
- 9:05 a.m. **Experimental Design for the 2006 American Community Survey Content Test**—◆ Mark Asiala, U.S. Census Bureau; Alfredo Navarro, U.S. Census Bureau
- 9:20 a.m. **A Comparison of Two Ratio Edit Methods for the Annual Survey of Government Finances**—  
◆ Elizabeth Cornett, U.S. Census Bureau; Joanna F. McLaughlin, U.S. Census Bureau; Carma R. Hogue, U.S. Census Bureau; Stephen D. Owens, U.S. Census Bureau
- 9:35 a.m. **Evaluation of the Detectability and Inferential Impact of Nonresponse Bias in Establishment Surveys**—◆ Randall Powers, Bureau of Labor Statistics; John L. Eltinge, Bureau of Labor Statistics
- 9:50 a.m. **A Coverage Profile of Area Frame Blocks on the United States Census Bureau's Master Address File**—◆ Timothy Kennel, U.S. Census Bureau
- 10:05 a.m. **Floor Discussion**





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# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 388 CC-211 ● ⊛ Cluster Modeling and Cluster Detection— Contributed

Section on Statistics in Epidemiology

*Chair(s): Margaret Nemeth, Monsanto Regulatory Sciences*

- 8:35 a.m. **P-Values for the Besag-Newell Cluster Detection Test**—◆ Ronald Gangnon, University of Wisconsin-Madison
- 8:50 a.m. **On Detecting a Rate Increase Using a Bernoulli-Based Scan Statistic**—◆ Michael Joner, Virginia Polytechnic Institute and State University; William H. Woodall, Virginia Polytechnic Institute and State University; Marion Reynolds, Virginia Polytechnic Institute and State University
- 9:05 a.m. **Spatial Survival Clusters of Patients Diagnosed with Lung Cancer and Late-Stage Colorectal Cancer in California**—◆ Lan Huang, National Cancer Institute
- 9:20 a.m. **A Latent Model for Highly Skewed and Grouped Data**—◆ Huichao Chen, Emory University; Amita K. Manatunga, Emory University; Robert Lyles, Emory University; Michele Marcus, Emory University
- 9:35 a.m. **Local Likelihood Models for Disease Cluster Modeling: a Space-Time Extension**—◆ Monir Hossain, University of South Carolina; Andrew B. Lawson, University of South Carolina
- 9:50 a.m. **Approximating the Multiple-Width-Window Scan Statistic for Nonuniform Background**—◆ Joseph Naus, Rutgers University
- 10:05 a.m. **Cluster Analysis Using Methods of Pairwise Weight on Mixed Type Attributes**—◆ William Warde, Oklahoma State University

## 389 CC-620 Methodology for Spatial Data—Contributed

Section on Statistics and the Environment, WNAR

*Chair(s): Eric Slud, U.S. Census Bureau*

- 8:35 a.m. **Spatial Multivariate EOFs: Discrete to Continuous Approximations**—◆ Yonggang Yao, The Ohio State University; Noel Cressie, The Ohio State University
- 8:50 a.m. **Spatial Designs and Strength of Spatial Signal: Effects on Covariance Estimation**—◆ Kathryn Irvine, Oregon State University; Alix Gitelman, Oregon State University; Jennifer A. Hoeting, Colorado State University

- 9:05 a.m. **Spatial Models, Spatial Integrals, and Green's Theorem**—◆ Gary Simon, New York University
- 9:20 a.m. **A Variation on Spike-Time Distance Prototypes**—◆ Katherine Tranbarger, Amherst College
- 9:35 a.m. **A Method for Multiscale Spatio-Temporal Analysis**—◆ Mary Louie, National Center for Health Statistics
- 9:50 a.m. **A Weighting Class Adjustment Estimator in a Continuous Domain**—◆ Breda Munoz, RTI International; Virginia M. Lesser, Oregon State University; Leigh Harrod, Oregon State University
- 10:05 a.m. **Floor Discussion**

## 390 CC-605 ● Survey-Based Estimation IV—Contributed

Section on Survey Research Methods

*Chair(s): Mansour Fahimi, RTI International*

- 8:35 a.m. **Effects of Uncontrolled Factors at the Collection Stage on the Canadian Nutrition Survey**—◆ François Verret, Statistics Canada; Steven Thomas, Statistics Canada
- 8:50 a.m. **Regression Diagnostics for Survey Data**—◆ Jianzhu Li, University of Maryland; Richard Valliant, University of Michigan
- 9:05 a.m. **Design Effects in Randomized Experiments Based on Sample Surveys**—◆ K. P. Srinath, Abt Associates Inc.
- 9:20 a.m. **Using Census Data to Define Estimation Areas for the American Community Survey: a Case Study**—◆ Joseph Powers, U.S. Census Bureau; Alfredo Navarro, U.S. Census Bureau
- 9:35 a.m. **Estimating Birth Counts for Small Geographical Domains Used for Control Totals in Raking Adjustment**—◆ Amang Sukasih, Mathematica Policy Research, Inc.; Donsig Jang, Mathematica Policy Research, Inc.; Mary Edith Bozylinsky, Mathematica Policy Research, Inc.; Barbara L. Carlson, Mathematica Policy Research, Inc.
- 9:50 a.m. **Iteration of Second-Stage and Composite Procedures in the Current Population Survey**—◆ Samantha Cruz, Bureau of Labor Statistics; Edwin L. Robison, Bureau of Labor Statistics; Tamara S. Zimmerman, Bureau of Labor Statistics
- 10:05 a.m. **Estimation and Reliability Issues of Health Estimates from the Behavioral Risk Factor Surveillance System for U.S. Counties Contiguous**

to the United States-Mexico Border—❖ Joe Fred Gonzalez, Jr., National Center for Health Statistics; Machell Town, National Center for Chronic Disease Prevention and Health Promotion; Jay J. Kim, National Center for Health Statistics; Sam Notzon, National Center for Health Statistics; Juan R. Albertorio, National Center for Health Statistics

## Invited Sessions 10:30 a.m.–12:20 p.m.

### 391 CC-4C-4 ● ⊕ Noether Award Invited Session—Invited

Noether Award Committee, Section on Nonparametric Statistics

*Organizer(s): Regina Liu, Rutgers University*

*Chair(s): Regina Liu, Rutgers University*

10:35 a.m. **Doing Thousands of Hypothesis Tests at the Same Time**—❖ Bradley Efron, Stanford University

11:25 a.m. **Bayesian Mixed Models for Functional Data**—  
❖ Jeffrey S. Morris, M. D. Anderson Cancer Center

12:15 p.m. **Floor Discussion**

### 392 CC-607 ● ⊕ Government Statistical Agencies Are Now Offering Electronic Reporting to Their Respondents, but Is It Worth the Effort?—Invited

Section on Government Statistics

*Organizer(s): Robert Lussier, Statistics Canada*

*Chair(s): Robert Lussier, Statistics Canada*

10:35 a.m. **Qui Bono: Who Benefits from Web Data Collection?**—❖ Michael D. Levi, Bureau of Labor Statistics

10:55 a.m. **The Development of Electronic Data Collection Techniques**—❖ Rami Peltola, Statistics Finland

11:15 a.m. **Statistics Canada's Electronic Data Reporting Experience**—❖ Jocelyn Burgess, Statistics Canada

11:35 a.m. **Improving the Provider Experience: the Vision for Multi-Modal Data Collection in Australia**—  
❖ Sean Thompson, Australian Bureau of Statistics

11:55 a.m. Disc: Thomas L. Mesenbourg, U.S. Census Bureau

12:15 p.m. **Floor Discussion**

### 393 CC-601 ● ⊕ Bayesian Methods in Cancer Genomics—Invited

WNAR, Biometrics Section, Section on Bayesian Statistical Science, ENAR

*Organizer(s): Sonia Jain, University of California, San Diego*

*Chair(s): Sonia Jain, University of California, San Diego*

10:35 a.m. **Variable Selection in Regression Mixture Modeling for the Discovery of Gene Regulatory Networks**—❖ Joseph G. Ibrahim, The University of North Carolina at Chapel Hill; Mayetri Gupta, The University of North Carolina at Chapel Hill

11:00 a.m. **Variable Selection in Clustering via Dirichlet Process Mixture Models**—❖ Marina Vannucci, Texas A&M University

11:25 a.m. **Nonparametric Models for Proteomic Peak Identification, Quantification, and Classification**—❖ Merlise Clyde, Duke University; Leanna House, Duke University; Robert Wolpert, Duke University

11:50 a.m. Disc: Steven N. MacEachern, The Ohio State University

12:10 p.m. **Floor Discussion**

### 394 CC-307 ⊕ Building Statistical Capacity in Developing Countries—Invited

Committee on International Relations in Statistics, Section on Statistical Education

*Organizer(s): Louise Ryan, Harvard School of Public Health*

*Chair(s): Martha Aliaga, American Statistical Association*

10:50 a.m. **Statistics in Argentina**—❖ Diana Kelmansky, University of Buenos Aires

12:15 p.m. **Floor Discussion**

### 395 CC-611 ● Latent Class Models for Disease Classification—Invited

ENAR, Biometrics Section, WNAR

*Organizer(s): Rebecca Betensky, Harvard School of Public Health*

*Chair(s): Rebecca Betensky, Harvard School of Public Health*

10:35 a.m. **Diagnosing Sepsis in Patients with SIRS**—  
❖ Klaus Larsen, University of Copenhagen

11:05 a.m. **Penalized Latent Class Methods for Disease Classification**—❖ Andres Houseman, Harvard School of Public Health; Brent A. Coull, Harvard School of Public Health; Rebecca Betensky, Harvard School of Public Health



# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

11:35 a.m. **Latent Class Measurement of Frailty and Dysregulation in Older Adults**—◆ Karen Bandeen-Roche, The Johns Hopkins Bloomberg School of Public Health

12:05 p.m. **Floor Discussion**

## 396 CC-2A **Semiparametric Inference in Practice—Invited**

IMS, Section on Nonparametric Statistics

*Organizer(s): Florentina Bunea, Florida State University*

*Chair(s): Florentina Bunea, Florida State University*

10:35 a.m. **Semiparametric Approaches To Model the Survival and Longitudinal Data Simultaneously**—◆ Jane-Ling Wang, University of California, Davis; Jimin Ding, University of California, Davis; Fushing Hsieh, University of California, Davis

11:05 a.m. **Semiparametric Models with Data Missing by Design and Inverse Probability Weighted Empirical Processes: Partial Results and Open Problems**—◆ Jon A. Wellner, University of Washington

11:35 a.m. **Statistical Inference for Variable Importance**—◆ Mark van der Laan, University of California, Berkeley

12:05 p.m. **Floor Discussion**

## 397 CC-308 **Balanced Sampling—Invited**

SSC

*Organizer(s): Pierre Lavallée, Statistics Canada*

*Chair(s): Pierre Lavallée, Statistics Canada*

10:35 a.m. **Balanced Sampling by Means of the Cube Method**—◆ Yves Tillé, Université de Neuchâtel

11:00 a.m. **Stochastic Imputation Using Balanced Sampling**—◆ Jean-Claude Deville, CREST/ENSAI

11:25 a.m. **Use of Balanced Sampling in the Framework of the Master Sample for French Household Surveys**—◆ Marc Christine, Institut National de la Statistique et des Études Économiques

11:50 a.m. **Sampling and Estimation Strategies for the Canadian Unincorporated Business Population**—◆ Wisner Jocelyn, Statistics Canada

12:15 p.m. **Floor Discussion**

## 398 CC-608 **Statistical Challenges in Analyzing Highly Stratified Data—Invited**

Biometrics Section, WNAR

*Organizer(s): Bhramar Mukherjee, University of Florida*

*Chair(s): Bhramar Mukherjee, University of Florida*

10:35 a.m. **Semiparametric Transformation Models with Random Effects for Highly Stratified Survival Data**—◆ Danyu Lin, The University of North Carolina at Chapel Hill

11:00 a.m. **Connections between Bayesian and Conditional Inference in Matched Studies**—◆ Kenneth Rice, University of Washington

11:25 a.m. **Model-Based Profile Confidence Intervals for Stratified Contingency Tables**—◆ Joseph B. Lang, The University of Iowa

11:50 a.m. **Fixed-Effects Models for Longitudinal Binary Data with Drop-Outs Missing at Random**—◆ Paul Rathouz, The University of Chicago

12:15 p.m. **Floor Discussion**

## 399 CC-401 **Human Perception and Statistical Graphics—Invited**

Section on Statistical Graphics, Section on Statisticians in Defense and National Security

*Organizer(s): Naomi B. Robbins, NBR*

*Chair(s): Naomi B. Robbins, NBR*

10:35 a.m. **Attention, Consciousness, and Data Display**—◆ Ronald A. Rensink, The University of British Columbia

11:05 a.m. **Perception of Scene Spatial Layout and Complex Visual Displays**—◆ Aude Oliva, Massachusetts Institute of Technology

11:35 a.m. **Toward Integrating Perception, Cognition, and Visual Statistical Analytics in Quantitative Visualization**—◆ Daniel B. Carr, George Mason University

12:05 p.m. **Floor Discussion**



400

CC-400

### ● ⊕ Haplotype Analysis—Invited

Section on Risk Analysis, ENAR

*Organizer(s): Ingo Ruczinski, The Johns Hopkins University*

*Chair(s): Hua Tang, Fred Hutchinson Cancer Research Center*

- 10:35 a.m. Haplotype Analysis in Related Individuals—**  
❖ Hongyu Zhao, Yale University; Ning Sun, Yale University
- 11:00 a.m. A Comparison of Haplotype-Based and Tree-Based SNPs Imputation in Association Studies—**  
❖ James Y. Dai, University of Washington; Ingo Ruczinski, The Johns Hopkins University; Michael LeBlanc, Fred Hutchinson Cancer Research Center; Charles Kooperberg, Fred Hutchinson Cancer Research Center
- 11:25 a.m. Haplotype and SNP Analyses in Genetic Epidemiology with Application to Longitudinal Data—**❖ M. Daniele Fallin, The Johns Hopkins Bloomberg School of Public Health; Kelly S. Benke, The Johns Hopkins Bloomberg School of Public Health
- 11:50 a.m. Disc:** Nilanjan Chatterjee, National Cancer Institute
- 12:10 p.m. Floor Discussion**

401

CC-201

### ● Bayesian Hierarchical Modeling of Exposure Pathways—Invited

Section on Statistics and the Environment, Section on Bayesian Statistical Science

*Organizer(s): Noel Cressie, The Ohio State University*

*Chair(s): Noel Cressie, The Ohio State University*

- 10:35 a.m. Regional Spatial Modeling of Toxic Metals in Various Environmental Media—**❖ Catherine A. Calder, The Ohio State University
- 11:00 a.m. Characterizing Human Exposure to Toxic Metals Using a Bayesian Pathways Model—**❖ Nancy J. McMillan, Battelle
- 11:25 a.m. Computational Strategies for Fitting and Learning from Complex Bayesian Hierarchical Models—**❖ Peter F. Craigmile, The Ohio State University
- 11:50 a.m. Disc:** Louise Ryan, Harvard School of Public Health
- 12:10 p.m. Floor Discussion**

## Invited Panels 10:30 a.m.–12:20 p.m.

402

CC-609

### ● Statistical Consulting for Clinical Research—Invited

Section on Statistical Consulting, Section on Statistical Education

*Organizer(s): Jeff Sloan, Mayo Clinic College of Medicine*

*Chair(s): Joseph Cappelleri, Pfizer Inc.*

- Panelists:**
- ❖ Jeff Sloan, Mayo Clinic College of Medicine
  - ❖ Todd Nick, Cincinnati Children's Hospital Medical Center
  - ❖ Felicity B. Enders, Mayo Clinic College of Medicine
  - ❖ Michael Griswold, The Johns Hopkins Bloomberg School of Public Health

**12:15 p.m. Floor Discussion**

## Topic-Contributed Sessions

### 10:30 a.m.–12:20 p.m.

403

CC-612

### ● ⊕ Statistics for Weather Forecasting I: Challenges and Opportunities—Topic-Contributed

Section on Statisticians in Defense and National Security, Section on Physical and Engineering Sciences, Section on Statistics and the Environment

*Organizer(s): Tilmann Gneiting, University of Washington*

*Chair(s): Tilmann Gneiting, University of Washington*

- 10:35 a.m. General Introduction to Weather Prediction—**  
❖ Clifford Mass, University of Washington
- 10:55 a.m. Local Bayesian Model Averaging for Calibrated Weather Forecast Probabilities—**❖ Eric Grimit, University of Washington
- 11:15 a.m. Combining Spatial Statistical and Ensemble Information in Probabilistic Weather Forecasts—**  
❖ Veronica Berrocal, University of Washington
- 11:35 a.m. Use of Uncertainty Information in Deterministic Weather Forecasting Decisions—**❖ Susan Joslyn, University of Washington
- 11:55 a.m. Disc:** Brad Colman, National Oceanic & Atmospheric Administration
- 12:15 p.m. Floor Discussion**

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 404** **CC-2B**  
**Dose-Finding—Topic-Contributed**  
Biopharmaceutical Section, Biometrics Section, ENAR  
*Organizer(s): Naitee Ting, Pfizer Inc.*  
*Chair(s): Greg C. G. Wei, Pfizer Inc.*
- 10:35 a.m.** Hypothesis Testing and Bayesian Estimation Applied to Sparse Dose Response Designs—  
❖ Neal Thomas
- 10:55 a.m.** Phase I Studies of Chemotherapeutic Agents in Cancer Patients: a Review of the Designs—  
❖ Douglas Potter, University of Pittsburgh
- 11:15 a.m.** Design and Analysis of Dose-Finding Studies Combining Multiple Comparisons and Modeling Procedures—❖ Frank Bretz, Novartis Pharma AG; Jose Pinheiro, Novartis Pharmaceuticals Corporation; Bjoern Bornkamp, University of Dortmund
- 11:35 a.m.** Optimal Dose Response Studies with Potentially Missing Observations—❖ Weng Kee Wong, University of California, Los Angeles; InYoung Baek, Stony Brook University; Wei Zhu, Stony Brook University
- 11:55 a.m.** Experimental Design for Experiments with Toxicity and Efficacy Response Functions—❖ Nancy Flournoy, University of Missouri-Columbia
- 12:15 p.m.** Floor Discussion
- 405** **CC-204**  
**● Modeling and Adjustment of Economic Time Series—Topic-Contributed**  
Business and Economics Statistics Section  
*Organizer(s): Thomas D. Evans, Bureau of Labor Statistics*  
*Chair(s): Thomas D. Evans, Bureau of Labor Statistics*
- 10:35 a.m.** Reference Week Adjustment of Labor Force Series with X-12-ARIMA—❖ Zhao-Guo Chen, Statistics Canada; Thierno A. Balde, Statistics Canada; Benoit Quenneville, Statistics Canada; Helen Fung, Statistics Canada
- 10:55 a.m.** Issues in Identifying Easter Effects in Economic Time Series—❖ Kellie Wills, U.S. Census Bureau
- 11:15 a.m.** A New Time Series Model for Seasonally Adjusting Economic Data with Trend-Cycle Movement and Irregular, Sharply Pronounced Seasonal Fluctuations—❖ Stephanus Arz, Deutsche Bundesbank
- 11:35 a.m.** An ARIMA Model-Based Approach To Estimate Evolving Trading Day Effect—❖ Xichuan Zhang, Australian Bureau of Statistics; Anna Poskitt, Australian Bureau of Statistics
- 11:55 a.m.** Modeling CPS Labor Force Time Series in Selected Metropolitan Areas—❖ Jennifer Oh, Bureau of Labor Statistics; Richard Tiller, Bureau of Labor Statistics
- 12:15 p.m.** Floor Discussion
- 406** **CC-606**  
**● ⊕ When Disaster Strikes: Responses from the Survey Community—Topic-Contributed**  
Section on Survey Research Methods, Section on Statisticians in Defense and National Security  
*Organizer(s): Rachel Harter, National Opinion Research Center*  
*Chair(s): David Banks, Duke University*
- 10:35 a.m.** Conducting Surveys When Disasters Strike—  
❖ Rachel Harter, National Opinion Research Center; Judith Petty, National Opinion Research Center; Jenny Kelly, National Opinion Research Center
- 10:55 a.m.** On the Use of Survey Methods in Assessing Large-Scale Human Rights Violations in Conflict Zones: Lessons-Learned from Timor-Leste and Sierra Leone—❖ Romesh Silva, Human Rights Data Analysis Group; Patrick Ball, Human Rights Data Analysis Group
- 11:15 a.m.** Impact of Gulf Hurricanes on the National Immunization Survey—❖ Kirk Wolter, National Opinion Research Center; James Singleton, Centers for Disease Control and Prevention
- 11:35 a.m.** Local Data Coordination and Dissemination in Post-Katrina New Orleans—❖ Allison Plyer, Greater New Orleans Nonprofit Knowledge Works
- 11:55 a.m.** Disc: Alan R. Tupek, U.S. Census Bureau
- 12:15 p.m.** Floor Discussion
- 407** **CC-614**  
**● Statistical Issues in Diagnostic Devices Including ROC Methods—Topic-Contributed**  
Section on Statistics in Epidemiology, Biometrics Section, ENAR  
*Organizer(s): R. Lakshmi Vishnuvajjala, U.S. Food and Drug Administration*  
*Chair(s): Kyunghee Song, U.S. Food and Drug Administration*
- 10:35 a.m.** ROC Graphs for Assessing the Ability of a Diagnostic Marker To Detect Three Disease Classes with an Umbrella Ordering—❖ Todd Alonzo, University of Southern California; Christos Nakas, University of the Aegean

- 10:55 a.m. **Random Effects Modeling Approaches for Estimating ROC Curves from Repeated Ordinal Tests without a Gold Standard**—❖ Paul S. Albert, National Cancer Institute
- 11:15 a.m. **Diagnostic Imaging Procedures: Defining and Analyzing Test Results To Account for Unknown Disease Loci**—❖ Gene Pennello, U.S. Food and Drug Administration; Brandon D. Gallas, U.S. Food and Drug Administration
- 11:35 a.m. **A Model-Free Approach to Combining Diagnostic Markers**—❖ Ruth Pfeiffer, National Cancer Institute; Efstathia Bura, The George Washington University
- 11:55 a.m. **Statistical Issues in Diagnostic Devices Including ROC Methods**—❖ R. Lakshmi Vishnuvajjala, U.S. Food and Drug Administration
- 12:15 p.m. **Floor Discussion**

**408** **CC-605**  
**● Innovative Uses of Longitudinal Panels, Information Documents, and Time-Series Analysis to Study the Impact of the U.S. Tax System—Topic-Contributed**

Section on Government Statistics

*Organizer(s): Barry Johnson, Internal Revenue Service*

*Chair(s): Arthur Kennickell, Federal Reserve Board*

- 10:35 a.m. **Analysis of the Distributions of Income, Taxes, and Payroll Taxes via Cross-Section and Panel Data**—❖ Thomas Petska, Internal Revenue Service; Michael Strudler, Internal Revenue Service; Ryan Petska, Ernst & Young LLP
- 10:55 a.m. **Social Security Taxes, Social Security Benefits, and Social Security Benefits Taxation: 2002**—❖ Peter J. Sailer, Internal Revenue Service; Evgenia Lomize, Internal Revenue Service
- 11:15 a.m. **Longitudinal Analysis of the Earned Income Tax Credit**—❖ Karen Masken, Internal Revenue Service
- 11:35 a.m. **The 1999–2003 Individual Income Tax Return Panel: a First Look at the Data**—❖ Michael Weber, Internal Revenue Service
- 11:55 a.m. **Constructing a Panel of Income and Estate Tax Data for Wealthy Individuals: Creativity and Compromise**—❖ Barry Johnson, Internal Revenue Service; Lisa Schreiber, Internal Revenue Service
- 12:15 p.m. **Floor Discussion**

**409** **CC-211**  
**● ⊕ Statistical Phylogenetics—Topic-Contributed**

IMS, Biometrics Section, ENAR

*Organizer(s): Bret Larget, University of Wisconsin-Madison*

*Chair(s): Laura S. Kubatko, University of New Mexico*

- 10:35 a.m. **A Model of AFLP Evolution and Its Use in Bayesian Estimation of Phylogenies**—❖ Ruiyan Luo, University of Wisconsin-Madison; Bret Larget, University of Wisconsin-Madison
- 10:55 a.m. **A Random Duplication/Deletion Model in Genome Rearrangement**—❖ Soowan Sohn, University of Wisconsin-Madison; Bret Larget, University of Wisconsin-Madison
- 11:15 a.m. **Spatially Smoothed Change-Point Processes for Phylogenetic Mapping of Recombination Hot Spots**—❖ Vladimir N. Minin, University of California, Los Angeles; Marc A. Suchard, University of California, Los Angeles; Karin S. Dorman, Iowa State University; Fang Fang, Iowa State University
- 11:35 a.m. **Reconstructing Posterior Distributions of a Species Phylogeny Using Estimated Gene Tree Distributions**—❖ Liang Liu, The Ohio State University; Dennis K. Pearl, The Ohio State University
- 11:55 a.m. **Reconstructing Evolutionary Trees Using Amino Acid Substitution Models That Allow Rate Variation To Depend on Spatial Location**—❖ Xueliang Pan, The Ohio State University; Dennis K. Pearl, The Ohio State University; Liang Liu, The Ohio State University; Dennis J. Pollack, The Ohio State University
- 12:15 p.m. **Floor Discussion**

**410** **CC-3B**  
**● ⊕ Bayesian Spatial Models—Topic-Contributed**

Section on Bayesian Statistical Science

*Organizer(s): Paul Speckman, University of Missouri-Columbia*

*Chair(s): Galin Jones, University of Minnesota*

- 10:35 a.m. **Hierarchical Bayes Estimation of Response Rates with Spatial Correlations**—❖ Xiaoming Gao, Missouri Department of Conservation; Chong He, University of Missouri-Columbia; Dongchu Sun, Virginia Polytechnic Institute and State University/University of Missouri-Columbia

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

10:55 a.m. **Reference Priors for Gaussian Processes with Spatial Correlation Structure**—❖ Mi Hyun Lee, Virginia Polytechnic Institute and State University; Dongchu Sun, Virginia Polytechnic Institute and State University/University of Missouri-Columbia

11:15 a.m. **Bayesian Spatial-Temporal Smoothing of Cancer Mortality Rates**—❖ Gentry White, University of Missouri-Columbia; Dongchu Sun, Virginia Polytechnic Institute and State University/University of Missouri-Columbia; Paul Speckman, University of Missouri-Columbia

11:35 a.m. **Spatially Adaptive Bayesian Thin-Plate Splines**—❖ Yu Yue, University of Missouri-Columbia

11:55 a.m. **Bayesian Smoothing of Density Estimation via Hazard Rates**—❖ Luyan Dai, University of Missouri-Columbia

12:15 p.m. **Floor Discussion**

## 411 CC-610 **Multidimensional Scaling and Manifold Learning—Topic-Contributed**

Section on Statistical Computing, IMS, Section on Statisticians in Defense and National Security

*Organizer(s): Michael W. Trosset, The College of William & Mary*

*Chair(s): David W. Scott, Rice University*

10:35 a.m. **Parametric Mapping (PARAMAP): an Approach to Nonlinear Mapping**—❖ Ulas Akkucuk, Bogazici University

10:55 a.m. **Metric MDS to Surfaces**—❖ David Johannsen, Naval Surface Warfare Center; Jeffrey L. Solka, Naval Surface Warfare Center

11:15 a.m. **Local Multidimensional Scaling: a Nonlinear Dimension Reduction Method for Data Visualization**—❖ Lisha Chen, University of Pennsylvania; Andreas Buja, University of Pennsylvania

11:35 a.m. **Classical Multidimensional Scaling and Laplacian Eigenmaps**—❖ Michael W. Trosset, The College of William & Mary

11:55 a.m. **Manifold Learning and Dimensionality Reduction for Classification**—❖ Alfred Hero, University of Michigan; Raviv Raich, University of Michigan; Jose Costa, California Institute of Technology

12:15 p.m. **Floor Discussion**

## 412 CC-205 **● Multivariate Control Charts and Other Related Topics—Topic-Contributed**

Section on Quality and Productivity, Section on Physical and Engineering Sciences

*Organizer(s): Arthur Yeh, Bowling Green State University*

*Chair(s): Jane Chang, Bowling Green State University*

10:35 a.m. **Single Variables Control Chart: an Overview**—❖ Smiley Cheng, University of Manitoba; Keoagile Thaga, University of Botswana

10:55 a.m. **Multivariate Process Control for Improving Detection of Out-of-Control Conditions**—❖ Amit Mitra, Auburn University

11:15 a.m. **The Multivariate Exponentially Weighted Moving Average**—❖ Steve Rigdon, Southern Illinois University; Nicole Munden, University of Missouri

11:35 a.m. **Monitoring Multivariate Process Variability for Individual Observations**—❖ Baiyau Yeh, Bowling Green State University

11:55 a.m. **Disc: Herb McGrath, Bowling Green State University**

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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## 413 CC-206 **● Assessing Student Retention of Essential Statistical Concepts, Issues, and Topics—Topic-Contributed**

Section on Statistical Education

*Organizer(s): Mark L. Berenson, Montclair State University*

*Chair(s): Mark L. Berenson, Montclair State University*

**Panelists:** ❖ Leonard Gaines, Empire State Development  
❖ Albyn Jones, Reed College  
❖ Deborah Rumsey, The Ohio State University  
❖ Jessica Utts, University of California, Davis  
❖ Karen Kinard, Tallahassee Community College

12:15 p.m. **Floor Discussion**



## Regular Contributed Sessions 10:30 a.m.–12:20 p.m.

### 414 CC-602 ● Unit Nonresponse in Surveys III—Contributed

Section on Survey Research Methods

Chair(s): Barbara L. Carlson, *Mathematica Policy Research, Inc.*

- 10:35 a.m. **A Comparison of a Model-Assisted Estimator and a Model-Based Estimator under Ignorable and Nonignorable Nonresponse**—❖ Jill A. Dever, University of Maryland; Richard Valliant, University of Michigan
- 10:50 a.m. **Modeling Nonresponse Adjustment Factors**—❖ Hee-Choon Shin, National Opinion Research Center
- 11:05 a.m. **Use of Propensity Scores To Estimate and Adjust Nonresponse Bias in Complex Surveys**—❖ Leigh Harrod, Oregon State University; Virginia M. Lesser, Oregon State University
- 11:20 a.m. **Are Refusal Conversions Different from Willing Respondents on Demographic, Cardiovascular, and Sensitive Items? National Health and Nutrition Examination Survey, 1999–2002**—❖ Margaret Carroll, National Center for Health Statistics; Yinong Chong, National Center for Health Statistics
- 11:35 a.m. **Response Process Models for Unit Nonresponse Adjustment**—❖ Courtney Kies-Bokenkroger, Iowa State University; Sarah M. Nusser, Iowa State University
- 11:50 a.m. **A Nonresponse Bias Analysis To Inform the Use of Incentives in Multistage Telephone Surveys**—❖ Benjamin Skalland, National Opinion Research Center; Kirk Wolter, National Opinion Research Center; Hee-Choon Shin, National Opinion Research Center; Stephen Blumberg, National Center for Health Statistics
- 12:05 p.m. **Floor Discussion**

### 415 CC-603 ● Sample Survey Quality V—Contributed

Section on Survey Research Methods

Chair(s): Mary March, *Statistics Canada*

- 10:35 a.m. **Efficiently Limiting Census Errors When Quality Control Parameters Range Freely**—❖ Glenn Wolfgang, U.S. Census Bureau

- 10:50 a.m. **Precision of Compositional Data in a Stratified Two-Stage Cluster Sample: Comparison of the Swiss Earnings Structure Survey 2002 and 2004**—❖ Monique Graf, Swiss Federal Statistical Office
- 11:05 a.m. **Independent School Survey Coverage Study**—❖ Dedrick Owens, U.S. Census Bureau
- 11:20 a.m. **Cluster Analysis for Outlier Detection and Its Application in a Large-Scale Survey**—❖ Jianqiang Wang, Iowa State University; Jean D. Opsomer, Iowa State University
- 11:35 a.m. **Using Evaluations To Plan and Integrate Survey Programs**—❖ Shawna Waugh, Energy Information Administration
- 11:50 a.m. **Modeling Nonsampling Errors in Agricultural Surveys**—❖ James Gentle, George Mason University; Charles R. Perry, National Agricultural Statistics Service; William Wigton, National Agricultural Statistics Service
- 12:05 p.m. **Interviewer Burden and Its Effects on Data Quality in the Swedish Part of the European Social Survey (ESS)**—❖ Lilli Japec, Statistics Sweden

### 416 CC-3A Nonparametric Bayesian Methods—Contributed

Section on Bayesian Statistical Science, Section on Nonparametric Statistics

Chair(s): Fabrizio Ruggeri, *CNR-IMATI*

- 10:35 a.m. **Bayesian Analysis for Quantile Regression of Correlated Data**—❖ Chin-Hua Wang, Family Health International; Pai-Lien Chen, Family Health International
- 10:50 a.m. **Sequentially Allocated Merge-Split Sampler for Conjugate and Nonconjugate Dirichlet Process Mixture Models**—❖ David Dahl, Texas A&M University
- 11:05 a.m. **Fast Nonparametric Bayes Testing of Distribution Changes in Large Datasets**—❖ Michael Pennell, National Institute of Environmental Health Sciences; David B. Dunson, National Institute of Environmental Health Sciences
- 11:20 a.m. **On the Random Functional of the Ferguson-Dirichlet Process**—❖ Thomas J. M. Jiang, National Chengchi University; Kun-Lin Kuo, National Chengchi University
- 11:35 a.m. **Bayesian Circular Regression**—❖ Barbara Jane George, U.S. Environmental Protection Agency; Kaushik Ghosh, New Jersey Institute of Technology

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

11:50 a.m. **Nonparametric Bayesian Bootstrap in ROC Curve Study**—◆ Jiezhun Gu, North Carolina State University; Subhashis Ghosal, North Carolina State University

12:05 p.m. **Floor Discussion**

## 417 CC-604 ● **Combining Information, Missing Data, and Hierarchical Bayesian Methods for Health Outcomes Data—Contributed**

Section on Health Policy Statistics, Biometrics Section, Section on Bayesian Statistical Science, ENAR

*Chair(s): Christopher Schmid, Tufts-New England Medical Center*

10:35 a.m. **Imputation and Forecasting for State Mortality**—◆ Guanhua Lu, University of Maryland/National Center for Health Statistics; Benjamin Kedem, University of Maryland; Rong Wei, National Center for Health Statistics

10:50 a.m. **The Impact of Using Different Imputation Methods for Missing Quality-of-Life Scores on the Estimation of the Cost-Effectiveness of Lung Volume Reduction Surgery**—◆ David Blough, University of Washington; Sean Sullivan, University of Washington; Scott Ramsey, Fred Hutchinson Cancer Research Center; Roger Yusen, Washington University School of Medicine

11:05 a.m. **Combining Information from Various Data Sources To Improve Analyses of Adjuvant Cancer Therapies**—◆ Yulei He, Harvard Medical School; Alan M. Zaslavsky, Harvard Medical School

11:20 a.m. **Do Teenagers Always Tell the Truth? Bayesian Methods To Estimate the Prevalence of Adolescent Risk Behaviors from Self-Report**—◆ Janet Rosenbaum, Harvard University

11:35 a.m. **Bayesian Simultaneous Intervals for Small Areas: an Application to Variation in Maps**—◆ Erik B. Erhardt, University of New Mexico; Balgobin Nandram, Worcester Polytechnic Institute; Jai Choi, National Center for Health Statistics

11:50 a.m. **Spatial Statistical Methods for Small-Area Health Data with Application to the Association of Breast Cancer Incidence and Local Power Plant Emissions**—◆ Heather Watson, New York University; Judith D. Goldberg, New York University School of Medicine; Mengling Liu, New York University School of Medicine

12:05 p.m. **Floor Discussion**

418

## ● ⊛ **Bioinformatics—Contributed**

Section on Statistical Computing, Biometrics Section, ENAR

*Chair(s): Jie Ding, GlaxoSmithKline*

10:35 a.m. **Linker DNA Length Preference in Human Chromatin Revealed by a Two-State Duration Hidden Markov Model**—◆ Guei-Feng Tsai, Northwestern University; Ji-Ping Wang, Northwestern University; Jonathan Widom, Northwestern University

10:50 a.m. **A Systematic Benchmark of Dimension Reduction in Remote Homology Detection with Support Vector Machines**—◆ Melissa M. Matzke, Pacific Northwest National Laboratory; Bobbie-Jo Webb-Robertson, Pacific Northwest National Laboratory; Christopher S. Oehmen, Pacific Northwest National Laboratory; Jorge F. Reyes Spindola, Pacific Northwest National Laboratory

11:05 a.m. **Using Microarray Gene-Coexpression Networks To Increase Gene Screening Validation Success and To Build Accurate Classifiers**—◆ Wei Zhao, University of California, Los Angeles; Steve Horvath, University of California, Los Angeles; Paul Mischel, University of California, Los Angeles; Aldons J. Lusis, University of California, Los Angeles; Stanley Nelson, University of California, Los Angeles

11:20 a.m. **ANOVA Model-Based Pattern Recognition Technique**—◆ Yushu Liu, University of Kentucky; R. Lakshman Chelvarajan, University of Kentucky; Thomas Getchell, University of Kentucky; Subbarao Bondada, University of Kentucky; Arnold J. Stromberg, University of Kentucky

11:35 a.m. **Canonical Parallel View and Adjustment for the Difference between Paired High-Dimensional Datasets**—◆ Xuxin Liu, The University of North Carolina at Chapel Hill

11:50 a.m. **ProMAT: Protein Microarray Analysis Tool**—◆ Amanda M. White, Pacific Northwest National Laboratory; Don S. Daly, Pacific Northwest National Laboratory; Susan S. Varnum, Pacific Northwest National Laboratory; Kevin K. Anderson, Pacific Northwest National Laboratory; Nikki Bollinger, Pacific Northwest National Laboratory; Rachel M. Gonzalez, Pacific Northwest National Laboratory; Richard C. Zangar, Pacific Northwest National Laboratory

CC-613

- 12:05 p.m. **Uncertainty in Clustering Posterior Distributions of Gene Expression Levels Using MCMC Samples—**  
❖Tanzzy Love, Carnegie Mellon University

**419** **CC-309**  
● **Nonparametric Statistics with Censored Data—Contributed**

Section on Nonparametric Statistics, ENAR

*Chair(s): Sarah Baraniuk, The University of Texas School of Public Health*

- 10:35 a.m. **Nonparametric Significance Tests for Sums of Censored Random Variables—**❖Golde Holtzman, Virginia Polytechnic Institute and State University; Carl E. Zipper, Virginia Polytechnic Institute and State University
- 10:50 a.m. **Nonparametric Tests for Covariate Effects with Multistate Survival Data—**❖Limin Peng, Emory University; Jason P. Fine, University of Wisconsin-Madison
- 11:05 a.m. **Estimation for Two-Sample, Location-Scale Models under Type I Censorship—**❖Xuewen Lu, University of Calgary
- 11:20 a.m. **Nonparametric Maximum Likelihood Estimation of Hazard Function under Shape Restrictions—**  
❖Desale Habtzghi, University of Georgia; Mary Meyer, University of Georgia; Somnath Datta, University of Louisville
- 11:35 a.m. **Inference on the Quantile Function under Left Truncation and Right Censoring—**❖Sana Buhamra, Kuwait University; Noriah Al-Kandari, Kuwait University
- 11:50 a.m. **Empirical Likelihood Method for Heteroscedastic Linear Model—**❖Hua Zhu, University of Kentucky; Mi-Ok Kim, University of Kentucky; Mai Zhou, University of Kentucky
- 12:05 p.m. **Empirical Likelihood and Marginal Confidence Interval—**❖Mi-Ok Kim, University of Kentucky

**420** **CC-310**  
● **Time Series and Temporal Correlation with Regression Applications—Contributed**

Section on Physical and Engineering Sciences, Section on Statistics and the Environment

*Chair(s): Stephan Sain, University of Colorado at Denver and Health Sciences Center*

- 10:35 a.m. **Spectral Analysis of Nonstationary Time Series with Piece-Wise Monotonic Time-Varying Frequencies—**❖Md. Jobayer Hossain, Southern Methodist University; Wayne A. Woodward,

Southern Methodist University; Henry L. Gray, Southern Methodist University

- 10:50 a.m. **Nonparametric Kernel Estimates of Autocorrelation Structure from Single-Molecule Experimental Data—**❖Tingting Zhang, Harvard University; Samuel Kou, Harvard University
- 11:05 a.m. **Exploring Statistical Correlations among Nonlinear Time Series/Signals—**❖Carolyn Morgan, Hampton University; Morris H. Morgan, Hampton University
- 11:20 a.m. **Wavelet Variance Analysis for Random Fields—**  
❖Debashis Mondal, University of Washington; Donald B. Percival, University of Washington
- 11:35 a.m. **Wavelet-Based Estimation of Linear Regression Models with Two Errors: a Long Memory and a White Noise—**❖Kyungduk Ko, Boise State University
- 11:50 a.m. **Calibrating OLS Estimators in Linear Regression with Long Memory Error—**❖Jaechoul Lee, Boise State University; Kyungduk Ko, Boise State University
- 12:05 p.m. **On Improved Estimation in Linear Regression with Long Memory Errors—**❖Mohamedou Ould Haye, Carleton University; A. K. Saleh, Carleton University

**421** **CC-615**  
● **QTL Analysis and Mapping—Contributed**

Biometrics Section

*Chair(s): Haiyan Wang, Kansas State University*

- 10:35 a.m. **Strategies for Fine Mapping of QTL in Complex Pedigrees Using Combined Linkage and Linkage Disequilibrium Method—**❖Natascha Vukasinovic, Monsanto Company; Fengxing Du, Monsanto Company
- 10:50 a.m. **A New Statistical Model for Dissecting the Genetic Basis of Heterosis through Multiple Interval Mapping (MIM) in Design III Populations—**  
❖Antonio A. F. Garcia, Escola Superior de Agricultura “Luis de Queiroz”; Zhao-Bang Zeng, Bioinformatics Research Center
- 11:05 a.m. **A Semiparametric Approach for Functional Genetic Mapping of Long-Term HIV Dynamics—**❖Song Wu, University of Florida; Jie Yang, University of Florida; Rongling Wu, University of Florida
- 11:20 a.m. **A Semiparametric Approach to K Mixtures of Two Components with Application to the**

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

**Mapping of Quantitative Trait Loci**—◆ Shiju Zhang, The University of Toledo; Biao Zhang, The University of Toledo; Grier P. Page, The University of Alabama at Birmingham

- 11:35 a.m. **Functional Mapping of Time-Warped Developmental Trajectories Based on B-Splines**—◆ Xueli Liu, University of Florida; Rongling Wu, University of Florida
- 11:50 a.m. **Combining QTL Analysis and Bayesian Network Discovery Methods To Determine Genetic Relationships in a Micorarray/Marker Dataset**—◆ Christine W. Duarte, North Carolina State University; Zhao-Bang Zeng, Bioinformatics Research Center
- 12:05 p.m. **A Statistical Approach for Genome-Wide Scan and Testing Imprinted Quantitative Trait Loci**—◆ Yuehua Cui, Michigan State University

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CC-617

## ● The Cox Model and Methods for Recurrent Events—Contributed

Biometrics Section, ENAR

*Chair(s): Huichao Chen, Emory University*

- 10:35 a.m. **Methods To Distinguish between the Cox and Aalen's Model for Right-Censored Data**—◆ Yinghua Zhang, Medical College of Wisconsin; John Klein, Medical College of Wisconsin
- 10:50 a.m. **Asymptotic Theory for the Proportional Hazards Model with Random Effects**—Anthony C. Gamst, University of California, San Diego; ◆ Michael Donohue, University of California, San Diego; Ronghui Xu, University of California, San Diego
- 11:05 a.m. **Comparing Two Crossing Hazard Rates by Cox Proportional Hazards Modeling**—◆ Kejian Liu, Novartis Pharmaceuticals Corporation; Peihua Qiu, University of Minnesota; Jun Sheng, University of Minnesota
- 11:20 a.m. **Robust Method for Analyzing Recurrent Events Data in the Presence of Terminal Events**—◆ Rajeshwari Sundaram, The University of North Carolina at Charlotte
- 11:35 a.m. **Estimation of Gap-Time Distribution with Recurrent Event Data under an Informative Monitoring Period**—◆ Akim Adekpedjou, University of South Carolina; Edsel A. Peña, University of South Carolina
- 11:50 a.m. **Floor Discussion**

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CC-619

## ● Binary Data—Contributed

Biopharmaceutical Section, Biometrics Section, ENAR

*Chair(s): Keith Soper, Merck & Co., Inc.*

- 10:35 a.m. **A Multiplicative Heteroscedasticity Model for Clustered Binary Data**—◆ Mitchell Rosen, Omnicare Clinical Research
- 10:50 a.m. **Design and Analysis of Active Control Noninferiority Trials with Binary Data**—◆ Yu-Yun Ho, Johnson & Johnson Pharmaceutical R&D; Sudhakar Rao, Johnson & Johnson Pharmaceutical R&D; George Chi, Johnson & Johnson Pharmaceutical R&D
- 11:05 a.m. **A Note on Sample Size Re-estimation with Interim Binary Data for Double-Blind Clinical Trials**—◆ Xiaohui Luo, Merck & Co., Inc.; Peng-Liang Zhao, Kyowa Pharmaceutical, Inc.
- 11:20 a.m. **More Powerful Analyses of Stratified Noninferiority Trials with Binary Endpoints**—◆ Devan V. Mehrotra, Merck Research Laboratories; William W. B. Wang, Merck Research Laboratories
- 11:35 a.m. **Estimation of Multiple Response Rates in Clinical Trials with Missing Observations**—◆ Myron Chang, University of Florida
- 11:50 a.m. **Choice of Working Correlation Structure for a GEE-Based Analysis of Incomplete Longitudinal Binary Data**—◆ Priya Kulkarni, Merck Research Laboratories; Devan V. Mehrotra, Merck Research Laboratories; Xiaoming Li, Novartis Pharmaceuticals Corporation
- 12:05 p.m. **Constructing Better Binomial Confidence Intervals by Remembering Three Lessons from Normal Data**—◆ Craig Borkowf, Centers for Disease Control and Prevention

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CC-620

## ● Missing Data—Contributed

Biopharmaceutical Section, Biometrics Section

*Chair(s): Soomin Park, Eli Lilly and Company*

- 10:35 a.m. **Statistical Methods To Analyze Incomplete Clinical Trial Data**—◆ Ohidul Siddiqui, U.S. Food and Drug Administration
- 10:50 a.m. **Mixed Model: an Alternative to LOCF as Primary Analysis**—◆ Cunshan Wang, Pfizer Inc.; Naitee Ting, Pfizer Inc.; Greg C. G. Wei, Pfizer Inc.



**11:05 a.m. Estimating Treatment Effect in Clinical Trials with Disease-Dependant Noncompliance**—❖ Kuenhi Tsai, Vertex Pharmaceuticals Incorporated; Peter Westfall, Texas Tech University; Stephan Ogenstad, Vertex Pharmaceuticals Incorporated; Miles Dunn, Vertex Pharmaceuticals Incorporated

**11:20 a.m. Variability in Visit Times in Clinical Trials and the Implications for a Common Mixed Model for Repeated Measures**—❖ Tristan Massie, U.S. Food and Drug Administration

**11:35 a.m. Using Stochastic Differential Equations for Imputation of Missing Values in Longitudinal Clinical Data**—❖ Naum Khutoryansky, Novo Nordisk

**11:50 a.m. What Is a Suitable Definition of Study Information in Longitudinal Clinical Trials?**—❖ Guoguang Ma, Merck & Co., Inc.; Michael Nessly, Merck Research Laboratories

**12:05 p.m. A Local Influence Sensitivity Analysis for Incomplete Longitudinal Depression Data**—❖ Shuyi Shen, Eli Lilly and Company; Caroline Beucnkens, Limburgs Universitair Centrum; Craig Mallinckrodt, Eli Lilly and Company; Geert Molenberghs, Limburgs Universitair Centrum

**425 CC-203**  
**● Time Series Outliers and Filters—Contributed**

Business and Economics Statistics Section

*Chair(s): Moon Jung Cho, Bureau of Labor Statistics*

**10:35 a.m. Forecasting and Dynamic Updating of Time Series of Curves**—❖ Haipeng Shen, The University of North Carolina at Chapel Hill; Jianhua Z. Huang, Texas A&M University

**10:50 a.m. Tests for Changing Mean with Monotonic Power**—❖ Ted Juhl, The University of Kansas

**11:05 a.m. Some Ruin Problems with the Mixture Distribution**—❖ Min Deng, Maryville University

**11:20 a.m. An Asymmetric Information Modeling Framework for Ultra-High-Frequency Transaction Data: a Nonlinear Filtering Approach**—❖ Yoonjung Lee, Harvard University

**11:35 a.m. Variance Change in Time Series ARIMA Models**—❖ Dongping Fang, SPSS Inc.

**11:50 a.m. Outlier Detection in Multiple Time Series by Projection Pursuit**—Galeano Pedro, Universidad

Santiago de Compostela ; ❖ Daniel Peña, Universidad Carlos III de Madrid; Ruey S. Tsay, The University of Chicago

**12:05 p.m. Longitudinal Microdata Outlier Detection Techniques**—❖ Eric Simants, Bureau of Labor Statistics

**426 CC-616**  
**● Modeling of Genetic Data—Contributed**

Biometrics Section, ENAR

*Chair(s): Yi He, University of Minnesota*

**10:35 a.m. Likelihood of a Particular Order of Genetic Markers and the Construction of Genetic Maps**—❖ Susanta Tewari, University of Georgia

**10:50 a.m. Estimating Population Structure**—❖ Suvajit Samanta, North Carolina State University; Bruce S. Weir, University of Washington

**11:05 a.m. Inference of Dynamic Activity of Transcriptional Modules**—❖ Ron Yu, University of California, San Diego; Jie Liu, University of California, San Diego; Wei Wang, University of California, San Diego

**11:20 a.m. Performance of Phylo-HMM for Evolutionary Conserved Element Detection in Promoter Region**—❖ Xiaodan Fan, Harvard University; Jun Liu, Harvard University

**11:35 a.m. A Mixture Model Approach in Analyzing Genotype-Phenotype Association**—❖ Jason Robarge, Indiana University School of Medicine; Lang Li, Indiana University; David Flockhart, Indiana University School of Medicine

**11:50 a.m. On the Detection of DNA Copy Number Changes**—❖ Jie Chen, University of Missouri-Kansas City; Yu-Ping Wang, University of Missouri-Kansas City

**12:05 p.m. Including Current Ages in Aggregation and Linkage Analysis of Longevity**—❖ Jeanine Houwing-Duistermaat, Leiden University Medical Center; Andrea Callegaro, Leiden University Medical Center; Marian Beekman, Leiden University Medical Center; Rudi Westendorp, Leiden University Medical Center; Eline Slagboom, Leiden University Medical Center; Hans van Houwelingen, Leiden University Medical Center

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CC-618

## ● Statistical Methods in Genetics—Contributed

Biometrics Section, ENAR

*Chair(s): Tracy Bergemann, University of Minnesota*

10:35 a.m. **Regional Admixture Mapping and Structured Association Testing: Conceptual Unification Using a General Linear Model**—◆David Redden,

The University of Alabama at Birmingham; Jasmin Divers, The University of Alabama at Birmingham; Kelly Vaughan, The University of Alabama at Birmingham; Hemant Tiwari, The University of Alabama at Birmingham; Mark Beasley, The University of Alabama at Birmingham; Jose R. Fernandez, The University of Alabama at Birmingham; Robert Kimberly, The University of Alabama at Birmingham; Rui Feng, The University of Alabama at Birmingham; Miguel Padilla, The University of Alabama at Birmingham; Nianjun Liu, The University of Alabama at Birmingham; Michael Miller, University of Minnesota; David B. Allison, The University of Alabama at Birmingham

10:50 a.m. **Data Normalization of Stable-Isotope Labeled Peptides in Mass Spectrometry**—◆Douglas

Mahoney, Mayo Clinic College of Medicine; Ann L. Oberg, Mayo Clinic College of Medicine; Jeanette E. Eckel-Passow, Mayo Clinic College of Medicine; Terry M. Therneau, Mayo Clinic College of Medicine; Suresh T. Chari, Mayo Clinic College of Medicine; Unnikrishnan Gopinathan, Mayo Clinic College of Medicine; Lawrence E. Ward, Mayo Clinic College of Medicine; Xuan-Mai T. Persson, Mayo Clinic College of Medicine; Sreekumar Raghavakaimal, Mayo Clinic College of Medicine

11:05 a.m. **A Genome-Wide Study on Transcriptional Regulation of Protein Complex in *Saccharomyces Cerevisiae***—◆Ching-Ti Liu, University of

California, Los Angeles; Shinsheng Yuan, University of California, Los Angeles; Ker-Chau Li, University of California, Los Angeles

11:20 a.m. **Comparative Validity and Power of Methods for Association-Testing with Related Individuals**—

◆Hemant Tiwari, The University of Alabama at Birmingham; Amit Patki, The University of Alabama at Birmingham; Mark Beasley, The University of Alabama at Birmingham; David B. Allison, The University of Alabama at Birmingham

11:35 a.m. **Measuring Deviations from Hardy Weinberg Equilibrium in SNP Data**—◆Vernon S. Pankratz, Mayo Clinic College of Medicine; Robert Vierkant, Mayo Clinic College of Medicine

11:50 a.m. **An Algorithm for Finite Markov Chain Imbedding Approach**—◆Lung-An Li, Academia Sinica

12:15 p.m. **Floor Discussion**

## Regular Contributed Posters

10:30 a.m.–12:20 p.m.

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CC-Level 6 East Lobby

## Contributed Posters—Contributed

General Methodology, Section on Bayesian Statistical Science, Section on Statistics in Epidemiology, Biometrics Section, Section on Statistical Computing, Section on Health Policy Statistics, Section on Physical and Engineering Sciences, IMS, Section on Quality and Productivity

*Organizer(s): Maura E. Stokes, SAS Institute, Inc.*

*Chair(s): Maura E. Stokes, SAS Institute, Inc.*

### Bayesian statistics, hierarchical models

- 01 **The Relative Contribution Measures in Multilevel Modeling**—◆Liyi Cen, University of Pennsylvania; Zhen Chen, University of Pennsylvania; Daniel E. Polsky, University of Pennsylvania; Kevin G. Volpp, University of Pennsylvania
- 02 **Uncertainty Computation for the Virtual Cement and Concrete Testing Laboratory Measurements**—◆Blaza Toman, National Institute of Standards and Technology; Charles Hagwood, National Institute of Standards and Technology; Adriana Hornikova, National Institute of Standards and Technology; Hung-kung Liu, National Institute of Standards and Technology; Nien Fan Zhang, National Institute of Standards and Technology
- 03 **Alternative Methods for Variable Selection in Generalized Linear Models with Binary Outcomes for Incomplete Data**—◆Gang Liu, University of California, Los Angeles
- 04 **Analysis in Opinions about the Death Penalty in U.S. States**—◆Shouhao Zhou, Columbia University; Andrew Gelman, Columbia University
- 05 **Join-Point Analysis of Survival Data**—◆Sandra Hurtado Rua, Northern Illinois University; Sanjib Basu, Northern Illinois University

### Biometrics, biostatistics, epidemiology

- 06 **Design-Based Calibration Estimators for Measurement**

- 07 **Error in the Cox Model**—❖ Thomas Lumley, University of Washington; Pam Shaw, University of Washington
- 07 **ROC Curve Analysis in Osteoporosis Screening**—❖ James Powers, The University of North Carolina at Chapel Hill; Margaret Gourlay, The University of North Carolina at Chapel Hill; Kristine Ensrud, VA Medical Center
- 08 **A Soft Endpoint for HIV-1Ba-I Growth in Cervical, Rectal, and Tonsular in vitro Assays**—❖ Sandra Senneke, BioStat Solutions Inc.; Nicola Richardson-Harman, BioStat Solutions Inc.; James Cummins, Southern Research Institute; Carol Lackman-Smith, Southern Research Institute; Christina Bromley, BioStat Solutions Inc.; Patricia Reichelderfer, National Institute of Child Health & Human Development
- 09 **Feasibility of Genome-Wide Haplotype Association Studies with Small Sample Size and Sparsely Spaced SNPs**—❖ Shaokun Chuai, University of Pennsylvania; Nandita Mitra, University of Pennsylvania; Nathan Ellis, The University of Chicago
- 10 **Bayesian State-Space Models for Predicting Temporal Gene Expression Profiles**—❖ Yulan Liang, University at Buffalo; Arpad Kelemen, Niagara University
- 11 **Handling Missing Data for Smoking Cessation with Bootstrap, Trees, and Multiple Imputation**—❖ Jeff Thostenson, University of Arkansas for Medical Sciences; Lowell C. Dale, Mayo Clinic College of Medicine; Darrell Schroeder, Mayo Clinic College of Medicine; Heike Hofmann, Iowa State University
- 12 **Analysis of Longitudinal Case-Control Zero-Heavy Data: Vaginal Shedding of HIV**—❖ Leann Myers, Tulane University; Hao He, Tulane University; Patricia Kissinger, Tulane University
- 13 **SAS Estimation of Standard Errors for Partial Least Squares Regression**—❖ April Grant, University of Arkansas for Medical Sciences; David K. Williams, University of Arkansas for Medical Sciences; Zoran Bursac, University of Arkansas for Medical Sciences; Geoffrey M. Curran, University of Arkansas for Medical Sciences
- 14 **Assessment of Capture-Recapture Methods in Estimating Populations of Oklahomans with Birth Defects**—❖ Robert C. Wild, The University of Oklahoma Health Sciences Center; Barbara Neas, The University of Oklahoma Health Sciences Center
- 15 **Comparing Methods of Examining Trend Data for a Large Population**—❖ Kristen Eberly, The University of Oklahoma; Barbara Neas, The University of Oklahoma Health Sciences Center; David M. Thompson, The University of Oklahoma
- 16 **Repeated Measurement of Gastric Myoelectric Activity in Obese Participants**—❖ Jiangyue Wang, The Pennsylvania State University
- 17 **Salamander Cannibalism**—❖ Jean Ellis, California State University, East Bay; Erica Wildy, California State University, East Bay
- 18 **Determining an Optimal Exposure Metric from a Bivariate Distribution of Asbestos Exposures (Length, Diameter) in a Cohort of South Carolina Textile Workers**—❖ Stephen Gilbert, National Institute for Occupational Safety and Health; Leslie T. Stayner, University of Illinois at Chicago; Eileen D. Kuempel, National Institute for Occupational Safety and Health; John D. Dement, Duke University Medical Center
- 19 **Analysis of Respiratory Viral Exposure and Timing of Exposure During Infancy with Development of Childhood Asthma**—❖ Pingsheng Wu, Vanderbilt University School of Medicine; Tebeb Gebretsadik, Vanderbilt University School of Medicine; William Dupont, Vanderbilt University School of Medicine; Marie Griffin, Vanderbilt University School of Medicine; Rachel Enriquez, Vanderbilt University School of Medicine; Kecia Carroll, Vanderbilt University School of Medicine; Tina Hartert, Vanderbilt University School of Medicine
- 20 **Evaluating the Predictiveness of a Continuous Marker in Case-Control Design**—❖ Ying Huang, University of Washington; Margaret S. Pepe, Fred Hutchinson Cancer Research Center/University of Washington
- 21 **Variable Selection in the Multivariate Adaptive Regression Splines (MARS)-Logit Models To Detect Gene-Gene Interactions**—❖ Huiyi Lin, Louisiana State University Health Sciences Center; Cruz Velasco, Louisiana State University Health Sciences Center; Jennifer J. Hu, Louisiana State University Health Sciences Center
- 22 **A Comparison of Three Categorical Data Analysis Methods Applied to Survey Data**—❖ Barbara Neas, The University of Oklahoma Health Sciences Center; Hani Dimassi, The University of Oklahoma Health Sciences Center; David M. Thompson, The University of Oklahoma; Betty J. Pfefferbaum, The University of Oklahoma Health Sciences Center
- 23 **Discrete Time Analysis of Mortality among Persons with Diabetes Using the Logit Model**—❖ Edward Tierney, Centers for Disease Control and Prevention

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## Bootstrap, resampling methods

- 24 **Permutation Test and Its Application to the Youth Partners in Care (YPIC) Study**—❖Lingqi Tang, University of California, Los Angeles; Naihua Duan, University of California, Los Angeles; Joan Asarnow, University of California, Los Angeles
- 25 **Comparison of Resampling Methods to Least Squares and Maximum Likelihood Methods for Estimating Fracture Strength Parameters of Glass Test Specimens**—❖Gerald Shaughnessy, University of Dayton; Peter Hovey, University of Dayton
- 26 **Stepwise Permutation Tests Using Medians**—❖Scott Richter, The University of North Carolina at Greensboro; Melinda McCann, Oklahoma State University
- 27 **Resampling Methods in Asymptotic Statistical Inferences**—❖Fassil Nebebe, Concordia University; Tak K. Mak, Concordia University

## Neuroscience, brain imaging

- 28 **Surface Shape Analysis with an Application to Brain Cortical Surface Analysis in Schizophrenia**—❖Christopher Brignell, University of Nottingham; Ian Dryden, University of Nottingham; William Browne, University of Nottingham

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## Speaker Luncheon 12:30 p.m.–1:50 p.m.

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### 429 **Health Policy Statistics Speaker with Lunch (fee event)—Speaker with Lunch** CC-4C-1

Section on Health Policy Statistics

*Organizer(s): Bonnie Ghosh-Dastidar, RAND Corporation*

- WL08 **Mapping and Applications in Spatio-Temporal Public Health Data**—❖Bradley P. Carlin, University of Minnesota

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## Roundtables with Lunch 12:30 p.m.–1:50 p.m.

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### 430 **Biopharmaceutical Section Roundtables with Lunch (fee event)** CC-4C-2

Biopharmaceutical Section, Section on Statistical Consulting, Section on Statistical Graphics

*Organizer(s): Amit Bhattacharyya, GlaxoSmithKline*

- WL09 **Procedures for Controlling the False Discovery Rate**

- in the Multiple Comparison Problems Involving Multiple Endpoint Tests in Clinical Trials—❖Arunava Chakravartty, University of California, Riverside
- WL10 **Bayesian Approaches to Clinical Trials**—❖Dinesh Kumar, Eisai Medical Research
- WL11 **How Can Statisticians Better Contribute to Clinical Trials and Intervention Studies in Developing Countries?**—❖Craig Borkowf, Centers for Disease Control and Prevention
- WL12 **Use of Propensity Scoring in Clinical Trials**—❖Daniel P. Reyner, Zimmer, Inc.
- WL13 **Increasing the Usage of Data from Cross-Over Studies**—❖Yonghua Wang, Bristol-Myers Squibb Company
- WL14 **Statistical Methods for Optimization of Development of Combination Products**—❖Timothy Montague, GlaxoSmithKline
- WL15 **How To Explain Complex Statistical Methods to Life Scientists**—❖Vadim Kutsyy, Cytokinetics, Inc.
- WL16 **R-Based Data Analysis and Graphics Applications for Scientists: Moving beyond Excel**—❖Bert Gunter, Genentech, Inc.
- WL17 **Translational Medicine: from R to D and from D to R**—❖Chi-Hse Teng, Pfizer Inc.; Patricia English, Pfizer Inc.
- WL18 **Proof-of-Concept Studies**—❖Robert Smith, Bristol-Myers Squibb Company
- WL19 **Sensitivity Analysis for Missing Data in Clinical Trials**—❖Jie Zhang, Novartis Pharmaceuticals Corporation
- WL20 **Analysis of Cell-Based, High-Content Imaging Data**—❖Shuguang Huang, Eli Lilly and Company
- WL21 **Interval Censored Time-to-Event Data: Examples, Analyses, and Assumptions**—❖Daohai Yu, Duke University

### 431 **Business and Economics Statistics Section Roundtable with Lunch (fee event)** CC-4C-2

Business and Economics Statistics Section

*Organizer(s): David Dickey, North Carolina State University*

- WL22 **Economic Aspects of Alternative Energy**—❖Margaret F. Land, TeXas Environmental Studies and Analysis, LLC



**432** **CC-4C-2**  
**Section on Statistical Computing Roundtables with Lunch (fee event)**

Section on Statistical Computing  
*Organizer(s): Edward Wegman, George Mason University*  
 WL23 S-PLUS and R: Working Together?—❖ Tim C. Hesterberg, Insightful Corporation

**433** **CC-4C-3**  
**Section on Statistical Consulting Roundtable with Lunch (fee event)**

Section on Statistical Consulting  
*Organizer(s): Phillip Chapman, Colorado State University*  
 WL24 Statistical Consulting in (and around) the Bayesian Paradigm—❖ Alix Gitelman, Oregon State University

**434** **CC-4C-3**  
**Section on Statisticians in Defense and National Security Roundtable with Lunch (fee event)**

Section on Statisticians in Defense and National Security, Section on Statistical Consulting  
*Organizer(s): Lara S. Schmidt, RAND Corporation*  
 WL25 Defense-Related Consulting Projects—❖ John Crown, RAND Corporation

**435** **CC-4C-3**  
**Section on Statistical Education Roundtables with Lunch (fee event)**

Section on Statistical Education  
*Organizer(s): Patti Collings, Brigham Young University*  
 WL26 Analogies and Other Strategies To Help Students Use Intuition To Understand Concepts—❖ Lawrence M. Lesser, The University of Texas at El Paso  
 WL27 How I Use the ARTIST Web Site in My Teaching—❖ John Holcomb, Jr., Cleveland State University

**436** **CC-4C-3**  
**Section on Statistics in Epidemiology Roundtable with Lunch (fee event)**

Section on Statistics in Epidemiology  
*Organizer(s): Jennifer Clark Nelson, Group Health Cooperative*  
 WL28 Relative Risk Regression as an Alternative to Logistic Regression in Cross-Sectional and Longitudinal Studies—❖ Richard Kronmal, University of Washington

**437** **CC-4C-3**  
**Section on Government Statistics Roundtable with Lunch (fee event)**

Section on Government Statistics  
*Organizer(s): Roberta Sangster, Bureau of Labor Statistics*  
 WL29 Journal of Empirical Research on Human Research Ethics—❖ Joan E. Sieber, California State University, East Bay

**438** **CC-4C-3**  
**Section on Statistical Graphics Roundtable with Lunch (fee event)**

Section on Statistical Graphics  
*Organizer(s): Simon Urbanek, AT&T Labs-Research*  
 WL30 Biostatistical Graphics: Large, Weak Datasets—❖ Thomas Lumley, University of Washington

**439** **CC-4C-3**  
**Section on Quality and Productivity Roundtable with Lunch (fee event)**

Section on Quality and Productivity  
*Organizer(s): William R. Myers, Procter & Gamble*  
 WL31 Communicating Statistics to Nonstatisticians in Industry—❖ Philip Scinto, The Lubrizol Corporation

**440** **CC-4C-3**  
**Section on Risk Analysis Roundtable with Lunch (fee event)**

Section on Risk Analysis  
*Organizer(s): Duane Steffey, Exponent, Inc.*  
 WL32 Results of a Post-Katrina Survey of New Orleans Residents—❖ David Banks, Duke University

**441** **CC-4C-3**  
**Section on Survey Research Methods Roundtables with Lunch (fee event)**

Section on Survey Research Methods  
*Organizer(s): Steven G. Heeringa, University of Michigan*  
 WL33 Survey Research and Its Role in Improving the Health and Lives of the World's Poor—❖ David J. Fitch, Universidad del Valle de Guatemala  
 WL34 Cross-Cultural Issues in Survey Research—❖ Peter P. Mohler, ZUMA

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 442 CC-4C-3 Social Statistics Section Roundtable with Lunch (fee event)

Social Statistics Section

Organizer(s): Allen Schirm, *Mathematica Policy Research, Inc.*

- WL35 The Next Survey Imperative: Being Proactive on Privacy—  
❖ Gerald Gates, U.S. Census Bureau

## 443 CC-4C-3 Section on Teaching Statistics in the Health Sciences Roundtable with Lunch (fee event)

Section on Teaching Statistics in the Health Sciences

Organizer(s): Patrick Tarwater, *The University of Texas Health Science Center at Houston*

- WL36 Distance Teaching and Learning in the Health Sciences—  
❖ T. Robert Harris, The University of Texas at Dallas

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## Invited Sessions 2:00 p.m.–3:50 p.m.

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## 444 CC-617 JASA Applications and Case Studies Invited Session—Invited

JASA, Applications and Case Studies, Section on Nonparametric Statistics

Organizer(s): Mark S. Kaiser, *Iowa State University*

Chair(s): Mark S. Kaiser, *Iowa State University*

- 2:05 p.m. **Model-Assisted Estimation of Forest Resources with Generalized Additive Models**—❖ Jean D. Opsomer, Iowa State University; F. Jay Breidt, Colorado State University; Gretchen Moisen, U.S. Forest Service; Goeran Kauermann, Universitaet Bielefeld
- 2:40 p.m. Disc: David Ruppert, Cornell University
- 2:55 p.m. Disc: Roderick J. Little, University of Michigan
- 3:10 p.m. Disc: Mary C. Christman, University of Florida
- 3:35 p.m. Floor Discussion

## 445 CC-211 New Methods for Modeling Choice in Marketing—Invited

Section on Statistics and Marketing

Organizer(s): Andrew Ainslie, *University of California, Los Angeles*

Chair(s): Andrew Ainslie, *University of California, Los Angeles*

- 2:05 p.m. **Structural Estimation of Retail Demand and Inventory Decisions**—❖ Andres Musalem, The

- Wharton School of the University of Pennsylvania
- 2:55 p.m. **Estimating Willingness To Pay with Random Coefficient Models**—❖ Garrett Sonnier, University of California, Los Angeles
- 3:45 p.m. Floor Discussion

## 446 CC-606 Nonparametric Inference—Invited

IMS, Section on Nonparametric Statistics

Organizer(s): Tony Cai, *University of Pennsylvania*

Chair(s): Jiashun Jin, *Purdue University*

- 2:05 p.m. **Statistical Inference for Evolving Periodic Functions**—❖ Peter G. Hall, Australian National University
- 2:25 p.m. **On Nonparametric Confidence Sets**—❖ Tony Cai, University of Pennsylvania; Mark Low, University of Pennsylvania
- 2:50 p.m. **Nonparametric Estimation of Eigenvectors**—  
❖ Iain Johnstone, Stanford University
- 3:15 p.m. **Adaptive Generalized Likelihood Inferences for Additive Models**—❖ Jianqing Fan, Princeton University; Jiancheng Jiang, Princeton University
- 3:40 p.m. Floor Discussion

## 447 CC-604 ● Split-Plot Designs and Response Surface Analysis: the Interface—Invited

Section on Quality and Productivity, Section on Physical and Engineering Sciences

Organizer(s): Martha Gardner, *GE Global Research*

Chair(s): Martha Gardner, *GE Global Research*

- 2:05 p.m. **Standard Error Calculations for Estimators of Regression Coefficients in Split-Plot Designs**—Shaun Wulff, University of Wyoming; ❖ Timothy Robinson, University of Wyoming; Christine M. Anderson-Cook, Los Alamos National Laboratory
- 2:30 p.m. **A Bayesian Approach to the Analysis of Split-Plot Experiments**—❖ Peter Goos, Universiteit Antwerpen; Steven G. Gilmour, Queen Mary, University of London
- 2:55 p.m. **Randomization-Based Analysis of Multistratum Response Surface Designs**—❖ Steven G. Gilmour, Queen Mary, University of London
- 3:20 p.m. **Testing for Lack-of-Fit in Split-Plot Response Surface Models**—❖ Scott Kowalski, Minitab Inc.;

Geoff Vining, Virginia Polytechnic Institute and State University

3:45 p.m. Floor Discussion

## 448 CC-3B ● Adaptive Designs in Clinical Trials—Invited

Biopharmaceutical Section, ENAR, WNAR

Organizer(s): Sue-Jane Wang, U.S. Food and Drug Administration

Chair(s): Kao-Tai Tsai, Organon

2:05 p.m. **Weighted and Unweighted Z-Tests in Sample Size Re-estimation**—❖Kuang-Kuo G. Lan, Johnson & Johnson Pharmaceutical R&D

2:30 p.m. **Considerations in Use of Adaptive Designs in Drug Development**—❖Hsien-Ming Hung, U.S. Food and Drug Administration

2:55 p.m. **Adaptive Designs in Clinical Trials**—❖Yu Shen, M. D. Anderson Cancer Center

3:20 p.m. Disc: Sue-Jane Wang, U.S. Food and Drug Administration

3:40 p.m. Floor Discussion

## 449 CC-4C-4 ● ⊕ A Tribute to Yehuda Vardi—Invited

Memorial, IMS, Section on Physical and Engineering Sciences

Organizer(s): Christopher Genovese, Carnegie Mellon University

Chair(s): Daryl Pregibon, Google Labs

2:05 p.m. **Statistical Inverse Problems in Active Network Tomography**—❖Vijay Nair, University of Michigan

2:35 p.m. **Fast Functional MRI**—❖Cun-Hui Zhang, Rutgers University

3:05 p.m. **Duration Data: Poisson Process and Bias Correction**—❖Zhiliang Ying, Columbia University

3:35 p.m. Floor Discussion

## 450 CC-607 ● New Statistical Methodology for Genomic Applications with Focus on Array CGH and Gene Networks—Invited

ENAR, Biometrics Section, WNAR

Organizer(s): Jeffrey S. Morris, M. D. Anderson Cancer Center

Chair(s): Jeffrey S. Morris, M. D. Anderson Cancer Center

2:05 p.m. **A Bayesian Hierarchical Model for Integrating Biological Data**—❖Shane Jensen, The Wharton School of the University of Pennsylvania

2:35 p.m. **A Statistics Method for Array CGH Analysis**—❖Pei Wang, Fred Hutchinson Cancer Research Center

3:05 p.m. **On Detecting Chromosomal Aberrations Using Copy Number Data**—Xuesong Yu, University of Washington; Tim Randolph, University of Washington; Hua Tang, Fred Hutchinson Cancer Research Center; ❖Li Hsu, Fred Hutchinson Cancer Research Center

3:35 p.m. Floor Discussion

## 451 CC-608 ● ⊕ The Role of Administrative Records in 21st-Century Surveys and Censuses—Invited

Social Statistics Section, Section on Health Policy Statistics

Organizer(s): Ronald Prevost, U.S. Census Bureau

Chair(s): Lisa Blumerman, U.S. Census Bureau

2:05 p.m. **Methods and File Acquisitions Supporting the Expanded Use of Administrative Records**—❖Dean Resnick, U.S. Census Bureau

2:25 p.m. **Administrative Records and Survey Data Reuse: a Muse on Their Future**—❖Ronald Prevost, U.S. Census Bureau

2:45 p.m. **Why Are Survey Counts of Medicaid Enrollees Lower Than Administrative Enrollment Counts?**—❖Michael Davern, University of Minnesota; David Baugh, Centers for Medicare and Medicaid Services; Christine Cox, National Center for Health Statistics; Kim Lochner, National Center for Health Statistics; Jacob Klerman, RAND Corporation

3:05 p.m. **Combining Social Program Administrative Data with Census Bureau Survey Data**—❖Robert Goerge, The University of Chicago

3:25 p.m. Disc: Joel Cohen, Agency for Healthcare Research

3:45 p.m. Floor Discussion

## 452 CC-612 Using Empirical Likelihood Methods in Survey Sampling—Invited

Section on Survey Research Methods, Section on Nonparametric Statistics

Organizer(s): Phillip S. Kott, National Agricultural Statistics Service

Chair(s): Charles R. Perry, National Agricultural Statistics Service

2:05 p.m. **Empirical Likelihood Inference from Sample Survey Data**—❖Jon N. K. Rao, Carleton University; Changbao Wu, University of Waterloo

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⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 2:30 p.m. **Variance Estimation for Empirical Likelihood Calibration Estimators in Unequal Probability Sampling**—◆Jae-kwang Kim, Yonsei University
- 2:55 p.m. **Empirical Likelihood Methods for Raking in Complex Surveys**—◆Randy R. Sitter, Simon Fraser University; Changbao Wu, University of Waterloo
- 3:20 p.m. Disc: Phillip S. Kott, National Agricultural Statistics Service
- 3:40 p.m. **Floor Discussion**

- 2:30 p.m. **An Introduction to Incomplete Data Regression Methods Used in Practice**—◆Nicholas J. Horton, Smith College; Ken P. Kleinman, Harvard Medical School
- 2:55 p.m. **A Data Mining Reading List**—◆Richard De Veaux, Williams College
- 3:20 p.m. **Introducing Bayes in a First Statistics Course**—◆James Albert, Bowling Green State University
- 3:45 p.m. **Floor Discussion**

453

CC-201

## ● ⊕ **Advanced Statistical Methods in Psychological Research—Invited**

Section on Bayesian Statistical Science, Biometrics Section, ENAR

*Organizer(s): Dongchu Sun, Virginia Polytechnic Institute and State University/University of Missouri-Columbia*

*Chair(s): Dongchu Sun, Virginia Polytechnic Institute and State University/University of Missouri-Columbia*

- 2:05 p.m. **Combining Speed and Accuracy To Assess Error-Free Cognitive Processes**—◆Mark Glickman, Boston University
- 2:30 p.m. **Long-Range Trends and Short-Range Dependencies in Response Time Data**—◆Mario Peruggia, The Ohio State University; Peter F. Craigmile, The Ohio State University; Trisha Van Zandt, The Ohio State University
- 2:55 p.m. **Hierarchical Bayesian Methods for Models of Memory Processes**—◆Paul Speckman, University of Missouri-Columbia; Jeff Rouder, University of Missouri-Columbia; Dongchu Sun, Virginia Polytechnic Institute and State University/University of Missouri-Columbia; Jun Lu, American University
- 3:20 p.m. Disc: Jay Myung, The Ohio State University
- 3:40 p.m. **Floor Discussion**

454

CC-401

## ● **A Statistician's Summer Reading List: Modern Topics To Check Out—Invited**

Section on Statistical Education, Section on Teaching Statistics in the Health Sciences

*Organizer(s): Paul Roback, St. Olaf College*

*Chair(s): Paul Roback, St. Olaf College*

- 2:05 p.m. **Analyzing DNA Microarrays with Undergraduate Statisticians**—◆Johanna Hardin, Pomona College; Laura Hoopes, Pomona College; Ryan Murphy, Pomona College

## Topic-Contributed Sessions

2:00 p.m.–3:50 p.m.

455

CC-618

## ● **Recent Advances in Brain Imaging—Topic-Contributed**

Biometrics Section, Section on Nonparametric Statistics, ENAR

*Organizer(s): Daniel Rowe, Medical College of Wisconsin*

*Chair(s): Daniel Rowe, Medical College of Wisconsin*

- 2:05 p.m. **Modeling State-Related fMRI Activity Using Change Point Theory**—◆Martin A. Lindquist, Columbia University; Tor D. Wager, Columbia University
- 2:25 p.m. **Wild Bootstrap for Functional Magnetic Resonance Imaging Data**—◆Hongtu Zhu, Columbia University/New York State Psychiatric Institute; Bradley S. Peterson, Columbia University/New York State Psychiatric Institute
- 2:45 p.m. **Predicting Post-Treatment Brain Activity Using a Bayesian Hierarchical Model**—◆F. DuBois Bowman, Emory University; Ying Guo, Emory University
- 3:05 p.m. **Power Calculations for Group fMRI Studies Accounting for Arbitrary Design and Temporal Autocorrelation**—◆Jeanette Mumford, University of Michigan; Thomas Nichols, University of Michigan
- 3:25 p.m. **New Kernel Method on Unit Sphere and Its Application to Brain Imaging**—◆Moo Chung, University of Wisconsin-Madison
- 3:45 p.m. **Floor Discussion**



## 456 CC-614 Measuring, Monitoring, and Evaluating Internal Revenue Service Data—Topic-Contributed

Section on Government Statistics

Organizer(s): Kevin Cecco, Internal Revenue Service

Chair(s): Thomas Petska, Internal Revenue Service

- 2:05 p.m. **Monitoring SOI Samples**—❖ Joseph Koshansky, Internal Revenue Service
- 2:25 p.m. **Measuring Nonsampling Error in Exempt Organization Business Income Tax Data**—❖ Tamara Rib, Internal Revenue Service
- 2:45 p.m. **Customer Satisfaction Initiatives at IRS's Statistics of Income: Using Surveys To Improve Customer Service**—❖ Ruth Schwartz, Internal Revenue Service; Beth Kilss, Internal Revenue Service
- 3:05 p.m. **Performance Measures within the Statistics of Income Division**—❖ Kevin Cecco, Internal Revenue Service
- 3:25 p.m. Disc: John Czajka, Mathematica Policy Research, Inc.
- 3:45 p.m. **Floor Discussion**

## 457 CC-308 Visualization of Large Datasets—Topic-Contributed

Section on Statistical Graphics, Section on Statisticians in Defense and National Security

Organizer(s): Simon Urbanek, AT&T Labs-Research

Chair(s): Deborah F. Swayne, AT&T Labs-Research

- 2:05 p.m. **Tours of Large Multivariate Data**—❖ Dianne Cook, Iowa State University
- 2:25 p.m. **Visualization of Features in Curve Estimates and Application to Genetic Loci Mapping**—❖ Myung Hee Lee, The University of North Carolina at Chapel Hill; Ivan Rusyn, The University of North Carolina at Chapel Hill; David Threadgill, The University of North Carolina at Chapel Hill; J. Stephen Marron, The University of North Carolina at Chapel Hill
- 2:45 p.m. **Upscaling Statistical Graphics**—❖ Martin Theus, University of Augsburg
- 3:05 p.m. **Visualization of Statistical Models on a Billion Cases**—❖ Graham Wills, SPSS Inc.
- 3:25 p.m. Disc: Antony Unwin, Universität Augsburg
- 3:45 p.m. **Floor Discussion**

## 458 CC-204 ● Topics in Univariate and Multivariate Time-to-Events Analysis—Topic-Contributed

Section on Bayesian Statistical Science, Biometrics Section, ENAR

Organizer(s): Nalini Ravishanker, University of Connecticut

Chair(s): Paola Sebastiani, Boston University

- 2:05 p.m. **Bayesian Modeling of Multiple Episode Occurrence and Severity with a Terminating Event**—❖ Amy Herring, The University of North Carolina at Chapel Hill
- 2:25 p.m. **Bayesian Semiparametric Inference for the Accelerated Failure Time (AFT) Model Using Hierarchical Mixture Modeling with N-IG Priors**—❖ Alessandra Guglielmi, Politecnico di Milano; Raffaele Argiento, Università Commerciale Luigi Bocconi/CNR-IMATI; Antonio Pievatolo, CNR-IMATI; Fabrizio Ruggeri, CNR-IMATI
- 2:45 p.m. **A Bayesian Dynamic Frailty Model for Recurrent Events**—❖ Changhong Song, University of Connecticut; Lynn Kuo, University of Connecticut
- 3:05 p.m. **Multivariate Times-to-Events Analysis for Marketing Data Using Frailty Models**—❖ Nalini Ravishanker, University of Connecticut; V. Kumar, University of Connecticut; Rajkumar Venkatesan, University of Connecticut
- 3:25 p.m. **Flexible Models for Quantile Regression**—❖ Milovan Krnjajic, Lawrence Livermore National Laboratory; Athanasios Kottas, University of California, Santa Cruz
- 3:45 p.m. **Floor Discussion**

## 459 CC-611 ● ⊕ Statistical Approaches to Handling Data Quality: Issues and Evaluating Intervention Effectiveness in HIV/AIDS Research—Topic-Contributed

Section on Statistics in Epidemiology, Biometrics Section, ENAR

Organizer(s): Felicia Hardnett, Centers for Disease Control and Prevention

Chair(s): Timothy Green, Centers for Disease Control and Prevention

- 2:05 p.m. **Assessing Mediation in HIV Intervention Studies**—❖ Felicia Hardnett, Centers for Disease Control and Prevention; Craig Borkowf, Centers for Disease Control and Prevention; Sherri Pals, Centers for Disease Control and Prevention;

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- 2:25 p.m. **Are Higher Levels of Multilevel (Hierarchical) Models Necessary? Application to High-Risk Sexual Behavior Data**—❖ DeMarc Hickson, Emory University/Centers for Disease Control and Prevention; Lance Waller, Emory University; Lillian Lin, Centers for Disease Control and Prevention
- 2:45 p.m. **How Good Is Good Enough? An Investigation of the Effect of Uncertainty in Survey Parameters on Estimates of HIV Prevalence, Guyana 2004**—❖ Maxine Denniston, Centers for Disease Control and Prevention; Nicole Seguy, Centers for Disease Control and Prevention; Wolfgang Hladik, Centers for Disease Control and Prevention
- 3:05 p.m. **A Multiple-Recapture Approach When a Unique Identifier Is Not Available**—❖ Ruiguang Song, Centers for Disease Control and Prevention; H. Irene Hall, Centers for Disease Control and Prevention; John Gerstle, Centers for Disease Control and Prevention; Lisa Lee, Centers for Disease Control and Prevention
- 3:25 p.m. **Floor Discussion**

## 460 CC-602 ● **Statistical Applications in Water Quality and Monitoring—Topic-Contributed**

Section on Statistics and the Environment

*Organizer(s): Keying Ye, The University of Texas at San Antonio*

*Chair(s): Ilya Lipkovich, Eli Lilly and Company*

- 2:05 p.m. **Clustering Using Stressor-Response Relationships**—❖ Samantha C. Prins, Virginia Polytechnic Institute and State University; Eric P. Smith, Virginia Polytechnic Institute and State University
- 2:25 p.m. **Composite Sampling for Environmental Variables**—❖ Sylvia Esterby, The University of British Columbia; Abdel H. El-Shaarawi, National Water Research Institute
- 2:45 p.m. **Modified Power Priors with Multiple Historical Datasets in Water Quality Evaluation**—❖ Yuyan Duan, Bristol-Myers Squibb Company; Keying Ye, The University of Texas at San Antonio; Eric P. Smith, Virginia Polytechnic Institute and State University

- 3:05 p.m. **Model-Based Clustering in a Brook Trout Classification Study within the Eastern United States**—❖ Huizi Zhang, Virginia Polytechnic Institute and State University; Samantha C. Prins, Virginia Polytechnic Institute and State University; Eric P. Smith, Virginia Polytechnic Institute and State University
- 3:25 p.m. **Nonparametric Harmonic Regression for Estuarine Water Quality Data**—❖ Melanie Autin, University of South Carolina; Don Edwards, University of South Carolina
- 3:45 p.m. **Floor Discussion**

## 461

## CC-310

### ● ⊛ **Statistics for Weather Forecasting II: Challenges and Opportunities—Topic-Contributed**

Section on Statisticians in Defense and National Security, Section on Physical and Engineering Sciences, Section on Statistics and the Environment

*Organizer(s): Tilmann Gneiting, University of Washington*

*Chair(s): Matthew Stephens, University of Washington*

- 2:05 p.m. **Probabilistic Forecasting in Meteorology**—❖ Barbara Brown, National Center for Atmospheric Research
- 2:25 p.m. **Probabilistic Forecasts, Calibration, and Sharpness**—❖ Fadoua Balabdaoui, Institut für Mathematische Stochastik; Tilmann Gneiting, University of Washington; Adrian E. Raftery, University of Washington
- 2:45 p.m. **Calibrated Probabilistic Forecasting at the Stateline Wind Energy Center: the Regime-Switching Space-Time (RST) Method**—❖ Tilmann Gneiting, University of Washington; Kristin Larson, 3 Tier Environmental Forecast Group, Inc.; Kenneth Westrick, 3 Tier Environmental Forecast Group, Inc.; Marc G. Genton, Texas A&M University; Eric Aldrich, Duke University
- 3:05 p.m. **Detection and Modeling of Long Memory in Biases of Daily Forecasts of Surface Air Pressure and Temperature**—❖ Yulia Gel, University of Waterloo; Bovas Abraham, University of Waterloo
- 3:25 p.m. **Disc:** Wendy Martinez, Office of Naval Research
- 3:45 p.m. **Floor Discussion**

## 462 CC-609

### ● ⊕ Reducing the Risk of Data Disclosure through Swapping and Other Masking Procedures—Topic-Contributed

Section on Survey Research Methods, Section on Statisticians in Defense and National Security

Organizer(s): Thomas Krenzke, Westat

Chair(s): Leyla Mohadjer, Westat

- 2:05 p.m. **Reducing the Risk of Data Disclosure through Area Masking: Limiting Biases in Variance Estimation**—❖ Inho Park, Westat; Sylvia Dohrmann, Westat; Jill Montaquila, Westat; Leyla Mohadjer, Westat; Lester R. Curtin, Centers for Disease Control and Prevention
- 2:25 p.m. **Disclosure Limitation in NAEP: a Probabilistic Approach to Swapping Sample Selection**—❖ David Freund, Educational Testing Service; Andreas Oranje, Educational Testing Service
- 2:45 p.m. **Tactics for Reducing the Risk of Disclosure Using the NCES DataSwap Software**—❖ Thomas Krenzke, Westat; Stephen E. Roey, Westat; Sylvia Dohrmann, Westat; Leyla Mohadjer, Westat; Wen-Chau Haung, Westat; Steve Kaufman, Retired; Marilyn Seastrom, National Center for Education Statistics
- 3:05 p.m. **Combinations of SDC Methods for Numerical Microdata**—❖ Anna Oganian, National Institute of Statistical Sciences; Alan Karr, National Institute of Statistical Sciences
- 3:25 p.m. Disc: Jerome Reiter, Duke University
- 3:45 p.m. Floor Discussion

### Topic-Contributed Panels 2:00 p.m.–3:50 p.m.

## 463 CC-206

### Making Statistical History: Collecting, Preserving, and Providing Access to Records of the American Statistical Community—Topic-Contributed

General Methodology, Section on Statistical Education

Organizer(s): John Paul Deley, Energy Information Administration

Chair(s): John McKenzie, Babson College

Panelists: ❖ John Paul Deley, Energy Information Administration

❖ Pat McClellan, American Statistical Association

❖ Rich Allen, ASA Committee on Archives and History

3:45 p.m. Floor Discussion

### Regular Contributed Sessions 2:00 p.m.–3:50 p.m.

## 464 CC-616

### ● Unit Nonresponse in Surveys IV—Contributed

Section on Survey Research Methods

Chair(s): Christopher Johnson, Centers for Disease Control and Prevention

- 2:05 p.m. **Evaluation of Using a Model-Assisted Sampling Paradigm versus a Traditional Sampling Paradigm in a Nationally Representative Establishment Survey**—❖ Marcus Berzofsky, RTI International; Brandon Welch, RTI International; Rick L. Williams, RTI International; Paul Biemer, RTI International
- 2:20 p.m. **Using Telephone-Exchange Data To Adjust for Nonresponse: Application in an Establishment Survey**—❖ Stephen R. Williams, Mathematica Policy Research, Inc.; Ronghua Lu, Mathematica Policy Research, Inc.
- 2:35 p.m. **Nonresponse Adjustment Using Logistic Regression: To Weight or Not To Weight?**—❖ Eric A. Grau, Mathematica Policy Research, Inc.; Frank Potter, Mathematica Policy Research, Inc.; Stephen R. Williams, Mathematica Policy Research, Inc.; Nuria Diaz-Tena, Mathematica Policy Research, Inc.
- 2:50 p.m. **Response Rates and Response Patterns among New Enterprises: Results from the Kauffman Firm Survey**—❖ Frank Potter, Mathematica Policy Research, Inc.; Yuhong Zheng, Mathematica Policy Research, Inc.; David DesRoches, Mathematica Policy Research, Inc.; Janice Ballou, Mathematica Policy Research, Inc.; Zhanyun Zhao, Mathematica Policy Research, Inc.
- 3:05 p.m. **Estimation of Attrition Biases in SIPP**—❖ Eric Slud, U.S. Census Bureau; Leroy Bailey, U.S. Census Bureau
- 3:20 p.m. **Subsampling Nonrespondents: Issues of Calculating Response Rates**—❖ Sonya

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Vartivarian, Mathematica Policy Research, Inc.; Sameena Salvucci, Mathematica Policy Research, Inc.; Donsig Jang, Mathematica Policy Research, Inc.; Daniel Kasprzyk, Mathematica Policy Research, Inc.

- 3:35 p.m. **Physician Survey Response Methods Research**—  
◆ Catharine Burt, National Center for Health Statistics; David Woodwell, National Center for Health Statistics

## 465 CC-615 ● Survey-Based Variance Estimation II— Contributed

Section on Survey Research Methods

*Chair(s): Yahia Ahmed, Internal Revenue Service*

- 2:05 p.m. **Study of Volatility and Smoothing of Estimated Variances in the Employment Cost Index Program**—◆ Meghan S. O'Malley, Bureau of Labor Statistics; Daniell Toth, Bureau of Labor Statistics; Chester Ponikowski, Bureau of Labor Statistics
- 2:20 p.m. **Estimation of Generalized Variance Functions for the 2003 Survey of Doctorate Recipients**—  
◆ Michael Yang, National Opinion Research Center; Yongyi Wang, National Opinion Research Center
- 2:35 p.m. **Stability of Jackknife Variance Estimates for Prescription Count Estimates over Time Intervals**—◆ Christina Gaughan, IMS Health; Heather Zuleba, IMS Health; Chris Boardman, IMS Health; Kennon Copeland, IMS Health
- 2:50 p.m. **To Replicate (a Weight Adjustment Procedure) or Not To Replicate? An Analysis of the Variance Estimation Effects of a Shortcut Procedure Using the Stratified Jackknife**—◆ Katherine Thompson, U.S. Census Bureau; Wesley Yung, Statistics Canada
- 3:05 p.m. **On Generalized Variance Functions**—◆ Donsig Jang, Mathematica Policy Research, Inc.; Amang Sukasih, Mathematica Policy Research, Inc.; Xiaojing Lin, Mathematica Policy Research, Inc.
- 3:20 p.m. **Generalized Variance Functions To Create Stable and Timely Variance Estimates for Prescription Count Estimates**—◆ Kennon Copeland, IMS Health; Christina Gaughan, IMS Health; Chris Boardman, IMS Health
- 3:35 p.m. **Standard Error Estimation for County-Level Radio Listening**—◆ Mandy Webb, Arbitron Inc.; Richard Griffiths, Arbitron Inc.

## 466 CC-603 ● Studies in Air Quality and Pollution— Contributed

Section on Statistics and the Environment, WNAR

*Chair(s): Jay Ver Hoef, National Marine Mammal Lab*

- 2:05 p.m. **Comparing CMAQ to Observations**—◆ Li Chen, The University of Chicago; Michael L. Stein, The University of Chicago
- 2:20 p.m. **A Case Study in Estimating Percentage Detection Biases along a Recorded Ozone Profile**—  
◆ Wendy Meiring, University of California, Santa Barbara
- 2:35 p.m. **Statistical Conditional Simulation of a Multiresolution Numerical Air Quality Model**—  
◆ Xiaofeng Shao, The University of Chicago; Michael L. Stein, The University of Chicago
- 2:50 p.m. **New Classes of Asymmetric Spatial-Temporal Covariance Models**—◆ Man Sik Park, Colorado State University
- 3:05 p.m. **Multivariate Spatio-Temporal Model for Speciated Fine Particle Matter**—◆ Jungsoon Choi, North Carolina State University; Montserrat Fuentes, North Carolina State University; Brian Reich, North Carolina State University
- 3:20 p.m. **Fast and Flexible Statistical Techniques for the Analysis of Space-Time Data with Complex Structures**—Dana Draghicescu, City University of New York-Hunter College; ◆ Michael Porter, City University of New York
- 3:35 p.m. **Statistical Challenges in Comparisons of Measured Indoor and Outdoor Exposures in an Urban Setting**—◆ Sorina Eftim, The Johns Hopkins Bloomberg School of Public Health; Alison Geyh, The Johns Hopkins Bloomberg School of Public Health; Patrick Breyse, The Johns Hopkins Bloomberg School of Public Health

## 467 CC-610 Quality Measures for Human Populations— Contributed

Social Statistics Section, Section on Health Policy Statistics

*Chair(s): Kelly H. Zou, Harvard Medical School*

- 2:05 p.m. **Individuals with Disabilities: How They Impact Research**—◆ Larry Featherston, University of Arkansas



- 2:20 p.m. **Statistical Methodology for Longitudinal Social Network Data**—❖ Anton Westveld, University of Washington; Peter Hoff, University of Washington
- 2:35 p.m. **Testing for Differential Responses in a Multiple Category Scale: a Case Study on Self-Rated Health among Foreign- and Native-Born Asian Americans**—❖ Elena Erosheva, University of Washington; Emily C. Walton, University of Washington; David T. Takeuchi, University of Washington
- 2:50 p.m. **Quality Management at the National Center for Health Statistics (NCHS)**—❖ Kenneth Harris, National Center for Health Statistics
- 3:05 p.m. **Achieving Clinical Satisfaction with the Desirability Function**—❖ Terrence Murphy, Yale University
- 3:20 p.m. **Temporary Help and Leased and Contract Workers: Designing and Testing a Supplement to the Current Employment Statistics Survey**—❖ Polly Phipps, Bureau of Labor Statistics; Kathy Downey, Bureau of Labor Statistics; Christopher Manning, Bureau of Labor Statistics; Kirk Mueller, Bureau of Labor Statistics
- 3:35 p.m. **Multilevel Structural Equation Model for Ordinal Responses**—❖ Sophia Rabe-Hesketh, University of California, Berkeley; Xiaohui Zheng, University of California, Berkeley

## 468 CC-203 Confidence Intervals and Hypothesis Testing—Contributed

Business and Economics Statistics Section

*Chair(s): Edward Melnick, New York University*

- 2:05 p.m. **New Tests for Joint Hypothesis of a Unit Root When There Is a Break in the Innovation Variance**—❖ Amit Sen, Xavier University
- 2:20 p.m. **Easily Implemented Confidence Intervals and Hypothesis Tests for Sharpe Ratios under General Conditions**—❖ J. D. Opdyke, DataMineIt
- 2:35 p.m. **Parameters Estimation and Bias Corrections for Diffusion Processes**—❖ Chengyong Tang, Iowa State University; Song X. Chen, Iowa State University
- 2:50 p.m. **New Tests for Endogeneity in a Simultaneous Equation System with Discrete Endogenous Variable**—❖ Xu Cao, University of Missouri-

Rolla; V. A. R. Samaranyake, University of Missouri-Rolla

- 3:05 p.m. **Causality Tests in Cointegrated Systems and Temporal Aggregation of Multivariate Autoregressive Moving Average Processes**—❖ Ceylan Yozgatligil, Temple University; William W. S. Wei, Temple University
- 3:20 p.m. **LAD Estimation of ARFIMA-GARCH Models**—❖ Wai K. Li, The University of Hong Kong; Guodong Li, The University of Hong Kong
- 3:35 p.m. **A Note on the Inequality Constraints for the GARCH Models**—❖ Henghsiu Tsai, Academia Sinica; Kung-Sik Chan, The University of Iowa

## 469 CC-2A ● Equivalence, Superiority, and Noninferiority—Contributed

Biopharmaceutical Section

*Chair(s): Amit Bhattacharyya, GlaxoSmithKline*

- 2:05 p.m. **Simultaneous Test for Superiority and Noninferiority Hypotheses in Active Controlled Clinical Trials**—❖ Joanne Zhang, Center for Drug Evaluation and Research; Yi Tsong, U.S. Food and Drug Administration
- 2:20 p.m. **Testing Equality of Medians in Two Independent Lognormal Distributions**—❖ Hongwei Wang, Merck & Co., Inc.; Arvind K. Shah, Merck & Co., Inc.
- 2:35 p.m. **Likelihood Ratio Tests for Equivalence Hypotheses**—❖ Shun-Yi Chen, Tamkang University; Ching-Feng Hsu, Tamkang University
- 2:50 p.m. **Simultaneous Testing of Noninferiority and Superiority Increases the False Discovery Rate**—❖ Tie-Hua Ng, U.S. Food and Drug Administration
- 3:05 p.m. **New Tests for Null Hypotheses of Nonunity Relative Risk**—❖ Kallappa Koti, U.S. Food and Drug Administration
- 3:20 p.m. **Assessing the Superiority of a Combination Drug**—Jianjun Li, Merck Research Laboratories; Steven Snapinn, Amgen Inc.; ❖ Guoyong Jiang, Cephalon, Inc.
- 3:35 p.m. **To Permute or Not Permute**—❖ Haiyan Xu, Johnson & Johnson Pharmaceutical R&D; Jason Hsu, The Ohio State University; Yifan Huang, H. Lee Moffitt Cancer Center & Research Institute; Violeta Calian, University of Iceland

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- 470** **CC-619**  
● **Semiparametric Methods—Contributed**  
Biometrics Section, Section on Nonparametric Statistics, ENAR  
*Chair(s): Sally Hunsberger, National Cancer Institute*
- 2:05 p.m. **The Efficiency of Multivariate Pseudo-Likelihood Estimation**—◆ Park Bum Hee, Hankuk University of Foreign Studies; Park Heungsun, Hankuk University of Foreign Studies
- 2:20 p.m. **Confidence Intervals Based on Non-Smooth Estimating Equations for Longitudinal Data Using Markov Chain Marginal Bootstrap**—◆ Di Li, University of Illinois at Urbana-Champaign
- 2:35 p.m. **Hierarchical Quasi-Likelihood Approach to Bioavailability and Bioequivalence Analysis**—◆ Changchun Xie, McMaster University
- 2:50 p.m. **Analysis of Linear Transformation Models with Covariate Transformations**—◆ Chunpeng Fan, University of Wisconsin-Madison; Jason P. Fine, University of Wisconsin-Madison
- 3:05 p.m. **Smoothing Spline ANOVA Model for Bivariate Bernoulli Outcome**—◆ Hyonho Chun, University of Wisconsin-Madison
- 3:20 p.m. **Statistical Inference for Multivariate Outcome-Dependent Sampling Design**—◆ Tsui-Shan Lu, The University of North Carolina at Chapel Hill; Haibo Zhou, The University of North Carolina at Chapel Hill
- 3:35 p.m. **Floor Discussion**
- 471** **CC-620**  
● **Inference and Models for Censored Data—Contributed**  
Biometrics Section, ENAR  
*Chair(s): Petra Buzkova, The University of North Carolina at Chapel Hill*
- 2:05 p.m. **Statistical Analysis of Survival Data under Informative Truncation**—◆ Shu-Hui Chang, National Taiwan University
- 2:20 p.m. **Medical Cost Estimation under Dependent Censoring**—◆ Wenqin Pan, Duke University; Donglin Zeng, The University of North Carolina at Chapel Hill
- 2:35 p.m. **A General Semiparametric Transformation Model for Survival Data**—◆ Hao Liu, University of California, Davis; Alexander Tsodikov, University of California, Davis
- 2:50 p.m. **Estimation of a Survival Curve with Unlinked Entry and Failure Times**—◆ Yujun Wu, University of Medicine & Dentistry of New Jersey; Weichung J. Shih, University of Medicine & Dentistry of New Jersey; Dirk Moore, University of Medicine & Dentistry of New Jersey
- 3:05 p.m. **Comorbidity through the Life Span**—◆ John Dixon, Florida State University; Eric Chicken, Florida State University; Myles Hollander, Florida State University; Dan McGee, Florida State University
- 3:20 p.m. **Goodness-of-Fit Tests for Left-Truncated and Right-Censored Data**—◆ Yi-Ting Hwang, National Taipei University
- 3:35 p.m. **A Goodness-of-Fit Test for Copula Models**—◆ Antai Wang, Georgetown University
- 472** **CC-2B**  
● **Osteoporosis, Contraceptive, and Vaccine Trials—Contributed**  
Biopharmaceutical Section, Biometrics Section, ENAR  
*Chair(s): Margaret Minkwitz, AstraZeneca Pharmaceuticals*
- 2:05 p.m. **Quantitative Risk-Benefit Assessment in the Multiple Outcomes of Raloxifene Evaluation (MORE) Trial: an Application of the Global Benefit-Risk Assessment**—◆ Messan G. Amewou-Atisso, Eli Lilly and Company; Yili Pritchett, Abbott Laboratories
- 2:20 p.m. **Quantifying the Effect of the Surrogate Marker by Information Gain**—◆ Yongming Qu, Eli Lilly and Company; Michael Case, Eli Lilly and Company
- 2:35 p.m. **Assessing Learning Effect and Nonrandom Dropout in a Contraceptive Device Trial**—◆ Pai-Lien Chen, Family Health International
- 2:50 p.m. **An Improved Exact Method for the Estimation and Testing of a Rate Ratio**—◆ William W. B. Wang, Merck Research Laboratories; Ivan Chan, Merck & Co., Inc.
- 3:05 p.m. **Utilizing Statistical Models To Predict the Duration of Protection of Vaccines**—◆ Liwen Xi, Merck & Co., Inc.
- 3:20 p.m. **A Statistical Framework for Quantile Equivalence Clinical Trials with Application to Pharmacokinetic Studies That Bridge from HIV-Infected Adults to Children**—◆ Lixia Pei, Harvard University; Michael Hughes, Harvard University

3:35 p.m. **The Use of an Internal Unblinded Statistician with a Data-Monitoring Committee**—❖David Radley, Merck & Co., Inc.; Gregory Golm, Merck & Co., Inc.

**473** **CC-3A**  
**● Oncology Trials—Contributed**

Biopharmaceutical Section, Biometrics Section, ENAR  
*Chair(s): David Manner, Eli Lilly and Company*

- 2:05 p.m. **Evaluating the Quality Reporting of Clinical Trials in Primary Treatment of Brain Tumors**—  
 ❖Lehana Thabane, McMaster University; Rose Lai, Columbia University; Rong R. Rachel, The University of British Columbia; Michael Fraumeni, Juravinski Cancer Centre
- 2:20 p.m. **Predicting Malignant Renal Lesions by Using Preoperative Color Doppler Ultrasonography: Building a Nomogram**—❖Alexia Iasonos, Memorial Sloan-Kettering Cancer Center; Ganesh V. Raj, Memorial Sloan-Kettering Cancer Center; Paul Russo, Memorial Sloan-Kettering Cancer Center
- 2:35 p.m. **Statistical Properties of a Modified Accelerated Design for Phase I Cancer Clinical Trials**—  
 ❖Weili He, Merck & Co., Inc.; Jun Liu, Rutgers University; Hui Quan, sanofi-aventis
- 2:50 p.m. **Using Marginal Structural Model To Adjust for Post-Discontinuation Chemotherapy in Cancer Clinical Trials**—❖Yanping Wang, Eli Lilly and Company; Jim Symanowski, Eli Lilly and Company
- 3:05 p.m. **On Dose Escalation Rules in Phase I Cancer Clinical Trials**—❖Susan Li, Centocor R&D, Inc.
- 3:20 p.m. **Identifying Patients with Newly Diagnosed; Histologically Proven; Untreated; Symptomatic Stage I, II, or III Myeloma Who May Benefit from Dexamethasone**—❖Keyue Ding, Queen's University
- 3:35 p.m. **A Statistical Method To Integrate Independent Review and Investigator Review in Clinical Cancer Trial**—❖Xiaolong Luo, Johnson & Johnson Pharmaceutical R&D

**474** **CC-601**  
**⊕ Network Analysis and Spatial Applications—Contributed**

Section on Physical and Engineering Sciences  
*Chair(s): Dave Higdon, Los Alamos National Laboratory*

2:05 p.m. **Dynamic Origin-Destination Matrix Estimation**

**from Partially Observed Trajectories in a Large Network**—❖Jaimyoung Kwon, California State University, East Bay; Pravin Varaiya, University of California, Berkeley

- 2:20 p.m. **Network Tomography Problems**—❖Jiangang Fang, Rutgers University; Cun-Hui Zhang, Rutgers University
- 2:35 p.m. **A Bayes/Empirical Bayes Approach for Service-Level Network Reliability/Survivability Measure**—❖Cheng Chen, Texas A&M University; Margaret F. Land, TeXas Environmental Studies and Analysis, LLC; Rajat Sethi, Texas A&M University-Kingsville
- 2:50 p.m. **Calibration and Prediction for Computer Experiment Output Having Qualitative and Quantitative Input Variables**—❖Gang Han, The Ohio State University; Thomas Santner, The Ohio State University; William Notz, The Ohio State University
- 3:05 p.m. **Validity of Likelihood and Bayesian Inference for Gaussian Process Regression**—❖Bela Nagy, The University of British Columbia; Jason Loepky, The University of British Columbia; William J. Welch, The University of British Columbia
- 3:20 p.m. **Exploiting Spatial Information in Multivariate Calibration**—❖Brian Marx, Louisiana State University; Paul H. C. Eilers, Leiden University Medical Center
- 3:35 p.m. **Representations of Spatial Surface Models**—  
 ❖James Yen, National Institute of Standards and Technology

**475** **CC-309**  
**Dimension Reduction and Image Analysis—Contributed**

Section on Statistical Computing, Section on Statistical Graphics  
*Chair(s): Ranjan Maitra, Iowa State University*

- 2:05 p.m. **Assessment of Influential Observations Using Alpha Factor Analysis**—❖Zenaida F. Mateo, University of Manitoba; Yutaka Tanaka, Nanzan University
- 2:20 p.m. **Factor Analysis for Multiattribute Ranked Data**—  
 ❖Philip L. H. Yu, The University of Hong Kong; Wai Ming Wan, The University of Hong Kong
- 2:35 p.m. **Sufficient Dimension Reduction, Regardless of (n, p) Relation**—❖Lexin Li, North Carolina State University

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 2:50 p.m. **Linear Dimension Reduction in Image Analysis Using Geometrical Tools**—◆ Evgenia Rubinshtein, Florida State University; Anuj Srivastava, Florida State University
- 3:05 p.m. **Inferring Galaxy Morphology through Texture Analysis**—◆ Kinman Au, Carnegie Mellon University; Christopher Genovese, Carnegie Mellon University; Andrew Connolley, University of Pittsburgh
- 3:20 p.m. **Image Analysis Using the EM Algorithm with Stochastic Variation**—◆ Xiaoxi Zhang, University of Michigan; Roderick J. Little, University of Michigan
- 3:35 p.m. **Validity Diagnostics for DTI Heterogeneity Models**—◆ Meagan E. Clement, Rho, Inc.; Keith E. Muller, The University of North Carolina at Chapel Hill; Guido Gerig, The University of North Carolina at Chapel Hill; Matthew Gribbin, The University of North Carolina at Chapel Hill; Joseph Piven, The University of North Carolina at Chapel Hill

## 476 CC-205 The Practice of Statistical Consulting: Study Design and Sample Size—Contributed

Section on Statistical Consulting

*Chair(s): Harold Dyck, California State University*

- 2:05 p.m. **The Joys (and Perils) of Professional Statistical Consulting**—◆ Nestor Rohowsky, IDCS, Inc.
- 2:20 p.m. **Impact of Effect Size, Sample Size, and Crossover Percent on Intention-to-Treat (ITT) Analysis: Do Subjects Need To Stay in the Group They Were Assigned?**—◆ Thomas Wasser, Lehigh Valley Hospital; Christopher S. Hollenbeak, The Pennsylvania State University; Stephen Matchett, Lehigh Valley Hospital
- 2:35 p.m. **Comparison of Effect Size, Power, and Type I Error Rate in Simulated Efficacy and Effectiveness Trials**—◆ Mary Z. Mays, Arizona State University; Jan Jirsak, University of Arizona
- 2:50 p.m. **Reporting Significant Results for a Large Sample Study**—◆ Gloria Caldito, LSU Health Sciences Center
- 3:05 p.m. **Uncontrolled Variation in Multistage Experiments**—◆ T. B. Bailey, Iowa State University

- 3:20 p.m. **Dose Ranging Studies in Acupuncture, Manipulative Therapy, and Mind Body Research**—◆ Laura L. Johnson, National Center for Complementary and Alternative Medicine; Catherine Stoney, National Center for Complementary and Alternative Medicine; Partap Khalsa, National Center for Complementary and Alternative Medicine
- 3:35 p.m. **A General Serial Gatekeeping Procedure To Control Studywise Error Rate**—◆ Fang Xie, Cephalon, Inc.; Chung-Kuei Chang, Cephalon, Inc.; Guoyong Jiang, Cephalon, Inc.

## 477 CC-307 Dimension Reduction Methods—Contributed

Section on Nonparametric Statistics

*Chair(s): Ann Kalinowski, WIHS UCSF*

- 2:05 p.m. **Sliced Inverse Moment Regression Using Weighted Chi-Squared Tests for Dimension Reduction**—◆ Jie Yang, The University of Chicago; Zhishen Ye, Eli Lilly and Company
- 2:20 p.m. **Selecting Tuning Parameters in Dimension Reduction Methods in Regression**—◆ Peng Zeng, Auburn University
- 2:35 p.m. **Projection-Directed Nonparametric Omnibus Test for the Multivariate Multisample Problem**—◆ Xiaobin Yuan, St. Jude Children's Research Hospital; Cheng Cheng, St. Jude Children's Research Hospital
- 2:50 p.m. **Aggregation of Nonparametric Estimators for Volatility Matrix**—◆ Yingying Fan, Princeton University
- 3:05 p.m. **Dimensionality Reduction of High-Dimensional Tables**—◆ Siamak Noorbaloochi, VAMC, University of Minnesota; David Nelson, VAMC, University of Minnesota; Joe Grill, VAMC, Minneapolis
- 3:20 p.m. **Statistical Inference of Distributions on Manifold**—◆ Wanli Min, IBM T. J. Watson Research Center
- 3:35 p.m. **Floor Discussion**



## 478 CC-400 ● Applied Bayesian Modeling—Contributed

Section on Bayesian Statistical Science

*Chair(s): Dan Spitzner, Virginia Polytechnic Institute and State University*

- 2:05 p.m. **Tree-Based and Bayesian Modeling of Food Web Collapse in the Permian Mass Extinction—**  
❖ Steve C. Wang, Swarthmore College; Peter D. Roopnarine, California Academy of Sciences; Kenneth D. Angielczyk, University of Bristol
- 2:20 p.m. **Bayesian Calibration Models for Obsidian Hydration Dating—**❖ Andrew Schaffner, California Polytechnic State University, San Luis Obispo
- 2:35 p.m. **Bayesian Semiparametric Analysis for a Single-Item Maintenance Optimization—**❖ Elmira Popova, The University of Texas at Austin; Paul Damien, The University of Texas at Austin; Timothy Hanson, University of Minnesota
- 2:50 p.m. **Bayesian Modeling of the Effect of Four-to-Three-Lane Conversion on the Number of Crashes and Crash Rates for Iowa Roads—**  
❖ Wen Li, Iowa State University; Alicia Carriquiry, Iowa State University
- 3:05 p.m. **Bayesian Procrustes Analysis—**Athanasios Micheas, University of Missouri-Columbia; ❖ Yuqiang Peng, University of Missouri-Columbia
- 3:20 p.m. **Statistical Analysis of Single-Unit Firing Rate—**  
❖ Sam Behseta, California State University; Robert E. Kass, Carnegie Mellon University
- 3:35 p.m. **Floor Discussion**

## 479 CC-613 Nonresponse Bias and Other Estimation Challenges—Contributed

Section on Government Statistics

*Chair(s): Carolyn Shettle, Westat*

- 2:05 p.m. **Nonresponse Bias in the Omnibus Household Survey—**❖ Promod Chandhok, Bureau of Transportation Statistics
- 2:20 p.m. **Nonresponse Bias of Time-Use Measures' Inter-Relationships—**❖ John Dixon, Bureau of Labor Statistics
- 2:35 p.m. **Using Survival Analysis To Predict Sample Retention Rates—**❖ Andy Sadler, Bureau of Labor Statistics

- 2:50 p.m. **Comparison of the Income Items from the CPS and Census 2000—**❖ Bruce H. Webster, Jr., U.S. Census Bureau

- 3:05 p.m. **Multiple-Record Applicants in the Analysis of Hiring Disparity—**❖ Charles McGhee, U.S. Department of Labor; Marika Litras, Office of Federal Contract Compliance Programs; Michael Sinclair, Office of Federal Contract Compliance Programs

- 3:20 p.m. **The Use of the Peters-Belson Method in Hiring Discrimination Assessments—**Michael Sinclair, Office of Federal Contract Compliance Programs; ❖ Shirong Leu, U.S. Department of Labor; Arline Easley, U.S. Department of Labor

- 3:35 p.m. **Estimating Missing Prices in Producer Price Index—**❖ Onimissi Sheidu, Bureau of Labor Statistics

## 480 CC-605 Stochastic Process and Mixture Models—Contributed

IMS

*Chair(s): Marloes Maathuis, University of Washington*

- 2:05 p.m. **A Class of Probability Measures on the Simplex—**❖ Zach Dietz, Tulane University
- 2:20 p.m. **The Bahadur Representation for Sample Quantiles under Weak Dependence—**❖ Shuxia Sun, Wright State University
- 2:35 p.m. **Long-Time Asymptotics for Constrained Diffusions in Polyhedral Domains—**❖ Chihoon Lee, The University of North Carolina at Chapel Hill; Amarjit Budhiraja, The University of North Carolina at Chapel Hill
- 2:50 p.m. **The Mixture-Labeling Problem: a Frequentist View—**❖ Daeyoung Kim, The Pennsylvania State University; Bruce G. Lindsay, The Pennsylvania State University
- 3:05 p.m. **Stability and Tail Properties of Nonlinear Stochastic Recursions with Application to Nonlinear AR-GARCH Models—**❖ Daren B. H. Cline, Texas A&M University
- 3:20 p.m. **Noncommutative Stochastic Convergence of the Bounded Besicovitch Sequence—**❖ Larisa Shwartz, IBM; Genady Grabarnik, IBM T. J. Watson Research Center
- 3:35 p.m. **Floor Discussion**

## Regular Contributed Posters 2:00 p.m.–3:50 p.m.

### 481 CC-Level 6 East Lobby Contributed Posters—Contributed

General Methodology, Social Statistics Section, Section on Survey Research Methods, Biopharmaceutical Section, Section on Physical and Engineering Sciences, Section on Statistics and the Environment, Section on Statistics and Marketing, Section on Statistical Consulting, Biometrics Section, Section on Statistical Computing, Section on Statistics in Sports, Section on Statistics in Epidemiology

*Organizer(s): Maura E. Stokes, SAS Institute, Inc.*

*Chair(s): Maura E. Stokes, SAS Institute, Inc.*

### Archeology, anthropology, humanities

- 01 **A Multivariate Statistical Analysis of Female Empowerment**—◆ Janelle Jones, SUMSRI; Adrienne Demski, SUMSRI

### General

- 02 **Examination of Structure Coefficient Interpretation in Descriptive Discriminant Analysis: the Three-Group Case**—◆ Mercedes Schneider, Ball State University
- 03 **Computer Literacy of Adolescents in Grades 9 to 12: an Exploratory Study**—◆ Matthew Sink, Shoreline Christian High School; Christopher A. Sink, Seattle Pacific University
- 04 **Partial Least Squares Regression and Its Application in Drug Discovery**—◆ Jingjing Chen, Merck & Co., Inc.
- 05 **Quasi-Probability Distributions Based on the Lagrange Expansions**—v Shubiao Li, Central Michigan University; Carl Lee, Central Michigan University; Felix Famoye, Central Michigan University
- 06 **Data Analysis of Virtual Cement Measurements**—◆ Adriana Hornikova, National Institute of Standards and Technology; Charles Hagwood, National Institute of Standards and Technology; Hung-kung Liu, National Institute of Standards and Technology; Blaza Toman, National Institute of Standards and Technology; Nien Fan Zhang, National Institute of Standards and Technology; Edward J. Garboczi, National Institute of Standards and Technology; Jeffrey W. Bullard, National Institute of Standards and Technology
- 07 **Analysis of Number of Components in Mixture Model**—◆ Yan Wang, Southern Methodist University; S. Lynne Stokes, Southern Methodist University
- 08 **The Impact of Erroneous Inclusion and Exclusion of Variables in Multivariate Inference**—◆ Youfeng Nie, Sam Houston State University; Cecil Hallum, Sam Houston State University

- 09 **On Testing about a Construct Mean for Likert-Scale Data**—◆ Chergng Ding, National Chiao Tung University; Hsiu-Yu Lee, National Chiao Tung University
- 10 **Caution When Using Covariate Adjustment in Mixed Effect ANOVA**—◆ Zhenxu Ma, Battelle; Paul Feder, Battelle
- 11 **Estimating a Population Median from a Small Sample**—◆ Boris Shulkin, Christy Industries/Magna International; Shlomo Sawilowsky, Wayne State University
- 12 **On the Use of Heywood Cases for Specification Testing in SEM**—◆ Stanislav Kolenikov, University of Missouri-Columbia; Kenneth A. Bollen, The University of North Carolina at Chapel Hill

### Linear models, GLMs, parametric methods

- 13 **S-PLUS and R Package for Least Angle Regression**—◆ Tim C. Hesterberg, Insightful Corporation
- 14 **Partially Repeated Measurements**—◆ Mitchell Watnik, California State University, East Bay; Erica Wong, California State University, East Bay; David Schlessinger, California State University, East Bay
- 15 **Selecting the Best Confidence Interval for a Variance Ratio (or Heritability)**—◆ Brent Burch, Northern Arizona University
- 16 **Calculating Power for Generalized Linear Models Using the Wald Test**—◆ Jonathan Mahnken, The University of Kansas Medical Center
- 17 **Confidence Interval Coverage for Four Effect Sizes for Predictor Variables in a Multiple Linear Regression Model**—◆ Todd Bodner, Portland State University

### Longitudinal data, repeated measurements, cluster data

- 18 **Large-Cluster Asymptotics for GEE: Working Correlation Models**—◆ Hyoju Chung, University of Washington; Thomas Lumley, University of Washington
- 19 **Free SAS/IML® Software for Computing Confidence Limits for Power in the Univariate and Multivariate Approaches to Repeated Measures**—◆ Jacqueline Johnson, The University of North Carolina at Chapel Hill; Matthew Gribbin, The University of North Carolina at Chapel Hill; Sola Park, The University of North Carolina at Chapel Hill; Keith E. Muller, The University of North Carolina at Chapel Hill
- 20 **Goodness-of-Fit Tests for Proportional Odds Model with GEE for Ordinal Categorical Responses**—◆ Junxiang Luo, University of Cincinnati; Rakesh Shukla, University of Cincinnati; Qi Zhang, University of Cincinnati

- 21 **Latent Class Growth Models: an Application—**  
◆ Maragatha Kuchibhatla, Duke University Medical Center; Gerda Fillenbaum, Duke University Medical Center
- 22 **Model Selection for the Impact Evaluation of Energy Efficiency Programs—**◆ Kathryn Parlin, West Hill Energy and Computing, Inc.; Larry Haugh, University of Vermont
- 23 **An Empirical Power Analysis of Hierarchical Multivariate Linear Model under Three Covariance Structures in Longitudinal Data Analysis—**◆ Hua Fang, Ohio University; Gordon P. Brooks, Ohio University; Maria L. Rizzo, Ohio University; Robert S. Barcikowski, Ohio University

**Probability, mathematical statistics, stochastic processes**

- 24 **A General Probability Distribution Using B, rmann Power Series—**◆ Pali Sen, University of North Florida; Richard F. Patterson, University of North Florida
- 25 **A Modified Asymmetric Simes Procedure for Multiple Tests of Significance—**◆ Li Deng, New England College of Optometry

**Simulation and Monte Carlo methods**

- 26 **An Examination of the Utility of Bonferroni Adjustments for Tests of Regression Coefficients—**◆ Daniel Mundfrom, University of Northern Colorado; Jamis Perrett, University of Northern Colorado; Jay Schaffer, University of Northern Colorado; Adam Piccone, University of Northern Colorado

**Sports, art, entertainment**

- 27 **The Brave New Hockey World: a Statistical Assessment of NHL Rules Changes—**◆ Paramjit Gill, The University of British Columbia

**Incomplete data analysis, imputation methods**

- 28 **Statistical Approches To Analyze Censored Data with Multiple Detection Limits—**◆ Wei Zhong, ICON Clinical Research; Linda Levin, University of Cincinnati; Paul Succop, University of Cincinnati; Rakesh Shukla, University of Cincinnati; Jeffrey Welge, University of Cincinnati

**Invited Sessions 4:00 p.m.–5:50 p.m.**

**482 CC-Ballroom 6ABC  
COPSS Awards and Fisher Lecture—Invited**

Committee of Presidents of Statistics Societies (COPSS), The ASA, ENAR, WNAR, IMS, SSC

*Organizer(s): Karen Bandeen-Roche, The Johns Hopkins Bloomberg School of Public Health*

*Chair(s): Karen Bandeen-Roche, The Johns Hopkins Bloomberg School of Public Health*

- 4:00 p.m. **Presentation of Awards—**◆ Karen Bandeen-Roche, The Johns Hopkins Bloomberg School of Public Health
- 4:20 p.m. **Recombination and Linkage—**◆ Terence P. Speed, University of California, Berkeley
- 5:35 p.m. **Floor Discussion**

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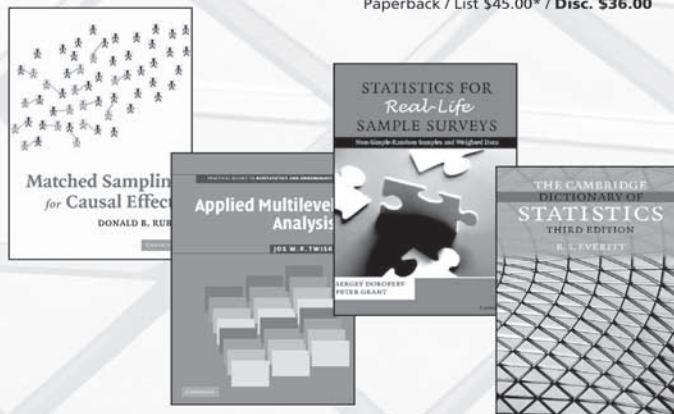
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## THURSDAY, AUGUST 10

### Tours

1:00 p.m.–5:00 p.m. CC-Convention Place  
**TR10 - Northwest Winery Tour (fee event)**

1:00 p.m.–5:00 p.m. CC-Convention Place  
**TR11 - Glassblowing Tour (fee event)**

### Committee/Business Meetings & Other Activities

7:00 a.m.–8:30 a.m. CC-305  
**Howard Levene Memorial Breakfast Reception (closed)**  
*Organizer(s): Zhiliang Ying, Columbia University*

7:00 a.m.–10:30 a.m. CC-507, CC-508  
**Speaker Work Rooms**

7:00 a.m.–10:30 a.m. CC-Level 4 South Lobby  
**Cyber Center**

7:30 a.m.–10:30 a.m. CC-Level 4 South Lobby  
**JSM Main Registration  
 ASA Membership/Special Assistance Desk**

8:00 a.m.–10:00 a.m. CC-306  
**Council of Sections Response Meeting (closed)**  
*Chair(s): John E. Boyer, Kansas State University*

8:00 a.m.–10:30 a.m. CC-Level 4 South Lobby  
**ASA Marketplace**

9:00 a.m.–5:00 p.m. CC-Level 1  
**Citywide Concierge Center**

10:00 a.m.–11:30 a.m. CC-306  
**Council of Sections Governing Board Debriefing Meeting (closed)**  
*Chair(s): John E. Boyer, Kansas State University*

### Invited Sessions 8:30 a.m.–10:20 a.m.

**483** **CC-603**  
**● Collaborative Research in Statistics—Invited**

General Methodology, Section on Physical and Engineering Sciences  
*Organizer(s): Bonnie K. Ray, IBM T. J. Watson Research Center*  
*Chair(s): Bonnie K. Ray, IBM T. J. Watson Research Center*

**8:35 a.m. Sensor Analytics: Radioactive Gas Quantity Estimation and Error Propagation—**✦ Dale N. Anderson, Pacific Northwest National Laboratory; Justin I. McIntyre, Pacific Northwest National Laboratory; Deborah K. Carlson, Pacific Northwest National Laboratory; Reynold Suarez, Pacific Northwest National Laboratory; James C. Hayes, Pacific Northwest National Laboratory

**9:00 a.m. Using Informative Bayesian Priors in a Sales Forecasting System—**✦ Phillip M. Yelland, Sun Microsystems Laboratories

**9:25 a.m. Formulation Prediction for Derivative Product Development—**✦ Martha Gardner, GE Global Research

**9:50 a.m. Disc:** Sarah Michalak, Los Alamos National Laboratory

**10:10 a.m. Floor Discussion**

**484** **CC-3A**  
**⊕ Statistical Methodology for Environmental Applications—Invited**

International Indian Statistical Association  
*Organizer(s): Soumendra N. Lahiri, Iowa State University*  
*Chair(s): Soumendra N. Lahiri, Iowa State University*

**8:35 a.m. Bayesian Melding: an Application and Critical Assessment—**✦ James Zidek, The University of British Columbia; Zhong Liu, The University of British Columbia; Nhu Le, BC Cancer Agency/ University of British Columbia

**9:00 a.m. Fixed Rank Kriging for Massive Datasets—**✦ Noel Cressie, The Ohio State University; Gardar Johannesson, Lawrence Livermore National Laboratory

**9:25 a.m. Minimum Distance Inference in Unilateral Autoregressive Lattice Processes—**✦ Marc G. Genton, Texas A&M University; Hira L. Koul, Michigan State University

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

9:50 a.m. **Computation and Modeling for Large Space-Time Environmental Datasets**—◆ Michael L. Stein, The University of Chicago

10:15 a.m. Floor Discussion

## 485 **Statistical Genetics and Nonparametric Methods: in Memory of Howard Levene—Invited**

CC-3B

Memorial, Section on Nonparametric Statistics

*Organizer(s): Zhiliang Ying, Columbia University*

*Chair(s): Todd Durham, Inspire Pharmaceuticals, Inc.*

8:35 a.m. **The Influence of Professor Levene's Test of the Equality of the Variances of k Groups on the Development of Robust Procedures and Their Application**—◆ Joseph Gastwirth, The George Washington University

9:00 a.m. **The Influence of Levene's Paper on Polymorphism in Subdivided Populations**—◆ Edward Pollak, Iowa State University

9:25 a.m. **Howard Levene: Statistician, Educator, Colleague, and Friend**—◆ Theodore W. Anderson, Stanford University

9:50 a.m. **Testing Multivariate Scale Difference by Depth Rank Tests**—◆ Regina Liu, Rutgers University; Kesar Singh, Rutgers University

10:15 a.m. Floor Discussion

## 486 **Experimental Design for Nonlinear Modeling—Invited**

CC-612

Biopharmaceutical Section

*Organizer(s): Thomas E. Bradstreet, Merck Research Laboratories*

*Chair(s): Thomas E. Bradstreet, Merck Research Laboratories*

8:35 a.m. **Curvature, Robustness, and Optimal Design in Applied Nonlinear Regression Modeling**—◆ Timothy E. O'Brien, Loyola University Chicago

9:00 a.m. **Locally D-Optimal Designs Based on Models Combining Emax and One-Compartment Models**—◆ Sam Hedayat, University of Illinois at Chicago

9:25 a.m. **Optimal Designs in Nonlinear Mixed-Effects Models: Applications for Population Pharmacokinetics/Pharmacodynamics Studies**—◆ Sylvie Retout, INSERM U738; Emmanuelle Comets, INSERM U738; France Mentre, INSERM U738

9:50 a.m. **Modeling and Clinical Trial Simulation in the Post-**

**Critical Path Drug**—◆ Michael D. Hale, Amgen Inc.

10:15 a.m. Floor Discussion

## 487 **Women Pioneering Solutions to New Global Challenges—Invited**

CC-619

Committee on Women in Statistics

*Organizer(s): Lori A. Thombs, University of Missouri-Columbia; Eleanor Feingold, University of Pittsburgh*

*Chair(s): Eleanor Feingold, University of Pittsburgh*

8:35 a.m. **Aggregation, Lasso, and Sparsity**—◆ Florentina Bunea, Florida State University

9:00 a.m. **A Bayesian Hierarchical Model with Nest-Specific Covariates in Nest Survival Study**—◆ Jing Cao, Southern Methodist University; Chong He, Virginia Polytechnic Institute and State University

9:25 a.m. **Joint Statistical Models for Genome-Wide Tiling Array and Sequence Data**—◆ Sunduz Keles, University of Wisconsin-Madison; Heejung Shim, University of Wisconsin-Madison

9:50 a.m. **A Markov-Hidden Markov Model for Genetic Admixture**—◆ Hua Tang, Fred Hutchinson Cancer Research Center; Pei Wang, Fred Hutchinson Cancer Research Center; Marc Coram, The University of Chicago

10:15 a.m. Floor Discussion

## 488 **Bayesian Methods in Bioinformatics—Invited**

CC-607

Section on Bayesian Statistical Science, Biometrics Section, WNAR, ENAR

*Organizer(s): Sounak Chakraborty, University of Missouri-Columbia*

*Chair(s): Marc A. Suchard, University of California, Los Angeles*

8:35 a.m. **Bayesian Mixture Models and Application to High-Throughput Data**—◆ Kim-Anh Do, M. D. Anderson Cancer Center

9:00 a.m. **Bayesian Modeling of Complex Traits**—◆ Paola Sebastiani, Boston University

9:25 a.m. **Functional Clustering by Bayesian Wavelet Methods**—◆ Bani K. Mallick, Texas A&M University

9:50 a.m. **Multiclass Cancer Diagnosis with Bayesian Kernel Machine Models**—◆ Sounak Chakraborty, University of Missouri-Columbia

10:15 a.m. Floor Discussion

# New from OXFORD

## THE DIOPHANTINE FROBENIUS PROBLEM

**Jorge L. Ramírez Alfonsín**, *Université*

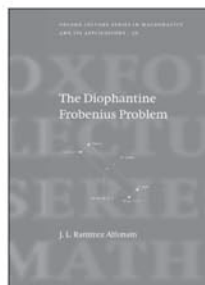
*Pierre et Marie Curie, Paris*

A number of methods from several areas of mathematics, have been used in the hope of finding a formula giving the Frobenius number and algorithms to calculate it. The main intention of this book is to highlight such methods, ideas viewpoints and applications to a broader audience.

(Oxford Lecture Series in Mathematics and Its Applications)

2006 260 pp.; 75 line illus.

0-19-856820-7 \$114.50/\$91.60



## COMPUTATIONAL TEXT ANALYSIS

For Functional Genomics and Bioinformatics

**Soumya Raychaudhuri**, *Stanford University*

This book brings together the two disparate worlds of computational text analysis and biology and presents some of the latest methods and applications to proteomics, sequence analysis and gene expression data. Including background chapters on the necessary biology, statistics and genomics, it is ideal for students and researchers in computational biology, bioinformatics, genomics, statistics and computer science.

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0-19-856740-5 cloth \$119.50/\$95.60



New!

## ARCHITECTURE OF MODERN MATHEMATICS

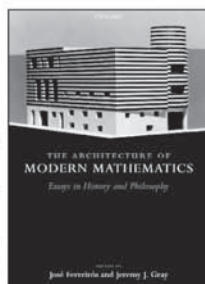
Essays in History and Philosophy

Edited by **J. Ferreirós**, *University of Seville*, and **J. J. Gray**, *Open University*

This edited volume, aimed at both students and researchers in philosophy, mathematics and history of science, highlights leading developments in the overlapping areas of philosophy and the history of modern mathematics. It is a coherent, wide ranging account of how a number of topics in the philosophy of mathematics must be reconsidered in the light of the latest historical research and how a number of historical accounts can be deepened by embracing philosophical questions.

May 2006 328 pp.; 2 line illus.

0-19-856793-6 \$74.50/\$59.60



## STATISTICAL EVIDENCE IN MEDICAL TRIALS

Mountain or Molehill, What Do the Data Really Tell Us?

**Stephen Simon**, *Children's Mercy Hospital*

*Statistical Evidence in Medical Trials* is a lucid, well-written and entertaining text that addresses common pitfalls in evaluating medical research. This book is ideal for health care professionals, students in medical or nursing schools, researchers and students in statistics, and anyone needing to assess the evidence published in medical journals.

2006 2 08 pp.; 4 cartoons & 28 line illus.  
0-19-856761-8 paper \$44.50/\$35.60  
0-19-856760-X cloth \$114.50/\$91.60



## INVITATION TO FIXED PARAMETER ALGORITHMS

**Rolf Niedermeier**, *Universitaet Jena*

An application-oriented introduction to the highly topical area of the development and analysis of efficient fixed-parameter algorithms for hard problems. Aimed at graduate and research mathematicians, algorithm designers, and computer scientists, it provides a fresh view on this highly innovative field of algorithmic research.

(Oxford Lecture Series in Mathematics and Its Applications

No. 31)

2006 312 pp.; 25 line illus.

0-19-856607-7 \$99.50/\$79.60



## MODELS FOR DISCRETE DATA

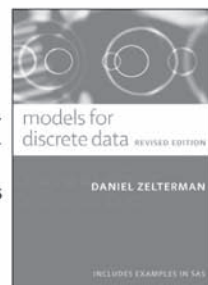
Revised Edition

**Daniel Zelterman**, *Yale University*

This revised edition illustrates the statistical analysis of data using computer programs in SAS, a widely used software package in the health sciences. Many numerical examples are provided to illustrate the methods and these are discussed along with the corresponding computer output. Several new datasets are included, mostly from the health and medical sector.

2006 352 pp.; 25 line illus.

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Forthcoming!

## SOLVING MATHEMATICAL PROBLEMS

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**Terence Tao**, *UCLA*

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November 2006 150 pp.

0-19-920560-4 paper \$25.95/\$20.76

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# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## 489 CC-2B

### ● Bayesian Inference for Population Survey Data—Invited

Section on Survey Research Methods, Section on Bayesian Statistical Science

*Organizer(s): Michael R. Elliott, University of Michigan*

*Chair(s): Steven G. Heeringa, University of Michigan*

- 8:35 a.m. **The Bayesian Approach to Inference for Finite Population Samples**—❖ Roderick J. Little, University of Michigan
- 9:00 a.m. **Weight Trimming via Bayesian Variable Selection Methods**—❖ Michael R. Elliott, University of Michigan
- 9:25 a.m. **Bayesian Approach for Combining Information from Multiple Surveys**—❖ Trivellore E. Raghunathan, University of Michigan
- 9:50 a.m. **Influence Functions and Robust Bayes Estimation**—❖ Malay Ghosh, University of Florida; Tapabrata Maiti, Iowa State University; Ananya Roy, University of Florida
- 10:15 a.m. **Floor Discussion**

## 490 CC-303

### ● Graphical Tools for Spatial Econometrics—Invited

Section on Statistical Graphics

*Organizer(s): Christine Thomas-Agnan, University of Toulouse*

*Chair(s): Antoine de Falguerolles, University Paul Sabatier (Toulouse III)*

- 8:35 a.m. **Using ArcView Mapping Files in Statistical Software Programs**—❖ James P. LeSage, The University of Toledo
- 9:05 a.m. **GeoXp: an R Package for Interactive Exploratory Spatial Data Analysis**—❖ Anne Ruiz-Gazen, University Toulouse I; Christine Thomas-Agnan, University of Toulouse
- 9:35 a.m. **Exploring Spatial Data with openGeoDa and PySAL**—❖ Luc Anselin, University of Illinois; Sergio J. Rey, San Diego State University
- 10:05 a.m. **Floor Discussion**

## 491 CC-614

### ● Bayesian Nonparametric Methods—Invited

ENAR, WNAR, Section on Bayesian Statistical Science, Section on Nonparametric Statistics

*Organizer(s): Mahlet G. Tadesse, University of Pennsylvania*

*Chair(s): Mahlet G. Tadesse, University of Pennsylvania*

- 8:35 a.m. **Split-Merge Markov Chain Monte Carlo for a Nonconjugate Dirichlet Process Mixture Model**—❖ Sonia Jain, University of California, San Diego; Radford Neal, University of Toronto
- 9:00 a.m. **Bayesian Semiparametric Inferences for Disease Risk, ROC Curves, and Prevalence**—❖ Wesley O. Johnson, University of California, Irvine; Adam Branscum, University of Kentucky
- 9:25 a.m. **Nonparametric Estimation of Copulas via Mixtures**—❖ Peter Hoff, University of Washington
- 9:50 a.m. **Bayesian Nonparametric Spatial and Spatio-Temporal Models for Disease Incidence Data**—❖ Athanasios Kottas, University of California, Santa Cruz; Jason Duan, Duke University; Alan E. Gelfand, Duke University
- 10:15 a.m. **Floor Discussion**

## 492 CC-304

### ● Fusing Environmental Data with Numerical Models—Invited

Section on Statistics and the Environment, Section on Bayesian Statistical Science

*Organizer(s): Montserrat Fuentes, North Carolina State University*

*Chair(s): Alan Gelfand, Duke University*

- 8:35 a.m. **Statistical Data Assimilation To Improve Hurricane Forecasting**—❖ Montserrat Fuentes, North Carolina State University; Kristen M. Foley, North Carolina State University
- 9:00 a.m. **Stochastic Parameterizations in Numerical Weather Forecasting Models**—❖ Christopher K. Wikle, University of Missouri-Columbia; Yong Song, University of Missouri-Columbia; Christopher Anderson, National Oceanic & Atmospheric Administration
- 9:25 a.m. **Ensemble Smoothing for Understanding Geophysical Processes**—❖ Douglas W. Nychka, National Center for Atmospheric Research
- 9:50 a.m. **Disc: Peter Guttorp, University of Washington**
- 10:10 a.m. **Floor Discussion**



## Invited Panels 8:30 a.m.–10:20 a.m.

### 493 CC-2A

#### ● ⊕ **Federal Data-Sharing Requirements: Issues, Ethical Challenges, and Roles for the Statistical Community—Invited**

Section on Government Statistics

*Organizer(s): Virginia A. de Wolf, Consultant*

*Chair(s): Alvan O. Zarate, National Center for Health Statistics*

- Panelists:**
- ❖ Joan E. Sieber, California State University, East Bay
  - ❖ Karen M. Hansen, Fred Hutchinson Cancer Research Center
  - ❖ Helen McGough, University of Washington
  - ❖ Alan M. Zaslavsky, Harvard Medical School

10:15 a.m. Floor Discussion

## Topic-Contributed Sessions 8:30 a.m.–10:20 a.m.

### 494 CC-613

#### ● **Survival Analysis Issues for Medical Devices—Topic-Contributed**

Biopharmaceutical Section, Biometrics Section, ENAR

*Organizer(s): David Breiter, Guidant Corporation*

*Chair(s): W. J. Hall, University of Rochester Medical Center*

- 8:35 a.m. **Confidence Levels of Confidence Intervals in the Survival Analysis**—❖ Xiaolong Shih, Boston Scientific Corporation
- 8:55 a.m. **Futility Analysis for a Randomized Trial with a Time-to-Event Endpoint**—❖ Corina M. Sirbu, Boston Scientific Corporation; Kay M. Larholt, Boston Scientific Corporation
- 9:15 a.m. **General Statistical Issues and Applications for Survival Analysis in Medical Device Clinical Studies**—❖ Chang S. Lao, U.S. Food and Drug Administration
- 9:35 a.m. **Group Sequential Design of Device Trials Using Time-to-Event Analysis with Highly Unbalanced, Recurrent Events**—❖ Zengri Wang, Medtronic, Inc.; Andrew Mugglin, University of Minnesota
- 9:55 a.m. Disc: Gosford Sawyerr, Medtronic, Inc.
- 10:15 a.m. Floor Discussion

### 495 CC-620

#### ⊕ **Industry Applications in Defense and National Security—Topic-Contributed**

Section on Statisticians in Defense and National Security, Section on Physical and Engineering Sciences

*Organizer(s): I-Li Lu, The Boeing Company*

*Chair(s): I-Li Lu, The Boeing Company*

- 8:35 a.m. **Exploiting Ontologies To Enhance Situation Awareness**—❖ Steven A. Lien, The Boeing Company; Matt Easley, Rockwell Scientific
- 8:55 a.m. **Multi-Sensor Fusion Using Nontraditional Sensors**—❖ Edward Wright, Information Extraction and Transport, Inc.
- 9:15 a.m. **Design of Experiments for Wind Tunnel Testing: an Application on Load Investigation**—❖ Julio Peixoto, The Boeing Company; Winson Taam, The Boeing Company; I-Li Lu, The Boeing Company
- 9:35 a.m. **Parametric Analysis of Advanced Feature-Aided Tracking with Dynamic Resource Allocation and Management**—❖ Thomas C. Bradley, Boeing Phantom Works; Dwight Rousu, Boeing Phantom Works; Jeffery D. King, Boeing Phantom Works; Jeffery D. Musiak, Boeing Phantom Works
- 9:55 a.m. **Weighted Least Squares Approach To Assess Flight Test with Unbalanced Samples**—❖ Winson Taam, The Boeing Company
- 10:15 a.m. Floor Discussion

### 496 CC-611

#### ● **Statistical Developments in Cancer Surveillance Research—Topic-Contributed**

Section on Statistics in Epidemiology, Section on Health Policy Statistics, Biometrics Section, ENAR

*Organizer(s): Mousumi Banerjee, University of Michigan*

*Chair(s): Mousumi Banerjee, University of Michigan*

- 8:35 a.m. **Learning from Cancer Incidence: Secular Trend, Lead Time, and Overdiagnosis in Prostate Cancer Screening**—❖ Ruth Etzioni, Fred Hutchinson Cancer Research Center; Donatello Telesca, University of Washington
- 8:55 a.m. **Screening with Virtual Colonoscopy: Should Small Polyps Be Referred for Removal?**—❖ Iris Vogelaar, University Medical Center Rotterdam; Marjolein van Ballegooijen, University Medical Center Rotterdam; Ann Zauber, Memorial

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- Sloan-Kettering Cancer Center; J. Dik F. Habbema, University Medical Center Rotterdam
- 9:15 a.m. **Modeling the Impact of Customizing Colorectal Screening by Age, Sex, and Race**—◆ Ann Zauber, Memorial Sloan-Kettering Cancer Center; Iris Vogelaar, University Medical Center Rotterdam; Marjolein van Ballegooijen, University Medical Center Rotterdam; J. Dik F. Habbema, University Medical Center Rotterdam; Sidney Winawer, Memorial Sloan-Kettering Cancer Center
- 9:35 a.m. **Short-Term Prediction of Time Series Using Semiparametric Bayesian Techniques**—◆ Kaushik Ghosh, New Jersey Institute of Technology; Ram Tiwari, National Institutes of Health
- 9:55 a.m. Disc: Kathy Cronin, National Cancer Institute
- 10:15 a.m. Floor Discussion

## 497 CC-606 ⊕ **Bayesian Methods and Computation in Finance—Topic-Contributed**

Section on Bayesian Statistical Science

*Organizer(s): Shawn Ni, University of Missouri-Columbia*

*Chair(s): Susan Alber, University of California, Los Angeles*

- 8:35 a.m. **A Full Information Bayesian Approach to the Evaluation and Estimation of DSGE Models**—◆ John Landon-Lane, Rutgers University
- 8:55 a.m. **Bayesian Selection of Multivariate Stochastic Volatility Models**—◆ Antonello Loddo, University of Missouri-Columbia
- 9:15 a.m. **Bayesian Smoothing in Generalized Additive Models**—◆ Shawn Ni, University of Missouri-Columbia; Dongchu Sun, Virginia Polytechnic Institute and State University/University of Missouri-Columbia
- 9:35 a.m. **Leveling the Playing Field: Prior Choice and DSGE Model Comparisons**—◆ Marco Del Negro, Federal Reserve Bank of Atlanta
- 9:55 a.m. Floor Discussion

## 498 CC-201 ● ⊕ **New Directions in Comparative and Cross-Cultural Survey Methods—Topic-Contributed**

Section on Survey Research Methods

*Organizer(s): Janet Harkness, University of Nebraska-Lincoln*

*Chair(s): Janet Harkness, University of Nebraska-Lincoln*

- 8:35 a.m. **Quality Assurance in Comparative Studies**—◆ Lars Lyberg, Statistics Sweden

- 8:55 a.m. **Harmonization by Design**—◆ Beth-Ellen Pennell, University of Michigan
- 9:15 a.m. **The Effects of Acculturation on Survey Question Comprehension among Latino Respondents in the United States**—◆ Timothy P. Johnson, University of Illinois at Chicago; Allyson L. Holbrook, University of Illinois at Chicago; Young I. Cho, University of Illinois at Chicago
- 9:35 a.m. **Use of Interpreters in Telephone Interviews**—◆ Laura Branden, Westat
- 9:55 a.m. **Cross-Cultural, Cross-National Questionnaire Design**—◆ Sue Ellen Hansen, University of Michigan
- 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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### 499 CC-206 **Explorations in Behavior and Outcomes—Contributed**

Social Statistics Section

*Chair(s): Carole L. Popoff, U.S. Census Bureau*

- 8:35 a.m. **Shift Workers and Their Spouses' Daily Activities**—◆ Anne Polivka, Bureau of Labor Statistics
- 8:50 a.m. **A Group-Based Approach to Causal Analysis Using Longitudinal Data with Applications to Gang Membership and Teen Violence**—◆ Amelia Haviland, RAND Corporation; Daniel Nagin, Carnegie Mellon University; Paul Rosenbaum, University of Pennsylvania
- 9:05 a.m. **Toward Redistricting Rules Based on Housing Density and Indivisible Census Tracts**—◆ Tom Belin, University of California, Los Angeles
- 9:20 a.m. **Test Equating for Mixed-IRT Models: an Illustration with 3PL and Generalized Partial Credit Model Using the Stacking-Lord Approach**—◆ Yann-Yann Shieh
- 9:35 a.m. **Oral Translations in Surveys: Issues of Data Quality and Question Design**—◆ Janet Harkness, University of Nebraska-Lincoln
- 9:50 a.m. **Comparing Internet Users and Nonusers' Behavior Toward Market Products**—◆ Nuria Diaz-Tena, Mathematica Policy Research, Inc.; Robert Benford, TNS-Global

10:05 a.m. **A Policy Tool for Assessing Alcohol Intervention Strategies**—Edward Wegman, George Mason University; ❖ Yasmin H. Said, The Johns Hopkins University

**500** **CC-211**  
**● Imputation of Sample Surveys—Contributed**

Section on Survey Research Methods

*Chair(s): Benmei Liu, Westat*

8:35 a.m. **Fractional Imputation for Missing Values in Linear Regression Models**—❖ Minhui Paik, Iowa State University; Michael D. Larsen, Iowa State University; Shin-Soo Kang, Iowa State University

8:50 a.m. **2010 Census Count Imputation: Research Results Using Spatial Modeling**—❖ Robert D. Sands, U.S. Census Bureau

9:05 a.m. **Bias-Reduced Multivariate Imputation: Use of the Locally Adjusted Predictive Mean Matching Method**—❖ Masato Okamoto, Statistical Research and Training Institute

9:20 a.m. **Imputation of Economic Data Subject to Linear Restrictions Using a Sequential Regression Approach**—❖ Caren Tempelman, University of Groningen

9:35 a.m. **Imputations via Triangular Regression-Based Hot Deck: Methods for Rapid Development of an Allocation Scheme and Preservation of the Covariance Matrix**—❖ Scott Susin, U.S. Census Bureau

9:50 a.m. **Creating Imputation Classes Using Nonparametric Classification Trees**—❖ Darryl Creel, RTI International; Stephen Black, RTI International; Karol Krotki, RTI International; Jeremy Porter, RTI International

10:05 a.m. **2010 Census Count Imputation: Research Results for Alternative Methods**—❖ Andrew Kilmer, U.S. Census Bureau

**501** **CC-610**  
**● ⊕ Theory and Application of Survival Analysis—Contributed**

Section on Statistics in Epidemiology, Biometrics Section, ENAR

*Chair(s): Patrick Tarwater, The University of Texas Health Science Center at Houston*

8:35 a.m. **Proportional Hazards Model with Empirically Estimated Weights**—❖ Qing Pan, University of Michigan; Douglas E. Schaubel, University of Michigan

8:50 a.m. **Power Estimation for Clearance of Live Vaccine Virus Using Weibull Survival Models with Interval Censoring**—❖ Daniel Zaccaro, Rho, Inc.; Barry Eggleston, Rho, Inc.; Susan Lieff, Rho, Inc.; Dennis Wallace, Rho, Inc.; Jon Hanifin, Oregon Health & Science University; Donald Leung, National Jewish Medical and Research Center; Marshall Plaut, National Institute of Allergy and Infectious Diseases; Erica Brittain, National Institute of Allergy and Infectious Diseases; Robert Holliday, Rho, Inc.; Mark Slifka, Oregon Health & Science University

9:05 a.m. **Comparison of Survival Methods and Polytomous Logistic Regression with Competing Risks**—❖ Robert Glynn, Brigham and Women's Hospital; Bernard Rosner, Harvard Medical School

9:20 a.m. **Software for Survival Analysis of Studies Nested within Cohorts To Estimate Relative, Absolute, and Attributable Risks**—❖ Hormuzd Katki, National Cancer Institute; Steven D. Mark, University of Colorado Health Sciences Center

9:35 a.m. **Population Attributable Risk in the Presence of Cure/Immune Individuals: a Simulation-Based Study**—❖ Jayawant Mandrekar, Mayo Clinic College of Medicine; Melvin L. Moeschberger, The Ohio State University

9:50 a.m. **Comparison of Methods to Model Mortality in the Presence of Time-Dependent Confounders**—❖ Ouhong Wang, Amgen Inc.; Trevor McMullan, Amgen Inc.

10:05 a.m. **Estimating Lifetime Risk Accounting for Baseline Prevalence: High Total Cholesterol in Framingham Heart Study**—❖ Michael Pencina, Boston University; Ralph B. D'Agostino, Boston University; Ramachandran S. Vasani, Framingham Heart Study; Alexa Beiser, Boston University; Mark R. Cobain, Unilever Corporate Research

**502** **CC-204**  
**● Survey-Based Estimation V—Contributed**

Section on Survey Research Methods

*Chair(s): Donsig Jang, Mathematica Policy Research, Inc.*

8:35 a.m. **Weighting an Internet Panel Survey on Drug Use and Abuse**—❖ Harpe Gordek, RTI International; Rick L. Williams, RTI International; Lanting Dai, RTI International

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ✦ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 8:50 a.m. **A New Method for Weighting Survey Respondents**—✦ Feiming Chen, Spectra Marketing Systems
- 9:05 a.m. **Nonparametric Regression with Complex Survey Data**—✦ Torsten Harms, Freie Universität Berlin; Pierre Duchesne, Université de Montréal
- 9:20 a.m. **Combining Survey and Population Data in Inference**—✦ Raymond Chambers, University of Wollongong
- 9:35 a.m. **Dual Frame Estimation in the National Survey of College Graduates**—✦ John Finamore, U.S. Census Bureau; David W. Hall, U.S. Census Bureau; Ronald S. Fecso, National Science Foundation
- 9:50 a.m. **Use Sampling Weights in Hierarchical Modeling**—✦ Yue Jia, Southern Methodist University; S. Lynne Stokes, Southern Methodist University
- 10:05 a.m. **Anomaly of Survey Weights for American Indians and Alaska Natives**—✦ Sunghee Lee, University of California, Los Angeles; John H. Kurata, University of California, Los Angeles; Yan Xiong, University of California, Los Angeles

## 503 CC-203 Broad Quality Issues in Organizations— Contributed

Section on Government Statistics

*Chair(s): Eugene Burns, Bureau of Transportation Statistics*

- 8:35 a.m. **Business Process Improvement in the Economic Programs Directorate at the U.S. Census Bureau**—✦ Deborah Stempowski, U.S. Census Bureau; Shirin A. Ahmed, U.S. Census Bureau
- 8:50 a.m. **Assessing the Improvement of Data Quality: Surveys Revised Using Cognitive Techniques**—✦ Kara Norman, Energy Information Administration; Carrie Hughes-Cromwick, Energy Information Administration
- 9:05 a.m. **Revisions and Other Changes in Official Statistics: Swedish Observations on Concepts and Terminology**—✦ Eva Elvers, Statistics Sweden
- 9:20 a.m. **Improving the Job Opening and Labor Turnover Survey**—✦ Darrell Greene, Bureau of Labor Statistics
- 9:35 a.m. **Data Quality Review at a Small Agency**—✦ John Blachere, U.S. Consumer Product Safety Commission

- 9:50 a.m. **Tying Web Site Performance to Mission Achievement in the Federal Government**—✦ Diane Milleville, U.S. Internal Revenue Service
- 10:05 a.m. **Results from the International Survey of ASA Members**—✦ Amy Luo, Ernst & Young LLP; Roberta Sangster, Bureau of Labor Statistics

## 504 CC-604 Bayesian Multiple Testing and Decision Theory—Contributed

Section on Bayesian Statistical Science

*Chair(s): David Dahl, Texas A&M University*

- 8:35 a.m. **Capturing Uncertainty When the Event Probability Is Subject to Uncertainty**—✦ Ehsan S. Soofi, University of Wisconsin-Milwaukee; Paul C. Nystrom, University of Wisconsin-Milwaukee; Masoud Yasai-Ardekani, George Mason University
- 8:50 a.m. **A New Bayes Rule**—✦ James R. Meginniss, Vista Research, Inc.
- 9:05 a.m. **Estimating the Positive False Nondiscovery Rate and False Nondiscovery Rate in Multiple Hypothesis Testing**—✦ Changzheng Chen, K & L Consulting Services Inc.; Burt Holland, Temple University
- 9:20 a.m. **Decision Theoretic Bayesian Hypothesis Testing with the Selection Goal**—✦ Naveen Bansal, Marquette University
- 9:35 a.m. **Bayes Approach to Dependent Multiple Comparisons**—✦ Lemuel Moye, The University of Texas Health Science Center at Houston
- 9:50 a.m. **A Bayesian Multiple Comparison Procedure for Order-Restricted Mixed Models**—✦ Junfeng Shang, Bowling Green State University; Farroll T. Wright, University of Missouri; Joseph E. Cavanaugh, The University of Iowa
- 10:05 a.m. **Empirical Bayes Analysis on the Power Law Process**—✦ Zhao Chen, Florida Gulf Coast University

## 505 CC-310 Simulation—Contributed

Section on Statistical Computing, Section on Physical and Engineering Sciences

*Chair(s): Tanzy Love, Carnegie Mellon University*

- 8:35 a.m. **Importance Sampling with the Huber and Elliptical Multivariate Logistic Distributions**—✦ Stella W. Karuri, North Carolina State University; Buffy Hudson-Curtis, North Carolina



State University; John Monahan, North Carolina State University

- 8:50 a.m.**    **Application of Randomized Spherical-Radial Integration to the E-step of the Monte Carlo Expectation Maximization Algorithm for Generalized Linear Mixed Models**—❖ Vadim Zippunikov, Cornell University; James Booth, Cornell University
- 9:05 a.m.**    **An Implementation of Constrained Sequential Monte Carlo by Particle Resizing**—❖ Lixin Lang, The Ohio State University; Prem K. Goel, The Ohio State University; Bhavik R. Bakshi, The Ohio State University
- 9:20 a.m.**    **Continuous Contour Monte Carlo for Marginal Density Estimation**—❖ Faming Liang, Texas A&M University
- 9:35 a.m.**    **Annealing Contour Monte Carlo Algorithm for Real Protein Folding**—❖ Sooyoung Cheon, Texas A&M University
- 9:50 a.m.**    **Simulation-Based Estimation**—❖ Weijie Cai, George Mason University; James Gentle, George Mason University
- 10:05 a.m.**    **Solving Complex Network Optimization Problems Using Response Surface Methodology**—❖ Ying-Chao Hung, National Central University

## 506 CC-205 Bayesian Statistics and Methods—Contributed

IMS, Section on Bayesian Statistical Science

*Chair(s): Man Sik Park, Colorado State University*

- 8:35 a.m.**    **Robust Prior Bayes Estimation on Infinite Dimensional Normal Mean and Spectral Densities**—❖ Herman Rubin, Purdue University; Hui Xu, Purdue University
- 8:50 a.m.**    **Geometric Ergodicity of the Gibbs Sampler for the Probit Model**—❖ Vivekananda Roy, University of Florida
- 9:05 a.m.**    **Markov Chain Monte Carlo Approximation of the Posterior in Hierarchical Linear Models**—❖ Galin Jones, University of Minnesota
- 9:20 a.m.**    **On the Bayesian Detection of a Change in the Arrival Rate of a Poisson Process**—❖ Marlo Brown, Niagara University
- 9:35 a.m.**    **The Bayesian LASSO**—❖ Trevor Park, University of Florida; George Casella, University of Florida
- 9:50 a.m.**    **Robust Estimators and Influence Measures**

**of Extremal Dependence**—❖ Yu-Ling Tsai, University of Western Ontario; Duncan Murdoch, University of Western Ontario; Debbie Dupuis, HEC Montréal

- 10:05 a.m.**    **Floor Discussion**

## 507 CC-605 ● Teaching and Technology—Contributed

Section on Statistical Education

*Chair(s): Lewis VanBrackle, Kennesaw State University*

- 8:35 a.m.**    **Real-Time Classroom Data Collection**—❖ Jeffrey Lidicker, Temple University; Alicia Graziosi, Temple University
- 8:50 a.m.**    **Visualizing Hypothesis Testing Concepts through the Power of PowerPoint**—❖ Edward Mansfield, The University of Alabama
- 9:05 a.m.**    **Ways To Increase the Use of Graphs throughout the Introductory Applied Statistics Course**—❖ John McKenzie, Babson College
- 9:20 a.m.**    **I Spy (Assessing the Reliability of Eye-Witness Testimony)**—❖ Mary Richardson, Grand Valley State University; Paul Stephenson, Grand Valley State University
- 9:35 a.m.**    **Using Online Videos To Supplement Classroom Instruction**—❖ Monnie McGee, Southern Methodist University; Jing Cao, Southern Methodist University; Robert Skinner, Southern Methodist University; Ian K. Aberle, Southern Methodist University
- 9:50 a.m.**    **Using Computer-Aided Learning To Teach Statistics**—❖ Tristan Denley, University of Mississippi; Kim Denley, University of Mississippi
- 10:05 a.m.**    **A Probability Problem on the Number of Loops Formed When Ends of Strings Are Tied**—❖ Marepalli Rao, University of Cincinnati; Subramanyam Kasala, The University of North Carolina at Wilmington

## 508 CC-307 ● Robust Statistical Methods—Contributed

Section on Nonparametric Statistics

*Chair(s): Samuel Wu, University of Florida*

- 8:35 a.m.**    **Multivariate Spatial Median for Clustered Data**—❖ Denis Larocque, HEC Montréal; Jaakko Nevalainen, University of Tampere; Hannu Oja, University of Tampere

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 8:50 a.m. **Multivariate Robust Regression Based on General Depth Function**—◆ Weihua Zhou, The University of North Carolina at Charlotte
- 9:05 a.m. **Robust Efficient Identification of an Outlying Cell in a Two-Way Layout with Replicates**—◆ Nathalie Malo, Genome Quebec Innovation Centre/McGill University
- 9:20 a.m. **Robust Testing of the Nonparametric Behrens-Fisher Hypothesis Using a Density Ratio Model**—◆ James Troendle, National Institute of Child Health & Human Development; Kostas Fokianos, University of Cyprus
- 9:35 a.m. **Robust Nonparametric Confidence Intervals and Tests for the Median in the Presence of (c,r)-Contamination**—◆ Masakazu Ando, Japan Society for the Promotion of Science; Itsuro Kakiuchi, Kobe University; Miyoshi Kimura, Nanzan University
- 9:50 a.m. **Inference in a Simple Random Effects Model with Low Replication and Nonnormal Distributions**—◆ Hongjuan Liu, University of California, Riverside; Xinping Cui, University of California, Riverside
- 10:05 a.m. **On the Estimation of Disability-Free Life Expectancy**—◆ Kosuke Imai, Princeton University; Samir Soneji, Princeton University

## 509 CC-308 ● **New Methods and Practical Application—Contributed**

Section on Quality and Productivity, Section on Physical and Engineering Sciences

*Chair(s): James D. Williams, GE Global Research*

- 8:35 a.m. **Robust Designs for One-Way Random Effects Model Using Q-estimator**—◆ Julie Zhou, University of Victoria; Xiaolong Yang, University of Victoria
- 8:50 a.m. **Beta-Geometric Distribution in Survival Modeling**—◆ Alfred Akinsete, Marshall University
- 9:05 a.m. **Optimal Targeting under an Asymmetric Loss**—◆ Yvonne Zubovic, Indiana University Purdue University Fort Wayne; Chand K. Chauhan, Indiana University Purdue University Fort Wayne
- 9:20 a.m. **Adaptively Trimmed L-Moments with Applications to Heavy-Tailed Distributions**—◆ Jonathan Hosking, IBM Research

- 9:35 a.m. **Goodness-of-Fit Testing and Pareto-Tail Estimation**—◆ Yuri Goegebeur, University of Southern Denmark; Jan Beirlant, K.U. Leuven; Tertius de Wet, University of Stellenbosch
- 9:50 a.m. **New Methods Using Levene-Type Tests for Hypotheses about Dispersion Differences**—◆ Xiaoni Liu, North Carolina State University; Dennis A. Boos, North Carolina State University; Cavell Brownie, North Carolina State University
- 10:05 a.m. **On Goodman and Kruskal's G and Stuart's Measure of Association**—◆ Jeffrey Green, Ball State University

## 510 CC-608 ● **Microarrays—Contributed**

Biopharmaceutical Section, Biometrics Section, ENAR

*Chair(s): Brian L. Wiens, Myogen, Inc.*

- 8:35 a.m. **Validation of Biomarkers Identified by Gene Expression Profiles**—◆ Boris Zaslavsky, U.S. Food and Drug Administration; Jing Han, U.S. Food and Drug Administration; Jawahar Tiwari, U.S. Food and Drug Administration; Raj K. Puri, U.S. Food and Drug Administration
- 8:50 a.m. **Gene Expression Data Analysis Using the Gene Ontology**—◆ Jiajun Liu, North Carolina State University; Jacqueline Hughes-Oliver, North Carolina State University; Alan J. Menius, GlaxoSmithKline
- 9:05 a.m. **Microarray, PCR, and Northern Blot: a Comparison**—◆ Yongzeng Ding, Northwestern University; ◆ Borko Jovanovic, Northwestern University; Raymond Bergan, Northwestern University; Irene Helenowski, Northwestern University
- 9:20 a.m. **Technical, Longitudinal, and Genetic Variation in Proteomic Analysis of Human Plasma**—◆ Imola K. Fodor, Lawrence Livermore National Laboratory; Todd H. Corzett, Lawrence Livermore National Laboratory; Megan Choi, Lawrence Livermore National Laboratory; Vicki L. Walsworth, Lawrence Livermore National Laboratory; Kenneth W. Turteltaub, Lawrence Livermore National Laboratory; Sandra L. McCutchen-Maloney, Lawrence Livermore National Laboratory
- 9:35 a.m. **A Valid False Discovery Rate Procedure in Presence of Biased Null P-Values**—◆ Hoa Phuong Nguyen, Johnson & Johnson

9:50 a.m. **A Sequential Monte Carlo EM Solution to the Transcription Factor Binding Site Identification Problem**—✦Edmund Jackson, Cambridge University; William Fitzgerald, Cambridge University

10:05 a.m. **Statistical Issues in High-Throughput Screening**—✦E. Venkatraman, Memorial Sloan-Kettering Cancer Center; Hakim Djabballah, Memorial Sloan-Kettering Cancer Center

## 511 CC-617 ● **Power and Sample-Size Calculations—Contributed**

Biometrics Section

*Chair(s): Sumithra Mandrekar, Mayo Clinic College of Medicine*

8:35 a.m. **Quick Calculation for Sample Size While Controlling False Discovery Rate with Application to Microarray Analysis**—✦Peng Liu, Cornell University; J. T. Gene Hwang, Cornell University

8:50 a.m. **Sample Size for FDR-Control in DNA Microarray Studies**—✦Yongzhao Shao, New York University; Chi-Hong Tseng, New York University

9:05 a.m. **Sample-Size Determination for Multiple Comparisons**—✦Chi-Hong Tseng, New York University; Yongzhao Shao, New York University

9:20 a.m. **Power Calculations for Linear Mixed Effects Models Using SAS/PROC MIXED**—✦Andrzej Galecki, University of Michigan; Tomasz Burzykowski, Hasselt University

9:35 a.m. **Power Analysis for Longitudinal Study Designs**—✦Xin Tu, University of Rochester; Wan Tang, University of Rochester

9:50 a.m. **Accuracy of P-Values and Sample Size in Comparing Skewed Clinical Trial Data**—✦Jun Zhao, Organon; Gang Li, Johnson & Johnson

10:05 a.m. **Does Pair-Matching on Baseline Measures Improve Power in a Pre-Post Cluster Randomized Trial?**—✦Misook Park, Virginia Commonwealth University; Robert E. Johnson, Virginia Commonwealth University

## 512 CC-615 ● **Methodology and Applications Based on Mixed Models—Contributed**

Biometrics Section, ENAR

*Chair(s): Hongmei Jiang, Northwestern University*

8:35 a.m. **A Two-Step Logistic Regression-Linear Mixed**

**Model Method to Calculate CpG Island Methylator Phenotype (CIMP) Scores in Colorectal Cancer Patients**—✦Wei Wei, M. D. Anderson Cancer Center; Jeffrey S. Morris, M. D. Anderson Cancer Center; Jean-Pierre Issa, M. D. Anderson Cancer Center

8:50 a.m. **A Mixed Model Analysis of Errors in Radiotherapy**—✦Alai Tan, The University of Texas Medical Branch; Giuseppe Sanguineti, The University of Texas Medical Branch; Daniel H. Freeman, The University of Texas Medical Branch

9:05 a.m. **Flexible Random Intercept Models for Binary Outcomes Using Mixtures of Normals**—✦Ming-Wen An, The Johns Hopkins University; Brian Caffo, The Johns Hopkins University; Charles Rohde, The Johns Hopkins University

9:20 a.m. **Generalized Linear Mixed Models with Sparse Binary Outcome Data: Comparing Estimation Methods**—✦Marie-Eve Beauchamp, McGill University; Robert W. Platt, McGill University; James A. Hanley, McGill University

9:35 a.m. **Baseline Adjustment: Issues for Mixed-Effects Regression Models in Clinical Trials**—✦Ronald Thisted, The University of Chicago

9:50 a.m. **Performance of Pseudo-Rsquare Statistics in the Linear Mixed Model**—✦Jean Orelie, SciMetrika LLC; Lloyd Edwards, The University of North Carolina at Chapel Hill

10:05 a.m. **Floor Discussion**

## 513 CC-602 ● ⊕ **Health, Resources, Energy, and Ranking—Contributed**

Business and Economics Statistics Section, Section on Health Policy Statistics

*Chair(s): Polly Phipps, Bureau of Labor Statistics*

8:35 a.m. **Diseased-Based Price Index: a Cure Worse Than the Disease**—✦Ralph Bradley, Bureau of Labor Statistics

8:50 a.m. **Switching from Retrospective to Current-Year Data Collection in the Medical Expenditure Panel Survey-Insurance Component (MEPS-IC)**—✦Anne T. Kearney, U.S. Census Bureau; John P. Sommers, Agency for Healthcare Research and Quality

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⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 9:05 a.m. **Nonparametric Inferences on Conditional Quantile Processes**—◆ Chuan Goh, University of Toronto
- 9:20 a.m. **Risk Sharing by Local Governments and Private Institutions in Environmental Transformation**—◆ Neela Manage, Florida Atlantic University
- 9:35 a.m. **Nonparametric Transfer Function Model**—◆ Jun Liu, Georgia Southern University; Qiwei Yao, London School of Economics; Rong Chen, University of Illinois at Chicago
- 9:50 a.m. **Rank-Based Estimation for Autoregressive Moving Average Time Series Models**—◆ Beth Andrews, Northwestern University
- 10:05 a.m. **Bayesian Seemingly Unrelated Regression in Spatial Regional Model: Economics of Agglomeration in Japan from 1991–2000**—◆ Kazuhiko Kakamu, Institute of Advanced Studies; Wolfgang Polasek, Institute for Advanced Studies; Hajime Wago, Nagoya University

## 514 CC-601 ● Regression, Time Series, and Adjustments—Contributed

Business and Economics Statistics Section

*Chair(s): Christian K. Hansen, Eastern Washington University*

- 8:35 a.m. **Using Firm Optimization To Evaluate and Estimate Returns to Scale**—◆ Yuriy Gorodnichenko, University of Michigan
- 8:50 a.m. **How Far to Asymptopia? Errors and Regressors with Realistically Asymmetric Distributions Generate Unreliable t-Statistics in Large Finite Samples**—◆ Robert McClelland, Bureau of Labor Statistics; Elliot Williams, Bureau of Labor Statistics
- 9:05 a.m. **Effectiveness of Two-Stage Least Squares in Correcting Endogeneity Bias: a Monte Carlo Study**—◆ V. A. R. Samaranyake, University of Missouri-Rolla; Xujun Wang, University of Missouri-Rolla
- 9:20 a.m. **Tuning Parameter Selectors for SCAD**—◆ Hansheng Wang, Peking University; Runze Li, The Pennsylvania State University; Chih-Ling Tsai, University of California, Davis
- 9:35 a.m. **A Stepwise SPA Test for Data Snooping and Its Application on Fund Performance Evaluation**—◆ Yu-Chin Hsu, The University of Texas at Austin; Po-Hsuan Hsu, Columbia University

- 9:50 a.m. **An Alternative Framework for Univariate and Multivariate Seasonal Adjustment**—◆ Stéphane Gregoir, CREST/INSEE
- 10:05 a.m. **Nonlinear Properties of Conditional Returns under Scale Mixtures**—◆ Venkata Jandhyala, Washington State University; Stergios B. Fotopoulos, Washington State University

## 515 CC-609 ● Psychiatric, Cardiovascular, and Infectious Disease Trials—Contributed

Biopharmaceutical Section, ENAR

*Chair(s): T. Paulette Ceesay, Merck & Co., Inc.*

- 8:35 a.m. **Comparison of Methods for Handling Missing Data in Noninferiority Psychiatric Trials**—◆ Isaac Nuamah, Johnson & Johnson Pharmaceutical R&D; Guohua Pan, Johnson & Johnson Pharmaceutical R&D; Kwang-Shi Shu, Johnson & Johnson Pharmaceutical R&D; Pilar Lim, Johnson & Johnson Pharmaceutical R&D
- 8:50 a.m. **Differentiating Major Depressive Disorder in Youths with Attention Deficit Hyperactivity Disorder**—◆ Adriana Lopez, University of Pittsburgh; Satish Iyengar, University of Pittsburgh; Rasim Diler, University of Pittsburgh; William Daviss, University of Pittsburgh
- 9:05 a.m. **Impact of Reference Range Selection on Long-Term Growth Evaluations**—◆ Dustin Ruff, Eli Lilly and Company
- 9:20 a.m. **Is There an Optimal Sample in Depression Studies?**—◆ Kenneth Liu, Merck & Co., Inc.; Duane Snavely, Merck & Co., Inc.
- 9:35 a.m. **Placebo Effect—Adjusted Assessment of Quality of Life in Placebo-Controlled Clinical Trials**—◆ Jens Eickhoff, University of Wisconsin-Madison
- 9:50 a.m. **Clinical Trial Designs To Study Rare Infectious Diseases**—◆ Yufeng Li, The University of Alabama at Birmingham; Seng-jaw Soong, The University of Alabama at Birmingham
- 10:05 a.m. **Floor Discussion**



## 516 CC-618 Environmental Models and Assessing Gene- Environment Interactions—Contributed

Biometrics Section, WNAR, ENAR

*Chair(s): Samiran Sinha, Texas A&M University*

- 8:35 a.m. Statistical Issues Related to Development of a New Model of the Life Cycle of Salmonid Fishes in the Pacific Northwest**—❖ Steven G. Smith, U.S. Department of Commerce; James R. Faulkner, U.S. Department of Commerce; Richard W. Zabel, U.S. Department of Commerce/NOAA Fisheries
- 8:50 a.m. Breeding Value Estimation in Forest Genetics**—❖ Anne M. Millar, Dalhousie University
- 9:05 a.m. A Model for Ordinal Data with Spatial and Temporal Dependency**—❖ Graciela Gonzalez-Farias, CIMAT; Rogelio Ramos-Quiroga, CIMAT; Felipe Peraza-Garay, Universidad Autonoma de Sinaloa
- 9:20 a.m. New Method for Assessing Gene-Environment Interaction in Case-Only Studies**—❖ Shizue Izumi, Oita University; John Cologne, Radiation Effects Research Foundation
- 9:35 a.m. An Evaluation of the Benefit of Genetic Information in Discovering the Effect of an Environmental Factor on Disease**—❖ Abhijit Dasgupta, Thomas Jefferson University; Nilanjan Chatterjee, National Cancer Institute; Sholom Wacholder, National Cancer Institute
- 9:50 a.m. Analysis of an Interaction Threshold in a Mixture of Drugs and/or Chemicals**—❖ Adam Hamm, Rho, Inc.
- 10:05 a.m. Floor Discussion**

## 517 CC-616 ● Statistical Methods in HIV Research— Contributed

Biometrics Section, ENAR

*Chair(s): Hrishikesh Chakraborty, RTI International*

- 8:35 a.m. Combining Retrospective and Prospective Data To Improve Markov Transition Parameter Estimation for Characterizing the Accumulation of HIV-1 Drug Resistance Mutations**—❖ Brian Healy, Harvard School of Public Health; Victor DeGruttola, Harvard School of Public Health; Marcello Pagano, Harvard School of Public Health

- 8:50 a.m. Inference for Multiple Kappas with Nested and Clustered Study Designs: Application to HIV Prevention and Sexual Abuse Research**—❖ Yan Ma, University of Rochester; Xin Tu, University of Rochester
- 9:05 a.m. On Sensitivity Analysis of HIV-Free Survival**—❖ Peng Zhang, Harvard University; Stephen W. Lagakos, Harvard University
- 9:20 a.m. Hierarchical Poisson Regression Models for HIV Vaccine Studies**—❖ Xin Huang, University of California, Los Angeles; W. John Boscardin, University of California, Los Angeles; Elissa Schwartz, Harvey Mudd College
- 9:35 a.m. Hypothesis Testing of Treatment Policies in Two-Stage Randomization Designs in Clinical Trials**—❖ Xiang Guo, sanofi-aventis; Anastasios A. Tsiatis, North Carolina State University
- 9:50 a.m. Design and Analysis of Neutralizing Antibody Assays in HIV-1 Vaccine Trials**—❖ Yunda Huang, Fred Hutchinson Cancer Research Center; Peter Gilbert, Fred Hutchinson Cancer Research Center/University of Washington; David Montefiori, Duke University Medical Center; Steve Self, University of Washington
- 10:05 a.m. Antigen Scanning Methods for Identifying Peptide Signatures**—❖ Allan deCamp, Fred Hutchinson Cancer Research Center; Peter Gilbert, Fred Hutchinson Cancer Research Center/University of Washington

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## Invited Sessions 10:30 a.m.–12:20 p.m.

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## 518 CC-605 Releasing Tabular Data Collected under a Confidentiality Pledge: Going beyond Cell Suppression—Invited

Business and Economics Statistics Section

*Organizer(s): Steve H. Cohen, Bureau of Labor Statistics*

*Chair(s): Jacob Bournazian, Energy Information Administration*

- 10:35 a.m. A Comparison on Data Utility between Publishing Fixed Intervals versus Traditional Cell Suppression on Tabular Employment Data**—❖ Steve H. Cohen, Bureau of Labor Statistics; Bogong Li, Bureau of Labor Statistics

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 11:00 a.m. **Quality-Preserving Controlled Tabular Adjustment: an Alternative to Cell Suppression for Disclosure Limitation of Tabular Magnitude Data**—◆Lawrence H. Cox, National Center for Health Statistics
- 11:25 a.m. **Combining Synthetic Data and Noise Infusion for Confidentiality Protection of the Quarterly Workforce Indicators**—◆John Abowd, Cornell University; Lars Vilhuber, Cornell University
- 11:50 a.m. **Protecting the Confidentiality of Commodity Flow Survey Tables by Adding Noise to the Underlying Microdata**—◆Paul B. Massell, U.S. Census Bureau; J. Neil Russell, National Center for Education Statistics
- 12:15 p.m. **Floor Discussion**

## 519 CC-603 ● **Monte Carlo Methods for Computationally Intensive Problems—Invited**

Section on Statistical Computing

*Organizer(s): Yuguo Chen, University of Illinois at Urbana-Champaign*

*Chair(s): Yuguo Chen, University of Illinois at Urbana-Champaign*

- 10:35 a.m. **Espousing Modern Computation with Classical Statistics: Sufficiency, Ancillarity, and a New Generation of MCMC**—◆Xiao-Li Meng, Harvard University
- 11:00 a.m. **Conditional Inference in Log-Linear Models: Exact Calculation versus Monte Carlo Approximation**—◆James Booth, Cornell University
- 11:25 a.m. **Constrained Sequential Monte Carlo (CSMC)**—◆Rong Chen, National Science Foundation
- 11:50 a.m. **Sequential Monte Carlo for Estimating Ratio of Normalizing Constants**—◆Arnaud Doucet, The University of British Columbia
- 12:15 p.m. **Floor Discussion**

## 520 CC-303 ● ⊛ **Classification of Data with a Large Number of Polychotomous Variables—Invited**

Classification Society of North America, Section on Physical and Engineering Sciences

*Organizer(s): I-Li Lu, The Boeing Company*

*Chair(s): Stephen P. Jones, The Boeing Company*

- 10:35 a.m. **Similarity Index for Polychotomous Variables**—◆Ranjan K. Paul, Boeing Math Group; I-Li Lu, The Boeing Company

- 11:00 a.m. **Learning Accurate Probability Estimates: Why and How?**—◆Dragos D. Margineantu, The Boeing Company; Roman D. Fresnedo, The Boeing Company
- 11:25 a.m. **Assessing the Risk of Classification Decisions**—◆Roman D. Fresnedo, The Boeing Company; Dragos D. Margineantu, The Boeing Company
- 11:50 a.m. **Disc: Sabyasachi Basu, The Boeing Company**
- 12:10 p.m. **Floor Discussion**

## 521 CC-310 ● ⊛ **Semiparametric and Nonparametric Modeling and Goodness-of-Fit Tests for Longitudinal Data—Invited**

WNAAR, Biometrics Section, Section on Nonparametric Statistics

*Organizer(s): Annie Qu, Oregon State University*

*Chair(s): Annie Qu, Oregon State University*

- 10:35 a.m. **Analysis of Longitudinal Data with Semiparametric Estimation of Covariance Function**—◆Runze Li, The Pennsylvania State University; Jianqing Fan, Princeton University; Tao Huang, Yale University
- 11:00 a.m. **Bayesian Model Assessment Using Pivotal Quantities**—◆Valen Johnson, M. D. Anderson Cancer Center
- 11:25 a.m. **Consistent Model Selection and Goodness-of-Fit Test for Marginal Regression Analysis of Longitudinal Data**—◆Lan Wang, University of Minnesota; Annie Qu, Oregon State University
- 11:50 a.m. **Semiparametric Modeling in Applications**—◆Naisyin Wang, Texas A&M University
- 12:15 p.m. **Floor Discussion**

## 522 CC-3A ● **What Makes a Successful Career in Statistics? Ruminations and Advice from Veteran Statisticians Who Have Made Major Contributions over the Long Haul—Invited**

Social Statistics Section, Section on Statistical Education

*Organizer(s): Jai Choi, National Center for Health Statistics*

*Chair(s): Fritz J. Scheuren, National Opinion Research Center*

- 10:35 a.m. **Good (?) Advice for Young Statisticians**—◆Robert V. Hogg, The University of Iowa
- 11:00 a.m. **Why Some Statisticians Never Die or Fade Away: Reflections on the Career of Joe Waksberg**—◆David Morganstein, Westat; Daniel Levine, Westat; Ed Bryant; Graham Kalton, Westat

11:25 a.m. **A Personal '10 Commandments' for a Successful Career in Biostatistics**—❖ Theodore Colton, Boston University

11:50 a.m. Disc: Paul S. Levy, RTI International

12:10 p.m. **Floor Discussion**

## 523 CC-616 ● ⊕ **Statistical Issues in Emerging Areas in Cancer Research—Invited**

Biometrics Section, WNAR, ENAR

*Organizer(s): Shili Lin, The Ohio State University; Jaya M. Satagopan, Memorial Sloan-Kettering Cancer Center*

*Chair(s): Shili Lin, The Ohio State University*

10:35 a.m. **DNA Methylation, Aging, and Cancer**—  
❖ Kimberly Siegmund, University of Southern California; Paul Marjoram, University of Southern California; Darryl Shibata, University of Southern California

11:00 a.m. **Molecular Classification of Prostate Tumors**—  
❖ Jaya M. Satagopan, Memorial Sloan-Kettering Cancer Center

11:25 a.m. **Composite MicroRNA Target Predictions and Comparisons of Several Prediction Algorithms**—  
❖ Jin Zhou, The Ohio State University; Vincent Melfi, Michigan State University; Joe Verducci, The Ohio State University; Shili Lin, The Ohio State University

11:50 a.m. Disc: Terence P. Speed, University of California, Berkeley

12:10 p.m. **Floor Discussion**

## 524 CC-3B ● **Statistical Models of Natural Language Text—Invited**

IMS, Section on Statisticians in Defense and National Security

*Organizer(s): Michael Collins, Massachusetts Institute of Technology*

*Chair(s): Christopher Genovese, Carnegie Mellon University*

10:35 a.m. **Structured Prediction Problems in NLP**—  
❖ Michael Collins, Massachusetts Institute of Technology

11:20 a.m. **Statistical Approaches for Machine Translation**—  
❖ Dan Klein, University of California, Berkeley

12:05 p.m. **Floor Discussion**

## 525 CC-608 ● **Population-Based Genetic Association Studies: Using Genetics/Genomics To Advance Public Health—Invited**

Section on Statistics in Epidemiology, Section on Health Policy Statistics, WNAR, ENAR

*Organizer(s): Philip S. Rosenberg, National Cancer Institute*

*Chair(s): Philip S. Rosenberg, National Cancer Institute*

10:35 a.m. **Gene-Environment Interaction: Implications for Public Health and Methodological Challenges**—  
❖ Ramal Moonesinghe, Centers for Disease Control and Prevention; Muin Khoury, Centers for Disease Control and Prevention

10:55 a.m. **Candidate Gene Association Studies: Power and Sample Size Requirements**—❖ Bingshu E. Chen, National Cancer Institute; Philip S. Rosenberg, National Cancer Institute

11:15 a.m. **Diversity of Haplotype Configurations in the Human Genome: Implications for Genome-Wide Association Studies**—❖ Shuying S. Li, Fred Hutchinson Cancer Research Center

11:35 a.m. **Risk Estimation in Persons at Genetic Risk of Cancer**—❖ Sining Chen, The Johns Hopkins Bloomberg School of Public Health; Edwin S. Iversen, Jr., Duke University; Giovanni Parmigiani, The Johns Hopkins University

11:55 a.m. Disc: Mitchell H. Gail, National Cancer Institute

12:15 p.m. **Floor Discussion**

## 526 CC-609 **Survival Analysis with Medical Applications: Parametric and Nonparametric Adjustment for Survival Function—Invited**

Biopharmaceutical Section, Biometrics Section, ENAR, WNAR

*Organizer(s): Chaofeng Liu, Eli Lilly and Company*

*Chair(s): Chaofeng Liu, Eli Lilly and Company*

10:35 a.m. **Evaluating the Added Value of an Expensive Marker in Predicting Survival**—❖ Tianxi Cai, Harvard University

11:00 a.m. **Adjusted Nelson-Aalen Estimator with Inverse Probability of Treatment Weighting**—❖ Jun Xie, Purdue University; Chaofeng Liu, Eli Lilly and Company

11:25 a.m. **Split Point Estimation for Logistic Regression**—  
❖ Ian McKeague, Columbia University

11:50 a.m. Disc: Gang Li, University of California, Los Angeles

12:10 p.m. **Floor Discussion**

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

## Invited Panels 10:30 a.m.–12:20 p.m.

### 527 CC-2A ● ⊛ **Misuse of Statistical Methodology—Invited**

Committee on Applied Statisticians, Section on Statistical Education, Section on Statistical Consulting, Section on Teaching Statistics in the Health Sciences

*Organizer(s): Joyce N. Orsini, Fordham University*

*Chair(s): Joyce N. Orsini, Fordham University*

**Panelists:** ❖ Gipsie B. Ranney, Belmont University  
❖ Michael Tveite, Guidant Corporation  
❖ Ian S. Bradbury, Peaker Services, Inc.

12:15 p.m. Floor Discussion

## Topic-Contributed Sessions 10:30 a.m.–12:20 p.m.

### 528 CC-613 ● **Assessing Treatment Effect in Cardiovascular Medical Device Clinical Trials—Topic-Contributed**

Biopharmaceutical Section, Biometrics Section, ENAR

*Organizer(s): Lilly Yue, U.S. Food and Drug Administration; Peter S. Lam, Boston Scientific Corporation*

*Chair(s): Yao Huang, U.S. Food and Drug Administration*

10:35 a.m. **Using Different Multiple Imputation Strategies in Estimating Treatment Effects in Drug-Eluting Stent Trials**—❖ Liang Li, Boston Scientific Corporation; Helen Chmiel, Boston Scientific Corporation; Hong Wang, Boston Scientific Corporation

10:55 a.m. **Survival Analysis of Repeated Events in Drug-Eluting Stent Trials**—❖ Yongyi Yu, Boston Scientific Corporation; Jian Huang, Boston Scientific Corporation; Brian Johnson, Boston Scientific Corporation; Hong Wang, Boston Scientific Corporation

11:15 a.m. **Bootstrap Generalized Estimating Equation for Treatment Differences for Randomization Trials with Correlated Data**—❖ Duo Zhou, Medtronic, Inc.; Zengri Wang, Medtronic, Inc.

11:35 a.m. **Gender by Treatment Interaction on Coronary Lesion Revascularization in Drug-Eluting Stent Trials**—❖ Zheng Zhou, Boston Scientific Corporation; Liang Li, Boston Scientific

Corporation; Hong Wang, Boston Scientific Corporation

11:55 a.m. Disc: Heng Li, Center for Devices and Radiological Health

12:15 p.m. Floor Discussion

### 529 CC-201 **New Technology for Data Collection—Topic-Contributed**

Section on Government Statistics

*Organizer(s): Michael P. Cohen, Bureau of Transportation Statistics*

*Chair(s): Kennon Copeland, IMS Health*

10:35 a.m. **The Impact of Using Hand-Held Computers To Reduce Count Imputation in the 2004 Census Test**—❖ Jamie Burnham, U.S. Census Bureau; Rosemary Byrne, U.S. Census Bureau

10:55 a.m. **Staffing and Infrastructure Issues Related to Hand-Held Computer-Based Data Collection in the 2004 Nonresponse Follow-up Operation**—❖ Darlene Moul, U.S. Census Bureau; Geraldine Burt, U.S. Census Bureau

11:15 a.m. **Electronic Wage Reporting Customer Satisfaction: a Good News Case Study**—❖ Stephen Dienstfrey, Schulman, Ronca & Bucuvalas, Inc.; Michael Greenberg, U.S. Social Security Administration

11:35 a.m. **Evaluating the Collection of Global Positioning System Coordinates with Hand-Held Computers in the 2004 Census Test**—❖ Diane Barrett, U.S. Census Bureau; Doug Olson, U.S. Census Bureau

11:55 a.m. Disc: Walter W. Hill, St. Mary's College of Maryland

12:15 p.m. Floor Discussion

### 530 CC-307 ⊛ **Statistics of Extremes—Topic-Contributed**

IMS

*Organizer(s): Liang Peng, Georgia Institute of Technology*

*Chair(s): Tailen Hsing, The Ohio State University*

10:35 a.m. **Dependence Estimation and Prediction in Max-Stable Random Fields**—❖ Daniel Cooley, Colorado State University; Philippe Naveau, Laboratoire des Sciences du Climat et de l'Environnement; Richard Davis, Colorado State University



**10:55 a.m. Analyzing the Extreme Behavior of Large-Scale Meteorological Variables Found To Have Influence on Severe Storms and Tornadoic Events Using Global Reanalysis Data**—❖Eric Gilleland, National Center for Atmospheric Research; Matt Pocerlich, National Center for Atmospheric Research

**11:15 a.m. Variance Reduction in Multiparameter Likelihood Models**—❖Liang Peng, Georgia Institute of Technology; Ming-Yen Cheng, National Taiwan University

**11:35 a.m. Bootstrap Confidence Band for Dependence Functions in Extreme-Value Statistics**—  
❖Yongcheng Qi, University of Minnesota, Duluth; Liang Peng, Georgia Institute of Technology

**11:55 a.m. Asymptotically (In)dependent Multivariate Maxima of Moving Maxima Processes**—  
❖Zhengjun Zhang, University of Wisconsin-Madison

**12:15 p.m. Floor Discussion**

## **531** **CC-607** ● **Bayesian Biostatistical Modeling—Topic-Contributed**

Section on Bayesian Statistical Science, Biometrics Section, WNAR, ENAR

*Organizer(s): Li-Jung Liang, University of California, Los Angeles*

*Chair(s): Kaushik Ghosh, New Jersey Institute of Technology*

**10:35 a.m. A Bayesian Adaptive Design for Two Drug Combination Phase I Clinical Trials**—❖Lu-May Chiang, University of California, Los Angeles; William G. Cumberland, University of California, Los Angeles

**10:55 a.m. A Bayesian Model Selection Approach for Simultaneous Clustering of Treatment Intercepts and Slopes**—❖Susan Alber, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles

**11:15 a.m. Hierarchical Zero-Inflated Poisson Models**—  
❖Warren Comulada, Center for Community Health; Robert Weiss, University of California, Los Angeles

**11:35 a.m. Using a Bayesian Phylogenetic Dual Change-Point Model To Detect HIV-1 Intra-host Recombination**—  
❖Erik Bloomquist, University of California, Los Angeles; Christina Kitchen, University of California, Los Angeles; Marc A. Suchard, University of California, Los Angeles; Vladimir N. Minin, University of California, Los Angeles; Hua Guo, University of California, Los Angeles

**11:55 a.m. Hierarchical Post-Processing of Longitudinal Bayesian Phylogenetic Analyses Using Semiparametric Regression Models**—❖Li-Jung Liang, University of California, Los Angeles; Robert Weiss, University of California, Los Angeles; Marc A. Suchard, University of California, Los Angeles

**12:15 p.m. Floor Discussion**

## **532** **CC-602** ⊕ **Applications of Modeling and Simulation for Homeland Security—Topic-Contributed**

Section on Statisticians in Defense and National Security

*Organizer(s): David Banks, Duke University*

*Chair(s): Jeffrey L. Solka, Naval Surface Warfare Center*

**10:35 a.m. Modeling the Interaction between Intelligent Site Selection and Other Stochastic Processes with Applications to Terrorism**—❖Michael Porter, University of Virginia; Charles D. Robinson, University of Virginia; Donald E. Brown, University of Virginia

**10:55 a.m. Issues in the Analysis of Combat Data**—  
❖Michael Last, National Institute of Statistical Sciences

**11:15 a.m. Strategies for Validating Complex Simulations**—  
❖David Banks, Duke University

**11:35 a.m. The Brave New World of Designing Simulation Experiments for Defense and Homeland Security Applications**—❖Thomas W. Lucas, Naval Postgraduate School; Susan M. Sanchez, Naval Postgraduate School

**11:55 a.m. Disc:** Sarah Michalak, Los Alamos National Laboratory

**12:15 p.m. Floor Discussion**

## **533** **CC-2B** ⊕ **Record Linkage—Topic-Contributed**

Section on Survey Research Methods, Section on Statisticians in Defense and National Security

*Organizer(s): William E. Winkler, U.S. Census Bureau*

*Chair(s): Thomas Herzog, U.S. Department of Housing and Urban Development*

**10:35 a.m. Automatically Estimating Record Linkage False Match Rates**—❖William E. Winkler, U.S. Census Bureau; William E. Yancey, U.S. Census Bureau

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

- 10:55 a.m. **Record Linkage and Automatic Maintenance Activities**—◆ Holly Smith, U.S. Department of Agriculture; Denise Abreu, National Agricultural Statistics Service; Kara Daniel, National Agricultural Statistics Service; Stan Hoge, National Agricultural Statistics Service; Bill Iwig, National Agricultural Statistics Service
- 11:15 a.m. **A Study of String Comparator Performance on Census Name Data**—◆ William E. Yancey, U.S. Census Bureau
- 11:35 a.m. **A Comparison of Big Match and the Current NDI Record Selection System Using Artificial Data**—◆ Bryan Sayer, Social & Scientific Systems, Inc.
- 11:55 a.m. **Using Test Databases To Evaluate Record Linkage Models and Train Linkage Practitioners**—◆ Michael H. McGlincy, Strategic Matching, Inc.
- 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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### 534 CC-203

#### ● Survey-Based Estimation VI—Contributed

Section on Survey Research Methods

*Chair(s): James Chromy, RTI International*

- 10:35 a.m. **Detection Method for the Sources of Change in Estimations**—◆ Serge Godbout, Statistics Canada
- 10:50 a.m. **Model-Based Approach in Two-Stage Sampling of Audit Data**—◆ Yan Liu, National Opinion Research Center; Mary Batcher, Ernst & Young LLP
- 11:05 a.m. **Confidence Interval Coverage in Stratified Sample Design**—◆ Jinhee Yang, Ernst & Young LLP; Wendy Rotz, Ernst & Young LLP
- 11:20 a.m. **Evaluating a Calibration Weighting Scheme for Elementary Indexes for Commodities and Services in the U.S. Consumer Price Index**—◆ Sylvia G. Leaver, Bureau of Labor Statistics; Robert A. Cage, Bureau of Labor Statistics; Darin T. Solk, Bureau of Labor Statistics
- 11:35 a.m. **Comparing Procedures To Estimate the Measure of Heteroscedasticity and Their Effect on Estimating Totals and Their Variances**—◆ Kimberly Henry, Internal Revenue Service; Richard Valliant, University of Michigan

- 11:50 a.m. **Power-Shrink Excessive Weights Preferred to Trimming**—Naihua Duan, University of California, Los Angeles; Xiao-Li Meng, Harvard University; ◆ Chihnan Chen, Boston University; Margarita Alegria, Cambridge Health Alliance
- 12:05 p.m. **Confidence Interval Coverage in Complex Model-Based Estimation with Deep Stratification**—◆ Archana Joshee, Ernst & Young LLP; Wendy Rotz, Ernst & Young LLP

### 535 CC-606

#### Bayesian and Empirical Bayesian Models—Contributed

Section on Bayesian Statistical Science

*Chair(s): Lei Qian, University of California, Los Angeles*

- 10:35 a.m. **The Analysis of Fluctuating Asymmetry as a Measure of Developmental Instability**—◆ Stefan Van Dongen, University of Antwerp
- 10:50 a.m. **Empirical Bayes Decision Rule for Classification Using Unsupervised Learning**—◆ Shui-Ching Chang, The Oversea Chinese Institute of Technology; Tze-Fen Li, National Chung Hsing University
- 11:05 a.m. **Bayesian Parameter Estimation of Stable Distributions**—◆ Ece Oral, Hacettepe University; Cenap Erdemir, Hacettepe University
- 11:20 a.m. **Bayesian Analysis and Model Selection in Closed-Population, Capture-Recapture Models**—◆ Ross Gosky, Bucknell University
- 11:35 a.m. **Estimation of Parameter Covariance for a Penalized Likelihood Approach to Estimation of Kinetic Models in PET (Positron Emission Tomography)**—◆ Michelle Byrtek, Western Washington University; Finbarr O'Sullivan, University College Cork
- 11:50 a.m. **Empirical Bayes Estimation for Additive Hazards Regression Models**—◆ M. Brent McHenry, Bristol-Myers Squibb Company; Debajyoti Sinha, Medical University of South Carolina; Stuart Lipsitz, Brigham and Women's Hospital; Malay Ghosh, University of Florida
- 12:05 p.m. **Floor Discussion**

## 536 CC-204 Data Collection and Missing Data Issues in Health Surveys—Contributed

Section on Health Policy Statistics

Chair(s): Carolyn Rutter, Group Health Cooperative

- 10:35 a.m. A New Method To Evaluate the Completeness of Case Ascertainment by a Cancer Registry—**  
❖ Barnali Das, National Cancer Institute; Limin X. Clegg, National Cancer Institute; Eric J. Feuer, National Cancer Institute; Linda Pickle, National Cancer Institute
- 10:50 a.m. The Early Release Program of the U.S. National Health Interview Survey—**❖ Jeannine Schiller, National Center for Health Statistics; Jane Gentleman, National Center for Health Statistics; Eve Powell-Griner, National Center for Health Statistics
- 11:05 a.m. Providing Health Information to the Public: Analysis of National Audience Data for Public Health Communication Planning—**❖ William Pollard, Centers for Disease Control and Prevention
- 11:20 a.m. Measuring Menses: Issues with Patient-Reported Menstrual Cycle Assessment—**❖ Stephanie Land, University of Pittsburgh; Gina Sucato, Children's Hospital; Marcie Ritter, University of Pittsburgh; Reena Cecchini, University of Pittsburgh; Sandra Swain, National Cancer Institute; Patricia Ganz, University of California, Los Angeles
- 11:35 a.m. Childhood Obesity: What's the Mother's Marital Status Got to Do with It?—**❖ Soma Roy, The Ohio State University; Elizabeth Stasny, The Ohio State University
- 11:50 p.m. Floor Discussion**

## 537 CC-205 ● Small-Area Estimation—Contributed

Section on Survey Research Methods

Chair(s): Georgia Roberts, Statistics Canada

- 10:35 a.m. Accounting for Interviewer Variability in Small-Area Estimation—**❖ Benmei Liu, Westat; Partha Lahiri, University of Maryland
- 10:50 a.m. Using Administrative Records with Model-Assisted Estimation for the American Community Survey—**❖ Robert Fay, U.S. Census Bureau
- 11:05 a.m. Small-Area Prevalence Estimates Using Two Surveys—**❖ William Davis, National Cancer

Institute; Charuta Soman, IMS Health; Zhaohui Zou, Information Management Services, Inc.

- 11:20 a.m. Interval Estimation in Small-Area Problems—**  
❖ Snigdhasu Chatterjee, University of Minnesota; Partha Lahiri, University of Maryland; Huilin Li, University of Maryland
- 11:35 a.m. Nonparametric M-Quantile Small-Area Estimation via Penalized Splines—**❖ Monica Pratesi, Università di Pisa; Nicola Salvati, Università di Pisa; Maria G. Ranalli, University of Perugia
- 11:50 a.m. Using Regression To Combine Information from Multiple Surveys for Small-Domain Estimation—**  
❖ Takis Merkouris, Statistics Canada
- 12:05 p.m. Using the t-Distribution in Small-Area Estimation: an Application to SAIPE State Poverty Models—**❖ Elizabeth Huang, U.S. Census Bureau; William R. Bell, U.S. Census Bureau

## 538 CC-612 ● ⊕ Model Diagnostics—Contributed

Section on Statistics in Epidemiology

Chair(s): Michael Pencina, Boston University

- 10:35 a.m. Semiparametric Estimation of the ROC Surface—**  
❖ Zheng Zhang, University of Washington
- 10:50 a.m. Model Diagnostics for Generalized Linear Mixed Models Using Chi-Square Test—**❖ Zhonghua Gu, University of California, Davis
- 11:05 a.m. Single-Sample Predictive Model Validation via Variance Components Estimated through Resampling and Cross-Validation—**❖ Michael Jones, University of Sydney; Petra Macaskill, University of Sydney
- 11:20 a.m. Investigating the Categories for Cholesterol and Blood Pressure for Risk Assessment of Death Due to Coronary Heart Disease—**❖ Billy Franks, Jr., Astellas Pharma Inc.; Daniel McGee, Sr., Florida State University
- 11:35 a.m. Survival and Classification Tree Analyses in Medicine: Usefulness in Identifying the Predisposing and Precipitating Health Conditions and Events Associated with Death—**  
❖ Gail McAvay, Yale University; Mary Tinetti, Yale University School of Medicine; Thomas Gill, Yale University; Heather G. Allore, Yale University

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

11:50 a.m. **Adjusting ROC Curves Estimation for Covariates without Gold Standard Tests**—◆ Chong Wang, Cornell University; Bruce W. Turnbull, Cornell University; Yrjö Gröhn, Cornell University; Søren Nielsen, The Royal Veterinary and Agricultural University

12:05 p.m. **Combination of Multiple Tests by Likelihood and Bayesian Approaches**—◆ Carol Lin, Bristol-Myers Squibb Company; Lance Waller, Emory University

## 539 CC-304 ● **Climate, Weather, and Health: Novel Applications of Spatial and Temporal Analyses—Contributed**

Section on Statistics and the Environment

*Chair(s): Kristen M. Foley, North Carolina State University*

10:35 a.m. **Predicting Spatial Exceedance Regions**—◆ Jian Zhang, The Ohio State University; Noel Cressie, The Ohio State University; Peter F. Craigmile, The Ohio State University

10:50 a.m. **A Geostatistical Method for Texas NexRad Data Calibration**—◆ Bo Li, Texas A&M University; Marian Eriksson, Texas A&M University; Raghavan Srinivasan, Texas A&M University; Michael Sherman, Texas A&M University

11:05 a.m. **Identifying Effect Modifiers in Air Pollution**—◆ Sandrah P. Eckel, The Johns Hopkins Bloomberg School of Public Health; Thomas A. Louis, The Johns Hopkins University

11:20 a.m. **Identifying Environmental Risk Factors of Childhood Obesity**—◆ Rong Qi, Indiana University; Gilbert Liu, Indiana University; Jeffrey Wilson, Indiana University Purdue University Indianapolis; Jun Ying, Indiana University

11:35 a.m. **Prediction of State Cancer Case Counts and Rates by Hierarchical Spatio-Temporal Models**—◆ Linda Pickle, National Cancer Institute

11:50 a.m. **Testing for Spatial Dependence Based on the SAR Model**—◆ Hongfei Li, The Ohio State University; Catherine A. Calder, The Ohio State University; Noel Cressie, The Ohio State University

12:05 p.m. **Space Time Analyses of Adverse Pregnancy Outcomes in Allegheny County, Pennsylvania**—◆ M. Abdus Sattar, University of Pittsburgh

## 540 CC-206 ● **Forecasting and Database Modeling in Marketing Applications—Contributed**

Section on Statistics and Marketing

*Chair(s): Steve Millard, Probability, Statistics, & Information*

10:35 a.m. **Some Challenges in Sales Forecasting in a Global Automotive Environment**—◆ Lynn Truss, GM Research & Development; Satish Sehgal, GM India Science Lab; Atul Saroop, GM India Science Lab; Balaji Jidugu, GM India Science Lab; Peiling Wu, GM Research & Development; Diane Gibbons, GM Research & Development

10:50 a.m. **An Empirical Analysis of Customized and Dynamic Cross-Selling Campaigns**—◆ Alan Montgomery, Carnegie Mellon University; Baohong Sun, Carnegie Mellon University; Shibo Li, Indiana University

11:05 a.m. **A New Methodology to Modeling Prospects of Corporate Database**—◆ Kangkang Xu, Experian

11:20 a.m. **Estimating Factor Effects with Data from Heterogeneous Experimental Units**—◆ Sam Weerahandi, Time Warner; Martin Koschat, Time Warner

11:35 a.m. **Hybrid GA-Based Constrained Optimization and Search for High-Potential Product Configurations**—◆ Brandon L. Paris, General Mills, Inc.; Lynd D. Bacon, Sighthound Solutions, Inc.; Jeff Hunter, General Mills, Inc.; Ashwin Sridhar, Sighthound Solutions, Inc.

11:50 a.m. **Falling into the Data Mine: Nontechnical Errors for Database Model Builders**—◆ Sam Koslowsky, Harte Hanks CRM Analytics

12:05 p.m. **Churn Modeling in a Noncontractual Setting**—◆ Enping Mai, Syracuse University; Raja Velu, Syracuse University

## 541 CC-611 ● **Repeated Measures and Longitudinal Data—Contributed**

Biopharmaceutical Section, Biometrics Section, ENAR

*Chair(s): Irina Kats, BIM, Inc.*

10:35 a.m. **A Multivariate Truncated Model Combined with Multiple Imputation for Longitudinal Data with Nonignorable Missing**—◆ Rong Liu, Merck & Co., Inc.; Viswanathan Ramakrishnan, Virginia Commonwealth University



- 10:50 a.m. **Analysis of Longitudinal Trials with Non-MCAR Dropouts and Potentially Non-Normal Data: Is Weighted GEE the Solution?**—✦ Robin Mogg, Merck Research Laboratories; Devan V. Mehrotra, Merck Research Laboratories
- 11:05 a.m. **Analysis of Repeated Measures Random Length Data**—✦ Ana-Maria Iosif, University of Pittsburgh; Allan R. Sampson, University of Pittsburgh
- 11:20 a.m. **Jointly Modeling the Dropout Process and Repeated Categorical Outcome**—✦ Yuting Zhang, MedFocus; Brent J. Shelton, University of Kentucky
- 11:35 a.m. **Inference for Skew-Normal Data Using Stochastic Hellinger Distance Method and Stochastic MLE**—✦ Serena Chan, Cornell University; Anand Vidyashankar, Cornell University
- 11:50 a.m. **Identifying Worsening MS Patients Using a Generalized Mahalanobis Distance Metric**—✦ Daniel Bonzo, Serono, Inc.
- 12:05 p.m. **Distributions of Patterns in Markov Chains with Stopping Rules**—✦ Francis Hsuan, Temple University; Milton Parnes, Temple University; Thomas E. Bradstreet, Merck Research Laboratories

**542** **CC-604**  
**● Principal Components, Predication, and Optimization—Contributed**

Business and Economics Statistics Section

*Chair(s): Kellie Wills, U.S. Census Bureau*

- 10:35 a.m. **Likelihood-Based Estimate for the Number of Principal Components**—✦ Lifang Hsu, Le Moyne College; Pinyuen Chen, Syracuse University
- 10:50 a.m. **Long Run Canonical Correlations: Estimation, Inference, and Usefulness in Econometric Analysis of Time Series**—✦ Kalidas Jana, Trinity University; Alastair R. Hall, North Carolina State University
- 11:05 a.m. **Ex Post and Ex Ante Prediction of Unobserved Multivariate Time Series: a Structural Model-Based Approach**—✦ Fabio Nieto, National University of Colombia
- 11:20 a.m. **Model-Based Sequence Clustering with Application to Resource Pattern Identification in B2B Services Engagements**—✦ Bonnie K. Ray, IBM T. J. Watson Research Center; Jianying Hu, IBM Research

- 11:35 a.m. **Applications of Direct Search Optimization Methods**—✦ Otto Schwalb; Timothy H. Lee
- 11:50 a.m. **Preliminary Micro Data Results from the Business List Comparison Project**—✦ Lucia Foster, U.S. Census Bureau; Joel Elvery, Bureau of Labor Statistics; C. J. Krizan, U.S. Census Bureau; David Talan, Bureau of Labor Statistics
- 12:05 p.m. **Establishment Survival Using the BLS Longitudinal Database**—✦ Merissa Piazza, Bureau of Labor Statistics

**543** **CC-618**  
**Inference for Parameters of Continuous Distribution—Contributed**

Biometrics Section

*Chair(s): Patches Johnson, Roanoke College*

- 10:35 a.m. **Bias-Corrected Point and Interval Estimates for Lognormal Mean**—✦ Abu Minhajuddin, The University of Texas Southwestern Medical Center at Dallas; Xian-Jin Xie, The University of Texas Southwestern Medical Center at Dallas
- 10:50 a.m. **Preliminary Test Estimator for the Mean of Bivariate Normal**—✦ Xiaoping Zhu, Novartis Pharmaceuticals Corporation; Chien-Pai Han, The University of Texas at Arlington
- 11:05 a.m. **Inferences on Correlation Coefficients: One-Sample, Independent, and Correlated Cases**—Kalimuthu Krishnamoorthy, University of Louisiana at Lafayette; ✦ Yanping Xia, University of Louisiana at Lafayette
- 11:20 a.m. **A New Approach for a Linear Combination of K Multinormal Mean Vectors**—✦ Shu-Hui Lin, National Taichung Institute of Technology; Jack C. Lee, National Chiao Tung University
- 11:35 a.m. **Estimation of Multivariate Normal Secondary Parameters in Group Sequential Trials**—✦ Kai Fun Yu, National Institute of Child Health & Human Development; Chengqing Wu, National Institute of Child Health & Human Development; Aiyi Liu, National Institute of Child Health & Human Development
- 11:50 a.m. **The Median Test for Cluster-Correlated Data**—✦ Rick L. Williams, RTI International; Angela Pitts, RTI International
- 12:05 p.m. **Bivariate Growth Charts**—✦ Ying Wei, Columbia University

# GENERAL PROGRAM SCHEDULE

⊕ Themed Session ● Applied Session ❖ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

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## ● Applications of Statistical Graphics—Contributed

Section on Statistical Graphics

*Chair(s): Weijie Cai, George Mason University*

10:35 a.m. **Importing Graphics for Statistical Plots**—❖ Paul Murrell, The University of Auckland

10:50 a.m. **An Implemetation of the Grammar of Graphics in R: ggplot**—❖ Hadley Wickham, Iowa State University

11:05 a.m. **Visualization Challenges in Internet Traffic Research**—❖ Cheolwoo Park, University of Georgia

11:20 a.m. **What Can Match 'a Daisy a Day?'**—❖ Rachel Graham, Iowa State University; Heike Hofmann, Iowa State University

11:35 a.m. **Design Strategies for Sampling in Graphs**—❖ James Rosenberger, The Pennsylvania State University; Hong Xu, The Pennsylvania State University; Steve Thompson, Simon Fraser University

11:50 a.m. **Advanced Sequential Sampling Methods and Their Implementation within a Portable Computing Environment**—❖ Arunava Chakravartty, University of California, Riverside; Daniel R. Jeske, University of California

12:05 p.m. **Floor Discussion**

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## ● Semi- and Nonparametric Methods—Contributed

Biometrics Section, Section on Nonparametric Statistics

*Chair(s): Trevor Park, University of Florida*

10:35 a.m. **Improving the Efficiency of the Log-Rank Test Using Auxiliary Covariates**—❖ Xiaomin Lu, North Carolina State University; Anastasios A. Tsiatis, North Carolina State University

10:50 a.m. **Fitting Density Function with Exponential Polynomials**—❖ Eugene Demidenko, Dartmouth Medical School

11:05 a.m. **U-Statistics for Right-Censored Data**—❖ Dipankar Bandyopadhyay, University of Georgia

11:20 a.m. **Extension of the Rank Sum Test for Clustered Data: Two Group Comparisons with Group Membership Defined at the Subunit Level**—

CC-619

❖ Bernard Rosner, Harvard Medical School; Robert Glynn, Brigham and Women's Hospital; Mei-Ling Ting Lee, Harvard Medical School

11:35 a.m. **Outputation Permutation: Exact Inference for Complex Clustered Data**—❖ Dean A. Follmann, National Institute of Allergy and Infectious Diseases; Michael P. Fay, National Institute of Allergy and Infectious Diseases

11:50 a.m. **A New Semiparametric Regression Approach for Modeling Group Differences**—❖ Qin Yu, University of Rochester; Xin Tu, University of Rochester

12:05 p.m. **Floor Discussion**

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## Multiple Comparisons and Testing—Contributed

Biometrics Section

*Chair(s): Yongming Qu, Eli Lilly and Company*

10:35 a.m. **The Combined P-Value for Detecting Differentially Expressed Genes from High Density Oligonucleotide Arrays**—❖ Ann Hess, Colorado State University; Hari Iyer, Colorado State University

10:50 a.m. **A Two-Step Multiple Comparison Procedure for a Large Number of Tests and Multiple Treatments**—❖ Hongmei Jiang, Northwestern University; Rebecca W. Doerge, Purdue University

11:05 a.m. **Optimality Results for the Bonferroni Method with Large  $m$** —❖ Yonggang Lu, Texas Tech University; Peter Westfall, Texas Tech University

11:20 a.m. **Control of the Family-Wise Error Rate for Multiple Correlated Test Outcomes: the Effect of Stress on Cytokine Production Prior to Spaceflight**—❖ Alan Feiveson, National Aeronautics and Space Administration; Satish Mehta, Enterprise Advisory Services, Inc.; Duane L. Pierson, NASA Johnson Space Center

11:35 a.m. **Effects of Dependencies in High-Dimensional Multiple Testing Problems**—❖ Kyung In Kim, Eindhoven University of Technology; Mark A. van de Wiel, Eindhoven University of Technology

11:50 a.m. **Hypothesis Testing of High-Dimensional Data with Applications to Medical Image Analysis**—❖ Kun Nie, Boehringer Ingelheim

12:05 p.m. **Floor Discussion**

CC-615

**547** **CC-617**  
**● Hypothesis Testing in Genetics—Contributed**

Biometrics Section, ENAR

*Chair(s): Rajagopalan Srinivasan, INC Research/INC Data Spectrum, Inc.*

- 10:35 a.m. Testing Hardy-Weinberg Equilibrium for Loci on the X Chromosome**—Gang Zheng, National Heart, Lung, and Blood Institute; ❖ Jungnam Joo, National Institutes of Health; Chun Zhang, Roche Palo Alto LLC; Nancy L. Geller, National Heart, Lung, and Blood Institute
- 10:50 a.m. A Conditional Test for Finding the Variants that Explain the Evidence for Association**—❖ Baoguan Ke, The University of Chicago
- 11:05 a.m. Improved Association Analyses of Disease Subtypes in Case-Parent Trio Studies**—❖ Glen Satten, Centers for Disease Control and Prevention; Michael Epstein, Emory University; Irwin Waldman, Emory University
- 11:20 a.m. Analysis of DNA Gene Sequences with the Smith-Waterman Algorithm**—❖ William Owen, University of Richmond
- 11:35 a.m. A New Approach To Performing Segregation Analysis To Detect Imprinting**—❖ Sanjay Shete, M. D. Anderson Cancer Center
- 11:50 a.m. Missing Genotypes in TDT**—❖ Gulhan Alpargu, California State University, Fullerton
- 12:05 p.m. Analysis of a Probe-Level Linear Mixed Model for Oligonucleotide Arrays**—❖ Alexander Cambon, University of Louisville; Caryn Thompson, University of Louisville; Brian Wattenberg, University of Louisville

**548** **CC-610**  
**● Step Up, Step Down Multiple Comparisons—Contributed**

Biopharmaceutical Section

*Chair(s): Mary J. Bartholomew, U.S. Food and Drug Administration*

- 10:35 a.m. A Non-Bonferroni Step-Up Rejection Procedure**—❖ Jianjun Li, Merck Research Laboratories
- 10:50 a.m. Gatekeeping Procedures for Dose-Finding Problems with Multiple Endpoints**—❖ Xin Wang, Northwestern University
- 11:05 a.m. Comparison of Two Step-Down Linear Trend Tests**—❖ Kaifeng Lu, Merck & Co., Inc.

- 11:20 a.m. A New Gatekeeping Strategy for Hierarchical-Structured Hypotheses in Clinical Trials**—❖ Junyuan Wang, The Medicines Company; Yan Zheng, University of Minnesota; Guanghan Liu, Merck Research Laboratories
- 11:35 a.m. Hochberg's Step-Up Method: Cutting Corners off Holm's Step-Down Method**—❖ Yifan Huang, H. Lee Moffitt Cancer Center & Research Institute; Jason Hsu, The Ohio State University
- 11:50 a.m. Testing the Assumption in Several Amalgamation-Based Tests for Dose Response**—❖ Arthur Roth, Pfizer Inc.
- 12:05 p.m. Exploring Dose Response in Flexible-Dose Clinical Trials Using Marginal Structural Models: a Clinical Trial Example**—❖ Ilya Lipkovich, Eli Lilly and Company; Craig Mallinckrodt, Eli Lilly and Company; Douglas Faries, Eli Lilly and Company

**549** **CC-308**  
**Better Statistical Intervals with Applications—Contributed**

Section on Physical and Engineering Sciences

*Chair(s): Kevin Coakley, National Institute of Standards and Technology*

- 10:35 a.m. Adjusting Likelihood Ratio Confidence Intervals for Parameters near Boundaries Applied to the Binomial**—❖ Sundar Dorai-Raj, PDF Solutions, Inc.; Spencer Graves, PDF Solutions, Inc.
- 10:50 a.m. Parametric 95%–95% Upper Tolerance Limits for Left-Censored Lognormal Data**—❖ Charles Davis, EnviroStat
- 11:05 a.m. Estimating the Variance of the Graybill-Deal Estimator of a Common Mean**—❖ Nien Fan Zhang, National Institute of Standards and Technology
- 11:20 a.m. Revisiting Beal's Confidence Intervals for the Difference of Two Binomial Proportions**—❖ Joshua M. Tebbs, University of South Carolina; Scott Roths, The Pennsylvania State University
- 11:35 a.m. Normal Approximations for Computing Confidence Intervals for Log-Location-Scale Distribution Probabilities**—❖ Yili Hong, Iowa State University; William Q. Meeker, Jr., Iowa State University; Luis A. Escobar, Louisiana State University

# GENERAL PROGRAM SCHEDULE

⊛ Themed Session ● Applied Session ◆ Presenter CC-Washington State Convention & Trade Center H-Grand Hyatt Seattle S-Sheraton Seattle Hotel & Towers

11:50 a.m. **Simulation Results To Assess Upper Tolerance Interval Methodology That Adjusts for Multiple Nuisance Uncertainties**—Greg Piepel, Battelle-PNNL; ◆ Scott Cooley, Battelle; Matthew Paul, Western Washington University

12:05 p.m. **Floor Discussion**

## 550 CC-211 ● ⊛ **Anxiety, Ambiguity, and Multiculturalism in Statistical Education—Contributed**

Section on Statistical Education

*Chair(s): David Swanson, University of Mississippi*

10:35 a.m. **Ambiguity Intolerance: an Impediment to Inferential Reasoning?**—◆ Robert Carver, Stonehill College

10:50 a.m. **Stochastics Learning Environment: Can a Professor Identify and Displace Student Statistical Anxiety?**—◆ Daniel Edelman, Illinois Institute of Technology

11:05 a.m. **Investigating Communication within a Multitiered Instructional Team**—◆ Marian Frazier, The Ohio State University; Jackie Miller, The Ohio State University

11:20 a.m. **Can You Explain That in Plain English? Making Statistics Group Projects Work in a Multicultural Setting**—◆ Michelle R. Sisto, International University of Monaco

11:35 a.m. **Balancing Cultural Differences in Teaching Statistics**—◆ Huizhen Guo, Xavier University

11:50 a.m. **A Window on Statistical Education at the University of Lagos, Lagos, Nigeria**—◆ Raymond Okafor, University of Lagos

12:05 p.m. **Floor Discussion**

## 551 CC-601 **Classification—Contributed**

Section on Statistical Computing

*Chair(s): Samuel Buttrey, Naval Postgraduate School*

10:35 a.m. **Evidence Contrary to the Statistical View of Boosting**—◆ David Mease, San Jose State University

10:50 a.m. **Adaptive Learning Rate in Stochastic Boosting**—◆ Mark Culp, University of Michigan; George Michailidis, University of Michigan; Kjell Johnson, Pfizer Inc.

11:05 a.m. **Use of Projection Pursuit in Classification**—◆ Li Li, George Mason University; James Gentle, George Mason University

11:20 a.m. **Tuned and Guided Adaptive Regression by Mixing**—◆ Panayotis Giannakouros, University of Missouri-Kansas City; Lihua Chen, The University of Toledo

11:35 a.m. **Floor Discussion**

## 552 CC-620 ● **Rank-Based Statistical Methods—Contributed**

Section on Nonparametric Statistics

*Chair(s): Xiaobin Yuan, St. Jude Children's Research Hospital*

10:35 a.m. **One-Sample and Multisample Tests for Repeated Measurement**—◆ Chien-Hua Wu, Chung-Yuan Christian University; Shu-Mei Wan, Lunghwa University of Science and Technology; Hon-Ron Lin, Chung-Yuan Christian University

10:50 a.m. **Test-Based Classification Rule: a Linkage between Classification and Statistical Testing**—◆ Shu-Min Liao, The Pennsylvania State University; Michael G. Akritas, The Pennsylvania State University

11:05 a.m. **Bayesian Hypothesis Testing Using Nonparametric Statistics**—◆ Ying Yuan, M. D. Anderson Cancer Center; Valen Johnson, M. D. Anderson Cancer Center

11:20 a.m. **Asymptotic Efficiency of the Majority Rule Relative to Rank-Sum Method for Selecting Best Population**—◆ Samuel Wu, University of Florida; David Annis, Naval Postgraduate School

11:35 a.m. **Nonparametric Methods in Multivariate Factorial Designs**—◆ Arne Bathke, University of Kentucky; Solomon W. Harrar, South Dakota State University

11:50 a.m. **Sequential Monitoring of Randomization Tests: Theory and Calculation Discussion**—◆ Yanqiong Zhang, Merck & Co., Inc.; William Rosenberger, George Mason University

12:05 p.m. **On the Relationship between Spearman's Rho and Kendall's Tau for Extreme Order Statistics**—◆ Yung-Pin Chen, Lewis & Clark College



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