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AMSTATNEWS

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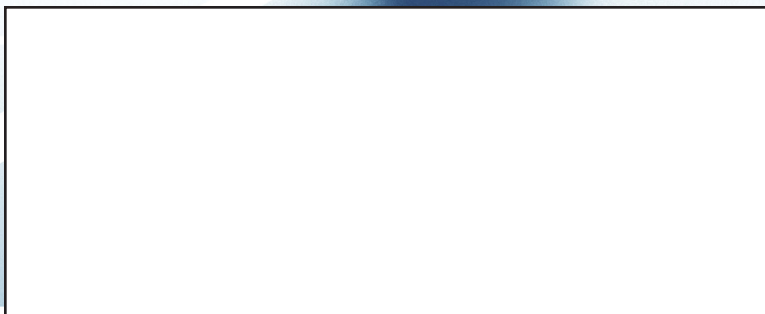


Annual Fund Drive Contributions Beat Last Year's Record

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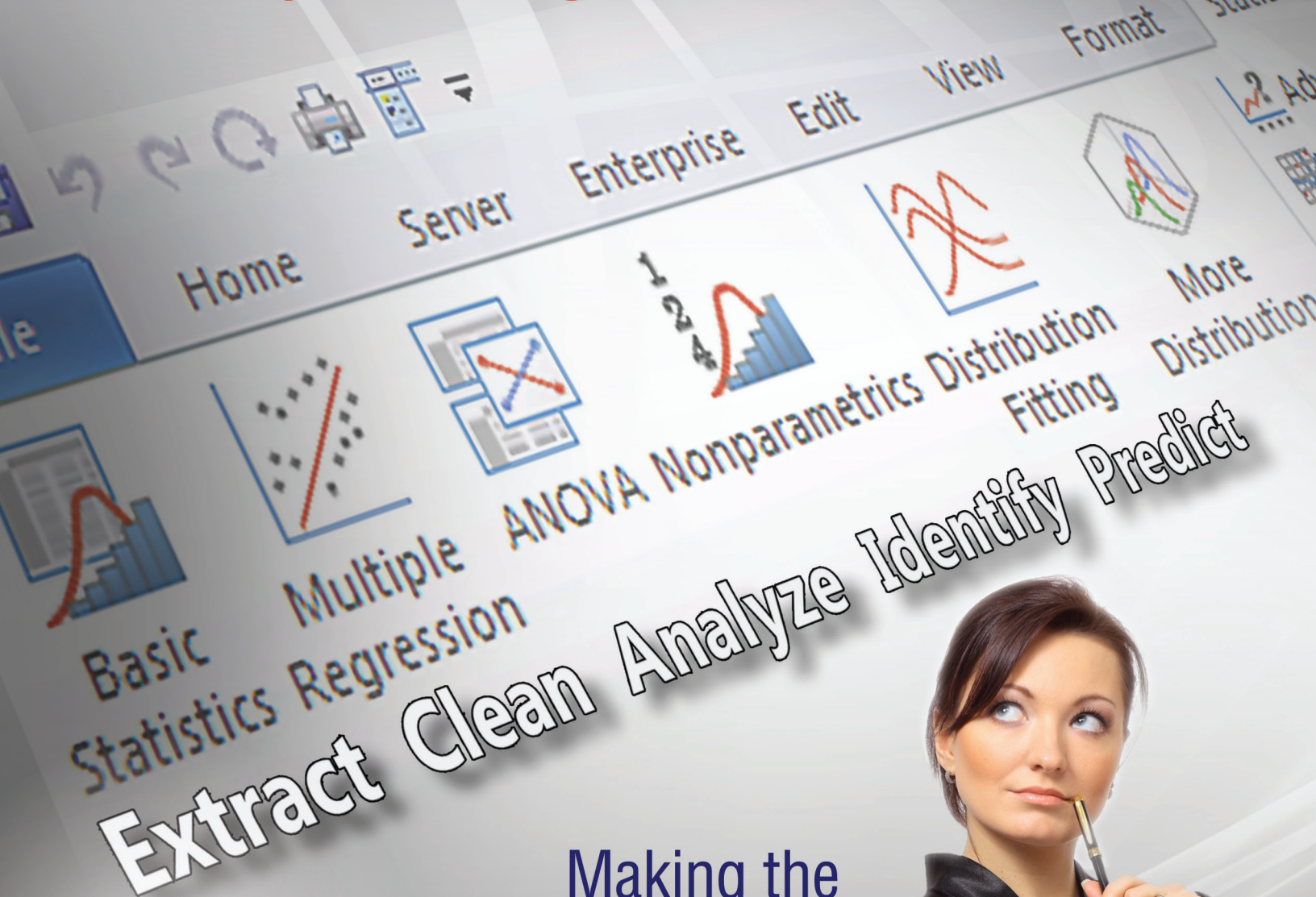
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American Statistical Association



The American Statistical Association is the world's largest community of statisticians. The ASA supports excellence in the development, application, and dissemination of statistical science through meetings, publications, membership services, education, accreditation, and advocacy. Our members serve in industry, government, and academia in more than 90 countries, advancing research and promoting sound statistical practice to inform public policy and improve human welfare.

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24 MASTER'S NOTEBOOK Type IV Errors: How Collaboration Can Lead to Simpler Analysis

This column is written for statisticians with master's degrees and highlights areas of employment that will benefit statisticians at the master's level. Comments and suggestions should be sent to Megan Murphy, *Amstat News* managing editor, at megan@amstat.org.



Stallings

Contributing Editor

Jonathan Stallings is a fifth-year PhD candidate in the Department of Statistics at Virginia Tech (VT). From 2011 to 2013, he was a Lead Statistical Collaborator at VT's Laboratory for Interdisciplinary Statistical Analysis, where he collaborated on more than 80 projects with researchers needing statistical guidance.

27 175 Thoughts on Energizing the ASA's Future

This year marks the ASA's 175th birthday. To celebrate, the column "175"—written by members of the ASA's 175th Anniversary Steering Committee and other ASA members—will chronicle the theme chosen for the celebration, status of preparations, activities to take place, and—best yet—how you can get involved.



Berzofsky

Contributing Editor

Marcus Berzofsky is a senior research statistician at RTI International working in survey statistics.



TRIVIA CHALLENGE

The ASA's Trivia Challenge is a fun way to read *Amstat News* and learn about the ASA. Every month, there will be three questions asked here, with the answers scattered throughout the magazine. Search for those answers while you're reading the issue and input your answers at www.amstat.org/asa175/triviachallenge.cfm. Whoever has the most correct answers at the end of each quarter will be entered into a drawing to win a 175th anniversary T-shirt!

1. The two Statistical Significance pieces recently released are
 - A. Agriculture and Energy
 - B. National Security and Economics
 - C. Sports and Agriculture
 - D. All of the Above
2. The U.S. Census Bureau is predicting the number of statisticians will continue to increase at a rate of about what percent over the next 10 years?
 - A. 20%
 - B. 8%
 - C. 14%
 - D. 25%
3. The Statistics2013 website became The News of the World of Statistics
 - A. True
 - B. False

This quarter's winner will be announced in the May issue.



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columns

28 **STATtr@k** **Learning for a Living**

STATtr@k is a column in *Amstat News* and a website geared toward people who are in a statistics program, recently graduated from a statistics program, or recently entered the job world. To read more articles like this one, visit the website at <http://stattrak.amstat.org>. If you have suggestions for future articles, or would like to submit an article, please email Megan Murphy, *Amstat News* managing editor, at megan@amstat.org.



Glanz

Contributing Editor

Hunter Glanz earned his bachelor's degrees in statistics and mathematics from California Polytechnic State University in 2009. In 2012, he earned his master's in mathematics from Boston University, where he is now working toward his PhD. His interests are Bayesian and computational statistics with applications in geography (remote sensing).

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To Participate or Not to Participate: That Is a Question About Value

A person considering ASA membership might wonder, “What do I get for paying my dues?” The ASA website (www.amstat.org/membership) provides the obvious answers:

- Subscriptions to *Amstat News* and *Significance*
- Networking opportunities through chapters, sections, and the online ASA Community
- Free online access to ASA journals
- Members-Only features of the ASA website
- JobWeb and the JSM Career Placement Service
- Discounted registration fees for various meetings and educational programs

The benefits just listed are, by themselves, compelling incentives to join the ASA. I believe, however, there is a much stronger incentive for membership: the *value* of participating in ASA activities. Unlike benefits, which are objective, value is subjective, varying from member to member or group to group. And unlike benefits, which can be listed on a website, value is best illustrated with personal stories.

I'd like to share some stories with you about how I've found value in the ASA. I'll emphasize three types of value, initialed “CDE.” I'm not talking about Common Desktop Environment, Cartoon Doll Emporium, or even chlorodifluoroethylene, but rather *community*, *diversification*, and *education*. I'd also like to develop a picture of the types of value found by the membership at large. So, whether your ASA experiences are similar to or different from mine, please send me your stories at natschenker@gmail.com.

I believe, however, there is a much stronger incentive for membership: the value of participating in ASA activities.

I've never been quite sure where I belong in my career. During graduate school at The University of Chicago, I worked at CNA Insurance and RAND. After graduate school, I worked at the U.S. Census Bureau for a few years. Then I moved across the country and taught biostatistics at UCLA for more than a decade, receiving tenure along the way. But I missed government work and returned to the DC area, where I've been employed by the National Center for Health Statistics (NCHS) ever since. [By the way, I serve as ASA president in my personal capacity, without endorsement or sanctioning by the Centers for Disease Control and Prevention (CDC, parent agency of NCHS) or the U.S. government. The opinions expressed herein are my own and do not necessarily reflect those of the CDC or the government.]

Through all of my changes in geographic location and employment, the ASA has provided me with an unwavering *community*, following me from coast to coast and job to job. For example, when I moved to Los Angeles to be an assistant professor at UCLA, I hardly knew anybody. As the “new kid in town,” I was asked to join the organizing committee for the Southern California Chapter's Workshop in Applied Statistics. Through my work on the committee, I got to know several statisticians in the area. Moreover,



Nat Schenker



(Photograph by Joe Jiang)

ASA President Nathaniel Schenker with members of the Southern California Chapter following the chapter's 2013 fall kick-off meeting at the City of Hope, Duarte, California

the committee asked me to be the master of ceremonies at the workshop, which gave me the opportunity to enhance my speaking skills and “introduce” myself to hundreds of others. Thus, my community, the ASA, provided a great source of colleagues and visibility early in my career!

As my career progressed, I yearned to serve the broad professional community and beyond. I volunteered for several ASA activities at the national level, such as being the program chair for the Survey Research Methods Section, joining a task force on electronic journals that helped launch the ASA's electronic publishing, and serving as a referee and then an associate editor for *JASA*. Eventually, I served on the ASA Board of Directors, for which I chaired a workgroup that led to the Conference on Statistical Practice (CSP). I also came to realize I was able to serve not only the statistical profession, but also communities outside of it, just by maintaining my ASA membership. Indeed, my dues, together with the work of ASA volunteers and staff, help to support efforts in important areas such as education (www.amstat.org/education) and public policy (www.amstat.org/policy), not to mention advocacy for our profession.

In addition to providing me with a wonderful community, the ASA helps to complement and enhance my paid jobs in different ways. One way is by *diversifying* my professional activities. I've enjoyed every job I've had, but I find ASA activities, such as those mentioned above, very fulfilling. They help provide balance to my career, giving me a lot to look forward to outside the office.

Diversifying my activities also has helped me develop my professional skills. For example, working on *JASA* made me more proficient at critical reading and decisionmaking, not to mention the opportunities it gave me to read about cutting-edge statistical work before it was published. And committee, section, task force, workgroup, and board activities helped me build skills in management and leadership that came in very handy when I recently moved into a senior management position at NCHS.

I've benefited from other ASA paths to continuing *education* and professional development, as well. One obvious path has been through attending and giving presentations at conferences. Another has been through short courses and webinars. In fact, I plan to take a short course on text analytics at CSP 2014 to help build my Big Data skills.

Another aspect of education that I enjoy is mentoring. I like to help guide more junior statisticians I meet through the ASA, and I hope to participate in the new mentoring program at CSP 2014 (www.amstat.org/meetings/csp/2014/mentoring.cfm). But one is never too senior to benefit from mentoring, and the ASA has given me many opportunities to be a mentee as well as mentor. For example, when I was a section program chair for JSM 1999, I learned about “running the show” by observing and working with the overall program chair, Alicia Carriquiry. Several years later, I served on the ASA Board of Directors while Bradley Efron was president and had the opportunity to spend about 45 minutes of one-on-one time with him every few months by driving him to the airport after board meetings. And recently, at the JSM 2013 Sunday night mixer, I sat down with my PhD advisor, Donald Rubin, whom I rarely have a chance to see outside of conferences, and we discussed my career plans over a couple of beers.

Lloyd Bentsen's famous line from the 1988 U.S. vice presidential debate, “... [Y]ou're no Jack Kennedy,” certainly applies to me. Nevertheless, I'd like to draw inspiration from President Kennedy's 1961 inaugural address and close with the following thought: Perhaps we should not ask what benefits the ASA can give to us, but rather ask what we can do within the ASA. Therein, we'll discover the value our association can provide.

Nathaniel Schenker

Statistical Significance Documents on Agriculture and Sports Released



Two new Statistical Significance (StatSig) documents were released in January to add to the seven created in 2009. The StatSig series highlights the contributions statistical science plays in important areas ranging from health and energy to business and national defense.

The new StatSig documents are “Statistical Science Aiding Sports” and “Statistical Science Improving Agriculture.” The former features the contribution of statistical science to evaluating talent, maintaining integrity, and anticipating opponent behavior. The agriculture StatSig highlights the intertwined history of agricultural research and statistical science and the contributions of statistical science to higher crop yield, food security, and efficient and fair commodity markets.

While originally intended for congressional staffers, the StatSig documents are used more broadly. The ASA uses them in their outreach at various meetings, and statistical science departments post them in their department hallways and in their outreach to prospective students. We’ve also heard of high-school teachers sharing them with their students.

A transportation StatSig should be released soon, and we welcome suggestions for other StatSigs.

The ASA Scientific and Public Affairs Advisory Committee also sponsors an annual Statistical Significance competition for poster presenters at JSM in which entrants are judged on their description of the (potential) of their research to societal issues. For information about this year’s competition, visit <http://bit.ly/K2wYMF>. Past winners are listed at <http://bit.ly/1dQuSGW>.

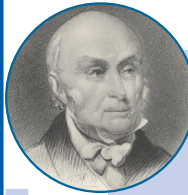
The StatSigs can be downloaded in PDF format at www.amstat.org/policy/statsig.cfm. ASA members also can order hard copies from the resources section of the ASA Store: www.amstat.org/series/scriptcontent/BEWeb/orders. ■

This month in ASA’s history... FEBRUARY



1840

Originally called the American Statistical Society, the organization’s name was changed to the American Statistical Association (ASA) at its first annual meeting, held in Boston on February 5, 1840.



1844

The association resolved that a petition be sent to Congress to revise the sixth census. During the meeting on February 7, 1844, the association members voted to petition Congress to revise the 1840 Census to create a new and accurate copy to be published. The appointed committee drew up a “Memorial of the American Statistical Association Praying the Adoption of Measures for the Correction of Errors in the Returns of the Six Census,” which was submitted to the House of Representatives by John Quincy Adams. Secretary of State John Calhoun reported that a “careful examination of the statistics” had been made and the returns were not revised.

1914

ASA celebrated its 75th anniversary. John Koren, president of the ASA from 1913–1914, spoke at the association’s annual meeting on February 13, 1914, in Boston. “Perhaps statistics will always remain the plaything of some immature minds and be used by others as a convenient springboard from which to jump at fallacious conclusions. But if the past carries any assurance of the future, may we not look forward to a time when the profession of statistics shall have come fully into its own, and when it will be recognized that the instrument at its hands has but the supreme purpose of searching for and diffusing human knowledge?”

To read the entire speech in *The History of Statistics: Their Development and Progress in Many Countries*, visit the Library of Congress website at <https://archive.org/details/historyofstat00kore>.

1974

The American Statistical Association passed a series of resolutions to oppose discrimination based on gender. In the February issue of *Amstat News*, a series of resolutions were published that stated the association is opposed to discrimination on the basis of sex or family status, in regards to job assignment, job security, work facilities, salary, fringe benefits, or other aspects of employment of statisticians. The four resolutions—passed during the December 1973 meeting in New York City—were submitted by the ASA Committee on Women in Statistics.

2012

The ASA held its first Conference on Statistical Practice in Orlando, Florida. The conference was designed to aid applied statisticians in improving their abilities in consulting with and helping customers and organizations solve real-world problems.



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Recognizing the ASA's Lifetime Members

The American Statistical Association would like to thank its lifetime members. We are grateful to the following members for their distinguished and faithful membership. Your lifetime membership in the ASA demonstrates your commitment to our association and to statistics. Lifetime membership includes all benefits of regular ASA membership and is intended for those who wish to continue the benefits of ASA membership with one final payment.

If you are a lifetime member and your name is not below and you believe it should be included, contact Amy Farris at amy@amstat.org to correct your record.



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Harry M. Rosenberg	Ronald D. Snee	Matthew P. Wand	Tong Zhang
Joan R. Rosenblatt	Karen L. Snowdon-Way	Hong-Long Wang	Hongyu Zhao
N. Phillip Ross	Victor Solo	Mei Wang	Ji Zhu
Donald B. Rubin	Daniel L. Solomon	Naisyin Wang	Eric R. Ziegel
Barbara F. Ryan	Ehsan S. Soofi	Yazhen Wang	
Thomas P. Ryan	Terence P. Speed	James F. Ward	
Julia Sabella			

Annual Fund Drive Contributions Beat Last Year's Record

It has happened again! ASA members have set a new record for generosity in support of their association for the fifth consecutive year. Nearly 700 members contributed a total of nearly \$68,000, up 29% from last year's record total.

In addition, members contributed nearly \$52,000 in memorial gifts for specific awards and scholarships. Thus, ASA members contributed nearly \$120,000 to help the ASA promote the practice and profession of statistics in 2013.

Here are examples of the ways gifts from ASA members were put to good use:

- Continued development of the International Year of Statistics website (www.statistics2013.org) and celebration, including the capstone Future of Statistical Sciences Workshop (<http://bit.ly/1j6bDR8>)
- Support for ASA Member Initiative proposals funded in 2013 (www.amstat.org/about/prolist.cfm#2013) such as the development of a mentoring program and support for the improvement of K–12 statistics instruction
- JSM Diversity Mentoring Program (www.amstat.org/meetings/dwm) support
- Advocating to Congress and others through the ASA Science Policy program (www.amstat.org/policy)
- Education programs such as Meeting Within a Meeting (www.amstat.org/education/mwm) at JSM (www.amstat.org/meetings/jsm/2013) and the ASA Educational Ambassador program (www.amstat.org/education/educambassador.cfm)
- Enhanced offerings at the ASA Conference on Statistical Practice (<http://bit.ly/L8Wn85>)
- Continuing development of STATtr@k (<http://stattrak.amstat.org>), a website for new statistics professionals
- Student travel for conferences and meetings
- ASA's 175th anniversary website (www.amstat.org/asa175) and preparations for the celebration

Supporters of the 2013 annual fund drive are listed at the end of this article. Also listed are those members who have taken part in the last three annual fund drives. This consistent support makes the year over year growth of the annual fund drive possible.

We also are grateful to several companies that made matching gifts to the ASA (Amgen, GE Foundation, Google, GlaxoSmithKline, Microsoft, Millennium Pharmaceuticals, Monsanto, Pfizer, and Westat).

There are many reasons members participate in the annual fund drive. For Bill Heiland, a statistical consultant, it is a matter of philanthropic principle. "Each year, we donate 10% of our annual income," Heiland says. "Each year, we choose nonprofits that

adhere to their goals and produce laudable results. ASA is certainly one of them.”

Paula Roberson, professor and chair of biostatistics in the College of Medicine at the University of Arkansas for Medical Sciences, noted the large role the ASA has played in her career development, going back to her days as a student. “Initially, the publications and local chapter meetings provided a window to the breadth of the discipline of statistics in many dimensions—methodologies, applications to other disciplines, opportunities to impact policy at many levels, and ethical issues underlying sound statistical practice,” Roberson said. “Over time, more benefits ensued—opportunities to present my own work, networking, continuing education, and leadership opportunities. I will never forget how nervous I was before my first JSM presentation or the benefits of the networking that resulted from that experience.”

Acknowledging the ASA’s 175th anniversary, Roberson added, “Contributing to the ASA’s efforts to promote and enable access to the profession is one way to ‘pay it forward’ and help energize our future.”

Paying it forward was also the motivation of Madhu Mazumdar, professor and chief of the Division of Biostatistics and Epidemiology at Weill Cornell Medical College. “I chose to contribute to the ASA because ASA has always been my national statistical home,” she said. “I have gotten my first job through advertisement in *Amstat News*, given my first national talk at ASA, and created my national statistical community by meeting statisticians at multiple JSMs. I want ASA to be there for the future statisticians as it has supported me over the last 20 years.”

Mazumdar chose to direct her gift to the Section on Statistics in Epidemiology. “I always enjoy the sessions sponsored by this section,” she said. “The talks are geared towards solving a real epidemiologic problem and there is rigor in the use of methodology. I also wanted to support the young investigator award supported by them.”

John Kimmel, acquisitions editor for statistics at Chapman & Hall/CRC, expressed similar sentiments. “Publishing statistics books for more than 30 years has been such an enjoyable and fulfilling career that I wanted to give something back. I chose to support the ASA’s important activities,” he said.

It is most important to note that the ASA’s richest support is the thousands of hours of volunteer work our members contribute. Thank you all for your support, and we encourage our newer members to take part as well. ■

<\$100

Athula Abeyratne

Erin Abrahams

Daniel Abuabasa

Ibrahim Ahmad

Baris Akgoz

Jeremy Albright

Rich Allen

Wendy Alvey

David Amato

Roya Amjadi

Chris Andrews

Alexander Andronov

Consuelo Arellano

Ersen Arseven

Taka Ashikaga

Jonathan Auerbach

Oluwagbohunmi Awosoga

Geraldine Baggs

Mark Bailey

Robert Baker

Raji Balasubramanian

Carey Baldwin

Chuck Baldwin

Jarrett Barber

Laurie Barker

Chris Barker

Wesley Basel

Asit Basu

Rex Bates

Donald Bauder

Paul Baum

Jessica Behrle

Cynthia Beller

Alan Berger

Veronica Berrocal

Robbie Beyl

Robert Bigelow

Jonas Bilenas

Christopher Bingham

Thomas Birkett

Herbert Bishop

Gerard Blais

Derek Blanchette

Richard Blough

Ricardo Bolado

Marc-Olivier Boldi

Katherine Bosshart

Marc Bourdeau

Marie Bousfield

Norman Breslow

William Bridges

Nancy Brucken

Jan Bruha

Rebecca Buchanan

Janet Buckingham

Steven Buechler

Efstathia Bura

Edward Burke

Vicki Burt

Norman Bush

Carolee Bush

Joseph Busillo

Patricia Busk

Allen Buxton

Terri Byczkowski

Jose Caraballo

Frank Caridi

Mary Carlson

Christopher Carroll

Robert Carver

Daniel Casey

Aki Caszatt

Timothy Cerino

Grace Chan

Sandra Chandler

Chung-Chou Chang

Richard Charnigo

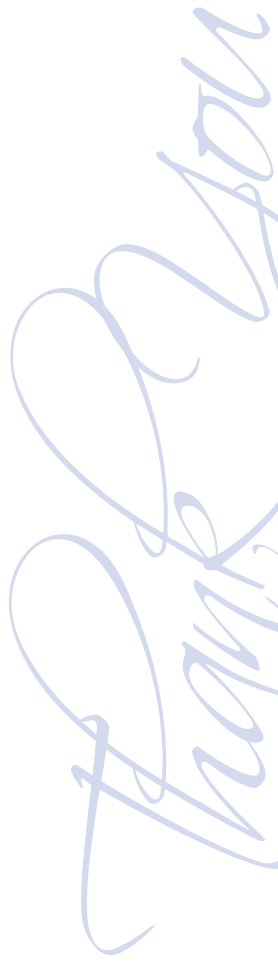
Subrata Chatterjee

Tak Wai Chau

Dongseok Choi

Jeremy Christman

James Chromy



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Alfredo Navarro	Ray Redd	John Schoenfelder	John Stickler	Michel Wedel
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David Morganstein
Sally Morton
Robert Rodriguez
Ronald Wasserstein

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Stan Altan

Participants Who Gave Continuously for the Last Three Years

Athula Abeyratne	Wenjuan Feng	Peter Jaehnig	William Mietlowski	David Schoenfeld
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Wendy Alvey	Dianne Finkelstein	Dallas Johnson	Mark Miller	John Schuenemeyer
Albert Anderson	Justin Fisher	Gerald Joireman	Renee Miller	Stanley Sclove
Alexander Andronov	Richard Forshee	Henry Kahn	George Milliken	Nagambal Shah
Consuelo Arellano	Christine Franklin	Lee Kaiser	Katherine Monti	Patrick Shrout
Stanley Azen	Ralph Frankowski	Ihsan Karabulut	Jerry Moreno	Eric Siegel
Geraldine Baggs	Neal Fultz	Charis Kaskiris	Sally Morton	Miles Simpson
David Banks	Mitchell Gail	Daniel Kasprzyk	Ed and Jeri Mulrow	Steve Snapinn
Jarrett Barber	A. Gallant	Talbot Katz	Mary Mulry	Steven Sonder
Donald Bauder	Stephen Ganocy	Jerome Keating	Charles Nam	Edward Spar
Alan Berger	Constantine Gatsonis	Arthur Kennickell	Wayne Nelson	Nancy Spruill
Carol Bigelow	John Gaudiosi	Jon Kettenring	Margaret Nemeth	Nancy Stambler
Mary Ellen Bock	Nancy Geller	Tim Keyes	Long Ngo	John Stewart
Ricardo Bolado	Thomas Gerig	Eileen King	Bryan Oberle	Susan Stewart
John Boyer	Richard Giambrone	Elizabeth King-Sloan	Daniel Oberle	John Stickler
Nancy Brucken	Michael Ginevan	Gary Koch	Maria Ojeda	Mark Strong
Vicki Burt	Ramanathan	Uwe Koehn	Robert Thomas Oneill	Walter Stroup
Carolee Bush	Gnanadesikan	Peter Lachenbruch	Jean Opsomer	Wendy Swanson
Norman Bush	Arnold Goodman	James Landwehr	J. Keith Ord	Juanita Tamayo Lott
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Thomas Butts	Michael Greene	Philip Lavin	Sastry Pantula	Ronald Thisted
Allen Buxton	Susan Groshen	Jerald Lawless	Ian Parke	Carol Thompson
Terri Byczkowski	Donald Guthrie	Kelvin Lee	Raymond Peck	Tamara Tom
Joseph Cappelleri	Irwin Guttman	Russell Lenth	Luigi Pieri	Alan Tupek
Frank Caridi	Gerald Hahn	David Letcher	Philip Prorok	Jessica Utts
Daniel Casey	James Hall	Ernst Linder	David Pyne	Esa Uusipaikka
Grace Chan	Katherine Halvorsen	Roderick Little	Sudhakar Rao	Sean Vadney
Christy Chuang Stein	Choudary Hanumara	Samuel Litwin	Ray Redd	Roger Walker
Sandra Clarkson	Frank Harrell	Gang Liu	Robert Reynolds	Liuxia Wang
Charles Contant	James Harris	Thomas Louis	Martin Ribe	Naisyin Wang
Bruce Craig	Brian Harris-Kojetin	Thomas Love	Mary Ritter	Ronald Wasserstein
David Cross	Bradley Hartlaub	Kimberly Love-Myers	Barbara Robles	Christine Waternaux
Harry Cullings	Gary Hatfield	Wenbin Lu	Robert Rodriguez	Michael Wathen
Marie Davidian	Donald Hedeker	Timothy Lutz	Joan Rosenblatt	Sanford Weisberg
Benjamin Davis	Jon Helgeland	Wendy Mack	Charles Rowland	Andrew White
Robert Davis	Susan Hilsenbeck	Dalisay Maligalig	Estelle Russek-Cohen	Linda Whitehand
Yves Deville	Klaus Hinkelmann	Jack Marshall	George Ryan	Leland Wilkinson
Jay Devore	Heike Hofmann	Nami Maruyama	V. Samaranyake	George Williams
Marie Diener-West	John Holcomb	Robert Mason	Susan Sanchez	G. Williamson
Kevin Dobbin	Nicholas Horton	Joseph Massaro	Ulderico Santarelli	Othmar Winkler
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Brenda Edwards	Yu-yi Hsu	Thomas McCoy	Robert Scheer	Kazunori Yamaguchi
Jonas and Susan Ellenberg	Mingxiu Hu	Raymond McIntyre	Nathaniel Schenker	Hung-Wen Yeh
Thomas Erdahl	J. Stuart Hunter	John McKenzie	Christopher Schmid	Donald Ylvisaker
Scott Evans	Michael Ikeda	Edward McLeod	Paul Schmidbauer	Marian Yong
Huaguang Feng	William Iwig	Michael Meredith	Mildred Schmidt	Marvin Zelen
		Mary-Jane Mietlowski	Paul Schneeman	Corwin Zigler

Symposium of the U.S. Statistical Agencies

An International Year of Statistics Event

Wendy L. Martinez, Bureau of Labor Statistics



Participants in the symposium attend the Career Choices in Statistics session

Many U.S. federal statistical agencies came together on November 13 and 14, 2013 to celebrate the International Year of Statistics at a symposium held at the Bureau of Labor Statistics conference center in Washington, DC. The symposium was organized by representatives of the Bureau of Labor Statistics, Bureau of Economic Analysis, U.S. Census Bureau, National Center for Science and Engineering Statistics, National Center for Health Statistics, Bureau of Justice Statistics, Internal Revenue Service Statistics of Income, National Agricultural Statistics Service, Economic Research Service, Office of Management and Budget, and the American Statistical Association.

Mirroring the goals of the International Year of Statistics, the objectives of the symposium were to increase public understanding of the power and impact of federal statistics and to nurture statistics as a profession in the public sector. The purpose of the symposium was not to have statisticians talking to other statisticians about their latest research. Instead, the goal was to inform non-statisticians about our profession and the importance of statistics.

The symposium was organized in five sessions that were targeted to different audiences and consumers of federal statistics and data products.

- **Statistics for Economists:** This session focused on statistics and related methodologies of interest to economists. Speakers came from the Bureau of Economic Analysis, National Center for Science and Engineering Statistics, the Bureau of Labor Statistics, and George Mason University.

- **Statistics in Health:** This session featured speakers describing the ways that statistics can be used in applications relating to health. Presenters came from the National Center for Health Statistics, the National Cancer Institute, the Census Bureau, and the Food and Drug Administration.
- **Statistics for Journalists:** Reporters and students found this session helped their understanding of official statistics produced by the various agencies. Paul Overberg of USA Today moderated this engaging session that included speakers from the U.S. Department of Agriculture, the Bureau of Justice Statistics, the National Science Foundation, and the Centers for Disease Control.
- **Statistics in the New Media Era:** A panel of expert speakers discussed how statistical agencies are implementing new media and digital tools. Agencies shared examples of how they are adapting new technologies and how this helps them provide easier public access to the data. Panel members include representatives from the Census Bureau, the Energy Information Administration, the Bureau of Economic Analysis, the Department of Justice, and the Bureau of Labor Statistics.
- **Career Choices in Statistics:** Two sessions were held for college students. These sessions included talks that explored various career paths, career-development skills, tips for getting a position with a federal statistical agency, and networking with professionals in government statistics. Presenters came from the Internal Revenue Service, Census Bureau, National Agricultural Statistics Service, National Center for Health Statistics, Food and Drug Administration, Department of Justice, Substance Abuse and Mental Health Services Administration, and Bureau of Labor Statistics.

More than 300 attendees from academia, government, industry, and the media participated in the event. A summary of the symposium and links to the presentations can be found at www.bls.gov/osmr/international_year_of_statistics_home.htm. ■

Experimental Design Featured in February Issue

Peihua Qiu, *Technometrics* Editor

The February 2014 issue of *Technometrics* features a discussion article titled “Screening Strategies in the Presence of Interactions,” by **Danel Draguljić, David C. Woods, Angela M. Dean, Susan M. Lewis, and Anna-Jane E. Vine.** The article describes novel strategies for screening designs that are popularly used in the discovery and development of high-quality products and processes. Screening designs are mainly for identifying active factors that have the greatest effect on the measured response. In practice, certain factors must function efficiently together. It is therefore vital that a screening strategy can identify active interactions as well as main effects. In the paper, the authors explore, extend, and compare different screening strategies that allow investigation of interactions to give insights into how the approaches might work in practice. Strategies that use supersaturated designs and group screening are investigated, together with several methods of shrinkage regression and Bayesian analysis. This article features discussion by **Michael Hamada, Christine Anderson-Cook, William Brenneman, William Li, Ji Zhu, Philip Scinto, Robert Wilkinson, Zhen Wang, and Andrew Rose** and a rejoinder by the authors.

In recent years, a surge of interest has been witnessed in using nested space-filling designs for a wide range of applications, including multi-fidelity computer experiments, sequential evaluations, multi-step functional fitting, and linking parameters. In these applications, some factors are often believed to be more important or deserve more attention than others. In the paper titled “Asymmetric Nested Lattice Samples,” **Peter Z.G. Qian, Mingyao Ai, Youngdeok Hwang, and Heng Su** propose a new class of space-filling designs, called asymmetric nested lattice samples. The new designs can divide different axes at different scales of fineness, and it is demonstrated that this flexibility is useful for situations mentioned above where some factors are more important than others are.

The paper titled “A Note on Dominating Fractional Factorial Two-Level Designs with Clear Two-Factor Interactions” by **Ulrike Grömping** considers the problem of selecting a two-level fractional factorial design that allows estimation of all main effects and some specified two-factor interactions (2fis). The paper concentrates on the “dominating

designs” that have been introduced but not pursued in the published paper by Wu, Mee, and Tang (2012, *Technometrics*, 191–197). In the paper, the author shows that it suffices to search through the complete catalog of dominating designs with the required 2fis being clear (i.e., without aliasing from any main effects or other 2fis).

Recurrent events are commonly seen in applications related to failure, repair, and replacement of industrial components or physical infrastructure. Observed data of recurrent events are often interval-censored (i.e., the events are known to occur in certain intervals only). Statistical analysis of interval-censored recurrent events data is discussed in the paper titled “Parametric Estimation for Window Censored Recurrence Data” by **Yada Zhu, Emmanuel Yashchin, and J.R.M. Hosking.** The authors derive the likelihood function for a model in which the distributions of inter-recurrence intervals in a single path need not be identical and may be associated with covariate information. The proposed method is demonstrated in a case study using the water distribution system maintenance records of a major U.S. city.

In “Applying Control Chart Methods to Enhance Data Quality,” **L. Allison Jones-Farmer, Jeremy D. Ezell, and Benjamin T. Hazen** discuss the important problem of data quality. As Big Data become a more popular topic in scientific communities, the data quality problem is especially important to discuss. In the paper, the authors examine the data quality problem systematically and propose the use of statistical process control techniques as viable tools for data quality monitoring and improvement. A case study about an aircraft maintenance data set is discussed in detail.

The paper titled “A Functional Time Warping Approach to Modeling and Monitoring Truncated Degradation Signals” by **Rensheng R. Zhou, Nicoleta Serban, and Nagi Gebrael** focuses on statistical analysis of degradation signals. In the paper, the authors present a flexible modeling framework for characterizing degradation signals that can only be observed up to a pre-specified failure threshold. Under that framework, a novel method is proposed for obtaining real-time predictions for the residual lifetime of engineering components deployed in the field. The proposed method is then tested using vibration-based degradation signals from a rotating machinery experiment and simulated degradation signals.

In the aerospace industry, failing to detect defects in side engines or airframe components can lead to a disaster. In such applications, nondestructive evaluation is used widely for detecting defects or flaws. The standard statistical method for analyzing such data is a simple linear regression between the signal response variables and explanatory variable(s) such as defect size. For some applications, such a simple empirical approach is inadequate. An important alternative approach is to use knowledge of the physics of the inspection process to provide information about the underlying relationship between the response and the explanatory variable(s). In the paper titled “Physical Model Assisted Probability of Detection of Flaws in Titanium Forgings Using Ultrasonic Nondestructive Evaluation,” **Ming Li, William Q. Meeker, and R. Bruce Thompson** describe a set of physical model-assisted analyses to study the capability of two ultrasonic testing inspection methods to detect synthetic hard alpha inclusion defects in titanium forging disks.

Robust estimation is the theme of the next two papers. One major motivation to develop robust statistical methods is to diminish the impact of outliers on the related estimators. In the paper titled “Robust Estimators of the Generalized Loggamma Distribution,” **Claudio Agostinelli, Alfio Marazzi, and Victor J. Yohai** propose two families of robust estimators of the three parameters of a generalized loggamma distribution. One nice feature of the

proposed estimation procedures is that they can be applied to other three-parameter distribution families with the parameters characterizing location, scale, and shape of the related distribution, such as the three-parameter log Weibull distribution family.

In another article, titled “Robust Constrained Clustering in Presence of Entry-Wise Outliers,” **Alessio Farcomeni** proposes a robust heteroschedastic model-based clustering method when outliers arise component-wise. One major idea in the proposed clustering method is the use of observation snipping, which tries to discard some dimensions of an observation and use the remaining dimensions for estimation. An expectation-maximization-type algorithm is developed for deriving inference, and its convergence properties are studied.

Motivated by an example of high-dimensional HIV-1 drug resistance data, the paper titled “The Cluster Elastic Net for High-Dimensional Regression with Unknown Variable Grouping” by **Daniela M. Witten, Ali Shojaie, and Fan Zhang** proposes the so-called cluster elastic net, which can perform less shrinkage on the coefficients corresponding to the cluster of highly correlated features that are associated with the response. Instead of assuming the clusters are known *a priori*, the cluster elastic net infers clusters of features from the data based on correlation among the variables and association with the response. ■

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Statistical Analysis of Big Data: A Special Issue of *Technometrics*

Recent advances in data acquisition technologies have led to massive amounts of data being collected routinely in the physical, chemical, and engineering sciences as well as information sciences and technology. In addition to volume, the data often have complicated structures.

Examples of such Big Data include the data streams obtained from complex engineering systems, image sequences, climate data, website transaction logs, and credit card records. Because of their big volume and complicated structure, Big Data are difficult to handle using traditional database management and statistical analysis tools. For instance, Big Data sets cannot be practically analyzed on a single computer because their sizes are often too large to fit in memory, or it is too time consuming to process using the current statistical methods. To circumvent this obstacle, one may have to resort to parallel and distributed architectures with multicore and cloud computing platforms that have access to hundreds or even thousands of processors.

While the parallel and distributed architectures present new capabilities for storage and manipulation of Big Data from an inferential point of view, it is unclear how the current statistical methodology can be transported to the paradigm of Big Data. Also, with growing data volume and complexity of data structures, the corresponding statistical models for properly describing the Big Data might need to be more sophisticated. Furthermore, with larger data comes the expectation of understanding the related scientific phenomena at a much deeper level than it would be possible with a moderately sized sample. For all these reasons, the advent of Big Data creates new challenges for current statistical methodology.

This special issue will publish original high-quality papers that deal with all aspects of the statistical analysis of Big Data, including but not limited to the following:

- Data visualization and exploratory data analysis
- Statistical computation
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- Innovative applications

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Important Dates

September 1, 2014: Paper submission deadline

January 1, 2015: Completion of the first review

April 1, 2015: First revision due

June 1, 2015: Completion of the second review

September 15, 2015: Final decision on paper acceptance

February 2016: Publication of the special issue

Papers in any application domain that fit within the broad scope of *Technometrics* will be considered. Papers must be prepared in accordance with the *Technometrics* standards and guidelines. Submitted papers should be original, not previously published, and not under consideration for publication elsewhere. All papers will be reviewed following the regular review procedure of *Technometrics*.

Paper Submission

Submit your manuscript through Manuscript Central at <http://mc.manuscriptcentral.com/amstat>. Please select "Special Issue on Big Data" under Manuscript Type. If you have difficulties, please contact Editorial Coordinator Janet Wallace at technometrics.office@gmail.com. ■

Academic Salary Survey by Gender

J. Lynn Palmer, ASA Director of Programs

Table 1 summarizes salary information for full-time academic faculty in statistics departments by title (rank), years in rank, and gender based on a nine-month salary.

Table 2 provides similar information for full-time academic faculty in biostatistics departments, but is based on a 12-month salary. These results were published in slightly more detail for years in rank, but not separated by gender in the January 2014 issue of *Amstat News*. The same categories are used here except

for Professors in Statistics Departments, due to small numbers for females.

Although no analyses were made, salaries appear similar between males and females who are at the same rank and years of experience. However, what is striking is the smaller number of females at the Associate Professor and Professor ranks.

Only research universities were included in these data due to low numbers for colleges. Some percentile estimates are not included due to small numbers. ■

Table 1—2013–2014 Salaries of Academic Faculty in Statistics Departments by Title, Years in Rank, and Gender Based on 9-Month Salary

Title	Years in Rank	Gender	Count	1 st Quartile	Median	3 rd Quartile	90 th Percentile	
Assistant Professor	0 to 1	Male	29	\$ 80,000	\$ 85,000	\$ 88,000	\$ 115,000	
		Female	19	\$ 82,000	\$ 86,000	\$ 89,600	\$ 94,100	
	2 to 3	Male	26	\$ 74,000	\$ 82,600	\$ 87,000	\$ 95,700	
		Female	8	\$ 73,800	\$ 82,700	\$ 91,800		
	4 to 5	Male	21	\$ 80,000	\$ 84,000	\$ 94,700	\$ 123,700	
		Female	13	\$ 80,200	\$ 82,800	\$ 86,600	\$ 96,200	
	6+	Male	3		\$ 80,000			
		Female	6		\$ 69,100			
	Associate Professor	0 to 1	Male	23	\$ 88,600	\$ 92,000	\$ 99,000	\$ 106,600
			Female	19	\$ 86,400	\$ 92,100	\$ 98,700	\$ 112,600
2 to 3		Male	30	\$ 88,700	\$ 94,000	\$ 105,000	\$ 107,700	
		Female	9	\$ 82,800	\$ 89,600	\$ 101,000		
4 to 6		Male	17	\$ 85,400	\$ 92,700	\$ 99,600	\$ 125,000	
		Female	13	\$ 90,200	\$ 97,600	\$ 100,500	\$ 103,000	
7 to 12		Male	14	\$ 76,600	\$ 84,100	\$ 103,600	\$ 112,600	
		Female	7	\$ 76,500	\$ 96,700	\$ 100,400		
13+		Male	14	\$ 70,600	\$ 80,600	\$ 88,300	\$ 104,300	
		Female	5		\$ 69,700			
Professor	0 to 5	Male	53	\$ 99,000	\$ 112,000	\$ 150,000	\$ 166,100	
		Female	10	\$ 100,700	\$ 104,300	\$ 148,200		
	6 to 10	Male	46	\$ 108,300	\$ 130,400	\$ 160,400	\$ 184,100	
		Female	12	\$ 103,700	\$ 122,200	\$ 160,700	\$ 172,000	
	11 to 15	Male	46	\$ 113,800	\$ 135,800	\$ 159,700	\$ 201,500	
		Female	8	\$ 112,700	\$ 125,100	\$ 160,900		
	16+	Male	95	\$ 116,000	\$ 142,400	\$ 182,200	\$ 232,000	
		Female	8	\$ 136,400	\$ 150,200	\$ 180,900		

Table 2—2013–2014 Salaries of Academic Faculty in Biostatistics Departments by Type of Institution, Title, Years in Rank, and Gender Based on 12-Month Salary

Title	Years in Rank	Gender	Count	1 st Quartile	Median	3 rd Quartile	90 th Percentile
Assistant Professor	0 to 1	Male	14	\$ 98,200	\$ 102,100	\$ 117,100	\$ 117,700
		Female	13	\$ 94,000	\$ 103,000	\$ 122,000	\$ 123,300
	2 to 3	Male	20	\$ 91,200	\$ 106,300	\$ 119,000	\$ 124,000
		Female	11	\$ 96,900	\$ 102,000	\$ 107,900	
	4 to 5	Male	14	\$ 100,700	\$ 112,700	\$ 122,100	\$ 127,300
		Female	11	\$ 96,000	\$ 105,000	\$ 116,000	
	6+	Male	12	\$ 88,400	\$ 106,300	\$ 120,400	\$ 152,000
		Female	9	\$ 103,700	\$ 112,000	\$ 116,100	
Associate Professor	0 to 1	Male	12	\$ 114,900	\$ 119,900	\$ 138,500	\$ 147,200
		Female	13	\$ 119,000	\$ 130,800	\$ 147,700	\$ 162,400
	2 to 3	Male	28	\$ 117,900	\$ 125,800	\$ 151,700	\$ 170,200
		Female	11	\$ 118,200	\$ 133,900	\$ 141,300	
	4 to 6	Male	12	\$ 113,800	\$ 123,800	\$ 149,200	\$ 152,200
		Female	14	\$ 119,000	\$ 139,100	\$ 149,100	\$ 158,400
	7+	Male	14	\$ 117,400	\$ 130,900	\$ 154,400	\$ 170,600
		Female	6		\$ 121,200		
Professor	0 to 1	Male	17	\$ 156,100	\$ 174,600	\$ 180,000	\$ 212,000
		Female	5		\$ 166,400		
	2 to 4	Male	9	\$ 162,200	\$ 187,600	\$ 198,700	
		Female	12	\$ 146,000	\$ 163,200	\$ 193,100	\$ 233,500
	5 to 7	Male	20	\$ 158,500	\$ 193,800	\$ 218,700	\$ 258,000
		Female	8	\$ 168,800	\$ 186,200	\$ 221,200	
	8 to 10	Male	15	\$ 168,400	\$ 228,800	\$ 273,500	\$ 296,000
		Female	5		\$ 264,000		
	11 to 15	Male	13	\$ 174,100	\$ 208,500	\$ 233,700	\$ 304,700
		Female	7		\$ 207,000		
	16+	Male	24	\$ 174,700	\$ 211,200	\$ 264,200	\$ 317,500
		Female	4		\$ 194,100		

Statistics2013 Becomes The World of Statistics

Jeffrey A. Myers, ASA Public Relations Coordinator

The International Year of Statistics (Statistics2013) was a fantastically successful celebration of all things statistics. Much was accomplished during the year-and-a-half period leading up to 2013 and throughout the past year.

For instance, an engaged network of 2,318 participating organizations—national and international professional statistical societies, colleges and universities, primary and secondary schools, businesses, government statistical agencies, and research institutes—representing 128 countries came together to promote statistics.

Hundreds of informative and insightful events worldwide—many attended by the public—were sponsored by participating organizations. Media



organizations the world over took notice (see this example: <http://on.wsj.com/1gYwT86>) and shared the news with their audiences.

In light of these and numerous other successes, Statistics2013 organizers decided it was essential to continue the global movement and rechristened it The World of Statistics.

“Members of the Statistics2013 Steering Committee felt strongly that it was the right choice to continue the

International Year of Statistics movement into 2014 and beyond,” says ASA Executive Director Ronald L. Wasserstein, who was a member of the event’s oversight group. “We believe that the field of statistics can build on the momentum generated by Statistics2013, work further toward its goals and engage new organizations.”

In the weeks since The World of Statistics was announced, feedback from Statistics2013 participating organizations has been unanimously supportive, with respondents agreeing that more time and effort are necessary to achieve the campaign’s goals, which are:

- Increase public awareness of the power and impact of statistics on all aspects of society
- Nurture statistics as a profession, especially among young people
- Promote creativity and development in the sciences of probability and statistics

The continuing movement also will help bring to reality the newly announced International Prize in Statistics, a “Nobel-like” prize in statistical science that will recognize the major achievement of an individual or team in the field of statistics.

The World of Statistics has its own set of communications tools. The Statistics2013 website became The World of Statistics—www.worldofstatistics.org—so, remember to bookmark this new address. Additionally, the Twitter handle has changed to @astatworld (please follow us). And, the former Statistics2013 newsletter was renamed the *News from The World of Statistics*. This newsletter will be published every three weeks (go

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The **April 8, 2014**, conference will bring together leading scientists who will discuss state-of-the-art approaches for using biomarkers and surrogate endpoints in the design, analysis, and interpretation of clinical trials.

Participants from academic institutions, industry, and government agencies with an interest in clinical trials methodology are encouraged to attend.

Speakers: Stuart Baker, the National Cancer Institute; Marshall Joffe, University of Pennsylvania; Jeremy Taylor, University of Michigan; Jarcy Zee, University of Pennsylvania; Michael Kattan, Cleveland Clinic; Ying Huang, Fred Hutchinson Cancer Research Center; and Herbert Weisberg, Causalytics

Panelists: Constantine Frangakis, Johns Hopkins Bloomberg School of Public Health; Michael Daniels, University of Texas; Eve H. Pickering, Pfizer; Lurdes Inoue, University of Washington; James Hung, Food and Drug Administration; and Debashis Ghosh, Penn State University.

For information and registration, visit www.cceb.med.upenn.edu/biostat/conferences/ClinTrials14/. For questions, contact Marissa Fox at mfox@upenn.edu.

NEWS FROM THE WORLD OF STATISTICS



to www.worldofstatistics.org today to sign up for this free newsletter).

As you have done previously, please send us information about your organization's upcoming events and completed activities using either the Event Submission Form for the Activities Calendar or the Post-Event Information & Photo Submission Form on The World of Statistics website. We will publish your event on the 2014 Activities Calendar or your article in an upcoming issue of the *News from The World of Statistics*.

Organizers also invite you and your organization to help populate The World of Statistics website with content for the other feature areas on the new website, including the blog and job of the

week entries, and items for the Teacher Resources, Statistics as a Career, and What is Statistics? areas. Submit your organization's content to jeffrey@amstat.org.

We strongly encourage your organization's active participation in The World of Statistics. If you choose to do so, you do not have to do anything. Your organization will be listed on the website as a participant and we'll continue to provide you information about statistics-related events around the world. To update or add contacts for your organization, send an email to ron@amstat.org. If you choose to not continue your organization's participation, please send an email with that message to ron@amstat.org. ■

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MASTER'S NOTEBOOK

Type IV Errors: How Collaboration Can Lead to Simpler Analyses

Jonathan Stallings

I started my graduate career in the department of statistics at Virginia Tech having had years of mathematical training and undergraduate research under my belt. Like many graduate students, I didn't like being wrong or uncertain about an answer. This attitude helped me succeed in the classroom, where questions have right and wrong answers, but I was inexperienced when it came to applying what I learned to real problems and felt very uncomfortable.

In my third year in the graduate program, I was asked to become a lead statistical collaborator at Virginia Tech's Laboratory for Interdisciplinary Statistical Analysis (LISA). I saw this as an opportunity to confront my insecurities and learn how statistics are used in practice. Naturally, I was apprehensive going into my first few meetings with clients I had never met before. I wasn't sure what they would expect from me or what I should expect from them, and I was terrified to be asked to do an analysis I didn't know how to do. Looking back, I now realize I was going into these meetings as if they were an exam I couldn't study for and had little chance of passing.

At LISA, we aim to answer a client's research question using statistics and refer to ourselves as collaborators, not consultants, to reflect our level of involvement in their project. LISA collaborators seek first to understand the client's overall goals outside a statistical framework and appreciate the effect of their research to their respective field. We then relate these goals to their collected data or advise them about how to design their data collection to best answer these goals. It is crucial for both the client and statistical collaborator to understand what the data will show if the client's hypotheses are correct. It is not until this stage is reached that we discuss potential statistical methodologies.

Focusing on the client's needs and wants outside of a statistical framework is the best way to prevent type III errors, which were introduced by A. W. Kimball's 1957 paper, "Errors of the Third Kind in Statistical Consulting." A type III error occurs when the statistician offers the correct statistical advice for the wrong research question. This was a difficult challenge for me; I had to get out of my comfort zone and fight the urge to talk about statistics. Once I became better at it, I realized that expressing interest in the client's research not only

fostered a more comfortable, collaborative relationship, but also gave me greater flexibility in choosing an appropriate statistical analysis.

What makes a statistical analysis "appropriate"? There are many criteria to compare methodologies such as type I errors, power, and validity of assumptions of the data like normality and constant variance. These criteria are meaningless to most clients, especially if they have limited statistical training. Clients I have interacted with are looking for techniques they can understand and give confident, accurate conclusions of the hypotheses. Maybe a latent growth curve model could be used to answer the research question, but if I could answer their research questions using a straightforward ANOVA, why wouldn't I just do that?

One of my first clients wanted to investigate the potential differences of tumor regression between immunocompetent (a functioning immune system) and immunodeficient (a poor immune system) mice after applying either a placebo or a technique known as irreversible electroporation. I made scatterplots for each group to see how the tumors grew across time and saw a clear trend that supported their hypotheses. Focusing on the data in front of me, I thought a repeated measures model that incorporated the presence of missing data was appropriate and spent a lot of time researching how those models worked. Eventually, I realized the client was not interested in modeling the growth curves; they just wanted to see whether differences existed. Ultimately, we chose to compare individual means at specific days using simple nonparametric tests and successfully answered their research question.

At this point, I would like to introduce what I call type IV errors: when a statistician performs the correct analysis that answers the right research questions when a simpler analysis would suffice. Why is a type IV error something to worry about? If the statistics are correct, isn't our job done? The issue is that when statisticians commit type IV errors, we are potentially alienating the client from the collaborative relationship and giving them results they cannot use. We also are giving ourselves too much work to do, spending days on something that could take hours or even minutes. At the end of the day, we have wasted everyone's time if the client doesn't understand what we did.

A common misconception that increases the likelihood of a type IV error is that more complicated analyses lead to more accurate conclusions and a better chance at getting statistically significant results. Clients have asked me about doing zero-inflated Poisson models, latent growth curves, and structural equation modeling, giving me the impression they think these techniques, which they have only heard about, are better because they are more complicated. Their data might fit the mold of such analyses, but the statistician's job isn't fitting models; it's helping answer research questions.

Simplifying an analysis is sometimes easier said than done; it is an art form that takes a lot of practice. Something that has helped me is not being afraid to get creative with the data. I make as many plots as I can that would support/reject the client's hypotheses, using these as visual confirmation and motivation for the chosen analyses; histograms and scatterplots are two of my very best friends. I see the raw data as a starting point and allow myself to think outside of what is presented, focusing instead on how I can use the data to achieve the client's goals.

Building your statistical toolbox with different analyses should be your goal in your graduate school coursework. This includes not only how to do them, but understanding their inner workings so they can be explained to nonstatisticians. Some techniques I commonly implement are bootstrapping, transformations,

Focusing first on the client's research goals has guided me to simpler statistical methodologies and helped me explain the results to the client.

permutation tests, and simple nonparametric tests like the Wilcoxon-Mann-Whitney rank-sum test and the Kruskal-Wallis ANOVA. Find whatever techniques you are most comfortable with, but be prepared to explain why they are useful and applicable to the client's project.

Type IV errors should not be seen as a deterrent from using advanced statistical methods to answer research questions. They are a reminder that whatever analysis you choose should answer the client's research questions and be understood by the client. Focusing first on the client's research goals has guided me to simpler statistical methodologies and helped me explain the results to the client. Do not be afraid to tell a client you don't know of an advanced statistical method or be swayed when they suggest this analysis is most appropriate. If you can find a simpler way to answer their questions, they will be thrilled to hear it! ■

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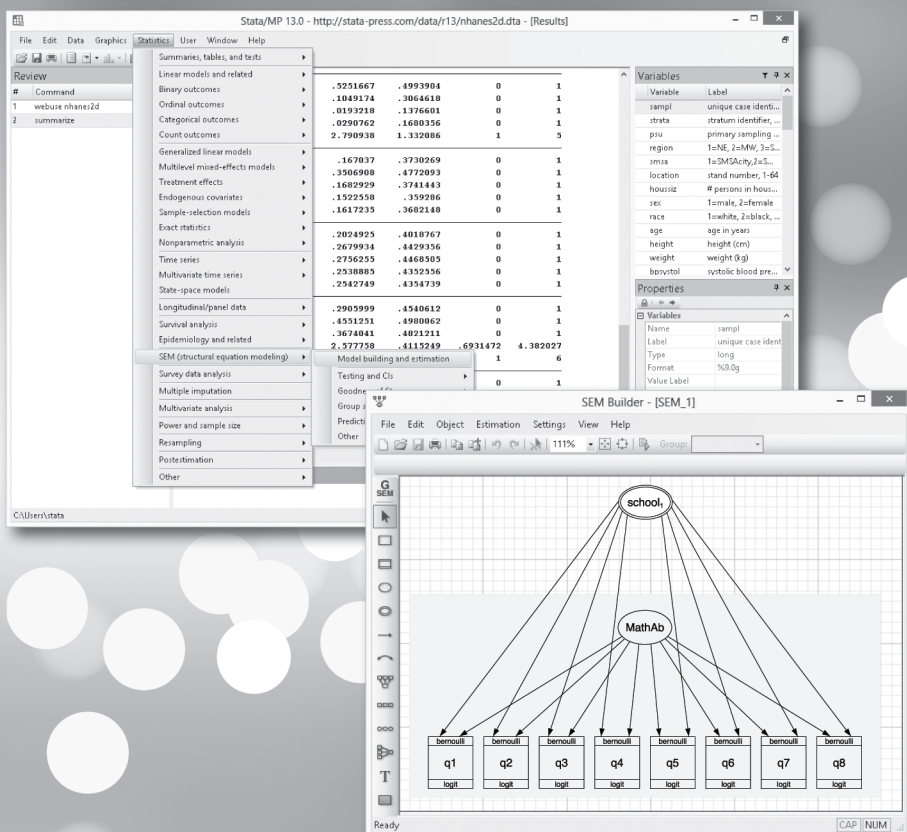
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Thoughts on Energizing the ASA's Future

Marcus Berzofsky

As the ASA turns 175 years old, we as an association are taking the opportunity to “celebrate our past and energize our future.” As a recent doctoral graduate and relatively new member of the ASA, I’d like to focus this column on how the ASA can adapt to growth in the profession over the next 25 years. In other words, at the time of its 200th anniversary, how will the ASA continue to provide meaningful services to its members?

Before we focus on the future, let’s reflect on a few statistics about our past. In 1989, the ASA had 15,134 members. As the statistics profession expanded, ASA membership also increased. Now, the ASA has approximately 18,000 members, which—based on the U.S. Census Bureau’s estimate of the number of statisticians (25,500 people in 2012)—is a 70% coverage rate of the occupation. The Census Bureau is predicting the number of statisticians will continue to increase at a rate of about 14% over the next 10 years, bringing in about 3,500 new statisticians by the year 2020. If this rate remains constant, there will be about 10,000 new statisticians (35,500 people total) when we reach our 200th anniversary. Furthermore, if the ASA maintains its current coverage rate of the profession, there will be 25,000 members. Thirty-six percent of ASA members are under the age of 34. Given the expected growth of the ASA, how can the association keep these younger members engaged?

We can certainly characterize the future of the ASA with estimates, but growth to the organization, as well as the profession, will likely create a challenge to support or engage its members, especially newer members.

Meeting these challenges requires personal contributions that need support at the association level. As a person new to the profession, I can speak from experience about how easy it is to become engrossed in the details of one’s job and not focus on what is going on in the statistics community. It will take effort to encourage younger members to join an ASA section relevant to their position, participate in message boards, take part in ASA chapter functions, and attend a leadership meeting when attending the Joint Statistical Meetings. On this last point, it is important to emphasize that simply attending the meetings is a big step for the ASA’s future. By attending, younger members can hear about current issues affecting the profession and start to think about how those issues affect them and what possible solutions there might be.

Older members who are already active in professional societies can invite junior colleagues to attend a chapter meeting or social functions at JSM, thereby helping them meet people they might not otherwise meet. Established members also can nominate a junior colleague to be on an ASA committee. In other words, recognize that it is difficult for a person new to the field to take the initiative to get involved (they may not even know where to look). Given a slight push, many would be happy to engage and remain involved in the ASA, flourishing and developing leadership skills over time. I can’t stress the importance of introducing opportunities to newer and younger members. Without others suggesting that I join committees, I would not be writing this column!

While it may be difficult to see how these individual actions can affect the association at large, they

will in aggregate, if properly supported by the association. If individuals and the ASA act together, I believe the ASA will have a membership that is equally, if not more, involved when it reaches its 200th anniversary. As the ASA grows its membership over the next 25 years (and the Census numbers indicate it will), it is my hope that the ASA also will grow its influence as a much-valued part of statisticians’ lives. That is a future to be energized about! ■

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STATtr@k

Learning for a Living

Hunter Glanz



What do you want to be when you grow up?

We all knew the answer when we were first asked. We probably knew the answer for the next five to seven years, too. We only knew about a handful of professions, and we knew which of them interested us most. However, as soon as we discovered the world that lay before us, uncertainty crept into our responses. They became about a host of other issues, some having less to do with the work we would be doing and more to do with job security, salary, or benefits.

I was once told the reason we attend a four-year university is to receive a general education, not necessarily an education about the major we end up choosing. I chose to study mathematics and statistics because they were the subjects I loved most and the closest to the career I was aiming for at the time. That revelatory experience of discovering you have a stronger connection to the learning process than any particular profession is one of the first signs graduate school might be for you. I did not know I wanted to go to graduate

school until I was in my last two years of college. I discovered learning was what was most important to me. Note that everyone encounters the need or desire to learn, no matter what path they choose, but I realized learning is an end in itself for me.

Graduate school provides a new depth of knowledge and an unprecedented outlet for curiosity. A formal foundation in the theoretical underpinnings of the field, probable teaching experience, and novel research form an ideal environment for those yearning for more. Something that can be overlooked is how much programs vary. When considering graduate programs in statistics, there is much to take into consideration. Students must interview schools for a good fit as much as departments must make their choices about who to accept.

Perhaps contrary to what some may think, you do not have to know what kind of research you want to do before you get to graduate school. However, faculty research interests provide an important glimpse into likely areas of thesis work, so you should have some interest or special potential for curiosity about at least one of these areas if you are planning to apply.

Internships, or REUs (research experiences for undergraduates), are a great way to develop secondary interests that can motivate research goals. Some schools have co-op programs that help in similar ways. It was an REU in machine learning and neuroscience that helped push me toward my graduate program. Ironically, I pursued research work in different areas during my time at Boston University: Bayesian and computational statistics with applications in remote sensing. On the other hand, if you already possess an overwhelming fascination with particular problems or areas of statistics, then your path ahead is that much clearer. If your aim is learning, then it will be difficult to regret any commitment you make in developing plans for your graduate work.

Beyond coursework, research may be the next biggest thing associated with graduate school. Your experience could involve so many other activities though! Graduate students often have the opportunity to teach as a teaching assistant, teaching fellow, or instructor. The skills and experience gained through these types of positions speaks volumes about your leadership, time management, communication, and organization.

Statisticians especially need excellent communication skills, and teaching experience can help hone them. Regardless of your feelings about teaching prior to graduate school, you should take the time to investigate the nature of the teaching responsibilities at each program. Often gone unsaid is the non-trivial benefit these responsibilities can have for one's own understanding of the material. Sometimes there exists a noticeable gap between, say, constructing a simple confidence interval for a textbook word problem and deriving a uniformly most powerful test. Teaching is an activity worth pursuing in graduate school, even if your program does not require it.

Consulting stands as perhaps one of the next biggest dimensions of statistics graduate programs. An excellent opportunity to further build communication skills, consulting offers a glimpse into career possibilities and potential research directions through collaborative interactions with professionals from a variety of fields. The role of consulting in graduate programs and departments can vary widely, so must be explored before applying.

In the end, be sure to explore the nature of funding at each institution to which you plan to apply. I was told once that you should not have

Even if you have not committed to a career in academia or industry, learning can be your focus.

to pay for graduate school. That is, you should have some sort of graduate assistantship at all times: teaching, research or otherwise. On this note, when you apply to graduate school, you also should be looking for graduate student fellowships. Incoming graduate students up to their second or third year are the only ones eligible to apply for a vast number of these fellowships.

Perhaps the ideal question to have heard growing up is, "What do you want to do when you grow up?" Do not feel destined for an academic career path just by going to graduate school. Even if you have not committed to a career in academia or industry, learning can be your focus. If all you can imagine is learning for a living, then graduate school represents an outstanding step in that direction! ■



2014 Senior Research Fellow Program

ASA, in cooperation with the Bureau of Labor Statistics (BLS) and the Bureau of Economic Analysis (BEA) under a grant from the National Science Foundation (NSF) is pleased to announce a Senior Research Fellow Program for 2014.

The Fellowship Program at BLS allows research fellows to come to the BLS and use BLS data and facilities, and interact with BLS staff. More information is available on the BLS website at http://www.bls.gov/osmr/asa_nsf_bls_fellowship_info.htm or in our brochure at <http://www.amstat.org/careers/pdfs/ASANSFBLSFellowshipProgram.pdf>



The Fellowship Program at BEA offers a unique opportunity to perform research at the Bureau of Economic Analysis. BEA produces key economic statistics that influence government policy, forecasting and business investment. Fellows will have access to BEA data and the expertise of BEA staff. More information is available at:

www.bea.gov/research/fellowship_program.htm or in our brochure at

<http://www.amstat.org/careers/pdfs/BEA.pdf>



Eligibility

An academically recognized research record and considerable expertise in the area of proposed research required. U.S. government employees are not eligible to apply. Applicants must be affiliated with a U.S. institution.

Condition of Appointment/Benefits

Research will be conducted at the government agency. The stipend received is commensurate with qualifications and experience. Term of appointment is flexible. Fringe benefits and travel allowances are negotiable.

Application Deadline: March 2, 2014

JSM 2014: Call for Late-Breaking Sessions

Jean Opsomer, 2014 JSM Program Chair

More than 95% of all statisticians know by now that the next JSM will take place in Boston during the first week of August (this is a little joke). While the JSM scientific program is mostly determined at this time, there is one last opportunity to submit a proposal for a JSM session. I am talking about the appropriately named “late-breaking sessions,” which are opportunities for new and emerging developments of interest to our discipline to have a chance to be part of the JSM program. Up to two such sessions are available, subject to approval by the Committee on Meetings, representing all the JSM sponsoring societies.

According to the program committee manual (a well-thumbed copy of which is on

my bedside table this year), “A late-breaking session must cover one or more technical, scientific, or policy-related topics that have arisen in the one-year period prior to the JSM.” I welcome proposals for such sessions, which can be submitted by any member or organization of a partner society. Proposals need to be received by me at jopsomer@stat.colostate.edu and ASA meeting staff at meetings@amstat.org by April 14 to be given consideration. Again from the program committee manual, a proposal for a late-breaking session should contain the following information:

A. The session title

B. A session description, including a summary of its statistical and scientific content, an

explanation of its timeliness, and comments on the specific audiences for which it will be of principal interest

C. The format of the session (e.g., a chair and four panelists; a chair, three speakers, and discussant; or a chair, two speakers, and two discussants)

D. Names of the session organizer, chair, speakers, panelists, and discussants


E. Complete affiliation and contact information (mailing address, phone, fax, email) for organizer, chair, and all participants


F. A title for each presentation

G. Web links to relevant technical reports, if applicable

Since the goal of these sessions is to ensure that new and emerging topics are presented at JSM, item (B) is clearly crucial, and evaluation of the proposals will rely heavily on the arguments presented there. Because these sessions are scheduled just a few short months before JSM, we are requesting that all session participants—including the chair, speakers/panelists, and discussants—agree to participate in the session before the session proposal is submitted. Note that participation in a late-breaking session will not count toward the limits on participation established for JSM.


In closing, let me thank everyone who has already submitted session proposals and/or presentation abstracts for their participation in creating a diverse and vibrant program for the Boston JSM. I look forward to receiving your proposals for late-breaking sessions. ■

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Charles Rothwell has been appointed director of the National Center for Health Statistics (NCHS), the nation's principal health statistics agency and a part of the Centers for Disease Control and Prevention (CDC). Rothwell succeeds Edward Sondik, who retired as NCHS director in April 2013. At NCHS, Rothwell will direct a comprehensive program of statistical activities designed to monitor the health of the nation and produce the information needed for research, policy, and programs.

Prior to becoming NCHS director, Rothwell was director of the NCHS Division of Vital Statistics and led a national effort to speed up mortality reporting using new automated systems that allow for real-time surveillance. During his tenure at NCHS, Rothwell served as a legislative assistant for Senator Lieberman (working primarily on health and education issues), worked with the National Science Foundation on their digital government initiative to build partnerships between academia and federal statistical agencies, and served as a member of the IT Board of the National Institute of Standards and Technology's Advanced Technology Program. Rothwell came to NCHS in 1987 as the associate director of NCHS responsible for bringing new IT and data dissemination technologies to the agency. In February of 2013, Rothwell was selected from a field of 62 nominees as one of the five top leaders in federal service.

Earlier in his career, Rothwell worked in the State Health Department in North Carolina and founded the North Carolina State Center for Health Statistics. He served as an officer in the Marine Corps, reaching the rank of captain. He is a Fellow of the American Statistical Association and the 2011 recipient of the Hal Dunn Award in Biostatistics. Rothwell earned his BS in physics from the Virginia Military Institute, his MS in operations research and systems analysis from the University of North Carolina, and an MBA from the University of Maryland. ■

Then and Now



Ronald P. Barry with his children, Eli Barry-Garland (left) and Maura Barry-Garland (right). The picture was published in the Marketplace in *Amstat News* sometime between 1994–1996.



Here is the same picture 19 years later.

Read about your colleagues and friends in the news. Go to www.amstat.org and click on "Statisticians in the News."

Obituary—Gang Zheng

Gang Zheng, professor of statistics at The George Washington University, lost his battle with cancer and passed away on Thursday, January 9, 2014. To read his memorial, visit http://magazine.amstat.org/blog/2014/02/01/obituary_february_2014.

Lester R. Curtin Award

The Lester R. (Randy) Curtin Award was established recently to help promising young health statisticians get the skills and training they need to make significant contributions in their area of study. The award was created to honor Randy's memory and his long career of working tirelessly to teach and mentor his colleagues at the Centers for Disease Control and Prevention's National Center for Health Statistics. Awardees receive support for travel to the ASA's annual Conference on Statistical Practice. For more information, visit www.amstat.org/awards/lesterrcurtinaward.cfm.

Applications and questions should be sent to the ASA office at pamela@amstat.org or 732 North Washington Street, Alexandria, VA 22314, attention Award Nominations. The nomination deadline is October 15. ■

Gertrude M. Cox Award

The Gertrude M. Cox Award Committee is seeking nominees for the 2014 Gertrude M. Cox Award, which includes a \$1,000 honorarium, paid travel expenses to attend the Washington Statistical Society's annual dinner, and a commemorative plaque.

The award was established in 2003 through a joint agreement between the Washington Statistical Society (WSS) and RTI International. It annually recognizes a statistician in early to mid-career (fewer than 15 since earning a terminal degree) who has made significant contributions to one or more of the areas of applied statistics in which Gertrude Cox worked: survey methodology, experimental design, biostatistics, and statistical computing.

In 1945, Gertrude Cox became director of the Institute of Statistics of the Consolidated University of North Carolina. In

the 1950s, as head of the department of experimental statistics at North Carolina State College, she played a key role in establishing mathematical statistics and biostatistics departments at The University of North Carolina. Upon her retirement from North Carolina State University in 1960, Cox became the first head of the statistical research division at newly founded RTI. She was a founding member of the International Biometric Society (IBS) and, in 1949, became the first woman elected into the International Statistical Institute. She served as president of both The American Statistical Association (1956) and the IBS (1968–1969). In 1975, she was elected to the National Academy of Sciences.

The award is presented at the WSS annual dinner, usually held in June, with the recipient delivering a talk on a topic of general interest to the WSS membership before the dinner.

Email your nominations to Karol Krotki at kkrotki@rti.org by February 28 with a supporting statement and CV (or link).

If you have previously nominated a candidate and you wish that nomination to be reconsidered, please update the supporting materials.

This award is made possible by funding from RTI International, and the recipient is chosen by a six-person committee—three each from WSS and RTI. This year's committee consists of WSS President Nancy Bates (co-chair), Past President Keith Rust, and President-elect Diane Herz, along with Safaa Amer, Phil Kott, and Karol Krotki (co-chair) from RTI. Past recipients, in chronological order, include Sharon Lohr, Alan Zaslavsky, Tom Belin, Vance Berger, Francesca Domenici, Thomas Lumley, Jean Opsomer, Michael Elliott, Nilanjan Chatterjee, Amy Herring, and Frauke Kreuter. ■

Lingzi Lu Memorial Award

Through the Lingzi Lu Memorial Award, the ASA and International Chinese Statistical Association support the studies of similarly dedicated people who are in master's programs in statistics or who have recently earned their master's degree in statistics. The award not only honors the memory of Lingzi, who was killed in the Boston Marathon bombing, but also the talented statistician she would have become. The award will provide support for travel to the ASA's 2015 Conference on Statistical Practice. Visit www.amstat.org/awards/lingzilumemorialaward.cfm for information and an application.

If you have questions, contact the committee chair, Ivan Siu Fung Chan, at ivan_chan@merck.com. Nominations should be sent to the ASA office at pamela@amstat.org or 732 North Washington Street, Alexandria, VA 22314, attention Award Nominations. The nomination deadline is October 15. ■

Julius Shiskin Award

Nominations are invited for the annual Julius Shiskin Memorial Award for Economic Statistics. The award is given in recognition of unusually original and important contributions to the development of economic statistics or in the use of statistics in interpreting the economy. Contributions can be in development of new statistical measures, statistical research, use of economic statistics to analyze and interpret economic activity, development of statistical tools, management of statistical programs, or application of data production techniques.

The award was established in 1980 in memory of Julius Shiskin, who had a varied and remarkable public service career. At the time of his death in 1978, "Julie" was the commissioner for the Bureau

of Labor Statistics and earlier served as the chief statistician at the Office of Management and Budget and chief economic statistician and assistant director of the Census Bureau. Shiskin published *Signals of Recession and Recovery*, which laid the groundwork for the calculation of monthly economic indicators, and he developed the monthly Census report *Business Conditions Digest* to disseminate them to the public.

Individuals and groups in the public or private sector from any country can be nominated. The award will be presented with an honorarium of \$1,000 plus additional recognition from the sponsors. A nomination form and list of all previous recipients are available at www.amstat.org/sections/bus_econ/shiskin.html. Nominations must be received by March 15.

For more information, contact Steven Paben, Julius Shiskin award committee secretary, at paben.steven@bls.gov.

This award is cosponsored by the Washington Statistical Society, National Association for Business Economics, and the ASA Business and Economics Statistics Section. ■

Mortimer Spiegelman Award

The Applied Public Health Statistics Section of the American Public Health Association (APHA) invites nominations for the 2014 Mortimer Spiegelman Award, which honors a statistician below the age of 40 in the calendar year of the award who has made outstanding contributions to health statistics, especially public health statistics. The award was established in 1970 and is presented annually at the APHA meeting.

The award serves the following three purposes

- To honor the outstanding achievements of both the recipient and Spiegelman

- To encourage further involvement in public health by the finest young statisticians
- To increase awareness of APHA and the Applied Public Health Statistics Section in the academic statistical community

To be eligible, a candidate must have been born in 1975 or later. Please email a nominating letter that states the candidate's date of birth and how

their contributions relate to public health concerns, up to three letters of support, and the candidate's CV to the award committee chair, Sudipto Banerjee, at baner009@umn.edu by April 1.

Details about the award, including a list of past recipients, and more information about the Applied Public Health Statistics Section of APHA can be found at www.apha.org/memberships/sections/aphasections/stats/about. ■

Deadlines and Contact Information for ASA National Awards, Special Lectureships, and COPSS Awards

www.amstat.org/awards

March 1, 2014

ASA Fellows

Nominations accepted online at www.amstat.org
Questions: Katherine L. Monti, kmonti@rhoworld.com

March 31, 2014

ASA Statistics in Chemistry Award

Philip J. Ramsey, pjrstats@aol.com

March 15, 2014

ASA W. J. Dixon Award for Excellence in Statistical Consulting

Nominations: Pam Craven, pamela@amstat.org
Questions: Lloyd J. Edwards, lloyd_edwards@unc.edu

March 15, 2014

ASA Founders Award

Nominations: Pam Craven, pamela@amstat.org
Questions: Marie Davidian, davidian@ncsu.edu

March 15, 2014

ASA W. J. Youden Award in Interlaboratory Testing

Nominations: Pam Craven, pamela@amstat.org
Questions: Michael J. Messner, messner.michael@epa.gov

March 15, 2014

ASA Waller Distinguished Teaching Career Award

Nominations: Pam Craven, pamela@amstat.org
Questions: Bradley A. Hartlaub, hartlaub@kenyon.edu

March 15, 2014

ASA Waller Education Award

Nominations: Pam Craven, pamela@amstat.org
Questions: Bradley A. Hartlaub, hartlaub@kenyon.edu

March 15, 2014

Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society

Nominations: Pam Craven, pamela@amstat.org
Questions: G. David Williamson, dxw2@cdc.gov

April 1, 2014

ASA Gertrude M. Cox Scholarship

Applications & Questions: Pam Craven, pamela@amstat.org

April 1, 2014

ASA Outstanding Statistical Application Award

Nominations: Pam Craven, pamela@amstat.org
Questions: DuBois Bowman dbowma3@emory.edu

April 1, 2014

ASA Edward C. Bryant Scholarship

Applications: Pam Craven, pamela@amstat.org
Questions: Tapabrata Maiti, maiti@stt.msu.edu

April 1, 2014

ASA Excellence in Statistical Reporting Award

Nominations: Pam Craven, pamela@amstat.org
Questions: Morteza Marzjarani, mortkm2@yahoo.com

April 1, 2014

ASA Samuel S. Wilks Memorial Medal

Nominations: Pam Craven, pamela@amstat.org
Questions: Lynne Billard, lynne@stat.uga.edu

The following events are the latest additions to the ASA's online calendar of events. Announcements are accepted from education and not-for-profit organizations only. To view the complete list of statistics meetings and workshops, visit www.amstat.org/dateline. * Indicates events sponsored by the ASA or one of its sections, chapters, or committees

March

7–9—Ordered Data Analysis, Models, and Health Research Methods: An International Conference in Honor of H. N. Nagaraja for His 60th Birthday, Dallas, Texas

For more information, visit faculty.smu.edu/ngh/hnnconf.html or contact Chaitra Nagaraja, 5 Columbus Circle, New York, NY 10019; (212) 636-6678; hnnconf@gmail.com.

12–14—International MultiConference of Engineers and Computer Scientists IMECS 2014, Hong Kong, China

For details, visit www.iaeng.org/IMECS2014 or contact IAENG Secretariat, Royal Garden Hotel, Hong Kong, International HK, Hong Kong; (852) 3169-3427; imecs@iaeng.org.

31–4/2—SAMSI-CRM Workshop on Geometric Aspects of High-Dimensional Inference, Research Triangle Park, North Carolina

For more information, visit <http://bit.ly/1gGNRac> or contact Jamie Nunnally, 19 T.W. Alexander Drive, RTP, NC 27709; (919) 685-9350; admin@samsi.info.

31–4/3—SIAM Conference on Uncertainty Quantification (UQ14), Savannah, Georgia

For details, visit www.siam.org/meetings/uq14 or contact Kirsten Wilden, 3600 Market Street, 6th Floor, Philadelphia, PA 19104; wilden@siam.org.

April

6–11—Eleventh International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Leuven, Belgium

For details, visit, mcqmc2014.cs.kuleuven.be or contact Ronald Cools, Dept. of Computer Science, KU Leuven, Celestijnenlaan 200A, Heverlee, International 3001, Belgium; +3216327562; ronald.cools@cs.kuleuven.be.

22–24—Mathematical and Statistical Methods for Actuarial Sciences and Finance, Vietri sul Mare, Italy

For more information, visit www.maf2014.unisa.it or contact Marcella Niglio, Di.S.E.S., Via Ponte Don Melillo, Fisciano (SA), International 84084, Italy; +39 089962651; maf2014@unisa.it.

22–25—AISTATS 2014, Seventeenth International Conference on Artificial Intelligence and Statistics, Reykjavik, Iceland

For more information, visit www.aistats.org or contact Jaakko Peltonen, Aalto University, Department of Information and Computer Science, P.O. Box 15400, Espoo, International FI-00076 Aalto, Finland; +358503623628; jaakko.peltonen@aalto.fi.

24—20th Federal Forecasters Conference, Washington, DC

For details, visit www.federalforecasters.org or contact Jeff Busse, 12201 Sunrise Valley Drive, MS987, Reston, VA 20192; (703) 648-4914; jbusse@usgs.gov.

*24–26—2014 SIAM International Conference on Data Mining, Philadelphia, Pennsylvania

For details, visit www.siam.org/meetings/sdm14 or contact Nicole Erle, 3600 Market St., 6th Floor, Philadelphia, PA 19104; (215) 382-9800; erle@siam.org.

27–29—26th Annual Kansas State University Conference on Applied Statistics in Agriculture, Manhattan, Kansas

For more information, visit www.k-state.edu/stats/news/conference.html or contact Leigh Murray, Kansas State University, Department of Statistics, 101 Dickens Hall, Manhattan, KS 66506; (785) 532-0515; lmurray@k-state.edu.

28–29—4th Annual International Conference on Operations Research and Statistics (ORS 2014), Phuket, Thailand

For details, visit www.orstat.org/index.html or contact Conference Secretariat, +6563270166, secretariat@orstat.org.

May

9–11—3rd Workshop on Biostatistics and Bioinformatics, Atlanta, Georgia

For more information, visit www2.gsu.edu/~matyiz/2014_workshop or contact Yichuan Zhao, Department of Mathematics and Statistics, Atlanta, GA 30303; (404) 413-6446; yichuan@gsu.edu.

15–18—AAPOR 2014 Annual Conference, Anaheim, California

For more information, visit www.aapor.org/AAPOR_Annual_Conference.htm#UnkdERDZjMg or contact Lisa Kamen, 111 Deer Lake Road, Suite 100, Deerfield, IL 60015; (847) 205-2651; lkamen@aapor.org.

*19–21—37th Annual Midwest Biopharmaceutical Statistics Workshop (MBSW), Muncie, Indiana

For details, visit www.mbswonline.com or contact Melvin Munsaka, One Takeda Parkway, Deerfield, IL 60015; (224) 554-2846; melvin.munsaka@takeda.com.

To view the entire list of statistics meetings and workshops, visit www.amstat.org/dateline.

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22–23—12th IIF Workshop, London, United Kingdom

For more information, visit forecasters.org/conferences/iif-sponsored-workshops or contact Mohsen Hamoudia, 5 Allee Clos des Charmes, Eragny, International 95610, France; +33155544151; mohsen.hamoudia@orange.com.

25–29—Statistical Challenges in 21st-Century Cosmology, Lisbon, Portugal

For details, visit sccc21.sim.ul.pt or contact Eric Feigelson, 525 Davey Laboratory, Penn State University, University Park, PA 16802; edf@astro.psu.edu.

26–28—PLS2014, Paris, France

For details, visit www.pls14.org or contact Gilbert Saporta, Dept. IMATH, 292 rue Saint Martin, Paris, 75003, France; +33140272268; pls2014@essec.edu.

June

*1–4—50th Summer Research Conference in Statistics and Biostatistics, Galveston, Texas

For details, visit srcos2014.rice.edu or contact Don Edwards, Dept. of Statistics, University of South Carolina, Columbia, TX 29208; (803) 777-7575; edwards@stat.sc.edu.

2–6—2014 Undergraduate Summer Research Program, Columbus, Ohio

For more information, visit www.mbi.osu.edu/eduprograms/undergrad2014.html or contact Dennis Pearl, The Ohio State University, Jennings Hall, 3rd Floor, 1735 Neil Ave., Columbus, OH 43210; (614) 292-3887; pearl.1@osu.edu.

2–6—11th International Conference on Ordered Statistical Data, Bedlewo, Poland

For more information, visit bcc.impan.pl/14OrderStat or contact Tomasz Rychlik, Dept. of Mathematical Statistics, Institute of Mathematics, Polish Academy of Sciences, Warszawa, International 00-956, Poland; +48 22 5228 219; osd2014@impan.pl.

*4–6—Workshop on Nonparametric Statistics for Big Data, Madison, Wisconsin

For more information, visit www.stat.wisc.edu/node/206 or contact Douglas Nychka, P.O. Box 3000, Boulder, CO 80305; (303) 725-3199; nychka@ucar.edu.

8–12—23rd International Workshop on Matrices and Statistics (IWMS), Ljubljana, Slovenia

For more information, visit www.law05.si/iwms or contact Damjana Kokol Bukovsek, Faculty of Economics, University of Ljubljana, Kardeljeva ploscad 17, Ljubljana, International 1000, Slovenia; Damjana.Kokol.Bukovsek@EF.Uni-Lj.SI.

16–26—Pan-American Advanced Study Institute on Spatial Statistics, Búzios, Brazil

For details, visit www.stat.washington.edu/peter/PASI/PASI_2014.html or contact Peter Guttorp, Box 354322, Seattle, WA 98195-4322; peter@stat.washington.edu.

17–20—First International Congress on Actuarial Science and Quantitative Finance, Bogotá, Colombia

For details, visit www.matematicas.unal.edu.co/icasqf or contact Jaime Londoño, Dept. of Mathematics, Universidad Nacional de Colombia, Bogotá, International 11001000, Colombia; [jalondonol@unal.edu.co](mailto:jalonodonol@unal.edu.co).

18–20—39th Annual Summer Institute of Applied Statistics, Provo, Utah

For more information, visit statistics.byu.edu or contact Amy Royer, 223 TMCB, Provo, UT 84602; (801) 422-4506; aroyer@stat.byu.edu.

*23–24—ASA Q&P and SPES Joint Research Conference, Seattle, Washington

For more information, visit jrc2014.org or contact Robert Gramacy, University of Washington, Seattle, WA 98195; (206) 543-2100; rbgramacy@chicagobooth.edu.

***24–28—Flint: One City, 100 Years Under Variability: International Conference, Flint, Michigan**

For details, visit bulldogs.kettering.edu/fisc or contact Boyan Dimitrov, 1700 University Ave., Flint, MI 48504; (810) 762-7910, bdimitro@kettering.edu.

26–27—International Conference on Survival Analysis in Memory of John P. Klein, Milwaukee, Wisconsin

For details, visit www.mcv.edu/biostatistics/JPKconference.htm or contact Haley Montsma, 8701 Watertown Plank Road, Suite H2100, Milwaukee, WI 53226; (414) 955-7439; hmontsma@mcw.edu.

29–7/2—34th International Symposium on Forecasting, Rotterdam, The Netherlands

For more information, visit forecasters.org/isf or contact Pamela Stroud, 53 Tesla Ave., Medford, MA 02155; (781) 234-4077; pamstroud@forecasters.org.

July

2–4—2014 International Conference of Applied and Engineering Mathematics, London, United Kingdom

For details, visit www.iaeng.org/WCE2014/ICAEM2014.html or contact IAENG Secretariat, Unit 1, 1/F, 37-39 Hung To Road, Hong Kong, International HK, Hong Kong; (852) 3169-3427; wce@iaeng.org.

7–9—Building Statistical Methodology and Theory: An International Conference in Honor of C.F. Jeff Wu for His 65th Birthday, Mile, China

For more information, visit www.stat.purdue.edu/~sunz/Jeff_2014/index.html or contact Jun Shao, 9402 Eaglewood Drive, Verona, Prince Edward Island S3S593; (608) 262-7938, shao@stat.wisc.edu.

7–10—Australian Statistical Conference in Conjunction with the Institute of Mathematical Statistics Annual Meeting (ASC-IMS 2014), Sydney, Australia

For more information, visit www.asc-ims2014.com or contact ASC-IMS 2014 Conference Managers, 51 Druitt St., Sydney, International 2000, Australia; +61 2 9265 0700; asc-ims2014@arinex.com.au.

7–18—The MBI-CAMBAM-NIMBioS Summer Graduate Program at MBI, Columbus, Ohio

For details, visit www.mbi.osu.edu/eduprograms/graduate2014.html or contact Rebecca Martin, The Ohio State University, Jennings Hall, 3rd Floor, 1735 Neil Ave., Columbus, OH 43210; (614) 688-3519; rebecca@mbi.osu.edu.

***11–13—2014 International Indian Statistical Association (IISA) Conference, Riverside, California**

For details, visit 2014iisa.intindstat.org or contact Subir Ghosh, Department of Statistics, University of California, Riverside, Riverside, CA 92521-0138; (951) 827-3781; subir.ghosh@ucr.edu.

14–18—29th International Workshop on Statistical Modelling (IWSM), Göttingen, Germany

For more information, visit www.uni-goettingen.de/iwsm2014 or contact Julia Meskauskas, Platz der Göttinger Sieben 5, Göttingen, International 37073, Germany; +49 (0)551 39 21104; iwsm2014@uni-goettingen.de.

August

***2–7—2014 Joint Statistical Meetings and ASA's 175th Anniversary, Boston, Massachusetts**

For details, visit www.amstat.org/meetings/jsm/2014 or contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; (888) 231-3473; meetings@amstat.org.

18–22—SAMSI Mathematical and Statistical Ecology Opening Workshop, Research Triangle Park, North Carolina

For details, visit <http://bit.ly/19sRlxN> or contact Jamie Nunnally, 19 TW Alexander Drive, RTP, NC 27709; (919) 685-9350.

24–28—35th Annual Conference of the International Society for Clinical Biostatistics, Vienna, Austria

For more information, visit www.iscb2014.info or contact AIM Group, Spitalgasse 23, Vienna, International 1090, Austria, +43 1 4027755 600, iscb2014@aimgroup.edu.

24–29—MiF 2014: Fifth International Conference on Mathematics and Statistics in Finance, Skukuza, Kruger National Park, South Africa

For more information, visit www.nwu.ac.za/content/mif-2014-landing-page or contact PJ (Riaan) de Jongh, Centre for BMI, North-West University, Hoffmanstreet, Potchefstroom, International 2531, South Africa; +27182992585; riaan.dejongh@nwu.ac.za. ■

Visit the **ASA Calendar of Events**, an online database of statistical happenings across the globe. Announcements are accepted from educational and not-for-profit organizations. To view the complete list of statistics meetings and workshops, visit www.amstat.org/dateline.

sectionnews

Biometrics

Edited by Feifei Wei, Biometrics Section
Publications Officer

The Biometrics Section would like to introduce you to the current members of the section's executive committee and offer a well-deserved thank you to the outgoing officers.

The section chair for 2014 is **Mike Daniels**, professor in the Section of Integrative Biology and Division of Statistics and Scientific Computation at The University of Texas at Austin. His research interests include Bayesian methods for incomplete longitudinal data and causal inference and priors and estimators for dependence. He earned his ScD in biostatistics from Harvard University in 1995. He currently collaborates on projects involving new interventions for weight management and imaging to monitor progression of Duchenne's muscular dystrophy.

Our chair-elect for 2013 is **Diana Miglioretti**, dean's professor of biostatistics in the department of public health sciences at the University of California Davis School of Medicine. She earned her PhD in biostatistics from the Johns Hopkins Bloomberg School of Public Health in 2000. Her current research interests include clustered and longitudinal data analysis, screening and diagnostic test evaluation, and risk prediction modeling.

Yu Shen continues as our secretary/treasurer. Yu is a professor of biostatistics in the department of biostatistics at The University of Texas MD Anderson Cancer Center and an adjunct professor at Rice University. She earned her PhD in biostatistics from the University of Washington. Her areas of research interest include survival analysis with biased sampling, design and analysis of cancer clinical trials and observational studies, primary and secondary cancer prevention, and cost-effectiveness analysis of cancer screening strategies.

Jonathan Schildcrout is the section program chair to the 2014 JSM Program Committee. Jonathan is an associate professor in the biostatistics department at the Vanderbilt University School of Medicine. He earned his PhD in biostatistics from

the University of Washington in 2004. His methodological interests relate to longitudinal data analysis and efficient study designs with data that are measured repeatedly over time.

Jason Roy is the section representative to the 2014 ENAR Meeting Program. He is associate professor in the department of biostatistics and epidemiology at the University of Pennsylvania. He earned his doctorate from the University of Michigan in 2000. His methodological research interests include causal inference, missing data, and multiple outcome models.

Rebecca Hubbard is the section program chair to the 2015 JSM Program Committee. She is an associate investigator at the Group Health Research Institute and an affiliate assistant professor at the University of Washington. She earned her PhD in biostatistics from the University of Washington in 2007. Rebecca's research interests include statistical methods for longitudinal observational data, including multi-state models, with a focus on methods for data from electronic health records.

Joe Hogan is our 2014–2016 representative to the Council of Sections. He is professor of biostatistics at Brown University School of Public Health. His current research interests are in causal inference for observational studies and methods for analyzing data from electronic health records.

LiHong Qi is the section program chair for the 2015 ENAR Meeting Program. She is an associate professor of biostatistics in the department of public health sciences at the University of California Davis School of Medicine. She earned her PhD in biostatistics from the University of Washington in 2003 and had her postdoctoral training at the Fred Hutchinson Cancer Research Center. Her research interests include survival analysis, missing data, and identifying genetic and environmental factors for complex diseases/disorders including cancer, autism, and birth defects.

Scarlett L. Bellamy continues as our 2012–2014 representative to the Council of Sections. She has been a faculty member at the University of Pennsylvania Department of Biostatistics and Epidemiology since completing her doctoral studies at Harvard in 2001. Her research interests are focused on the methodological issues related to the design and analysis of cluster-randomized trials. She is particularly interested in applying this methodology to community-based research projects and projects that address health disparities for a variety of clinical and behavioral health outcomes.

Limin Clegg continues as our 2013–2015 representative to the Council of Sections. She is a senior-level federal government employee, serving as the director for the Division of Biostatistics

and Program Evaluations at the Office of Inspector General in the U.S. Department of Veterans Affairs. She earned her doctorate in biostatistics from The University of North Carolina at Chapel Hill. Her research interests are in survival analysis, statistical methods for epidemiology and public health, and building population-based administrative data files across federal government health care systems to evaluate health care issues across the continuum of care systems.

Donglin Zeng continues as the continuing education chair. He is a professor in the department of biostatistics and the co-director of the Carolina Survey Research Lab at The University of North Carolina. He earned his PhD in statistics from the University of Michigan. His research interests include semiparametric models, high-dimensional data analysis, personalized medicine, survival analysis, clinical trials, and survey sampling.

Roslyn Stone is our co-chair of the Strategic Initiatives Committee. She is a professor in the department of biostatistics at the University of Pittsburgh Graduate School of Public Health. She earned her doctorate in biomathematics from the University of Washington. Her research interests are in generalized linear models, survival analysis, multi-level models, statistical methods for occupational and environmental epidemiology, guideline implementation, and cluster-randomized studies.

Page Moore is our co-chair of the Strategic Initiatives Committee. She earned her doctorate in statistics from Baylor University in 2006 and is now an associate professor in the department of biostatistics at the University of Arkansas for Medical Sciences. Her main research interests are in multiple imputation techniques, longitudinal data analysis, computational statistics, and clinical trial design.

Feifei Wei continues as the section's publication officer through 2014. She is an associate professor in the department of biostatistics in the college of public health of the University of Arkansas for Medical Sciences. She earned her doctorate in statistics from The Ohio State University. Her research interests focus on using population-based health care data sets to identify disparities in immunization and predict health-related events occurring in community settings.

Gerald Beck is our webmaster. He is a staff member in the department of quantitative health sciences at the Cleveland Clinic Foundation. His primary interest is in the design, conduct, and analysis of clinical trials. He serves as principal investigator of data coordinating centers for multi-center clinical studies supported by the National Institutes of Health, including the Frequent Hemodialysis Network Trials and the Hemodialysis Fistula Maturation Study.



Survey Michigan

Photo credit: Thinkstock

Courses in Survey Research Techniques,
Questionnaire & Sample Design, Data Collection Methods, and Survey Analysis

June 2 – July 25, 2014

www.si.isr.umich.edu



67th annual **Summer Institute** in Survey Research Techniques
Survey Research Center, Institute for Social Research, University of Michigan
For more information: Phone (734) 764 6595, Toll Free (877) 880-9389

Helping Out at JSM

Want to get more involved in JSM? Consider volunteering to chair a session. Chairing a session is an important responsibility and a great way to meet your colleagues. If you are interested, contact Schildcrout at jonathan.schildcrout@vanderbilt.edu.

Strategic Initiatives

The following three proposals have been funded as part of the section's Strategic Initiative, "Developing the Next Generation of Biostatisticians":

- TSHS Resources Portal Taxonomy, Dennis Pearl, The Ohio State University
- Biostatistics: High-Impact Discipline and Growing Career Field, Jane Monaco, The University of North Carolina at Chapel Hill
- TSHS Resources Portal Best Practices, Carol Bigelow, University of Massachusetts-Amherst

Continuing Education

The following continuing education proposals sponsored by our section were selected for JSM 2014:

Cure Models and Their Applications in Biomedical Research (1/2-day) Jeremy Taylor, University of Michigan • Yingwei Peng, Queen's University

Cure models refer to a class of models for survival data with a cured fraction. The standard survival models often assume subjects in a study will experience the event of interest with sufficient follow-up. However, this assumption may not be appropriate in situations such as cancer studies where patients may be cured and will not experience relapse however long the follow-up. The last 15 years witnessed a rapid growth in extending survival models to accommodate potential cured subjects. New statistical methodologies were developed to extend the existing survival models, and the newly proposed cure models greatly expand the applicability of cure models to various types of survival data with a cured fraction and provide appealing ways to interpret the results of analysis, compared to standard survival analysis models. This course will cover the mixture and bounded cumulative hazard formulation of cure models, estimation methods, identifiability issues, and software and consider extensions to clustered data, population studies, and joint longitudinal and survival data. The instructors will introduce data sets from clinical studies, present necessary details of the cure models, and demonstrate software.

Adaptive Methods in Action: How to Improve Pharmaceutical Drug Development (1-day)

Guosheng Yin, Hong Kong University • Byron Jone, Novartis Pharma • Frank Bretz, Novartis Pharma

Clinical trials play a critical role in pharmaceutical drug development. New trial designs often depend on historical data, which may not be accurate for the current study due to changes in study populations, patient heterogeneity, or different medical facilities. As a result, the original plan and study design may need to be adjusted, or even altered, to accommodate new findings and unexpected interim results. The goal of using adaptive methods in clinical trials is to enhance the flexibility of trial conduct and maintain the integrity of trial findings. Through carefully thought-out and planned adaptation, we can pinpoint the right dose faster, treat patients more effectively, identify treatment effects more efficiently, and expedite the drug-development process. From perspectives of practicality, this one-day short course will introduce various adaptive methods for phase I to phase III clinical trials. Accordingly, different types of adaptive designs will be introduced and illustrated with case studies. This includes dose escalation/de-escalation and dose insertion based on observed data; adaptive dose-finding studies using optimal designs to allocate new cohorts of patients based on the accumulated evidence; population enrichment designs; early stopping for toxicity, futility, or efficacy using group-sequential designs; blinded and unblinded sample size re-estimation; and adaptive for confirmatory trials with treatment or population selection at interim.

Analysis of Genome-Wide Sequencing Association Studies (1-day) Xihong Lin, Harvard University • Mike Wu, The University of North Carolina

This short course will teach the current statistical methodology for designing and analyzing sequencing association studies to identify the genetic basis of common complex diseases. Rapid advances in next-generation sequencing technologies offer exciting opportunities to gain a better understanding of biological processes underlying complex disease and can lead to new approaches for prevention and treatment. Recently, investigators have exploited these advances and are conducting large-scale sequencing association studies, such as the whole exome sequencing studies, to identify new genetic variants that play important roles in complex diseases. Such data are becoming increasingly common in the hopes that results will not only better our understanding of disease etiology, but also improve treatment response. However, due to the massive

number of variants and the rareness of many of these variants across the genome, combined with sequencing costs and the complexity of diseases, analysis of such studies remains challenging. To address the critical statistical gaps, significant effort has led to development of new efficient methods for designing and analyzing emerging sequencing studies. This short course provides an overview of statistical methods for analysis of genome-wide sequencing association studies. Topics include pipelines for low-level processing of whole exome sequencing data, QC methods, review of the 1000 Genome Project and the Whole Exome Sequencing Project, imputation methods for sequencing data, statistical methods for detecting rare variant effects, meta-analysis, interaction testing, and designs for whole genome-wide (exome) sequencing studies. Data examples will be provided and software will be discussed.

Quantile Regression (1-day) Roger Koenker, University of Illinois, Urbana-Champaign • Huixia Judy Wang, North Carolina State University

Quantile regression is a valuable alternative to classical least squares regression. Instead of modeling the conditional functions, quantile regression offers a variety of methods for estimating conditional quantile functions. In applications such as birth weight studies, survival analysis, climate studies and so on, the covariates may have different impacts on different tails of the response distribution. Quantile regression enables the researcher to explore more thoroughly heterogeneous covariate effects and study the tails of scientific interest. The course will offer a comprehensive introduction to quantile regression methods and briefly survey recent developments. The first part of the course will introduce basics of quantile regression, including its features, comparison with the least squares regression, estimation and computation, statistical properties, and inferential procedures. Methods will be demonstrated by using examples from birth weight, climate, and survival studies. The second part of the course will discuss more advanced topics, including nonparametric quantile regression, quantile regression for longitudinal and time series data, censored quantile regression and survival analysis, and Bayesian quantile regression. Course lectures will be complemented by a computationally oriented interlude designed to give students experience with application of the methods. This session will be conducted in the open-source R language and rely on the `quantreg` package.

Missing Data Methods for Regression Modeling (1-day) Joe Ibrahim, The University of North Carolina

This short course covers an important topic in statistical inference, namely missing data methods in regression models. Missing data is a major issue in many applied problems, especially in the biomedical sciences, including clinical trials, longitudinal studies, observational studies, and sample surveys. The short course on such a topic is timely, since much software has been recently developed to fit various types of regression models with missing covariate and/or response data. One unique and extremely strong feature in this short course is that it will focus on regression models and research problems encountered in actual practice and demonstrate a wide variety of statistical packages dealing with missing data, including SAS, `logXact`, and `WinBUGS`.

Regression models covered will include linear and generalized linear models, models for longitudinal data, and survival models. Missing responses and/or covariates will be examined as well as ignorable and nonignorable missing data mechanisms. This short course will be comprehensive in its coverage of the various methodologies for handling missing data, including detailed coverage of maximum likelihood, multiple imputation, fully Bayesian methods, and weighted estimating equations. We will examine several case studies with missing data and demonstrate the various missing data methodologies using these case studies.

Applied Longitudinal Analysis (1-day) Garrett Fitzmaurice, Harvard University • Nan Laird, Harvard University

The goal of this course is to provide a broad introduction to statistical methods for analyzing longitudinal data. The main emphasis is on the practical aspects of longitudinal analysis. The course begins with a review of established methods for longitudinal data analysis when the response of interest is continuous. A general introduction to linear mixed effects models for continuous responses is presented. Next, we discuss how smoothing and semiparametric regression allow greater flexibility for the form of the relationship between the mean response and covariates. We demonstrate how the mixed model representation of penalized splines makes this extension straightforward. When the response of interest is categorical (e.g., binary or count data), two main extensions of generalized linear models to longitudinal data have been proposed: marginal models and generalized linear mixed models. While both classes of models

account for the within-subject correlation among the repeated measures, they differ in approach. In this course, we highlight the main distinctions between these models and discuss the types of scientific questions addressed by each.

For more information about the Biometrics Section, visit www.bio.ri.ccf.org/Biometrics. For information about the continuing education courses at this year's Joint Statistical Meetings, visit www.amstat.org/meetings/jsm/2014/ce.cfm.

Physical and Engineering Sciences

Winson Tam, SPES Chair

Thanks to all its volunteers, the Section on Physical and Engineering Sciences (SPES) had a wonderful 2013. SPES offered a variety of services to its nearly 700 members. It sponsored a number of conferences and webinars and an industrial speaker program. It also recognized achievements among its ranks with awards and scholarships.

As the ASA started using communities to network its members, SPES decided to align its main website with a SPES microsite (<http://community.amstat.org/SPES/Home>), which now serves as a single entry point to all SPES-related information. It has the look and feel of all other community sites within the ASA. You could sign in to SPES-associated communities through this microsite. Thanks to the tireless effort of our webmaster.

The Spring Research Conference (SRC) was held at the University of California at Los Angeles. The Fall Technical Conference (FTC) was held in San Antonio, Texas. Both conferences were well attended and had many innovative topics to highlight our members' technical accomplishments. SPES sponsored these conferences to build a community of industrial statisticians working in various physical and engineering science fields. SPES sponsored several student scholarships at SRC and a number of short courses at FTC. Marie Davidian, ASA past-president, gave a talk titled "Achieving Personalized Medicine: An Introduction to Optimal Dynamic Treatment Regime" to encourage cross-discipline dialog about methods used in medical research and engineering applications.

SPES was well represented at the Joint Statistical Meetings in Montréal. The joint mixer with the Quality and Productivity Section was a great success with an endless supply of door prizes donated by various individuals and corporations. They are too many to name here, but look for other SPES news regarding that. During the mixer, this year's *Technometrics* Ziegler Prize was awarded to Bradley

Jones and Peter Goos for their book, *Optimal Design of Experiments: A Case Study Approach*.

We can't thank Stephanie DeHart enough for securing funds from DuPont to sponsor this year's Statistics in Chemistry Award, which was given out at the JSM awards ceremony. Members of the SPES executive committee just voted to adopt the proposals put forward by the Chemometric Award Committee to transition the Statistics in Chemistry Award to the Statistics in Physical and Engineering Science Award in 2015.

Regarding conferences, a volunteered web survey was conducted to get a sense of how frequent our membership attended SPES-sponsored conferences in the past five years. Among those who responded to the survey, the majority did not attend SRC, FTC, and webinars. Most attended JSM. This study helped SPES to explore other services for its membership.

Quality and Productivity Section and Section on Physical and Engineering Sciences

JOINT RESEARCH CONFERENCE

University of Washington, Seattle, Washington

June 23, 2014

Short Course on Bayesian Statistical Process Control

June 24 – 26, 2014

In 2014, the **ASA Quality and Productivity (Q&P) Section's Quality and Productivity Research Conference** will combine with the **ASA's Section on Physical and Engineering Sciences Spring Research Conference** to create a **Joint Research Conference (JRC)** with the theme "Statistics and Quality in a Data Rich World." The 2014 JRC will be held June 24–26 at the University of Washington. The goal of the conference is to stimulate interdisciplinary research among statisticians, scientists, and engineers in quality and productivity, industrial needs, and the physical and engineering sciences. Statistical issues and research approaches drawn from collaborative research will be highlighted.

The conference will honor Douglas Hawkins from the University of Minnesota. Conference registration includes a tour and reception at the Future of Flight Aviation Center and a tour of Boeing's Commercial Jet Assembly Plant in Everett, Washington (the world's largest building).

For a small additional registration fee, a short course on Bayesian statistical process control taught by Panagiotis Tsiamirtzis will be offered before the conference on June 23.

For further information about the conference program, registration, and housing, visit <http://jrc2014.org> or contact either Robert Gramacy at rgramacy@chicagobooth.edu or Christina Mastrangelo at mast@u.washington.edu.

In addition to various community-building activities such as conferences and continuing education programs (webinars and short courses), SPES also nominated members to become ASA Fellows. SPES was successful in doing so in 2013 for William Brennehan, who contributed extensively to industrial experiments and advancing decision-making processes with data. I would like to extend our congratulations to SPES members **William Guthrie**, **William Li**, **Shane Reese**, and **Ananda Sen** for becoming ASA Fellows in 2013.

All these activities could not be accomplished without the dedication and effort put forth by SPES officers. If you have a chance, please reach out to them at <http://community.amstat.org/SPES/OfficerDirectory> and thank them for their time and talent. Speaking of officers, I would like to welcome the newly elected officers for 2014: **Stephanie DeHart** (chair-elect), **William Li** (JSM program chair-elect), and **Peter Hovey** (treasurer).

I would like to thank all of you for supporting SPES and making my job so much easier. I look forward to more exciting activities and events from SPES in the coming months.

Survey Research Methods

Jill Montaquila

Happy New Year! As you may know, 2013 was declared the International Year of Statistics (www.statistics2013.org) and, as we usher in 2014, we continue to celebrate our profession.

As evidenced by the Survey Research Methods Section's (SRMS) full program at the Joint Statistical Meetings, developments in survey research abound. The list of SRMS-sponsored activities at JSM reads a bit like a familiar Christmas carol—invited, topic-contributed, and contributed paper sessions; topic-contributed and contributed poster sessions; a continuing education course; roundtable discussions; and the section's annual open business meeting. But amidst this slate of "usual" activities, there was a noteworthy addition—the SPEED session, a single session containing 20 five-minute oral presentations, followed by a poster session (later the same day) involving the same presenters. SRMS was one of five ASA sections to participate in piloting the SPEED sessions. With quite a bit of positive feedback from their inaugural test, SPEED sessions will be part of the program for JSM 2014 in Boston.

Plans are also in the works for a series of SRMS-sponsored webinars in 2014. The webinars are announced to the SRMS membership via email and in the section newsletter, and information about upcoming SRMS-sponsored webinars also is

provided on the section website (www.amstat.org/sections/SRMS). SRMS members also are eligible to register for webinars sponsored by the American Association for Public Opinion Research (AAPOR) at a discounted rate.

The year 2013 saw the launch of a new scholarly journal that provides an important outlet for new developments in the field of survey research, the *Journal of Survey Statistics and Methodology* (JSSAM). Co-sponsored by the ASA and AAPOR, JSSAM aims "to publish cutting-edge scholarly articles on statistical and methodological issues for sample surveys, censuses, administrative record systems, and other related data." Through a special arrangement, Oxford University Press is providing free subscriptions to JSSAM for all members of SRMS for the first three years. Information about JSSAM is available at www.oxfordjournals.org/our_journals/jssam.

There are many who contributed to SRMS activities during the past year, and I would like to recognize the dedication and contributions of those who served on the executive committee and related committees. These include past chair **John Czajka**, chair-elect **Phil Kott**, treasurer **Jill Dever**, secretary **Rebecca Andridge**, program chair **Frauke Kreuter**, program chair-elect **Karol Krotki**, Council of Sections representatives **Chris Moriarity** and **Jeff Gonzalez**, publications officer **John Finamore**, education officer **Marilyn Seastrom**, newsletter editors **Shelton Jones** and **Jamie Ridenhour**, and webmaster **Pushpal Mukhopadhyay**. ■

Annual Connecticut Chapter Mini-Conference

The 12th Annual Connecticut Chapter Mini-Conference, "Statistics in Evidence Synthesis—Personalized Medicine and Comparative Effectiveness Research," will be held March 26 on the Boehringer-Ingelheim campus in Ridgefield, Connecticut.

Invited speakers for the conference are Eric Lober from North Carolina State University, Lei Shen from Eli Lilly & Company, Jason Hsu from The Ohio State University, Demissie Alemayehu from Pfizer Inc., and Christopher Schmid from Brown University. Additionally, a contributed poster session will be held.

Visit the CT-ASA website at www.amstat.org/chapters/Connecticut/home for more information and to register.

Arkansas

■ The Agricultural Statistics Laboratory, a unit of the Arkansas Agricultural Experiment Station, has an opening for a 12-month, non-tenure-track assistant professor. A in statistics or biostatistics is required. Duties include statistical and collaborative research, statistical consulting, and professional service. Further information and application procedure found at www.uark.edu/depts/agstat. For questions regarding the position, contact egbur@uark.edu. Review of applications will begin January 2, 2014. The University of Arkansas' Division of Agriculture is an equal opportunity, affirmative action institution. All applicants are subject to public disclosure under the Arkansas Freedom of Information Act and persons hired must have proof of legal authority to work in the United States.

California

■ Associate/full professor of biostatistics, UCSF. Responsibilities: Direct biostatistics core of UCSF Cancer Center, conduct methods research in clinical, epidemiological or biological aspects of cancer. Biostatistics/statistics required. Apply (including CV & names of three references) by 3/31/14, to Frank McCormick, FRS, c/o Kate Shumate, Director of Scientific Program Administration, UCSF Helen Diller Family Cancer Center, 185 Berry St., Suite 6608, San Francisco, CA 94107. The University of California, San Francisco, is an affirmative action/equal opportunity employer. The University undertakes affirmative action to assure equal employment opportunity for underutilized minorities and women, for persons with disabilities and for Vietnam-era veterans and special disabled veterans.

Connecticut

■ Yale University's Program for Applied Translational Research is looking for an experienced biostatistician with a strong interest in academic scholarship and publication as well as tremendous skill in managing, programming and analyzing data from multiple sources including large administrative databases. To review and

Professional Opportunity listings may not exceed 65 words, plus equal opportunity information. The deadline for their receipt is the 20th of the month two months prior to when the ad is to be published (e.g., May 20 for the July issue). Ads will be published in the next available issue following receipt. Listings are shown alphabetically by state, followed by international listings. Vacancy listings may include the institutional name and address or be identified by number, as desired. Professional Opportunities vacancies also will be published on the ASA's website (www.amstat.org). Vacancy listings will appear on the website for the entire calendar month. Ads may not be placed for publication in the magazine only; all ads will be published both electronically and in print. **Rates:** \$320 for nonprofit organizations (with proof of nonprofit status), \$475 for all others. Member discounts are not given. For display and online advertising rates, go to www.amstat.org/ads. Listings will be invoiced following publication. All payments should be made to the American Statistical Association. All material should be sent to *Amstat News*, 732 North Washington Street, Alexandria, VA 22314-1943; fax (703) 684-2036; email advertise@amstat.org. Employers are expected to acknowledge all responses resulting from publication of their ads. Personnel advertising is accepted with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual orientation. Also, look for job ads on the ASA website at www.amstat.org/jobweb.

apply to this position, please visit www.yale.edu/jobs and search for requisition #23403BR. Yale is an AA/EOE.

Hawaii

■ University of Hawaii SOM biostatistics core is seeking MS or statisticians to provide research design, statistical programming and analysis support to biomedical research projects. Requirements: ability to plan and/organize, find creative solutions to new problems, critical thinking and excellent communication skills, attention to detail and committed to high standards of work quality. Send letter of interest, resume, names of references, and transcripts to biostat@hawaii.edu. EOE.

Kentucky

■ The University of Kentucky Markey Cancer Center is seeking a Bioinformatics Analyst to work on collaborative and research projects in cancer genomics. The position requires a master's degree preferably in statistics, computer science or a related field. Strong computational

CARNEGIE MELLON UNIVERSITY Assistant/Associate Teaching Professor

Applications are invited for the position of Teaching Professor, rank (Assistant, Associate or Full) to be determined. The Department of Statistics, Carnegie Mellon University is seeking a passionate, master teacher to contribute to our thriving, modern undergraduate and graduate programs. The successful candidate will be expected to have a strong and successful teaching record, demonstrate excellence in statistical pedagogy, and an active research agenda. This position emphasizes teaching, student advising, curriculum development, and supervising collaborative research projects. PhD in statistics, biostatistics or related area required.

See <http://www.stat.cmu.edu> or email hiring@stat.cmu.edu for more details. Send CV, relevant transcripts, teaching and research statements, and three recommendation letters to:

Teaching Faculty Search Committee, Statistics,
Carnegie Mellon University, Pittsburgh, PA
15213, USA or hiring@stat.cmu.edu.

Application screening begins immediately,
continues until positions closed.

Women and minorities are encouraged to apply. AA/EOE.



37th Annual Midwest Biopharmaceutical Statistics Workshop

May 19–21, 2014 • Ball State University, Muncie, Indiana

Modern Perspectives: Model Selection and Validation

Thank You

The following individuals have made vital contributions to the success of the workshop

Cindy Lee of Eli Lilly—Co-registrar

Yun-Fei Chen of Eli Lilly—Co-registrar

Yonggang Zhao of Skyview Pharma Services—Treasurer

Ying Grace Li of Eli Lilly—Treasurer

Dale Umbach—Local arrangements chair

Fangyi Zhao of Eli Lilly—Outgoing-chair poster session

Bill Pikounis of Johnson and Johnson—Past-chair poster session, webmaster, and social feeds

Additionally, we would like to acknowledge the contributions of the session chairs and speakers, all of whom are listed on the website.

Charles Sampson of Eli Lilly (retired)

Mir Masoom Ali of Ball State (retired)

Stan Young of CGStat

Jeff Hofer of Eli Lilly

Jackie Reisner of PPD

HALF-DAY SHORT COURSES

Network-Based Analysis of High-Throughput Omics Data by Steven Ma (Yale University)

An Introduction to Data-Driven Treatment Regimes by Eric Laber (North Carolina State University)

MONDAY PLENARY SESSIONS

Lessons Learned from the OMOP and Sentinel Experiments: Is There a Third Way to Address the Safety of Medical Products—Marianthi Markatou (SUNY - Buffalo)

Validation in Drug Development—C. Glenn Begley (Independent Consultant)

There will be four main parallel tracks, with sessions on Tuesday and Wednesday. The four tracks are Clinical; Discovery/Pre-clinical; Chemistry, Manufacturing, and Controls; and Health Outcomes and Observational Research. Each track will have three sessions at least two hours in length with 3–5 speakers. Speakers have time to discuss topics in more detail than at many conferences, and participants will have many opportunities to ask questions and participate in discussions. Additionally, speakers from the FDA and other governmental agencies will be invited to give presentations.

A student-focused session organized by Yun-Fei Chen and Brian Millen of Eli Lilly and Cathie Spino of the University of Michigan will again be part of the workshop.

KAISER FUNG is this year's banquet speaker. He will discuss his book, *Numbersense: How to Use Big Data to Your Advantage*.

Contributed posters are being accepted for the poster session, to be held on Tuesday, with Ying (Grace) Li of Eli Lilly serving as the chair. The poster session theme is "From Theories to Applications: Great Opportunities Being a Statistician in the Pharmaceutical Industry." Posters will be considered on any biopharmaceutical statistical topic. Abstracts must be submitted by April 11.

www.mbswonline.com

Questions not addressed on the website can be sent to Melvin Munsaka, publicity chair, at melvin.munsaka@takeda.com; Steven Novick, workshop chair, at chair@mbswonline.com; or Dale Umbach, local arrangements chair, at dumbach@bsu.edu.

Updates about the workshop:

Twitter: @mbswonline, <https://twitter.com/mbswonline>

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MBSW was co-founded by Charles B. Sampson and Mir Masoom Ali and is co-sponsored by the ASA Biopharmaceutical Section. MBSW, which was founded as a conference to meet the needs of U.S. pharmaceutical industry statisticians in the Midwest, has remained in Muncie, but welcomes attendees from across the United States and around the world.

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Maryland

■ Seeking experienced master's statisticians for Center for Devices and Radiological Health, FDA, HHS in Silver Spring, MD. Grapple with rich array of statistical issues in clinical trials for new technologies, from LASIK and artificial hearts to genetic tests and robotic surgery. Review statistical design/analysis issues in medical devices from invention to postmarket. Email CV to Greg Campbell, greg.campbell@fda.hhs.gov. Identify residency/visa status in application. FDA is a smoke-free environment and an Equal Opportunity Employer.

Nebraska

■ Tenure-track assistant professor (12-month), Department of Statistics, University of Nebraska-Lincoln, start August 2014. See <http://employment.unl.edu> (requisition # F_130231) for complete application information. Submit letter of interest, CV, graduate transcript(s), research and teaching statements (each one page), and arrange for three reference letters to be sent to bpik2@unl.edu. Application review is 2/3/2014. employment.unl.edu. The University of Nebraska has an active National Science Foundation ADVANCE gender equity program, and is committed to a pluralistic campus community through affirmative action, equal opportunity, work-life balance, and dual careers.

Ohio

■ The Ohio State University Center for Biostatistics is recruiting experienced and master's-level biostatisticians. Qualifications include extensive experience collaborating in a research environment as a biostatistician; managing large databases, utilizing statistical software packages; preparing grant applications, and writing research papers. Additional coursework in epidemiology, public health, biology, or medicine is desired. Details can be found at www.biostatistics.osu.edu/aboutus. Send CV and cover letter to biostatistics@osumc.edu. AA/EOE.

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■ Tenure-track assistant professor of analytics, College of Business, University of Cincinnati, starting fall 2014: (or nearly resolved ABD) in statistics, operations research, analytics, or closely related discipline. Demonstrate success or high potential in producing excellent research and effective teaching. Submit applications through www.jobsatuc.com (213UC7107), and inquiries to Professor Yu, AnalyticsSearch.UC@gmail.com. Review of applications starts on January 10, 2014, until the position is filled. The University of Cincinnati is an affirmative action/equal opportunity employer. Women, people of color, persons with a disability, and Vietnam-era and veterans that are disabled are encouraged to apply.

Pennsylvania

■ Carnegie Mellon University has possible tenure-track and visiting positions. Collegial environment emphasizing disciplinary and cross-disciplinary research and teaching. All statistics areas welcome. Joint appointments possible with other units in Pittsburgh area. See www.stat.cmu.edu.

[cmu.edu](mailto:hiring@stat.cmu.edu) (email: hiring@stat.cmu.edu). Apply online: <https://webapps.cs.cmu.edu/FacultyApplication/Statistics>. Application screening begins immediately, continues until positions closed. (If you previously applied by email or mail there is no need to register online.) www.stat.cmu.edu AA/EOE. Women and minorities encouraged to apply.

■ Statistical analyst/programmer - Temple University School of Medicine: provide programming, statistical, and educational support to faculty and trainees under the general direction of the department chair and statistical faculty. Bachelor's degree in statistics or biostatistics and at least 3 years of related experience with statistical analysis and/or statistical programming in SAS. Please visit our website at www.temple.edu. EOE.

■ Possible tenure-track and visiting positions. Collegial environment emphasizing disciplinary and cross-disciplinary research and teaching. All areas of statistics welcome. Joint appointments possible with other units in the Pittsburgh area. See www.stat.cmu.edu (email: hiring@stat.cmu.edu). Send CV, research papers, relevant transcripts, and three recommendation letters to: Faculty Search Committee, Statistics, Carnegie Mellon University, Pittsburgh, PA 15213, USA. Application screening begins immediately, continues until positions closed. Women and minorities are encouraged to apply. AA/EOE.

Utah

■ Faculty, assistant professor, statistics. The Department of Mathematics at Utah Valley University invites qualified individuals to apply for a tenure-track position as an assistant professor of statistics starting August 2014. Duties include teaching lower- and upper-division statistics courses as well as mathematics courses as required. Apply online: www.uvu.jobs. Review of applications will begin February 1, 2014. Utah Valley University is an Affirmative Action / Equal Opportunity/ Equal Access Employer.

■ Faculty, assistant professor, mathematics education. The department of mathematics at Utah Valley University invites qualified individuals to apply for a tenure-track position as an assistant professor

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Survey Sampling Statistician

EOE

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Our company was founded in 1961 by three statisticians. The current staff of more than 2,000 includes over 60 statisticians, as well as research, technical, and administrative staff. In addition, our professional staff is supported by data collection and processing personnel situated locally and in field sites around the country. The work atmosphere is open, progressive, and highly conducive to professional growth.

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Applications should be submitted electronically at <https://www.iastatejobs.com>; look for vacancy number 131437. Completed applications should include a letter of application, curriculum vita, up to five significant publications, and contact information for three references. Applicants for assistant professor should electronically submit course transcripts as a PDF file. Review of applications will begin on 3/1/2014 and will continue until the position is filled. EOE/AA.

of mathematics education beginning in August 2014. Duties include teaching mathematics courses for elementary education majors and other mathematics courses as required. Apply online: www.uvu.jobs. Utah Valley University is an Affirmative Action / Equal Opportunity/ Equal Access Employer.

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■ Applications are invited for a teaching-track faculty position at Carnegie Mellon Qatar in Education City, Doha. This position emphasizes undergraduate teaching primarily, but also involves a combination of course development and/or research. All areas of statistics are welcome. See www.stat.cmu.edu (email: hire@stat.cmu.edu). Send CV, relevant transcripts, teaching statement, and three recommendation letters to: Search Committee, Statistics, Carnegie Mellon University, Pittsburgh, PA 15213 or hire@stat.cmu.edu. Women and minorities are encouraged to apply. AA/EOE.

■ Applications are invited for a teaching-track faculty position at Carnegie Mellon Qatar in Education City, Doha. This position emphasizes undergraduate teaching primarily, but also involves a combination of course development and/or research. All statistics areas welcome. See www.stat.cmu.edu (email: hire@stat.cmu.edu). Apply online: <https://webapps.cs.cmu.edu/FacultyApplication/Statistics>. (If you previously applied by email or mail there is no need to register online.) Women and minorities encouraged to apply. AA/EOE. ■

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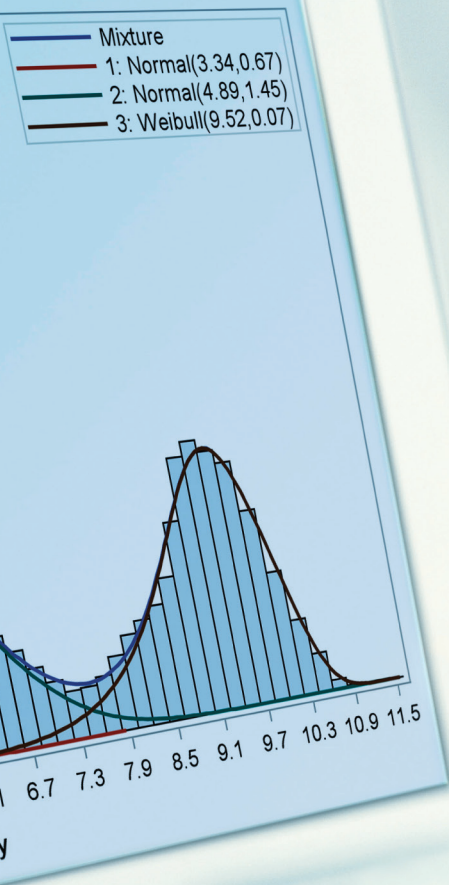
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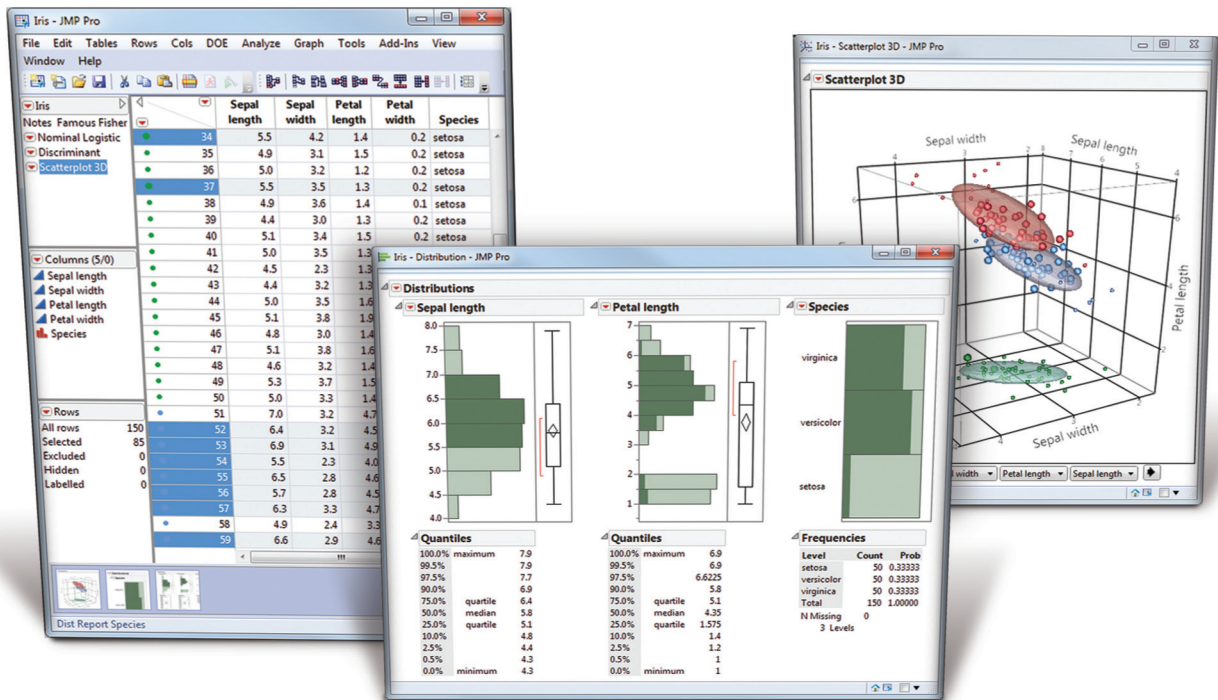
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