

AMSTATNEWS

The Membership Magazine of the American Statistical Association • <http://magazine.amstat.org>



Celebrating the 175th Anniversary at JSM 2014

ALSO:

You Are the Master of Your
Master's

Time to Embrace a New
Identity?



STATISTICA™

High Performance, Massively Parallel,
In-Memory Processing of *HUGE* Data.

by  StatSoft®



Extract Clean Analyze Identify Predict

Making the World
More Productive.®



StatSoft is now a part of Dell

Headquarters: StatSoft, Inc. • 2300 East 14 Street • Tulsa, OK 74104 • USA • +1 (918) 749-1119 • info@statsoft.com • www.statsoft.com

Australia: StatSoft Pacific Pty Ltd.
Brazil: StatSoft South America Ltda.
Bulgaria: StatSoft Bulgaria Ltd.
Chile: StatSoft South America Ltda.
China: StatSoft China

Czech Rep.: StatSoft Czech Rep. s.r.o.
France: StatSoft France
Germany: StatSoft GmbH
Hungary: StatSoft Hungary Ltd.
India: StatSoft India Pvt. Ltd.

Israel: StatSoft Israel Ltd.
Italy: StatSoft Italia srl
Japan: StatSoft Japan Inc.
Korea: StatSoft Korea
Netherlands: StatSoft Benelux

Norway: StatSoft Norway AS
Poland: StatSoft Polska Sp. z o.o.
Portugal: StatSoft Iberica Lda
Russia: StatSoft Russia
S. Africa: StatSoft S. Africa (Pty) Ltd.

Spain: StatSoft Iberica Lda
Sweden: StatSoft Scandinavia AB
Taiwan: StatSoft Taiwan
UAE/Egypt: StatSoft Middle East
United Kingdom: StatSoft Ltd.

AMSTATNEWS

OCTOBER 2014 • ISSUE #448

Executive Director

Ron Wasserstein: ron@amstat.org

Associate Executive Director and Director of Operations

Stephen Porzio: steve@amstat.org

Director of Science Policy

Steve Pierson: pierson@amstat.org

Director of Education

Rebecca Nichols: rebecca@amstat.org

Managing Editor

Megan Murphy: megan@amstat.org

Production Coordinator/Graphic Designer

Kathryn Wright: kathryn@amstat.org

Publications Coordinator

Val Nirala: val@amstat.org

Advertising Manager

Claudine Donovan: claudine@amstat.org

Contributing Staff Members

Amy Farris • Jeff Myers • Rebecca Nichols • Rick Peterson
Steve Pierson • Kathleen Wert

Amstat News welcomes news items and letters from readers on matters of interest to the association and the profession. Address correspondence to Managing Editor, *Amstat News*, American Statistical Association, 732 North Washington Street, Alexandria VA 22314-1943 USA, or email amstat@amstat.org. Items must be received by the first day of the preceding month to ensure appearance in the next issue (for example, June 1 for the July issue). Material can be sent as a Microsoft Word document, PDF, or within an email. Articles will be edited for space. Accompanying artwork will be accepted in graphics file formats only (jpg, etc.), minimum 300 dpi. No material in WordPerfect will be accepted.

Amstat News (ISSN 0163-9617) is published monthly by the American Statistical Association, 732 North Washington Street, Alexandria VA 22314-1943 USA. **Periodicals postage paid** at Alexandria, Virginia, and additional mailing offices. POSTMASTER: Send address changes to *Amstat News*, 732 North Washington Street, Alexandria VA 22314-1943 USA. Send Canadian address changes to APC, PO Box 503, RPO West Beaver Creek, Rich Hill, ON L4B 4R6. Annual subscriptions are \$50 per year for nonmembers. *Amstat News* is the member publication of the ASA. For annual membership rates, see www.amstat.org/join or contact ASA Member Services at (888) 231-3473.

American Statistical Association

732 North Washington Street
Alexandria, VA 22314-1943 USA
(703) 684-1221 • FAX: (703) 684-2037

ASA GENERAL: asainfo@amstat.org

ADDRESS CHANGES: addresschange@amstat.org

AMSTAT EDITORIAL: amstat@amstat.org

ADVERTISING: advertise@amstat.org

WEBSITE: <http://magazine.amstat.org>

Printed in USA © 2014
American Statistical Association



 **Promoting the Practice and Profession of Statistics®**

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.

features

- 3 President's Corner
- 5 ASA PR Campaign Launches to Great Interest
- 6 SPAIG Committee Seeks Collaboration
- 6 BASS XXI on Tap for November
- 7 Editors of New ASA Journal Look Ahead
- 8 *Technometrics* Calls for Editor Applications, Nominations
- 8 *CHANCE*, *JQAS* Focus on Sports
- 9 Students Talk Fellowships

columns

14 MASTER'S NOTEBOOK You Are the Master of Your Master's

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.



Cheung Hall

Contributing Editor

For the past eight years, Natalie Cheung Hall has worked as a computational statistician at Eli Lilly and Company. She is part of the newly formed Science Driven Adaptive Program group in their Global Statistical Sciences Organization. She earned her master's in biostatistics from The University of North Carolina at Chapel Hill in 2003 and remains a rabid UNC Tarheel fan despite her Midwest address.

16 175 The Crystal Ball Says ...

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.



Myers

Contributing Editors

Jeff Myers joined the ASA in July 2012. He possesses 28 years' experience as a communications professional in branding; public, media, and member relations; strategic planning; and consumer advertising. He is responsible for increasing the public profile of the ASA and its members, acting as a liaison between the ASA and media, and managing external communications.



Wasserstein

Ron Wasserstein is the ASA's executive director and president of Kappa Mu Epsilon National Mathematics Honor Society. Previously, he was vice president for academic affairs at Washburn University.



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!

- The official number of JSM 2014 attendees is:
 - 6,203
 - 7,022
 - 5,789
 - 6,809
- In October 2002, which ASA Chapter hosted its first Statistics Career Day?
 - Boston Chapter
 - New York City Metropolitan Area Chapter
 - Northwest Ohio Chapter
 - Central Indiana Chapter
- ASA recently launched a new journal, titled *Statistics and Public Relations*.
 - True
 - False

This quarter's winner will be announced in the February 2015 issue.

Online Articles

The following articles in this issue can be found online at <http://magazine.amstat.org>.

Interest in statistics for many people begins with sports, which is why the **September 2014 issue of CHANCE** is devoted to methods and applications in sports statistics. <http://magazine.amstat.org/blog/2014/10/01/chance-highlights>.

Lee Tyson shares a blog post about his **JSM 2014 experience**. <http://magazine.amstat.org/blog/2014/10/01/snapshots-from-the-hub>.

The **September 2014 issue of the Journal of Quantitative Analysis in Sports** features five articles covering topics in hockey, basketball, and American football. Read more at <http://magazine.amstat.org/blog/2014/10/01/jquas>.

17

STATtr@k

A Journey to Statistics, the ASA, and Accreditation

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.



Williamson

Contributing Editor

Forrest Williamson is a PhD candidate in the department of statistical science at Baylor University and research scientist at Eli Lilly and Company. He has been a student member of the ASA for more than four years and a member of Statistics Without Borders for one year. Recently, Williamson was the first to receive the ASA's new Graduate Statistician designation, GStat.



Page 22

departments

19 statistician's view

Time to Embrace a New Identity?

22 meetings

Many Honored at Presidential Address, Awards Ceremony
ASA Leaders Reminisce at JSM Breakfast

28 education

Proposals Sought for USCOTS'15
Workshops for Math, Science Teachers Held in Boston
BAPS Workshop Held with JSM
Education Program Hosts Colombian Ambassador

member news

- 33 People News
- 34 Awards and Deadlines
- 38 Section • Chapter • Committee News
- 42 Professional Opportunities



Follow us on Twitter @AmstatNews



Join the ASA Community
<http://community.amstat.org/Home>



Like us on Facebook

Change Is Afoot in the World of Election Polling

With the U.S. mid-term elections to be held next month, I invited Scott Keeter, director of survey research for the Pew Research Center in Washington, DC, to write a column about election polling. Keeter is a past president of the American Association for Public Opinion Research (AAPOR) and has been an election night analyst of exit polls for NBC News since 1980. His published work includes books and articles about public opinion, political participation and civic engagement, religion and politics, American elections, and survey methodology. A native of North Carolina, he earned a PhD in political science from The University of North Carolina at Chapel Hill.

Nathaniel Schenker

Election polls provide one of the most visible applications of statistics at work. Polls—especially those in presidential elections—have been quite accurate over the past several election cycles, thus providing an important public confirmation of the validity of sampling and statistical methods in general.

But this is a time of great challenges to polling. It is also a time of great opportunities. While traditional telephone polls are becoming much more difficult to do, new approaches to conducting surveys may help solve some of their current problems and even improve the quality of data. However, these new approaches are highly controversial within the polling profession, and much of the controversy revolves around statistical theory and practice.

Traditional polling has relied on probability sampling for the past 60 years or so. Most polls today are still conducted by telephone using either random digit dialing or random samples of voters from registration lists. Perhaps the biggest challenge faced by political polls, as well as nearly all surveys, is growing nonresponse. While large,

well-funded, face-to-face surveys can achieve high response rates, most political and opinion polls—even those that make multiple efforts to contact respondents—have rates in the single digits or low-mid teens. Battling against nonresponse increases the costs and time required to complete a survey.

Low response rates also raise issues of credibility. Even though there is good evidence (<http://pewrsr.ch/1wK7oic>) that polls still produce representative samples of the public, we pollsters are often asked how data from such surveys can be valid if the assumptions underlying probability sampling are violated so badly. The answer is twofold. First, the performance of the polls in previous elections tells us the nonrespondents are largely missing at random with respect to the most important variables of interest, such as candidate choice, partisanship, and ideology. Second, weighting adjustments continue to be effective at correcting biases in demographic characteristics related to these central variables of interest—in part because the demographic biases in obtained samples are not particularly severe on most variables.

Another challenge that confronted pollsters using telephone surveys in the past decade is coverage of the population of interest. According to data from the National Health Interview Survey, 39% of adults had only a cell phone during the latter half of 2013, up from about 5% in 2004. Adults who have only a cellphone are younger, poorer, and more likely to be renters, to live with unrelated adults, and to be Hispanic than those who also have a landline phone. Samples based only on landlines thus have significant coverage biases. For example, only about 5% of adults in our landline samples are under age 30, compared to the population parameter of 21% for this age group.

On this challenge, there is actually some good news. Pollsters have found that people will take surveys on cellphones, and most major survey organizations now use dual-frame samples (e.g., Pew Research now interviews 60% of its respondents on cell phones and 40% on landlines in most surveys). It is more expensive to call cell phones than landlines because of federal regulations that require cellphones to be dialed manually. Yet the rise of cellphones has



Scott Keeter

actually reduced overall coverage error: Because cellphones have enabled lower-income adults to afford telephone service, dual frame samples now cover about 98% of the U.S. population, which is higher than landline coverage during the heyday of landline telephone surveys.

Despite the success pollsters have had in maintaining a high level of accuracy in the face of these challenges, most agree that this situation probably won't continue indefinitely. And there may be better ways to survey the public. Online polls based on opt-in, non-probability panels of respondents are growing in popularity and already dominate the market research world. Self-administered surveys, in general, have been shown to have advantages in terms of data quality for certain kinds of questions, including those on sensitive topics. Online surveys, in particular, are more convenient for respondents than interviewer-administered surveys. They also make it possible to incorporate pictures, graphs, and videos in the interview. But perhaps the biggest comparative advantage of online polls based on non-probability samples is that they are far less expensive than telephone surveys.

Some online nonprobability polls have compiled a good record of predicting election outcomes, actually outperforming traditional polls in some elections. But skeptics point to the absence of a theory, such as the one underlying probability sampling, that provides a basis for expecting traditional polls to work well under different conditions. The memory of the failure of the *Literary Digest's* straw poll in 1936—after successfully predicting the presidential vote in several elec-

tions—looms large for pollsters. There is no practical sampling frame of email addresses, or any other way to draw a sample of online adults in which every adult has a known probability of selection.

Online polls have one other obvious limitation: Not everyone is online. However, this problem is steadily shrinking. According to recent Pew Research Center data, 89% of adults now use the Internet, though it's important to remember that the people who are not online are very different from those who are.

As a consequence of these and other concerns about online panels and related methods, many pollsters and news organizations have drawn a bright line between probability and nonprobability sampling and refused to cross it. For decades, most major news organizations refused to publish polls based on nonprobability samples (<http://abcnews.com/1rtIOBR>). This changed in a big way in July when *The New York Times* and CBS News announced that they would begin using online survey panels from YouGov as part of their election coverage (<http://nytimes.com/1rtIOSB>). The *Times* also took down their polling standards document, which limited the publication of data based on nonprobability samples, and replaced it with a statement that their polling standards are under review.

The action by the *Times* and CBS sparked a vigorous debate in the industry. The leadership of AAPOR criticized the move and then found themselves the target of criticism from members. One pair of critics wrote, "We worry that this traditionalism is holding back our understanding of public opinion, not only endangering our ability to

innovate but putting the industry and research at risk of being unprepared for the end of landline phones and other changes to existing 'standards.'" (<http://wapo.st/ZHOTlf>)

The AAPOR leadership listened to the critics and decided to take a big step in the direction of reconciling the competing perspectives. They formed a task force (<http://bit.ly/VPFdAL>) to reassess the current state of survey methods and provide guidance to practitioners and end users. I am a co-chair of this group, along with Mike Brick and Reg Baker, who were co-chairs of the AAPOR Task Force on Nonprobability Sampling. The new task force includes several researchers who are also members of the ASA.

It's important to remember that election polls are not about just predicting elections. I believe that, at their best, polls help us understand the meaning of elections—and of public opinion more generally. Critically, polling is an important channel providing a voice to people who otherwise might not be heard. Political scientist Sidney Verba put it eloquently: "Surveys produce just what democracy is supposed to produce—equal representation of all citizens."

The debate over probability vs. nonprobability samples is about representation. Acquiring a representative sample is more important than ever in an era of growing inequality in income, wealth, and voice in the political process. This debate is no mere spat over methodology; the stakes are much, much bigger. If polling loses credibility, either because its methods become outdated or because new approaches lead to serious mistakes, our democracy will be worse off. ■

ASA PR Campaign Launches to Great Interest

Jeff Myers, ASA Public Relations Coordinator



A three-stage rollout of the ASA's new public awareness campaign—*This Is Statistics* (www.thisisstatistics.org)—has generated a buzz that is spreading word about the initiative within the statistics community and, more importantly, to the campaign's audiences and the media.

The campaign is targeting high-school juniors and seniors and college undergraduate students with the message to take courses or major in statistics while in college. Secondary audiences are people who influence students such as parents, high-school guidance and college career counselors, and statistics instructors at the high-school and college levels. Its goal is to educate these students about the plentiful, diverse, and careers in statistics.

The first stage of the rollout—a soft launch—kicked off prior to the Joint Statistical Meetings (JSM) in Boston. The week before JSM, an email was sent to registrants announcing the launch of the initiative's website. At JSM, attendees were further introduced to the awareness campaign through stickers featuring the logo and website address and a flyer distributed at the ASA booth in the exhibit hall, signs strategically placed in the convention center, and the screening during two plenary sessions of two campaign videos profiling members Genevera Allen of Rice University (www.youtube.com/watch?v=xURkTKtDq_M) and Roger Peng of The Johns Hopkins University (www.youtube.com/watch?v=WMDAR2bZEp0&list=UUQbWMP38BP-pQQOp9zmMocSQ).

This combination of pre-event and onsite exposure successfully

communicated the initiative to ASA members and generated great interest among JSM attendees. In all, more than 3,400 people visited the campaign website during the period July 29 to August 7, the last day of JSM. This attention helped propel the Allen video to 3,700 total views.

Stage two—the public launch of the campaign—was conducted August 19. For this unveiling, Stanton Communication—the ASA's public relations firm—issued a press release announcing *This Is Statistics* to a list of 130 hand-picked journalists who write about education, science, technology, career, or lifestyle topics for national and metro dailies, online publications and blogs, and education trade magazines and wire services.

Several reporters, including journalists from *U.S. News & World Report's* career section and *USA Today's* career blog, expressed interest in the ASA and a desire to receive more story ideas about careers and trends in statistics and data science.

The launch of the campaign's social media outreach on Twitter, Facebook, and YouTube (a LinkedIn showcase page went live later) coincided with this stage. A growing network of people—including teachers, students, and members of the statistical community such as professors—is following the public awareness campaign on social media and strongly engaging with its content. In just 10 days, 490 people "liked" the campaign's Facebook page and 231 had followed its Twitter account.

The public launch also included outreach to the top 25 statistics programs at U.S.

colleges, establishing initial contact with key stakeholders and conduits of its messaging. Many responded with offers to share campaign information and engaged on social media.

All this concentrated outreach generated strong traffic to the campaign website, with about 3,000 unique visitors touring the informational clearinghouse.

The third stage started in late August, as students, parents, counselors, instructors, and others returned from vacation and began preparing for the new school year. Its primary thrust was pitching campaign-related stories to university newspapers about the importance of statistics courses and national news media about women in statistics, how statistics education is growing in the pre-K to college levels, and how Big Data research is made better with the expertise of statisticians.

This phase also included outreach to professional organizations, such as the National Association of Colleges and Employers and the Association of Mathematics Teacher Educators, to explore ways for each to share the campaign's core messages with their members.

Promotional efforts will continue through year's end. As the campaign unfolds, Stanton anticipates more interest and activity from the media and campaign audiences as everyone returns to normal routines.

For more information about the *This Is Statistics* campaign, contact ASA Public Relations Coordinator Jeff Myers at jeffrey@amstat.org. ■

SPAIG Committee Seeks Collaboration

Barry Nussbaum, SPAIG Committee Chair

SPAIG is the acronym for the ASA committee with the longest name—Statistical Partnerships among Academe, Industry, and Government. It also has one of the longest reaching of the ASA's many goals: to encourage, initiate, and reward collaborative efforts across the three main branches of the statistical profession—academe, industry, and government. SPAIG exists to build the diversity of the ASA.

The ability as an association to learn in a cross-disciplinary way can speed up the response of the statistics profession to the issues each branch has, many of which are common to all branches. To turn this insight into a call for action, members of the SPAIG committee need to listen to ASA members. Therefore, the committee will be formulating and distributing a pilot survey. It also will probably use focus groups, reach out at chapter business meetings this fall, and seek member views on the ASA section electronic mailing lists.

Where to start? Well, we have picked two pervasive concerns at the start to get your views (with more perhaps added later):

- **Big Data:** This “catch phrase” seems to be taking the analytic world by storm. Do statisticians feel their contribution is being circumvented by the IT folks, and how do statisticians remain prominent players?
- **Declining Response:** Response rates to surveys are on a steep decline. Even our committee's homegrown salary survey to our fellow statisticians has suffered an ever-decreasing response. No easy answers here?

Clearly, we are in the formulation stage. We are seeking volunteers and welcoming comments and suggestions for next steps. Time matters, which is why we have jumped over several steps to get started. Please address responses to Barry Nussbaum at Nussbaum.barry@epa.gov or (202) 566-1493. ■

BASS XXI on Tap for November

The 21st meeting of the Biopharmaceutical Applied Statistics Symposium (BASS XXI) will be held November 3–7 at the Crowne Plaza Washington DC-Rockville. At least 16 one-hour tutorials on diverse topics pertinent to the research, clinical development, and regulation of pharmaceuticals will be presented November 3–5 by speakers from academia, the pharmaceutical industry, and the Food and Drug Administration (FDA). Two parallel two-day short courses will be presented November 6–7.

Popular features of BASS XXI are the keynote address on November 4, with reception following, and the November 5 FDA Biometrics session.

BASS is a nonprofit entity established for the purpose of fundraising to support graduate studies in biostatistics. To date, BASS has provided support to more than 50 master's or doctoral degree graduate students in biostatistics.

For further information, visit www.bassconference.org or contact the BASS registrar at Rewhitworth@gmail.com, Andreas Sashegyi at (317) 532-7414 or aisasheg@lilly.com, or Karl Peace at (912) 681-6980 or peacekarl@frontier.com.

PENN STATE
ONLINE

Earn a Master of Applied Statistics Online in Two Years

- ▶ **Customize your degree with courses in:**
 - biostatistics techniques
 - data mining
 - predictive analytics
 - statistical consulting
- ▶ **Use industry-standard software: Minitab, R, SAS**
- ▶ **Based on reputable on-campus program: same curriculum and faculty**
- ▶ **12-credit Graduate Certificate also offered**

PENNSTATE
1855 World Campus



worldcampus.psu.edu/amstat14

U.Ed.OUT 14-0596/14-WC-1006aps/sss

Editors of New ASA Journal Look Ahead

David Banks, Sharon Lohr, Dan McCaffrey, and Sally Morton

Last November, the ASA launched a new journal, *Statistics and Public Policy*. This journal does not require methodological novelty, but instead emphasizes the application of good statistical practice to problems of public policy import.

SPP is an open-access electronic journal. Anyone can read and download any of the articles for free at www.tandfonline.com/loi/uspp. Currently, the cost of publication is being borne by the ASA, but this will change in 2015 when authors will be asked to pay \$800 for an article that is eight or fewer pages, \$1,000 for an article of nine to 12 pages, and \$1,500 for a longer article. (However, the ASA has volunteered to cover the costs for up to 10 articles per year.)

The new journal has published two special issues. One examines possible pediatric cancer clusters in Florida using five methods by five sets of authors. The other studies the use of value-added metrics to assess teachers, drawing upon multiple (statistical) perspectives and models.

The term “special issue” is a bit slippery in the e-publishing world. In this case, it means articles and commentary are posted when there is a critical mass of material on the topic, but later articles and commentary may arrive after the first release and will supplement the first batch. Articles within the same special issue are labeled as

belonging to that special issue, and there is an editorial introduction that explains the motivation behind the special issue.

Looking ahead, *SPP* editors intend for the journal to provide a forum for statistical input to policy decisions and are receptive to discussion papers and constructive debate. The goal is to model the kind of data-driven decisionmaking the ASA believes is our profession’s best contribution to the formulation and practice of public policy. ■



CELEBRATING **30** YEARS OF STATISTICAL SOFTWARE INNOVATION

PASS¹³
Sample Size Software

NCSS⁹
Statistical Analysis
and Graphics Software

Learn more at
ncss.com

NCSS
Statistical Software

(800) 898-6109
sales@ncss.com

Technometrics Calls for Editor Applications, Nominations

The American Statistical Association and American Society for Quality (ASQ) invite nominations and applications for the position of editor of *Technometrics*.

Technometrics contributes to the development and use of statistical methods in physical, chemical, and engineering sciences, as well as information sciences and technology. These include developments on the interface of statistics and computer science such as data mining, machine learning, and large databases. The journal places a premium on clear communication among statisticians and practitioners of these sciences and an emphasis on the application of statistical concepts and methods to problems that occur in these fields.

The *Technometrics* editor reviews new submissions and makes final decisions about which papers to accept for publication. The editor appoints the editorial board and works with them to handle the journal's peer review process. Papers

submitted to *Technometrics* are refereed using a rigorous double-blind review system.

The editor also prepares short articles about each issue's highlights, which are published in *Amstat News*, and writes an annual editor's report that is published in the journal.

The *Technometrics* editor is provided with an online manuscript submission and tracking system and given training in the use of the system. The system allows the editor to review papers and assign reviewers easily, as well as to generate reports. Editors also receive funds for office supplies used in the course of the editorship.

The editor receives significant assistance from the editorial coordinator, an independent contractor engaged by the ASA. The editor also works with the production editor to create each issue and ensure timely production and publication.

The editor is a member of ASQ's Journal Editors Committee, which provides a forum for the ASQ journal editors while informing and receiving assistance from the ASQ Publications Management Board. The editor also works with the *Technometrics* Management Committee, which oversees and guides the operation of the journal. The chair of the committee represents the journal on the ASA's Committee on Publications.

The new editor will serve from 2017 through 2019, with the transition beginning in 2016. During that year, the incoming editor will handle all new submissions to the journal.

Technometrics editors should be active members of the ASA and ASQ during their terms.

Nominations

If you know someone who would be a good candidate for the editorship of *Technometrics*, please nominate that person by sending his or her name, email address, and a brief description of his or her qualifications to journals@amstat.org by November 15. The search committee will consider your nomination along with others received.

Applications

Applications for the editorship should be sent electronically to journals@amstat.org by November 30 and include a CV; the names of three references; and a letter of interest that includes a brief statement of the candidate's vision for the publication, directions the candidate would pursue, and contributions she or he would make if selected as editor. ■

CHANCE, JQAS Focus on Sports

If you like sports statistics, you're in for a treat. The *Journal of Quantitative Analysis in Sports (JQAS)* September issue is out and features articles about professional and amateur sports. Also, the September issue of *CHANCE* magazine is devoted to methods and applications in sports statistics.

The lead-off hitter for the special sports issue of *CHANCE* is Jim Albert, editor of *JQAS*. He evaluates streakiness in home run hitting by evaluating spacings between consecutive home runs to see what streaky performances tell us about the "streaky abilities" of players.

Krista Fischer and Donald A. Berry then describe the case of Andrus Veerpalu, an Estonian Olympic gold medalist in cross-country skiing, who tested positive for human growth hormone and was barred from competition. This decision was overturned on appeal by the Court of Arbitration for Sport. The rationale for the decision was faulty use of statistics in the interpretation of the test results.

The issue also features an interview with Carl Morris, professor of statistics at Harvard University and a pioneer in the development of statistical methodologies in sports.

The September issue of *JQAS* features five articles covering topics in hockey, basketball, and American football. All demonstrate innovations in statistical work. These articles are available on a subscription basis from the *JQAS* website, which can be found at www.degruyter.com/view/jljqas.

To read more about the articles in these special issues, visit <http://magazine.amstat.org>.

Students Talk Fellowships

Five fellows from the Data Science for Social Good (DSSG) program offer advice and respond to questions about their experiences, views on data science, and future plans.



Andrew Landgraf is a PhD candidate in statistics at The Ohio State University. He is interested in the intersection of machine learning and statistics and is doing research on dimensionality reduction.

How are you spending your summer as a DSSG fellow?

My team is working with Chicago Public Schools (CPS). Each year, months before the school year starts, CPS has to forecast the number of students enrolled at each school. Based on these forecasts, budgets are made for the schools. If the forecasts are incorrect, the budgets are adjusted, which can cause disruptions for both the students and teachers.

One of the more interesting and challenging approaches has been building a model at the student level. In this model, we are estimating the probability that each student goes to each school and adding them up to predict the number of students going to each school.

What inspired you to apply?

I enjoy working on applied statistical and machine learning problems, but you can only get so much out of working on an abstract problem or maximizing profits. This fellowship has given me a great opportunity to work on a project with a meaningful impact and hopefully to get involved with more in the future.

I have a strong background in statistics from my coursework and research projects, but I wanted to gain experience in other aspects of data science. To work on the interesting problems of the present and future, statisticians need strong computational skills and the ability to work with large data sets.

Do you recommend fellow statisticians participate in this program in the future? If so, why and what advice do you have for them?

The fellowship has been a great experience, and I think every statistician who is interested would benefit from it. The fellowship is comprised of a diverse group of very smart fellows and mentors, whom you can learn a lot from. The experience of working on not only your project, but learning from all the other projects as well, is invaluable. My advice is to try out as many different tools and methods as possible. You will likely not have another chance to experiment as freely and to have so many people who can help you along.

The DSSG fellows come from diverse fields. How do you view the relationship of statistics to data science?

There seems to be a battle right now for the definition of data science. In particular, many statisticians believe data science *is* statistics. Data scientists have to be able to collect and clean data, explore variables and model dependencies, communicate insights, and deliver data products. A solid statistical background is very important for all of these tasks, but is more crucial for some than others are. If we want to claim that data science is statistics, more equal emphasis would need to be put on all aspects.

What advice do you have for young statisticians wanting to work in data science?

The most important thing is to jump right in. If there is a data set you want to analyze or a language you want to learn, just do it. At its core, data science and statistics are about getting meaningful insights out of data, and the best way to learn is to try. There are more resources available now than ever, so if there is something more you would like to learn about, it is not hard to find. Don't wait until there is a class project to get started.

What do you plan to do after your fellowship/graduating?

I am going back to OSU to complete my PhD. I am still deciding what to do after graduating, but my motivations for participating in the fellowship remain. I want to work on difficult problems that have meaningful impact and leverage the latest technologies to solve them.



Subho Majumdar is a statistics PhD student at the University of Minnesota. He left an opportunity to join one of India's top medical schools seven years ago to pursue statistics as a career, but remains passionate about the application of

quantitative methods in biological fields, especially human genetics and public health.

How are you spending your summer as a DSSG fellow?

My team is working with the Chicago Department of Public Health on developing a predictive model for lead poisoning in children across the city of Chicago. We further aim to come up with a standalone application that provides house-level information on lead poisoning and risk scores to health professionals, as well as obtain a model that predicts the trajectory of a newborn child's blood lead level in their early childhood.

At the heart of our model is a random forest-based algorithm, which takes into account several house-level, child-level, and census tract-level aggregate variables to come up with predictions.

What inspired you to apply?

Last summer, I did an internship with the National Marrow Donor Program, which has the largest database in the world for bone marrow donors and organizes transplantations for Leukemia patients when the need arises. This made me aware of the different computational methods in social good-related problems. When I came to know about DSSG from another PhD

student in my department, I saw it as a natural extension of my previous experience in related work and another great opportunity to spend a summer doing something I am passionate about.

Do you recommend fellow statisticians participate in this program in the future? If so, why and what advice do you have for them?

Definitely yes. Especially in government organizations, vast troves of data are stored due to policy regulations, and valuable information can be gained by analyzing them. Being equipped with a rigorous mathematical and probabilistic framework provides us statisticians the intuition to come up with an applicable model. Moreover, I believe that irrespective of their own research interests, any statistician working in DSSG will leave with an enriched professional skill-set and a better understanding of how to tackle a real-world problem. This is because working in an environment with highly competent people from diverse backgrounds provides the opportunity to obtain various perspectives on the same problem.

The DSSG fellows come from diverse fields. How do you view the relationship of statistics to data science?

I believe that at the heart of data science is the rapid development of computational capabilities in the past two decades. For this reason, it is the confluence of several disciplines that deal with data, like statistics, machine learning, database management, and visualization methods. The field is very much in its infancy, and a combination of expertise from these disciplines, as well as domain knowledge about the specific problem one is dealing with, can make a big impact.

What advice do you have for young statisticians wanting to work in data science?

Know your data. It is not enough to know what you are doing with the data; it is also important to know why you are doing it.

Don't be afraid to ask questions. Data science is not about only analyzing data, but also storage, visualization, communication, and understanding the practical issues related to the data. It is by asking questions that you'll gain new insights into the same data.

Broaden your skills. That way you can get answers to more questions by yourself.

Keep abreast of or at least have a cursory knowledge of the latest developments in data science outside statistics.

What do you plan to do after your fellowship/graduating?

After getting my PhD, I want to work in interdisciplinary research positions at universities or government laboratories for a few years, but am also open to R&D positions in the health sector. In any case, I would like to be involved in the development of new statistical methodologies as well as their application.



Carl Shan earned a degree in statistics from the University of California at Berkeley, where he graduated early with high honors. In college, he directed a national education nonprofit, started an enrichment summer camp for middle-

school students, and taught a math course to other Berkeley students. He is a bit obsessed with improving the field of education and hopes to leave the world a little better than he found it.

How are you spending your summer as a DSSG fellow?

At DSSG, my team and I are working on building models to predict the outcome of social services. Specifically, we're working with a nonprofit called Health Leads. Health Leads figured out that many people who have health issues also have non-health needs (such as dilapidated housing) that contributes to their poor health. They work with patients to connect them with resources such as food stamps.

Unfortunately, many patients also drop out of the Health Leads program, and our team is digging through their data to figure out why. By digging up factors that contribute to drop outs, Health Leads can better improve their service to get patients the resources they need to live a healthy life.

What inspired you to apply?

When I was a freshman in college, I had a deeply moving personal experience—I signed up for a program to mentor nearby elementary school students. To be honest, I signed up mostly because there was a pretty girl in the club I wanted to talk to. However, once I started volunteering, I realized many of the students I was mentoring grew up in situations and backgrounds starkly different from my own. Whereas I had attended a fantastic high school, many of the students would not be lucky enough to receive the same quality of education I did. Frustrated, I dug around and realized that the social institution most well positioned to make a difference solving this inequality are schools.

I applied to DSSG because I was hoping to use my background in statistics to provide more people with the type of opportunities I received.

Do you recommend fellow statisticians participate in this program in the future? If so, why and what advice do you have for them?

Absolutely. Personally, I have been incredibly happy with the experience I've received at DSSG. The other fellows have been fantastic, with varied experiences and skill sets I've learned a great deal from. In addition, my project has been motivating and inspiring. The leaders of the fellowship also have been very supportive and effective.

If others would like to apply, one word of advice would be to normalize expectations by realizing that most nonprofits and governments do not do a great job of collecting, organizing, or analyzing data. Therefore, you should be prepared to play the role of a data janitor as much as a data scientist. I certainly spent a part of my summer just cleaning and munging the data.

The DSSG fellows come from diverse fields. How do you view the relationship of statistics to data science?

As I've experienced it, statistics is one of the foundational cornerstones of an effective data scientist. But I imagine what separates the best data scientists from the merely good is not simply a strong grasp of statistics and machine learning, but also the ability and knowledge to carefully interpret statistical results and communicate them to others in a meaningful way that inspires action.

Large parts of statistics seem to be primarily about analysis, producing knowledge. Rayid, the director of the fellowship, once mentioned to me that the more promising goal of data science isn't the production of knowledge, but rather the production of actions.

What advice do you have for young statisticians wanting to work in data science?

I've already mentioned the whole "data janitor" vs. "data scientist" part in an earlier answer. Another point I'd like to throw out there comes from a donut discussion (weekly discussions about data science over donuts some fellows had during the summer).

It was pointed out that because data science is still a massively evolving field, it hasn't developed the full system of checks and balances other fields (especially scientific research) might have.

For example, we claim to be data scientists working for the social good. But who gets to define what "social good" is? How do we hold data scientists who mine private data, but in the pursuit of the public interest, accountable for their actions?

All of these questions are to say that while data science is an incredibly talked-up and emerging profession, like any new field, it can come with potential abuses of power. Channeling Uncle Ben: "With great power comes great responsibility."

What do you plan to do after your fellowship/graduation?

After the summer, I will actually be continuing on with the fellowship. In addition to a few other fellows who also will be staying on, I'll be working on another project that uses a variety of factors to predict high-school dropout rates. I'd like to continue working on these projects and developing my statistical, machine learning, and computer science chops while producing social value.

In the longer term, I'm interested in going back to graduate school to study machine learning, public policy, and education. As for what I'll do afterward, I'll punt that decision to my (hopefully) wiser and more knowledgeable future self.



Tracy Schifeling is starting her third year as a PhD student at Duke University. In 2010, she graduated from The University of Chicago with a bachelor's in math.

How are you spending your summer as a DSSG fellow?

My team worked with Chicago Public Schools (CPS) to improve predictions of how many students will enroll at each school in the district. Many months before the start of the school year, CPS must predict back-to-school enrollment numbers at each school and allocate funds accordingly, so accurate predictions are crucial. Our summer was spent exploring their data and fitting statistical models to try to get the most predictive power out of the data as possible.

What inspired you to apply?

I was inspired to become a statistician after reading about the Chicago Police Department finding patterns in their crime data and making predictions about likely locations of future crimes. This fellowship seemed like the perfect opportunity to join the community of humanitarian statisticians and data scientists.

Do you recommend fellow statisticians participate in this program in the future? If so, why and what advice do you have for them?

Yes! It was a great experience to work through the entire data analysis process, from initial exploration of the data to communicating our final results back to CPS. My work at DSSG helped me develop a realistic understanding of what the challenges are when working with real-world data and how statistics can be useful in such real-world applications.

The DSSG fellows come from diverse fields. How do you view the relationship of statistics to data science?

Statistics is definitely an important step in the data science process. From my experience this summer, I would say that data science process includes understanding the research question and how data can help, data exploration and visualization, data preparation, statistical modeling, and communicating results.

What advice do you have for young statisticians wanting to work in data science?

Data science is fun because you get to be a generalist. I think it is useful to be familiar with a wide range of statistical models and machine learning methods, because a broad knowledge of these areas gives you the opportunity to be creative and explore a lot of modeling ideas.

What do you plan to do after your fellowship/graduation?

After the fellowship, I am returning to my PhD program at Duke.



Hui Fen (Sarah) Tan is a statistics PhD student at Cornell University. Previously, she studied statistics at the University of California at Berkeley and Columbia University and worked at government and nonprofit organizations in New York City. She tweets at @shftan.

How are you spending your summer as a DSSG fellow?

I am part of a team that works with the Nurse-Family Partnership (NFP), a national nonprofit organization that runs a home-visiting program for low-income mothers and children. We are building models using NFP's operational data to identify mothers who are at risk of dropping out or not reaching the program's goals. I also am starting a second project where we try to help WBEZ, a public radio station in Chicago, better target their fundraising.

What inspired you to apply?

Three reasons: First, before graduate school, I worked at government and nonprofit organizations, mostly as the only statistician in teams of domain experts. I wanted the experience of working in a data science team with people of varied backgrounds. Second, I was attracted by the prospect of working with some interesting data sets that we statisticians do not necessarily

get access to in academia. Last, I wanted to interact with policymakers to better understand the feedback loop between data science and policy.

Do you recommend fellow statisticians participate in this program in the future? If so, why and what advice do you have for them?

Definitely. The program gives us a view into organizations and industries that are traditionally less data-driven yet really stand to benefit from data science. If you would like to use your skills for social good, this program provides exactly that opportunity. Also, Chicago in summer is beautiful! As for advice ... as a fellow, when you are knee deep in data cleaning and modeling, it is helpful to take a step back and remember the question you are trying to answer and the use cases of the models you are building.

The DSSG fellows come from diverse fields. How do you view the relationship of statistics to data science?

Statistical models are essential in data science. But statistical thinking is also invaluable. The things we emphasize in statistics—the importance of knowing your data, checking your assumptions, worrying about bias—add rigor to data science. We statisticians have a lot to contribute to and a lot to learn from data science, and I think we have a tremendous opportunity to shape this young, developing field in our own ways.

What advice do you have for young statisticians wanting to work in data science?

Take some programming classes and learn some computer science. Get a hold of some data, and get your hands dirty. Try to experience the data science process from start to end, from data cleaning to modeling and model testing to visualization.

What do you plan to do after your fellowship/graduation?

I just started my second year in the statistics PhD program at Cornell, so I have a while to go before graduation. I hope to continue collaborating on problems with social impact. After I graduate, I would like to find opportunities with interesting problems and data sets. ■

MASTER'S NOTEBOOK

You Are the Master of Your Master's

Natalie Cheung Hall, Eli Lilly and Company



As an undergraduate at The University of North Carolina at Chapel Hill, I vacillated between becoming a chemistry major and a mathematics major. By sophomore year, it was decision time. I could not see myself working in a chemistry lab, but I also did not see myself teaching math at a local high school. Uncertainty eventually became my livelihood, but at the time, it was a nagging tagalong.

One fateful day in combinatorics class, a flier was passed out that serendipitously asked, “Do you like math? Do you like science? Do you want to explore a new degree?” I answered emphatically, “Yes, all around!” The solution to my major equation was a bachelor’s of public health (BSPH) in biostatistics. Count me in!

After finishing my BSPH, I worked at a contract research organization for a year and a half, but I yearned for a deeper statistical understanding of the projects I was assigned. Thus, I went to graduate school. I found an MPH in biostatistics to be very manageable with high rewards. I say very manageable because it entailed two years of courses, some comprehensive exams, and a thesis, which are all very doable if you enjoy statistics. I say high rewards because I found a plethora of jobs in the market specifically asking for a master’s in statistics. I was

practically guaranteed a job after graduation. I don’t know of many other disciplines where this is true for someone with a master’s degree.

The last decision to make was whether to earn a PhD. I was drawn to more practical applications of statistics, and I was ready to get my hands dirty in the data. Eleven years after graduate school, I am now a computational statistician at Eli Lilly. I can say getting my master’s was the right choice for me. However, in a world of mostly PhD-educated colleagues, there are a few tips I keep in mind to stay successfully engaged and happy in my career. They might seem obvious, but as I progress, I find it helps to come back to the following three points:

1. You are a statistician.

A key to being a successful master’s-level statistician is to remember you are always a statistician. A lot of programming positions are staffed by employees with IT or computer science degrees. While it is important to have the mathematical and computing background, it’s your comprehension of the statistical theory behind the analysis that sets you apart. Your statistical background will provide you with an understanding of appropriate methodology, which leads to correct interpretation of the data and differentiates between spurious relationships and statistically significant findings. You are also the person who will notice an issue with the programming or coding, because the results don’t look quite right. You will be the go-to person when it is time to communicate results to nonstatisticians in an accessible way. As the member of a study team that understands both what results to report and how to report them, you are in a unique position to suggest new and better ways to visualize the data. This is a hugely impactful way to contribute to research, as graphs and tables are what people look to for information first.

In my experience, our study team was implementing an adaptive design, which was new to all of us. We were simulating different clinical trials to find the optimal design. My task was to collate the results and present pre-defined tables.

However, as I was able to learn more about trial simulations and the statistics involved, I designed more informative tables and graphs that conveyed the pertinent information more clearly and standardized the process for future teams. I did this not in the capacity of a programmer, but as a statistician.

Don't let your title or degree limit you. Whether you are leading a study or are in charge of coding the tables and graphs, you are a statistician and will always contribute significantly in that role to the benefit of your colleagues.

2. Continue to learn.

In the 2+ years after you earn your master's, you are working on your career. However, being out of the classroom does not mean you are not still a student of statistics and your professional industry. Wherever you work, innovation is necessary for statistics to continue to grow.

In the pharmaceutical industry, innovation in statistics is vital to bringing effective and safe treatments to patients faster. We need to improve constantly. Being a master's-level statistician places you at an advantage in this area. With a strong foundation in statistics, and time and experience within your field of work, you will be the innovative force necessary for your department. There are always new areas of interest in statistics that you can explore further. Ask to meet with your local expert. As you gain a deeper understanding, use your knowledge of what your industry needs and apply what you have learned where it is needed. This is the sweet spot: taking the deep theoretical expert knowledge and using it effectively to help on future work projects.

In my role, I worked with a team to help develop simulation software. However, I never had any formal Bayesian training. I worked with Bayesian statisticians and learned the analyses needed to test the software as it was being developed and helped train others in our group to use it. I wasn't in a classroom with books, chalk, and a professor. However, by leveraging the expertise around me and being open to learning new methodologies, I was able to further my education to the benefit of my department.

3. Find what you love to do. Become an expert. And then share.

Master's-level positions generally allow a

statistician to have more hands-on projects: implementing analyses while working with PhD colleagues. Because of this, we are exposed to a breadth of activities and have the luxury of deciding what areas interest us most. You can become an expert in a certain methodology, programming and coding, standardization of code, automation of statistical processes, trial design simulations, Bayesian computing, high-performance computing, or effectively managing other statisticians. As you find yourself energized in one area, dive deep and become an expert.

We might be intimidated because expert sounds like having a PhD. However, becoming an expert is not just a function of formal education. An expert is someone who has taken the time and energy to understand an area deeply, whether it is the methodology or application of the methodology. An expert also has the agility to navigate new territory, understanding both scientific and operational aspects of an idea. And last, an expert can share learning from his/her experiences.

I think master's-level statisticians are uniquely equipped to disseminate knowledge, acting as a conduit between scientists who live and breathe the statistics and those who need to actualize the science. I have delved into many of these areas in my career and have found them all interesting. However, the most interesting was being on the team that implemented an adaptive design, and I was able to work on the trial design simulations. This subsequently led to a rewarding position on a team whose focus was providing trial simulation consultation to teams. Today, a large part of my job is passing the skills on to other statisticians. It is fulfilling to play a part in arming our statisticians with the tools and skills needed to run trial simulations.

The career opportunities for someone with a master's degree in statistics are tremendous. We are in demand in several industries because we bring a strong statistical foundation from our education coupled with the ability to practically execute scientific projects, which leads us to make meaningful contributions at work. Those contributions increase in significance as we continue to grow, learn, and share expertise with others. Reflecting on these key points has been helpful throughout my career. I hope you find them useful, too. ■

The Crystal Ball Says ...

Jeff Myers, ASA Public Relations Coordinator, and Ron Wasserstein, ASA Executive Director



With the big celebrations of the ASA's 175th anniversary behind us, it's only natural to ponder what the 25 years leading up to the association's bicentennial will hold for statistical science.

To get a glimpse of that future, we asked a group of ASA members and others in statistics to peer into their crystal balls and offer a projection. Prognosticators ranged from established statisticians to college students excited about their coming careers. Here's what they predicted: Broadly, most talked about the growth of data and the need for statisticians to find meaning from it.

"The dramatic surge in the complexity and volume of data, the increased power of modern computing systems, the new focus on evidence-based decisions, and a growing need to make sense of the information that is around us will ensure a vibrant future," says Nick Horton, an ASA Board member and professor of statistics at Amherst College in Massachusetts.

"Our profession has a tremendous opportunity to demonstrate our unique value in this challenging era of Big Data and data analytics. The world is awash in a sea of data from which information must be extracted, if global leaders are to make sound decisions," says ASA President-elect David Morganstein, who challenged statisticians to "step up to the task!"

Genevra Allen, an assistant professor at Rice University, echoes the ASA's Big Tent theme in her prediction: "As the breadth of data expands, so too should our definition of 'statistics.' Our community should be inclusive, broaden our reach, and embrace all involved with Big Data, data science, machine learning, and data-rich domains."

Geert Molenberghs, a biostatistics professor at Hasselt University and the University of Leuven in Belgium, foresees a new direction for educating tomorrow's statisticians: "Statistics is increasingly interdisciplinary and multidisciplinary, presenting challenges for education. We must equip the next generation of graduate statisticians with lifelong learning strategies—technical and substantive; train

communication and interpersonal skill; strengthen the mathematical and statistical curriculum of secondary schools; take outreach very seriously; and foster international collaboration."

Many of the key skills used by statisticians today will carry over to the future, says Oregon State University PhD student Heather Hisako Kitada. "Although the ubiquity of data collection will increase the demand for statisticians and the opportunities for interdisciplinary collaboration, good statistical analysis will continue to require creative problemsolving skills, critical thinking, and the ability to effectively communicate to diverse audiences."

Sarah Hale, a fifth-year graduate student at North Carolina State University (NCSU), predicts a bigger role for the ASA. "Recent advances in data-collection technologies have pushed statistics to a data-driven mentality. Statistical theory and methodology are evolving in order to analyze and interpret such large and complex data sets. In this new Big Data era, the ASA will need to actively support and promote the proper application of statistics."

Statisticians who learn to communicate and collaborate with nonstatisticians will stand out in the future, says Eric Vance, director of Virginia Tech's Laboratory for Interdisciplinary Statistical Analysis. "Statisticians who learn how to be effective collaborators will have increasing impact in a world increasingly in need of people who can make sense out of data."

FiveThirtyEight.com data journalist Carl Bialik says there will be no change in the longstanding risk of making incorrect predictions, including the statistical profession. However, he predicts there will be an "expansion in the number of practitioners—in their credentials and in the scope of fields they study, in the range of approaches they employ, and in the size of data sets they analyze—and a shift in emphasis toward tools that grapple with big data sets and identify questions no one thought to ask."

We end with a picture painted by Dionne Price, director of the Division of Biometrics IV in the Food and Drug Administration's Center for Drug Evaluation and Research, that speaks to the need for recruiting the very statisticians who will be leading the ASA and the field and celebrating the 200th anniversary of the association in 2039: "A 12-year-old is asked, 'What do you want to be when you grow up?' The response is, 'a statistician.' This scenario can become a reality through communication and education focused on greater exposure of the profession and increased promotion of the impact of statistics in all walks of life." ■

STATtr@k

A Journey to Statistics, the ASA, and Accreditation

Forrest Williamson

Looking back, I believe taking statistics courses in other departments is what really encouraged me to become a statistician. Seeing that a common set of skills could be used so universally was incredible, almost liberating. With statistics, I did not have to choose between disciplines.

Before starting graduate school at Baylor University, I participated in the Summer Institute for Training in Biostatistics (SIBS) at North Carolina State University. The SIBS program director was ASA Past President Marie Davidian, who spoke about the ASA and the various opportunities it has for students. Eager to get involved, I joined the association in 2010.

Last summer, I had the privilege of joining a group of statisticians representing the ASA on a one-week delegation to Havana, Cuba (<http://magazine.amstat.org/blog/2013/08/01/asa-delegation-to-cuba>). As ASA president, Marie Davidian led the delegation. I was unsure of whether I would contribute anything as a graduate student, but knowing Marie from my SIBS program, I decided to reach out and see what her thoughts were about having a student delegate. I was well received.

Shortly after returning from Cuba, I attended my first JSM in Montréal, Québec, Canada. Despite the large JSM attendance and the relatively small number of ASA delegates who went to Cuba, I seemed to run into nearly everyone at some point during the conference. This year in Boston, I was fortunate to catch up with a few of them again. It has been my most rewarding experience to date as an ASA member. I've genuinely enjoyed getting to know these great people—on not only the American end, but also the Cuban end. The trip motivated me to become more involved in the ASA because I really enjoyed the social aspect of membership.

Last year with Statistics2013 making its big push in the news, the ASA committed many resources to promoting the accreditation program that launched in late 2010. I was entering the last year of my graduate program and searching for ways to be more competitive when it came time to interview. I had already started to become involved in the ASA, but had yet to do anything that would keep me



engaged. As an ongoing commitment, accreditation seemed like a good first step to continual involvement. I knew I was ineligible for full Professional Statistician (PStat[®]) accreditation, lacking the requisite experience, but thought I could start working toward the designation.

In Montréal, I attended two sessions devoted to ASA accreditation. Panelists representing industry and academia spoke about what accreditation meant to them and their organizations. There was talk in the accreditation committee of a junior level of accreditation similar to those offered by other statistical societies. In March of this year, the ASA launched their junior level of accreditation—the Graduate Statistician (GStat)—which has the same requirements as the PStat[®], minus the experience. The primary purpose of the GStat is to prepare statisticians for the PStat[®] once the experience

To me, accreditation has meant getting involved, networking, socializing, and simply enjoying our incredible discipline.

requirement is achieved. Basically, what I set out to do a year ago on my own, the ASA now sponsors and guides. In addition, GStat members enjoy all of the benefits of ASA accreditation, so there is no reason to wait to apply for the PStat®.

Becoming a GStat has given me the opportunity to talk a lot about the ASA and the accreditation program to other early career statisticians. In Boston, I was honored to serve on the accreditation informational panel. The panel broke into small groups to address questions from attendees, so I was able to speak with a couple of statistics students who were in the same place I was the year before. Speaking with them one-on-one was a rewarding experience, because I noticed these statisticians were not simply interested in accreditation, but in developing themselves personally and professionally to be highly skilled, involved, and informed graduates. And that is exactly what the accreditation program is looking for: statisticians who strive to be on top of their game—active professionals who are current with statistics and want to serve as resources for one another.

This network of accredited statisticians is, in my opinion, the most valuable benefit we share. However, it is not the only benefit. Both PStat® and GStat statisticians enjoy the following benefits of accreditation:

- Discounts on Professional Development offerings at JSM and the Conference on Statistical Practice (CSP)
- Free access to LearnSTAT OnDemand courses
- Discounts on registration at CSP
- JSM mixer exclusively for accredited members

The GStat program also offers mentoring for members who are transitioning to full PStat® status. Because the program is so new, we have not experienced many transitions from GStat to PStat®, but the mentoring program will grow as more people become eligible for full accreditation.

For student members of the ASA, these benefits supplement some of the benefits already given. For example, students receive lower fees for registration and Professional Development courses. The accreditation discounts are applied on top of the already discounted student fees. This year, I took full advantage of the double discount, participating in four short courses. Some of the students I spoke with at the informational session were interested in taking supplemental courses not offered by their graduate programs, so we pulled up the LearnSTAT OnDemand page to view all the free courses that come with accreditation. Yet another reason to become accredited now.

The application process to become a GStat is free and easy. The full list of requirements can be found at www.amstat.org/accreditation, but, in brief, it requires the following:

- Proof of a graduate degree in statistics or a related subject
- Letters of recommendation stating involvement in statistics
- Agreement with the ASA's Ethical Guidelines for Statistical Practice (www.amstat.org/about/ethicalguidelines.cfm)

GStat is an ASA accreditation, and therefore ASA membership is required to apply for and maintain it. Once accredited through the ASA, other professional organizations with accreditation programs also acknowledge the accreditation (and vice-versa).

The next step for my fellow GStats and me is full PStat® accreditation. The PStats® I have spoken with have given good advice for preparing to apply for the professional level of accreditation. Most often, I have been told to keep track of everything I do—professionally and personally—related to the field. This includes presentations, courses taken and taught, publications, conference attendances, and professional volunteer activities. When it comes time to submit a portfolio for review, having this timeline of events and samples of work will help expedite the process.

To me, accreditation has meant getting involved, networking, socializing, and simply enjoying our incredible discipline. It's created more opportunities than I could have imagined and I am excited to watch the program expand as we continue to promote good statistical practice. I hope to see some of our GStats move over to the PStat® list and the list of accredited members grow.

If you are interested in accreditation, visit www.amstat.org/accreditation. ■

Time to Embrace a New Identity?

Thomas Speidel

There is no question in my mind that statisticians are crossing a sea of changes. As a profession, we have made high-quality contributions to many fields over the past decades, with our engagement being perfectly epitomized in the recent book *Statistics in Action: A Canadian Outlook*. However, one cannot help but notice the recent trends (and hype) in the closely aligned—and somewhat vaguely defined—fields of analytics, Big Data, data science, and machine learning and wonder if our current model will continue to do well.

As a statistician, I am concerned. As a professional who recently migrated from the cancer research “sandbox” to the energy industry “sandbox,” I am facing numerous challenges associated with poor statistical literacy and the burden of the image problem we suffer from, which was so well captured by Brian Everitt in his book, *Chance Rules: An Informal Guide to Probability, Risk, and Statistics*: “[Statistics] conjures either a near-sighted character amassing volumes of figures about cricketers’ bowling and batting averages [...] or a government civil servant compiling massive tables of figures” Hype aside, we are seeing a distortion of our field, the reinvention of many concepts, and the sad disregard of our contributions—often by those who do not analyze data professionally.

Because I happen to believe that many of our members and colleagues are insulated from what goes on outside of their fields, we may not fully understand the repercussions these events can have on our future.

Hence, I feel compelled to list a few examples:

First, consider the consulting firm McKinsey & Company, which wrote a report on Big Data in 2011 (<http://bit.ly/1pCOqom>). On Page 28, they list the techniques to analyze Big Data as mostly coming from the field of machine learning. However, I count at least 11 techniques that were developed in the field of statistics. On Page 30, regression, predictive modeling, and statistics are separate entities. And that’s not all. On Page 47, the authors list the new R&D opportunity in health care as “analyzing clinical trials data.” Does this imply we have not been analyzing clinical trials in the past? Now, to put this into perspective, consider how influential and trusted McKinsey is. Add the low statistical literacy of most organizations and we have a problem: Treating this field as novel ignores nearly 300 years of statistical history, and most people looking into Big Data won’t realize that.

Second, the machine learning attitude toward statistics is worrisome. All too often, we observe bright computer scientists who can pick up computational aspects of our work, yet rarely possess the solid statistical foundations needed to properly tackle the problem—from poor research methods to ignoring uncertainty. In a guest blog post on FierceBigData, <http://bit.ly/1tRKMP8>, ASA Executive Director Ronald Wasserstein wrote, “Are the data collected in a way that introduces bias? Are there missing or incomplete data? Are there different kinds of data? Statisticians not only know how



to ask the right questions, but may have practical solutions already available.” There are plenty of examples of this attitude, especially on the popular forum Cross Validated (<http://stats.stackexchange.com>). In turn, this leads to provocative articles such as “The Death of the Statistician” (www.analyticbridge.com/profiles/blogs/the-death-of-the-statistician) and “Is Data Science the End of Statistics? A Discussion” (<http://bit.ly/1DfVT6A>).

Third, many things are being reinvented. Bradley Efron once said, “Statistics is the science of learning from experience. Those who ignore statistics are condemned to reinvent it.”

Thomas Speidel, PStat®, is a statistician working as trend specialist for Suncor Energy in Calgary, Alberta. He spent nearly 10 years working in cancer research before moving to the “sandbox” of the energy industry. Speidel is often seen writing and commenting about issues of statistical literacy on LinkedIn, Twitter, and several blogs.

According to Wikipedia (http://en.wikipedia.org/wiki/Logistic_regression), logistic regression is a classifier. More recently, Hadley Wickham noticed how nearly 50 years of statistical smoothing literature has had little effect on information visualization, which had to reinvent the wheel (<http://vita.had.co.nz/papers/bigvis.pdf>).

Fourth, as Randy Bartlett explains in *A Practitioner's Guide to Business Analytics*, making data analysis software more user-friendly has opened the flood gates holding back statistical malfeasances. The desire to simplify tools, methods, and solutions for use by business users has led to what some people refer to as a culture of “buttonology.” Frank Harrell had this to say: “What I most fear is that statistics wasn't respected enough before the machine learning field went viral, and things have just gone from bad to worse. The ready availability of software has hurt.”

Fifth, false novelty is feeding reinvention. Consider Terry Speed's talk on Big Data (<http://bit.ly/1kxwvR5>), for instance, in which he gave a memorable example. A University of California alumni magazine article on Big Data showed an empty row for statistics (<http://bit.ly/1BJQfYL>). Economics, chemistry, marketing, computer science? All there. Statistics? Nope. And to add insult to injury, they have not forgotten it; it's simply empty, as if statistics contributed nothing. I echo what Jeff Leek wrote on his Simply Statistics blog: This “shows a fundamental disrespect for applied statisticians who have developed serious expertise in a range of scientific disciplines” (<http://bit.ly/1qZpbjq>).

A recent report (<http://bit.ly/1wohSDu>) on the future

of the statistical sciences says, “Statisticians, with some prominent exceptions, also have been unwilling or unable to communicate to the rest of the world the value (and excitement) of their work.” This sentence hints at the consequences we may face if we do not act quickly: We may never have existed in the eyes of many and our contributions may be reinvented and re-packaged in a different field.

Also, the report confirms challenges we have never faced in the past: “Undoubtedly the greatest challenge and opportunity that confronts today's statisticians is the rise of Big Data.” While some think these trends will “eventually fade,” as they did in the data mining movement of the '90s, I believe there is too much economic interest for it to simply fade away. If the numbers of analytics software and languages are any indication of things to come, this movement is hardly going to fade.

I am convinced that despite the misguided direction and pitfalls, the focus and attention on Big Data (or data science) is mostly a good thing. Sure, Big Data is not going to change those organizations and research institutions that have been doing this work for decades. However, it will inevitably bring a more evidence-based approach to the way companies do business and the government makes policies. This progress, however, may come at a price.

Statistical certification is largely unrecognized outside academic and research institutions. I suspect this was meant to protect us from the very improvised statisticians who contributed to the bad image. It may have worked, if things stayed the same. I think we are falling victim to the complacency of our own culture. Perhaps, ASA Past President Robert Rodriguez

saw this coming when he suggested we use the big tent approach (<http://bit.ly/1t8cFjs>).

Doing nothing and hoping problems will fade away is not a good strategy.

First, this is going to hurt us because we cannot properly assert our knowledge and contributions against parallel fields with a much more rapid mechanism of spreading new ideas (e.g., conference proceedings are typical in CS/ML vs. peer-review in statistics).

Second, our lack of notoriety in other fields may deprive our departments and professors of the needed funding and recognition.

Third, we have been unable or unwilling to prepare the next generation of applied statisticians for a work place that might change substantially. At present, statistics departments are reluctant to incorporate feedback from applied statisticians in the field. Applied statisticians must finish their basic training after graduate school. Fourth, a multitude of certifications are now being established to monetize on the recent data movement. Should we not be at the forefront of this? Shouldn't our certifications be the highest regarded owing to our nearly 300-year history? INFORMS (an operation research organization) is aggressively pushing their certification, CAP, which is establishing itself as the certification for analytics. A quick scan of its content reveals it covers a blend of data management and data analysis.

There are multiple ways we can become more engaged. At a minimum, acknowledging and talking about these issues is a first step. Here are a few ideas.

Consider being active on social media. There are numerous venues to show the rest of the world the value and

excitement of our work: Stack Exchange, LinkedIn, Twitter, Facebook, Quora, and the many fora specific to statistical software packages are some of the most obvious choices. I am part of a team founding About Data Analysis (ADA), a new LinkedIn discussion group specific to data analysis issues.

1. Consider stepping outside of your comfort zone. For example, many of the methods we commonly use are now being used in other fields (e.g., survival analysis in marketing). Why not speak at conferences outside your sandbox to those who are starting to use the very methods we have mastered?
2. Consider making some of your work openly available. Write a blog or an

open-access paper. If a paper was not accepted at a journal, why not make it freely available?

3. If you teach, consider approaching your department about making video tutorials. Look at the work of Jeff Leek and Roger Peng for examples.
4. If you have videos of your conference presentation, make them available.
5. As a profession, we should explore diversifying our certifications programs or joining forces with similar and reputable professional organizations.

As a profession, we need to have the courage to look outside the wall that has so far protected us from unscrupulous intruders.

As Randy Bartlett wrote in *Amstat News* (<http://bit.ly/1r5cR2x>), “[T]o differentiate our value proposition, we must be involved.” We need to involve ourselves with other parallel fields, learn about their problems, and share existing solutions. This does not mean lowering our standards for rigorous results. We cannot defend our profession and retain our current customers by building walls meant to keep the barbarians out. We need to empower our applied statisticians with certification and more applied training. Furthermore, we need to build bridges to support their entrance into other fields. ■

Editor’s Note: A version of this article was published in the August 2014 issue of *Liaison*, the newsletter of the Statistical Society of Canada.



Powered by
architect

NEW LOOK, NEW CAPABILITIES, SAME RELIABILITY

Improve the way you design, simulate and monitor your adaptive and fixed clinical trials with East version 6

- Bayesian probability of success and predictive power
- Stratified survival study designs and simulation engines that connect to R code
- Trial monitoring dashboard for interim analyses and decision making

Cytel

www.cytel.com





Many Honored at Presidential Address, Awards Ceremony

This year's Joint Statistical Meetings, which took place this past August in Boston, Massachusetts, was particularly special because the ASA celebrated its 175th anniversary. There were special events, a slew of activities, and a few firsts. To top it off, it was the largest meeting in JSM history, with 6,809 in attendance.

On Tuesday, right after the president's address, the ASA celebrated its 175th anniversary with a party that included a champagne toast, birthday cake, and talent show. The talent show and competition to honor the study and practice of statistics creatively featured four acts: Almost Shirley, The Imposteriors, Fifth Moment Band and Jami Jackson. All four acts had us dancing in the aisles, so they each won the grand prize package of a one-year ASA membership, JSM T-shirt, and \$20 give certificate to the ASA Marketplace.

In addition to the celebrations, there were a few firsts, including Sharon Lohr—who became the first woman to give the Deming Lecture—a downloadable app, and a photo scavenger hunt.

To view the plenary session webcasts, visit www.amstat.org/meetings/jsm/2014/webcasts/index.cfm.

For those who were unable to attend or missed some of the activities, here are a few photos and highlights.

Highlighting the Joint Statistical Meetings was the ASA Presidential Address and Founders and Fellows Recognition, during which the Founders Award winners were announced and 63 new ASA Fellows were officially inducted. Congratulations to all.

President Nat Schenker presented the Founders Award to James J. Cochran, Christine A. Franklin, and Sastry G. Pantula. "The ASA and all of its members around the world are deeply indebted to Jim, Christine, and Sastry for their invaluable contributions to the advancement of the association, its mission, and the field of statistical science," said ASA President Nat Schenker. "It is a personal privilege for me to acknowledge the unwavering commitment and dedication of these great leaders by presenting each the 2014 ASA Founders Award."

The citations for each 2014 Founders Award honoree follow:



James J. Cochran, Louisiana Tech University, for his vision for international outreach expressed through the creation of Statistics Without Borders and the Friends of Australasia; for his leadership of the ASA Section





Sixty-three ASA members received the honor of Fellow in 2014.

on Statistics in Sports; for his commitment and service to both the Council of Sections and the Council of Chapters; for his service on ASA committees; for representing our profession and association well in a variety of other endeavors; and for taking on all these responsibilities with enthusiasm and good grace.



Christine A. Franklin, University of Georgia, for her outstanding leadership and efforts in curricular development and teaching statistics; for her research, leadership, and professional service in helping to grow the field of statistics education; for chairing the ASA-sponsored strategic initiative titled “Guidelines for Assessment and Instruction in Statistics Education”; and for chairing and participating in numerous committees devoted to statistics education, including the ASA Statistical Education Section, ASA Advisory Committee on Teacher Enhancement, ASA-sponsored strategic initiative “Statistical Education of Teachers,” ASA-National Council of Teachers of Mathematics Joint Committee on Curriculum in Statistics and Probability, and the Consortium for the Advancement of Undergraduate Statistics Education.



Sastry G. Pantula, Oregon State University, for bold, sustained, and visionary leadership of the statistics profession in many different capacities: as an architect and steward of the success of the department of statistics at North Carolina State University; as the president of the ASA in 2010, with signal achievements in raising the visibility and impact of our field and numerous other contributions to the association; as the first statistician to serve as director of the Division of Mathematical Sciences at the National Science Foundation; and as a dean at Oregon State University, nurturing a new wave of collaborative interdisciplinary statistical science.

Each year, ASA Fellows are nominated by the membership and selected by the ASA Committee on Fellows, chaired this year by Katherine L. Monti. The

number of Fellows named is limited to no more than one-third of 1% of the active ASA member total. The following 63 ASA Fellows were inducted this year:

- Deepak Agarwal, *LinkedIn Corporation*
- Patrick Ball, *Human Rights Data Analysis Group*
- Sanjib Basu, *Northern Illinois University*
- Nancy Bates, *U.S. Census Bureau*
- Johnny Blair, *Independent Consultant*
- Brian Scott Caffo, *Johns Hopkins Bloomberg School of Public Health*
- Catherine A. Calder, *The Ohio State University*
- Joseph E. Cavanaugh, *The University of Iowa*
- Aloka G. Chakravarty, *U.S. Food and Drug Administration*
- Jie Chen, *University of Missouri-Kansas City*
- Ying-Kuen Ken Cheung, *Columbia University*
- Jeng-Min Chiou, *Academia Sinica*
- Bertrand Salem Clarke, *University of Nebraska-Lincoln*
- Ciprian M. Crainiceanu, *The Johns Hopkins University*
- Holger Dette, *Ruhr-University Bochum*
- Ronald J. M. M. Does, *University of Amsterdam*
- Lynn Elizabeth Eberly, *University of Minnesota*
- Paul Embrechts, *ETH Zurich*
- A. Richard Entsuah, *Merck Research Laboratories*
- Felix Famoye, *Central Michigan University*
- Paul Gallo, *Novartis*
- Martha M. Gardner, *General Electric Global Research*
- Yulia R. Gel, *The University of Texas at Dallas and University of Waterloo*
- Peter Brian Gilbert, *Fred Hutchinson Cancer Research Center and University of Washington*

JSM 2014 by the Numbers

6,809 Attendees

1,698 CE Registrants

325 Exhibitors

322 New Members

3,494 ASA Members



JSM Tweets



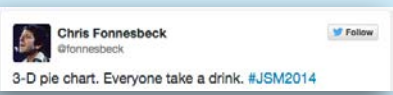
Nitesh Kumar @nitesh The skytrooper is here to stay #JSM2014



Regina Nuzzo @ReginaNuzzo @amstatnews, thanks! Fondue, anyone? *ASA: Where the awards are bigger than your head.* #asa175 #JSM2014



Christina Knudson @cannoodieson You know you're on a flight to Boston when you hear sometime unironically say "forevah." #JSM2014



Chris Fannesbeck @fannesbeck 3-D pie chart. Everyone take a drink. #JSM2014



Joe Blitstein @stat110 Yesterday at 10:30 there were literally 5 sessions I wanted to attend. One more and I would have rolled a die. #massivelyparallel #JSM2014

To read all the JSM tweets, visit <https://storify.com/AmstatNews/jsm2014>.

- Mark E. Glickman, *Boston University School of Public Health*
- Heike Hofmann, *Iowa State University*
- Scott H. Holan, *University of Missouri*
- Shelley Hurwitz, *Harvard Medical School and Brigham & Women's Hospital*
- Lurdes Yoshiko Tani Inoue, *University of Washington*
- Qi Jiang, *Amgen*
- Amarjot Kaur, *Merck*
- Harry J. Khamis, *Wright State University*
- Mimi Y. Kim, *Albert Einstein College of Medicine*
- Frauke Kreuter, *JPSM University of Maryland, IAB & LMU*
- Karunarathna Bandara Kulasekera, *University of Louisville*
- Purushottam W. (Prakash) Laud, *Medical College of Wisconsin*
- Nicole Alana Lazar, *The University of Georgia*
- Robert H. Lyles, *Emory University*
- Leslie M. (Lisa) Moore, *Los Alamos National Laboratory*
- Edward J. Mulrow, *NORC at the University of Chicago*
- Bin Nan, *University of Michigan*
- Eva Petkova, *New York University*
- Vasilis Bill Pikounis, *Johnson & Johnson*
- Sophia Rabe-Hesketh, *University of California at Berkeley*
- Shesh Nath Rai, *University of Louisville*
- Timothy Jay Robinson, *Wyoming WWAMI Medical Education Program*
- Philip Rocco Scinto, *The Lubrizol Corporation*
- Larry Z. Shen, *Pharmapace, Inc.*
- Pedro Luis do Nascimento Silva, *IBGE – National School of Statistical Science*
- Philip B. Stark, *University of California*

- Stefan Steiner, *University of Waterloo*
- Elizabeth A. Stuart, *Johns Hopkins Bloomberg School of Public Health*
- Joshua M. Tebbs, *University of South Carolina*
- Naitee Ting, *Boehringer-Ingelheim Pharmaceuticals, Inc.*
- Tor Devin Tosteson, *Dartmouth Geisel School of Medicine*
- David Charles Trindade, *Bloom Energy Corporation*
- Tyler J. VanderWeele, *Harvard University*
- Melanie Wall, *Columbia University*
- Hansheng Wang, *Peking University*
- Changbao Wu, *University of Waterloo*
- Lilly O. Yue, *U.S. Food and Drug Administration*
- Xiaohua Douglas Zhang, *Merck Research Laboratories*
- Tian Zheng, *Columbia University*

Many more people were honored for their contributions to various causes that advance the field of statistics. Following is a list of awards and recipients:

Samuel S. Wilks Memorial Award

The Samuel S. Wilks Memorial Award was established in 1964 to honor the memory and distinguished career of Sam Wilks by recognizing outstanding contributions to statistics that carry on the spirit of his work. The 2014 Wilks award winner is **Madan L. Puri** of Indiana University for his pioneering and innovating research in multiple fields of mathematical statistics; for extraordinarily broad and deep contributions in initiating and developing rank-based methods in many areas of statistics; for his contributions to limit theory under dependence, extreme value theory, asymptotic expansions, large deviation theory, and fuzzy sets and measures; and for his tireless efforts to promote our discipline through his doctoral students and his many collaborations with colleagues around the world.

Gottfried E. Noether Awards

The Noether awards were established in 1999 by the wife and daughter of the late Gottfried Emanuel Noether of the University of Connecticut as a tribute to his memory. They recognize distinguished researchers and teachers and support research in nonparametric statistics. The Gottfried E. Noether Young Researcher Award winner for 2014 is **Arnab Maity** of North Carolina State University for outstanding early career contributions to nonparametric statistics. The Gottfried E. Noether Senior Scholar Award winner for 2014 is

Raymond J. Carroll of Texas A&M University for outstanding contributions to the theory, applications, and teaching of nonparametric statistics.

Outstanding Statistical Application Award

Each year, the ASA recognizes a paper that is an outstanding application of statistics in the physical, biological, or medical sciences. This year's winners are **Joshua M. Tebbs**, **Christopher S. McMahan**, and **Christopher R. Bilder** for their seminal work on classification and estimation for multiple infections in group testing procedures. Their paper, titled "Two-Stage Hierarchical Group Testing for Multiple Infections with Application to the Infertility Prevention Project," was published in *Biometrics* in 2013.

W. J. Youden Award in Interlaboratory Testing

The W. J. Youden Award in Interlaboratory Testing was established in 1985 to recognize the authors of publications that make outstanding contributions to the design and/or analysis of interlaboratory tests or describe ingenious approaches to the planning and evaluation of data from such tests. The 2014 Youden Award went to **Ying Huang**, **Yunda Huang**, **Shuying Su Li**, **Felicity Zoe Moodie**, and **Steven Self** of the Fred Hutchinson Cancer Research Center. In their paper, "Comparing and Combining Data Across Multiple Sources via Integration of Paired-Sample Data to Correct for Measurement Error," the authors present an original method for adjusting data obtained from different laboratories when true values of the test materials are not observed. The adjustment is based on materials that are split for assay by each laboratory. The authors describe the method, provide sample size calculations, and illustrate the two-laboratory case using simulated data and actual data from two HIV vaccine laboratories.

Waller Awards

Retired ASA Executive Director Ray Waller and his wife, Carolyn, established both the Waller Education Award and the Waller Distinguished Teaching Career Award to recognize outstanding statistical educators. The 2014 Waller Award winner is **Andrew Zieffler** of the University of Minnesota in recognition of his outstanding contributions to and innovations in the teaching of elementary statistics. And the first winner of the 2014 Waller Distinguished Teaching Career Award is **Robin Lock** of St. Lawrence University in recognition of his many years of outstanding teaching and contributions and creative efforts in statistical education.

Edward C. Bryant Scholarship Award

The Bryant scholarship trust is a permanent scholarship fund endowed by Westat to honor its cofounder and longtime leader, Edward C. Bryant. The award honors an outstanding graduate student who is studying survey statistics. The 2014 scholarship recipient is **Shu Yang** of Iowa State University for an excellent academic record and contribution to survey statistics.

W. J. Dixon Award for Excellence in Statistical Consulting

Established through a gift from the family of Wilfrid Dixon, this award recognizes outstanding contributions to the practice of statistical consulting. The 2014 award was presented to **Frank E. Harrell Jr.** from Vanderbilt University School of Medicine for exceptional contributions to advancing the science and art of statistical consulting and collaboration by developing innovative, widely used, statistical methodology and statistical software; for outstanding mentoring of faculty and students; and for superb leadership and teaching of the fundamental principles associated with these activities.

Gertrude M. Cox Scholarships

Samantha J. Taylor from the University of Pittsburgh and **Laura B. Balzer** from the University of California at Berkeley are the winners of the Gertrude M. Cox Scholarship in Statistics Award. Since 1989, the scholarship has been awarded by the ASA Committee on Women in Statistics and the Caucus for Women in Statistics to encourage women to enter statistically oriented professions. **Amanda Mejia**, **Shannon Gallagher**, and **Vivian Meng-Wang** were awarded honorable mentions.

Karl E. Peace Award

The Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society recognizes statisticians who have made substantial contributions to the statistical profession and society in general. The award—established by Christopher K. Peace, son of Karl Peace, on behalf of the Peace family to honor the life work of his father—was offered for the first time this year. The 2014 Peace award winner is **Gary Grove Koch** of The University of North Carolina at Chapel Hill for exemplary scholarly research, teaching, and practice leading to improving public health, including a global impact on the design, analysis, and conduct of clinical trials in pharmaceutical regulation; for tireless efforts mentoring and leading students to fulfill their academic pursuits and promise; and for a philanthropic vision and commitment to his profession, universities, and students.

Visit <http://magazine.amstat.org> to view more pictures from JSM 2014 and to read about Tyson Lee's JSM experience. Also, visit www.amstat.org/meetings/jsm/2014/webcasts/index.cfm to view the plenary session webcasts.



ASA Leaders Reminisce at JSM Breakfast

James J. Cochran



ASA leaders (foreground from left) Bob Rodriguez, Bill Smith, (middleground from left) Ray Waller, Jon Kettingring, Sastry Pantula, (background from left) Judith O'Fallon, Lynne Billard, and Michael O'Fallon reminisce at a JSM breakfast.

One of the many events held to commemorate the ASA's 175th Anniversary at the recent Joint Statistical Meetings in Boston was the roundtable breakfast "Past Presidents and Executive Directors Reminisce." As the title implies, this was a unique opportunity for past and current presidents/presidents-elect and executive directors to gather, share a meal, and reflect on their terms in office. On August 4, it was my privilege and honor to chair this roundtable and observe the event first-hand.



James J. Cochran is professor of applied statistics and the Rogers-Spivey Faculty Fellow at the University of Alabama. He earned his PhD from the University of Cincinnati in 1997. He is a co-founder of Statistics Without Borders and a Fellow of the ASA. He also received the ASA Founders Award this year.

This was likely the largest gathering of ASA past presidents and executive directors ever held, though I am not sure how I could document this statement! Sixteen ASA presidents and three ASA executive directors whose terms ranged over more than two decades participated.

Several weeks prior to the roundtable, I asked the participants to consider the following questions in preparation for the discussion:

- What was your first thought when you were asked to run for president/be a candidate for executive director? What was your first thought when you learned you had won

the election for president/been selected as executive director?

- What was the high point of your time as president/executive director of the ASA? What accomplishment as president/executive director of the ASA did you find most gratifying?
- What surprised you most about being president/executive director of the ASA?
- What particularly humorous or unusual incident happened to you while you were president/executive director of the ASA?
- What advice would you share with future candidates for president or executive director of the ASA?
- What are your feelings about the future of the ASA? What makes you particularly optimistic about the ASA's future? What would you like to see addressed?

The discussion was not limited to these questions, but the questions did provide a basis for opening the conversation.

The room was filled with people who are not demure about their passion for statistics and the American Statistical Association, so the conversation flowed freely. At times, the exchange was inspiring; at times, it was funny (often, it was both). Participants discussed events occurring during their terms in office that were important to both the ASA and our discipline. I was reminded of the ASA's role in several important recent events and made aware of several others that had somehow escaped me when they occurred.

The conversation was wide ranging, and at various times turned to an attempt by the U.S. House of Representatives to forbid the use of statistics in designing, executing, analyzing, and reporting on the 2000 Decennial Census; technical issues of early uses of PowerPoint in keynote talks at JSM; strategic planning efforts; and issues with the building that housed the former ASA headquarters (which was struck and damaged by lightning at least once). Other topics included the following:

- Establishment of the Conference on Statistical Practice and expanding the "big tent"

- Approval of professional statistician accreditation
- Hosting Sen. Daniel Patrick Moynihan of New York
- Proactively reaching out to student members
- ASA presidents representing at statistics conferences around the globe
- The shock of being asked to run or serve
- The shock of being elected and slowly realizing the magnitude of the commitment of serving as ASA president
- Developing a strategic plan
- The surprise many members express when they learn the ASA president and executive director have no say over the schedule of sessions at JSM
- Appreciation for the very capable ASA staff
- The abundance of energetic and enthusiastic ASA volunteers

Although this was a diverse group with diverse interests, I was struck by what they have in common. They are extremely thoughtful people who are dedicated to our profession and the ASA. They are accomplished professionals, but they have great humility and a strong desire to learn about and foster the professional efforts of others. They are supremely optimistic about the future of statistics. They are funny, like to laugh, and excel at making others laugh.

When we read the words of the ASA president or executive director in *Amstat News* or other publications, it is easy to think of these individuals in terms of the offices they hold, rather than the people they are. It is important to realize every president and executive director of the ASA is a unique person who makes sacrifices during her/his term to deal with issues and problems both mundane and critical, many of which cannot be anticipated.

During this breakfast, it also struck me that these people share a bond that must, in some ways, be similar to the bond shared by the Beatles. One of the Beatles (I believe it was George Harrison) said that one reason the members of the band remained close was that nobody other than the four of them could truly understand what it was like to be a Beatle. While the experience of serving as president or executive director of the ASA is certainly not “Beatlesque,” one cannot help but suspect that only those who have served as ASA president or executive director can fully appreciate the demands and surprises these offices present.

The ASA presidents who participated (in order of their term of service) are:

J. Stuart Hunter (President, 1993)

Lynne Billard (President, 1996)

Jon R. Kettenring (President, 1997)

Jonas H. Ellenberg (President, 1999)

W. Michael O’Fallon (President, 2000)

Miron L. Straf (President, 2002)

Robert L. Mason (President, 2003)

Fritz J. Scheuren (President, 2005)

Sally C. Morton (President, 2009)

Sastry G. Pantula (President, 2010)

Nancy Geller (President, 2011)

Robert N. Rodriguez (President, 2012)

Marie Davidian (President, 2013)

Nathaniel Schenker (President, 2014)

David R. Morganstein (President, 2015)

Jessica M. Utts (President, 2016)

And the ASA executive directors who participated (also in order of their term of service) are:

Ray A. Waller (Executive Director, 1995–2001)

William B. Smith (Executive Director, 2001–2007)

Ronald L. Wasserstein (Executive Director, 2007–present)

Although I am confident the dialogue at this roundtable is of great interest to the readers of *Amstat News*, space does not permit more than a cursory review here. Fortunately, a detailed article will appear in a May 2015 special issue of *The American Statistician* devoted to the events held in observance of the 175th anniversary. Also, *Amstat News* will publish a series of extended one-on-one interviews with past presidents and executive directors on a monthly basis throughout the next three to four years. Read more about the stories they told during the breakfast and learn about others, such as how one president’s son thought his dad was a 2008 presidential hopeful for Hilary Clinton. This series of articles is scheduled to begin in the January 2015 issue. ■

Proposals Sought for USCOTS'15

The next United States Conference on Teaching Statistics (USCOTS) will be held at the Penn Stater Hotel and Conference Center May 28–30, 2015, and hosted by the Consortium for the Advancement of Undergraduate Statistics Education (CAUSE). The USCOTS'15 Program Committee is seeking ideas for active, participant-focused breakout sessions addressing the conference theme, “Making Connections.”

This conference is designed to model good teaching in its sessions, social activities, and hallways. As with previous USCOTS, this conference will consist of plenary sessions, breakout sessions, and “poster and beyond” sessions. These sessions will address how to make connections in four main areas: curriculum, pedagogy, resources, and educational research.

Examples of the types of connections that will be addressed include those that directly benefit students and teachers:

Students

- Making connections with fellow students, both face-to-face and virtually
- Making connections among course concepts, methods, and applications (e.g., between the use of randomness [random sampling or random assignment] in collecting data, the scope of conclusion that can be drawn from the study [generalizability, causation], and the role of randomness conducting statistical inference related to the study)
- Making connections with earlier educational experiences (e.g., statistical concepts learned in high school)
- Making connections with material learned in other courses (e.g., in science or social science courses in the student's major)
- Making connections with later educational experiences
- Making connections with news reports in popular media

Teachers

- Making connections with other instructors of the same course, with instructors of quantitative courses in client disciplines, or with statistics teachers at other institutions
- Making connections with practicing statisticians and other professionals who use statistical ideas and methods

The ... committee is seeking ideas for active, participant-focused breakout sessions addressing the conference theme, “Making Connections.”

- Making connections with former students and employers
- Making connections with education professionals with expertise in educational research and educational technology and other areas

We are now requesting proposals for 80-minute breakout sessions that relate directly to the conference theme and focus on actively engaging participants. It is not appropriate for a breakout session to consist primarily of a presentation.

To propose a breakout session, send a description of the session to program chair Allan Rossman (arossman@calpoly.edu) by November 21. Proposal should be no more than 1,000 words and must include the following:

- Title for proposed session
- Names, email addresses, and brief biographical sketches for all leaders of the session
- Description of how the session relates to the conference theme (making connections)
- Explanation of how the session will actively engage participants
- Discussion of how participants will be able to implement ideas presented in the session

Proposals will be reviewed by the USCOTS'15 Program Committee, and notifications will be made by January 15, 2015. Proposals for “poster and beyond” sessions will be solicited at a later date; those proposals will be due February 1, 2015.

For more information, visit www.CAUSEweb.org/uscots. ■

Workshops for Math, Science Teachers Held in Boston

Eighth annual Meeting Within a Meeting held in conjunction with JSM

Katherine Halvorsen, MWM Program Chair, and Rebecca Nichols, ASA Director of Education

The American Statistical Association sponsored a two-day Meeting Within a Meeting (MWM) statistics workshop for middle- and high-school mathematics and science teachers August 5–6 during the 2014 Joint Statistical Meetings (JSM) in Boston, Massachusetts.

This year, 18 middle-school and 30 high-school teachers, administrators, and mathematics educators attended the workshops that addressed statistical concepts taught in middle and high school. The MWM workshops emphasize the growth of statistical literacy and thinking as teachers explore problems that require them to formulate questions; collect, organize, analyze, and draw conclusions from data; and apply basic concepts of probability. Additionally, a follow-up program is planned that will help keep the teachers who attended MWM and the ASA in contact via webinars and email.

The primary goals of the MWM 2014 program (www.amstat.org/education/mwm) were to introduce middle- and high-school math and science teachers to the *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report: A Pre-K–12 Curriculum Framework* and statistical content of the Common Core Mathematics Standards (adopted by most states, including Massachusetts), as well as provide an opportunity for teachers to discuss and apply these data analysis and statistical concepts. A secondary goal was to encourage cooperation between mathematics and science teachers in the teaching of statistics.

The MWM program was designed to enhance educators' understanding of statistics and provide them with hands-on activities they can use in their own classrooms to strengthen the teaching of statistics in their schools.

"One of the primary missions of the American Statistical Association is to work for the improvement of statistical education at all levels," said Ron Wasserstein, the ASA's executive director. "We are pleased to reach out to the K–12 mathematics and science community through the MWM workshop and follow-up activities," he added. "MWM will not only enhance understanding and teaching of statistics concepts in the classroom, but also provide participants with a network of statisticians and educators



to assist in developing the quantitative literacy of their students."

The first MWM workshop was held in Salt Lake City, Utah, in 2007 and focused on middle-school math and science teachers. Its success led Martha Aliaga, former ASA director of education and creator of MWM, to recommend expanding the Denver MWM workshop in 2008 to a two-day format that included separate strands for K–4, 5–8, and 9–12 teachers. MWM 2009 in Washington, DC, included parallel strands for K–4, 5–8, and 9–12 teachers on the first day with a field trip to the U.S. Census Bureau on the second day. MWM 2010 in Vancouver, BC was the first international MWM workshop jointly sponsored by the ASA and Statistical Society of Canada and included both U.S. and Canadian presenters and participants. MWM 2011 in Miami Beach, Florida, and MWM 2012 in San Diego, California, included separate workshops for middle- and high-school teachers focused on the statistics content in the Common Core State Standards. Additionally in 2012, MWM participants could choose to attend the International Census at School workshop for two days after MWM (<http://bit.ly/1ybQwVQ>). In 2013, MWM was held after JSM at the ASA office in Alexandria, Virginia.

Each workshop day of MWM 2014 consisted of three sessions and a closing period used to reflect on the day's work and provide comments about the program to the organizers. The workshop sessions were preceded by an overview of the GAISE report and Common Core standards relevant to the audience.

Middle-school teachers attended the workshop sessions on both Tuesday and Wednesday

STATA[®] does more.

One unified statistical software program for all of your analytical needs.

STATA[®]

The ease of a user-friendly interface.

The flexibility of a matrix programming language.

Stata's clean interface is arranged to simplify your workflow. The Data Editor, Graph Editor, and dialog boxes ease all types of analyses. But there are no restrictions. With Stata's intuitive command syntax and matrix programming language, you have the freedom to customize Stata to perfectly suit your needs.

Survival analysis, multilevel models, GLM, multiple imputation ... Stata does all this, and more.

STATA[®]



stata.com/amstat14

and participated in discussions about formulating statistical questions, univariate analysis of measurement data focusing on measures of center and spread, using random sampling, bivariate measurement data analysis and categorical data analysis, and investigating patterns in data.

The three sessions in the high-school program on Tuesday included discussions about statistical questions and study design, displaying and summarizing categorical and quantitative data, and using randomization tests to make inferences and justify conclusions. High-school teachers were given the option on Wednesday to attend the second day of the middle-school workshop (to see what should be taught before students reach high school) or attend statistics education sessions at the Joint Statistical Meetings. Some also attended the Beyond AP Statistics (BAPS) Workshop (www.amstat.org/education/baps), which was held in conjunction with JSM on August 6.

MWM program chair Katherine Halvorsen planned the program, while ASA Director of Education Rebecca Nichols managed the website, registration and evaluation procedures, and logistics of setting up and advertising the conference. Also, Sharon Hessney and the Boston Chapter helped spread the word among Massachusetts educators.

MWM 2014 presenters included former ASA/NCTM Joint Committee chair Jerry Moreno (John Carroll University), past committee chair Patrick Hopfensperger (University of Wisconsin-Milwaukee), GAISE report author and ASA/NCTM committee member Chris Franklin (University of Georgia), ASA/NCTM committee member Robert Gould (University of California at Los Angeles), and Halvorsen (Smith College). Additionally, ASA President Nat Schenker, ASA President-elect David Morganstein (2015 president), ASA President-elect Jessica Utts (2016 president), ASA Executive Director Ron Wasserstein, and members of the Boston Chapter welcomed the attendees.

All teachers attending MWM were given a certificate of participation issued by the ASA and are eligible for one semester graduate credit hour through Adams State University. The ASA and Washington Statistical Society will provide follow-up activities throughout the 2014–2015 school year, including webinars that will continue to be archived at www.amstat.org/education/webinars.

The 2015 MWM will be held in conjunction with JSM in Seattle, Washington. Do you know K–12 mathematics or science teachers who are interested in



ASA President-elect David Morganstein (2015 president)



ASA President-elect Jessica Utts (2016 president)



MWM attendees from JSM in Boston, Massachusetts

enhancing their understanding and teaching of statistics within their mathematics and science curriculum? Encourage them to register for the 2015 workshop.

For more information, visit www.amstat.org/education/mwm or contact Nichols at rebecca@amstat.org. ■

December Internship Listing

The deadline for listing an internship opportunity in the December 2014 issue of *Amstat News* is October 20. Any listings received after October 20 will be posted on the ASA website only. For details, visit www.amstat.org/education/internships.cfm.

BAPS Workshop Held with JSM

Rebecca Nichols, ASA Director of Education, and Roxy Peck, BAPS Program Chair



The American Statistical Association/National Council of Teachers of Mathematics Joint Committee on Curriculum in Statistics and Probability sponsored

a Beyond AP Statistics (BAPS) workshop at the annual Joint Statistical Meetings in Boston on August 6. Forty teachers from Massachusetts and other parts of the country came to the full-day event designed to strengthen and expand teachers' statistics backgrounds by introducing them to topics just beyond the content of the typical AP Statistics course.

This year's workshop, organized by Roxy Peck of Cal Poly, was divided into the following four sessions:

- Inference for Paired Data, led by Allan Rossman and Beth Chance of Cal Poly
- Logistic Regression, led by Tom Short of John Carroll University
- What Do We Do When Assumptions Are Not Met?, led by Robin Lock of St. Lawrence University
- Engaging Students in Statistics, led by James Cochran of the University of Alabama

Boston Chapter members also welcomed the BAPS attendees, who were given a pass to visit the exhibit hall at the Joint Statistical Meetings and a certificate of participation certifying professional development hours. An optional 0.5 graduate credit hour also was made available through Adams State University. Additionally, some BAPS participants attended the high-school sessions of the Meeting Within a Meeting (MWM) Statistics Workshop for Math and Science Teachers (www.amstat.org/education/mwm) on August 5.

The brainchild of former ASA/NCTM Joint Committee Chair Jim Matis, BAPS has been offered at JSM for more than a decade and will be offered again during JSM 2015 in Seattle, Washington. The ASA encourages chapters and members to connect with local AP Statistics teachers and middle- and high-school mathematics and science teachers. Chapters also can sponsor teachers to attend the workshop.

For more information, visit www.amstat.org/education or contact Rebecca Nichols, ASA director of education, at rebecca@amstat.org or (703) 684-1221, Ext. 1877. ■

Education Program Hosts Colombian Ambassador



Juan Carlos Salazar Uribe

As the 2014 ASA Educational Ambassador, Juan Carlos Salazar Uribe of the Universidad Nacional de Colombia, attended the Joint Statistical Meetings (JSM) in Boston, Massachusetts, to

participate in Continuing Education (CE) courses.

The Educational Ambassador Program is an ASA outreach effort launched by the Committee on International Relations in Statistics to foster international collaboration and enhance statistics education worldwide. The program subsidizes an ambassador from a developing country to attend JSM and take CE courses. It also provides a one-year ASA membership.

Candidates are required to have a PhD in statistics, an interest in teaching, and be open to study in new areas of research. After attending CE courses in an emerging area of research, the educational ambassador returns to his or her country and teaches the subject matter learned in the CE course(s) within the next year to at least 10 students. While at JSM, Juan took several CE courses and was particularly interested in the course "Applied Longitudinal Analysis."

Since the program launch in 2005, the Committee on International Relations in Statistics has chosen educational ambassadors from Argentina, Ethiopia, Vietnam, Morocco, Armenia, Costa Rica, Botswana, and Colombia.

For more information about the program, contact ASA Director of Education Rebecca Nichols at rebecca@amstat.org.

The American Society for Quality (ASQ) awarded the 2014 Shewhart Medal to **Bovas Abraham** during its World Quality Congress, held in Dallas, Texas, in May. The medal recognizes outstanding leadership in modern quality control. The citation reads, "To Bovas Abraham, in the year 2014, for outstanding contributions to quality improvement through research, teaching, and consulting; for leadership in professional societies and education; and for outreach through conference organization."

In addition to the Shewhart Medal, Abraham holds a service award from the International Statistical Institute and the William G. Hunter Award from the Statistics Division of ASQ. To read more about Abraham, visit <http://bit.ly/1ogNfuP>. ■

Susan Ellenberg and **Keith Soper** received the 2014 Distinguished Service Award from the National Institute of Statistical Sciences (NISS). Alan Karr, director of NISS, presented the awards on August 4 at the NISS/SAMSI (Statistical and Applied Mathematical Sciences Institute) reception, held during the 2014 Joint Statistical Meetings in Boston, Massachusetts.

The NISS Distinguished Service awards were established by the board of trustees in 2005 to recognize individuals who have given extraordinary service that significantly advances NISS and its mission. Karr said, "These individuals didn't have to do what they did, but they did it because they believe in NISS and its role in the statistics community."

Ellenberg, who chaired the NISS Board of Trustees from 2011–2014, was given the award for helping lead NISS through "exciting and challenging times, always with common sense, wisdom, and good humor," noted Karr. Ellenberg is professor of

Two Honored with Griffith Award

Kenneth C. Schoendorf from the National Center for Health Statistics and **J. Gregory Robinson** from the U.S. Census Bureau were honored with this year's Jeanne E. Griffith Mentoring Award in a ceremony July 9. Deborah Griffin, chair of the award committee, noted that both awardees shared common strengths—their advocacy and support of the research others participate in, their partnerships with junior staff to build their confidence, their ability to help staff learn how to solve complex problems, and their integrity and commitment to public service. Griffin also noted that while the committee generally tries to select one individual to receive this award, it was happy to honor both individuals this year.

The Jeanne E. Griffith Mentoring Award recognizes individuals working in federal, state, and local government statistical agencies for their efforts in mentoring junior staff. To read more about this award, visit <http://magazine.amstat.org>.



From left: Jennifer Parker, Ken Schoendorf, Sarah Schoendorf, and Lara Akinbami



From left: Kelly Robinson, Ali Dane, Gregg Robinson, Scott Robinson, Ben Dane, Pam Robinson, and Amy Dane

biostatistics in the department of biostatistics and epidemiology at the University of Pennsylvania Perelman School of Medicine. She formerly held leadership positions at the U.S. Food and Drug Administration and National Institutes of Health.

Soper, senior director at Merck, was recognized for his long-term service to NISS as a two-term member of the board of trustees. He served on the executive committee and was also chair of the affiliates committee during 2013–2014. Karr said, "You have helped NISS reinvigorate the affiliates

program and to move it in new and important directions."

Ellenberg and Soper's names will be added to a plaque displayed in the lobby of the NISS building in Research Triangle Park that lists the names of all recipients, of which there are now 25. ■

The 2014 Don Owen Award, given by the San Antonio Chapter of the American Statistical Association, was presented to **Peter Thall** on March 21, 2014, during the Conference of Texas Statisticians by chapter vice president, Jesús Cuéllar Fuentes. The conference

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

www.amstat.org/awards

November 15, 2014

ASA Deming Lectureship

Nominations: Pam Craven pamela@amstat.org
Questions: Nancy M. Gordon nancymg@mac.com

December 15, 2014

COPSS Fisher Lectureship and Award

www.copss.org

December 15, 2014

ASA Noether Senior and Young Scholar Awards

Nominations: Pam Craven pamela@amstat.org
Questions: Dennis Boos boos@stat.ncsu.edu

December 15, 2014

Monroe G. Sirken Award in Interdisciplinary Survey Methods Research

Nominations and Questions: Pam Craven pamela@amstat.org

January 15, 2015

COPSS Presidents' Award

www.copss.org

January 15, 2015

COPSS Florence Nightingale David Award

www.copss.org

January 15, 2015

George W. Snedecor Award

www.copss.org

February 1, 2015

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

February 1, 2015

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

Nominations: Pam Craven pamela@amstat.org
Questions: Michael H. Kutner mkutner@emory.edu

February 15, 2015

Causality in Statistics Education Award

Nominations and Questions: educinfo@amstat.org

February 15, 2015

ASA Samuel S. Wilks Memorial Medal

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

February 15, 2015

ASA Waller Distinguished Teaching Career Award

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

February 15, 2015

ASA Waller Education Award

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

February 15, 2015

ASA W. J. Youden Award in Interlaboratory Testing

Nominations: Pam Craven pamela@amstat.org
Questions: Blaza Toman blaza.toman@nist.gov

February 20, 2015

ASA Statistics in the Physical and Engineering Sciences Award

Nominations and Questions: Philip J. Ramsey pjrstats@aol.com

February 23, 2015

ASA Gertrude M. Cox Scholarship

Applications: Pam Craven pamela@amstat.org
Questions: Eloise E. Kaizar ekaizar@stat.osu.edu

March 1, 2015

ASA Edward C. Bryant Scholarship

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

March 1, 2015

ASA Excellence in Statistical Reporting Award

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

March 1, 2015

ASA Fellows

Nominations accepted online at www.amstat.org beginning October 1, 2014
Questions: Stephanie S. Shipp steph19@vbi.vt.edu

March 1, 2015

ASA Outstanding Statistical Application Award

Nominations: Pam Craven pamela@amstat.org
Questions: DuBois Bowman dubois.bowman@columbia.edu

March 15, 2015

ASA Founders Award

Nominations: Pam Craven pamela@amstat.org
Questions: Nathaniel Schenker natschenker@gmail.com

was held at the University of Texas (UT) at Dallas and organized by Min Chen and Robert Serfling of the department of mathematical sciences. Thall was nominated by Serfling.

Thall is a professor at the department of biostatistics at the University of Texas MD Anderson Cancer Center in Houston. He earned his doctoral degree in statistics and probability from Florida State University in 1975, after which he worked for five years in the department of mathematical sciences at UT Dallas and 10 years in the department of statistics at The George Washington University before joining UT MD Anderson Cancer Center in 1991.

Thall has published more than 160 referred research articles in statistical and medical journals. His research includes several topics, including probability, stochastic processes, statistical modeling, clinical trials, and the application of Bayesian methods to the design and analysis of clinical trials. He pioneered the Bayesian approach to the design of clinical trials and is widely recognized for his expertise in the design and analysis of clinical trials.

For more information about the award or Thall, visit www.amstat.org/news/2014OwenAwardWinner.cfm. ■

ASA member **Karl Peace** recently established the Elsie Mae Cloud Peace Awards for Academic Excellence at Baker County High School in Newton, Georgia. Three students from grades 9–12 who have the highest grades across all subjects will be recognized with a monetary prize on an annual basis.

The awards, which honor Peace's mother, were established to serve as an impetus for students to strive for high academic achievement. Peace's

mother, who faced hardships and challenges throughout her life, was able to attend school for only three years. She completed the sixth grade in the three years she attended school. She was an avid reader—reading everything she could get her hands on—and a major influence on her son in his educational pursuits. Toward the end of her life, she remarked, “There are few places that I’ve visited physically, but there are fewer places I haven’t visited in my mind.”

To read more about the academic excellence award, visit <http://bit.ly/1sXxeeC>. ■

Judith D. Singer, senior vice provost for faculty development and diversity and James Bryant Conant Professor of Education at Harvard University, is the recipient of the 13th annual Janet L. Norwood Award for Outstanding Achievement by a Woman in the Statistical Sciences. She will accept the award at the University of Alabama at Birmingham. To read more about Singer, visit www.soph.uab.edu/awards/norwoodaward/thirteenthaward. For more information about the award, visit www.soph.uab.edu/awards/norwoodaward. ■

Terry Speed, head of bioinformatics at the Walter and Eliza Hall Institute for Medical Research in Melbourne, Australia, is the recipient of the 2014 Jerome Sacks Award for Cross-Disciplinary Research. The award is given by the National Institute of Statistical Sciences (NISS) to recognize “sustained, high-quality, cross-disciplinary research involving the statistical sciences.” The award was announced at the 2014 Joint Statistical Meetings (JSM) in Boston, Massachusetts.

The awards committee of the NISS Board of Trustees selected

2014 IISA Conference Recognizes Young Researchers, PhD Students

Subir Ghosh, Professor of Statistics, University of California at Riverside

The International Indian Statistical Association (IISA) Conference on Research Innovations in Statistics for Health, Education, Technology, and Society was held July 11–13 at the Riverside Convention Center in Riverside, California.

Following IISA tradition, three young (under 45) researchers were honored with the Young Researcher Award:

- *Methods and Applications* - **Bhramar Mukherjee**, University of Michigan
- *Theory and Methods* - **Debashis Paul**, University of California at Davis, and **Shalabh**, Indian Institute of Technology

The conference had three student paper presentation sessions for competition. Again, following IISA tradition, four students were selected for the Best Student Paper Award based on the quality of their work and presentation:

- *Theory and Methods* - **Sumanta Basu**, University of Michigan, and **Pratima Bagchi**, University of Michigan
- *Methods and Applications* - **Subhabrata Sen**, Stanford University, and **Raymond Wong**, University of California at Davis

The complete conference program, photos, and award details can be viewed at <http://2014iisa.intindstat.org>.

Speed, citing him as “a pioneer in the development and application of statistical methods for the analysis of biomedical and genomic data. His work exemplifies the best of applied statistics in cross-disciplinary research and is notable for its creativity, rigor, and relevance.”

Speed’s research focuses on the application of statistics to problems in genetics and molecular biology. He has spent years looking at the mapping and expression of genes in mice and humans, including disease genes and genes contributing to other traits.

Speed also was awarded the prestigious Australian Prime Minister’s Prize for Science recently. To read more about the award and Speed, visit <http://bit.ly/XVIEHj>. ■

C. R. Rao was awarded a doctor of science (*honoris causa*) degree at the convocation of the Indian Institute of Technology, Khanpur,

on July 26, 2014, with the following citation: “For his contribution to the foundations of modern statistics through the introduction of concepts such as Cramer-Rao inequality, Rao-Blackwellization, Rao Distance, and Rao Measure; and for introducing the idea of orthogonal arrays for the industry to design high-quality products.”

This is Rao’s 38th honorary doctorate degree received from universities in 19 countries spanning six continents. ■

Victoria Stodden, assistant professor of statistics at Columbia University and a noted expert on reproducibility of scientific research, will present a talk on the topic during an appearance at the Mathematical Association of America’s (MAA) Distinguished Lecture Series on October 23.

The ASA is sponsoring Stodden’s talk in celebration of its 175th anniversary.

Stodden has written extensively about reproducible

The ULTRA Software



SPM v7.0

Salford Predictive Modeler®

Software suite

The **SPM Salford Predictive Modeler®** software suite is a highly accurate and ultra-fast analytics and data mining platform for creating predictive, descriptive, and analytical models from databases of any size, complexity, or organization.

What is SPM Ultra?

The best of the best. For the modeler who must have access to leading-edge technology available and fastest run times including major advances in ensemble modeling, interaction detection and automation. ULTRA also provides early access to new features as they become available.



SALFORD PREDICTIVE MODELER

SPM Salford Predictive Modeler® software suite is a highly accurate and ultra-fast platform for developing predictive, descriptive, and analytical models from databases of any size, complexity, or organization.



CART® is the definitive classification tree generating clear and easy-to-understand flow chart representation of predictive models.



MARS® is ideal for users who prefer results in a form similar to traditional regression while capturing essential nonlinearities and interactions.



TreeNet® is Salford's most flexible and powerful data mining tool, capable of consistently generating extremely accurate models.



Random Forests® features include prediction clusters and segment discoveries, anomaly tagging detection, and multivariate class discrimination.

START FREE TRIAL NOW!

<http://1.salford-systems.com/AMSTAT-download-spm>



research, including a book titled *Implementing Reproducible Research* (<https://osf.io/s9tya/wiki/home>), and testified before Congress about the topic. She also served on the National Academy of Sciences Committee on Responsible Science: Ensuring the Integrity of the Research Process.

During her presentation, Stodden will talk about several key challenges, including the reproducibility and verifiability of statistical results, reliance on Big Data findings in public discourse and decisionmaking, and privacy considerations. She also will outline several solutions based in emerging computational tools, policy, the practice of science, and statistical methods.

For more information and to register, visit <http://bit.ly/1r4XkAL>. ■

Abdus S. Wahed was honored with the Statistician of the Year Award by the ASA Pittsburgh Chapter at the group's annual banquet April 17. The award was established by the chapter in 1969 to recognize the contribution of its members to the statistical community.

Wahed is an associate biostatistics professor. The award recognizes his accomplishments in theoretical research, applied statistics, teaching, mentorship, professional service, and institutional service. He is an expert in methods for design and analysis of sequentially randomized clinical trials and dynamic treatment regimes. He also is involved in the summer institute of biostatistics program for undergraduate students and is director of the department's PhD program. He received the 2010 James L. Craig Award for Teaching Excellence from the graduate school of public health at the University of Pittsburgh.

Additionally, Wahed served as the 2012–2013 president of the ASA's Pittsburgh Chapter. He is

currently a member of the ASA's Committee on International Relations in Statistics. ■

John Stufken has joined the school of mathematical and statistical sciences (SoMSS) at Arizona State University as the Charles Wexler Professor in Statistics. His hiring is an initial step in ASU's goal to build a strong statistics unit over the coming years. Plans are under way to elevate this unit into a statistics department under the umbrella of SoMSS. ■

Guan Yu, a PhD candidate at The University of North Carolina at Chapel Hill, is this year's recipient of the Young Statisticians in Business and Industry Award. The award recognizes the best

paper, based on both content and delivery, presented by an early career researcher at the International Symposium on Business and Industrial Statistics Conference, which was held in June in Durham, North Carolina. The conference is hosted by the International Statistical Institute.

Yu's paper is titled "Sparse Regression Incorporating Graphical Structure Among Predictors." The paper focuses on using the structure information among predictors to improve sparse regression models. This structure information can be modeled by the connectivity of an undirected graph.

Yu was awarded \$500 for his paper by the National Institute of Statistical Sciences and the ASA. ■

Obituary

William Jacob Hemmerle, 87, of Wakefield, Rhode Island, died peacefully on July 2, 2014, among family members in Newburyport, Massachusetts, after suffering a stroke. He was born in Des Plaines, Illinois, in 1927.

After serving in the Navy during World War II, Hemmerle earned his BS from the University of Colorado in 1950 (business) and his MS from the University of Wisconsin in 1951 (mathematics). He became an analyst for the National Security Agency and served as a civilian and a Navy officer during the Korean War. In 1955, he joined IBM, where he managed a scientific computing center and was an assistant manager of a data processing center.

In 1960, Hemmerle decided to return for his PhD and become an academic research scientist. He moved to Ames, Iowa, to study at Iowa State University (ISU), where he graduated with a PhD in 1963 (statistics and mathematics). In the following years, Hemmerle pioneered advances in statistical computing.

At ISU, he pursued graduate study and research in statistical numerical analysis. He assisted in the starting of the Numerical Analysis Programming Group at the ISU Statistical Laboratory. In addition, he developed one of the first statistical packages, AARDVARK (a compiler-monitor system for analysis of variance), as part of his doctoral research. He also authored the first textbook devoted entirely to statistical computing, *Statistical Computations on a Digital Computer*.

During his tenure at the University of Rhode Island, Hemmerle published in prestigious journals and frequently gave invited papers. He was awarded many National Science Foundation grants and was an editorial board member and reviewer for multiple statistical journals. Hemmerle was also a consultant to the Ford Foundation in the development of the computing center at the National School of Agriculture in Mexico. He was a visiting research professor at both North Carolina State University and Texas A&M University.

In 1979, Hemmerle became a fellow of the American Statistical Association. His published works will have a lasting impact on his profession.

Hemmerle is survived by his true love and wife, Lee; they were married 66 years. He also is survived by his loving children and grandchildren and will be deeply missed by his family.

section news

Biometrics

Edited by Feifei Wei, Biometrics Section Publications Officer

The Biometrics Section held its annual business committee meeting at JSM 2014 in Boston, Massachusetts. Complete minutes of the meeting are available at www.bio.ri.ccf.org/Biometrics.

2015 Byar Young Investigator Award

The Biometrics Section is seeking applications for the 2015 David P. Byar Young Investigator Award, which is given to a young investigator for the best paper to be presented at JSM in Seattle, Washington. The award commemorates the late David Byar, a biostatistician who made significant contributions to the development and application of statistical methods and was esteemed as an exceptional mentor during his career at the National Cancer Institute. The winner will receive \$2,000, and the deadline to submit materials is December 1.

In addition to the Byar Award, the section may provide travel awards to the authors of other outstanding papers submitted to the competition.

Travel Award

The section also is funding an award for a PhD-level biostatistician interested in conducting methodological or collaborative research in radiology/imaging clinical trials to attend the Radiological Society of North America Clinical Trials Methodology Workshop in Scottsdale, Arizona, from January 10–16, 2015. This award will cover up to \$3,000 in travel costs.

For more information about the section or either award, visit <http://magazine.amstat.org/?cat=17>.

Physical and Engineering Sciences

Greg Piepel, Pacific Northwest National Laboratory and Marquardt Memorial Industrial Speakers Chair

What does an applied statistician really do? How do they solve problems in science, engineering, technology, and business? What nontechnical skills are required to be successful as an applied

statistician? The Industrial Speakers Program was established by SPES in the early 1990s to coordinate visits by experienced statisticians to universities and colleges across the country to help answer such questions! SPES approves up to six speaker visits per year and can reimburse the host institution up to \$500 for the speaker's travel expenses. If you are an interested speaker or an interested institution, contact Greg Piepel at greg.piepel@pnnl.gov or (509) 375-6911.

Quality and Productivity

The following members of the ASA Quality and Productivity Section were elected Fellow this year: **Martha Gardner, Timothy Robinson, Stefan Steiner, and David Trindade.**

Newly elected section officers beginning in 2015 are William Brenneman of Proctor & Gamble as chair-elect and John Szarka of W.L. Gore & Associates as program chair-elect. These positions will begin in 2016.

Nominations for chair-elect, program chair-elect, and Council of Sections representative are being sought for this November. The section also is looking for nominations for a publications chair-designate, webinar coordinator, and fellow nominations chair. Appointed positions will begin in 2015.

Charter Changes

Officially change the section name from “Quality and Productivity Section” to “Section on Quality and Productivity”

Program-chair position to become a three-year position: program chair-elect, program chair, past program chair, with the past program chair being involved in the Conference on Statistical Practice

Statistical Education

Jennifer Kaplan

The Statistical Education Section had a very productive JSM 2014 under Program Chair Ming-Wen An, sponsoring or co-sponsoring six invited panels/sessions, seven topic-contributed

panels/sessions, eight contributed paper sessions, one poster session, and 13 roundtables. Erin Blankenship will chair the section's 2015 JSM program.

Three section members were announced as new ASA Fellows: **Martha M. Gardner**, **Leslie M. Moore**, and **Tian Zheng**. Many other education awards were announced at JSM, including the annual \$1,500 Jacqueline Dietz Award for the year's best *Journal of Statistics Education (JSE)* paper, which was presented to Jenny Green and Erin Blankenship for their November 2013 paper, "Primarily Statistics: Developing an Introductory Statistics Course for Pre-Service Elementary Teachers."

Active section members also have won honors announced outside of JSM recently. At the 2014 Joint Mathematics Meetings, the SIGMAA on Statistics Education announced that Johanna Hardin (Pomona College) was the winner of the Robert V. Hogg Award for Excellence in Teaching Introductory Statistics.

Winners of the spring 2014 election for the section are:

- Chair-elect, Nicholas Horton
- Council of Sections representative, Jackie Miller
- Executive Committee-at-Large, Tena Katsaounis and Michael Posner

Also, section member Jessica Utts was elected ASA president for 2015.

Two announcements of note were made at the business meeting during JSM. First, the members of the *JSE* editorial board are considering moving the journal into the Taylor & Francis portal with the other ASA journals. *JSE* would retain its open access and authors would not incur publication fees as a result of the move. Also, the ASA would be responsible for moving the *JSE* archives into the Taylor & Francis system. If anyone has comments about the potential move, please contact the current *JSE* editor, Michelle Everson, at everson.50@osu.edu. Second, the ASA has a current initiative to start student chapters of the ASA. Anyone interested in starting a student chapter on their campus is encouraged to contact Rick Peterson at peterson@amstat.org for details.

Statistics in Epidemiology

The Section on Statistics in Epidemiology (SIE) invites applications from young investigators who will present their papers at JSM 2015 in Seattle, Washington. The awards honor the best papers by young investigators in statistics in epidemiology presented at JSM and are open to all current graduate students in statistics, biostatistics, and epidemiology, as well as recent graduates who earned their degrees no earlier than December 31, 2012. Each award consists of \$800 to help defray travel costs to JSM. A reception will be held at the Seattle meeting to honor award recipients.

Preference will be given to papers with both methodological contributions and substantive epidemiological applications. Jointly authored papers are certainly acceptable, but the applicant is expected to be the lead author and present the work at JSM 2015. The presentation at JSM may be in a regular session, speed session, or poster session. Further, the presentation does not have to be in a session sponsored by SIE, nor must applicants necessarily be current members of SIE. The presentation at JSM must correspond to the paper receiving the award, however.

Papers should be submitted in .pdf format. They should be in 12-point type, be double-spaced, and have one-inch margins. We strongly recommend papers be no longer than 20 pages, but this is not an absolute maximum.

To apply for the award, submit a paper no later than December 15. Early submissions are encouraged. Along with the paper, include a cover letter stating where you are a current student or your year of graduation if you are a recent graduate. Submissions should be sent to Susan Shortreed at shortreed.s@ghc.org. Questions about the award can be addressed to Babette Brumback at brumback@ufl.edu.

2014 Award Winners

The winners of the 2014 SIE Young Investigator Award are Ian Barnett (Harvard School of Public Health), Xinyi Lin (Harvard School of Public Health), John Rice (University of Michigan), and Jennifer Anne Sinnott (Harvard School of Public Health).

To view section news in its entirety, visit <http://magazine.amstat.org>.



THEMATIC PROGRAM ON STATISTICAL INFERENCE, LEARNING, AND MODELS FOR

JANUARY - JUNE, 2015

PROGRAM

JANUARY 12 - 23, 2015

Opening Conference and Boot Camp

Organizing Committee: Nancy Reid (Chair), Sallie Keller, Lisa Lix, Bin Yu

JANUARY 26 - 30, 2015

Workshop on Big Data and Statistical Machine Learning

Organizing committee: Ruslan Salakhutdinov (Chair), Dale Schuurmans, Yoshua Bengio, Hugh Chipman, Bin Yu

FEBRUARY 9 - 13, 2015

Workshop on Optimization and Matrix Methods in Big Data

Organizing Committee: Stephen Vavasis (Chair), Anima Anandkumar, Petros Drineas, Michael Friedlander, Nancy Reid, Martin Wainwright

FEBRUARY 23 - 27, 2015

Workshop on Visualization for Big Data: Strategies and Principles

Organizing Committee: Nancy Reid (Chair), Susan Holmes, Snehelata Huzurbazar, Hadley Wickham, Leland Wilkinson

MARCH 23 - 27, 2015

Workshop on Big Data in Health Policy

Organizing Committee: Lisa Lix (Chair), Constantine Gatsonis, Sharon-Lise Normand

APRIL 13 - 17, 2015

Workshop on Big Data for Social Policy

Organizing Committee: Sallie Keller (Chair), Robert Groves, Mary Thompson

JUNE 13 - 14, 2015

Closing Conference

Organizing Committee: Nancy Reid (Chair), Sallie Keller, Lisa Lix, Hugh Chipman, Ruslan Salakhutdinov, Yoshua Bengio, Richard Lockhart to be held at AARMS of Dalhousie University

GRADUATE COURSES

JANUARY TO APRIL 2015

Large Scale Machine Learning

Instructor: Ruslan Salakhutdinov (University of Toronto)

JANUARY TO APRIL 2015

Topics in Inference for Big Data

Instructors: Nancy Reid (University of Toronto), Mu Zhu (University of Waterloo)

BIG DATA

This thematic program emphasizes both applied and theoretical aspects of statistical inference, learning and models in big data. The opening conference will serve as an introduction to the program, concentrating on overview lectures and background preparation. Workshops throughout the program will highlight cross-cutting themes, such as learning and visualization, as well as focus themes for applications in the social, physical and life sciences. It is expected that all activities will be webcast using the FieldsLive system to permit wide participation. Allied activities planned include workshops at PIMS in April and May and CRM in May and August.

ORGANIZING COMMITTEE

Yoshua Bengio (Montréal)
Hugh Chipman (Acadia)
Sallie Keller (Virginia Tech)
Lisa Lix (Manitoba)
Richard Lockhart (Simon Fraser)
Nancy Reid (Toronto)
Ruslan Salakhutdinov (Toronto)

INTERNATIONAL ADVISORY COMMITTEE

Constantine Gatsonis (Brown)
Susan Holmes (Stanford)
Snehelata Huzurbazar (Wyoming)
Nicolai Meinshausen (ETH Zurich)
Dale Schuurmans (Alberta)
Robert Tibshirani (Stanford)
Bin Yu (UC Berkeley)

For more information, allied activities off-site, and registration, please visit:

www.fields.utoronto.ca/programs/scientific/14-15/bigdata

Image Credits: Sheelagh Cappendale & InnoVis



Survey Research Methods

Jill A. Dever

The Survey Research Methods Section (SRMS) offers a student travel award for students in any terminal degree program (bachelor's, master's, or doctoral) in statistics, survey methodology, or allied survey research disciplines. Support is offered for students to attend the Joint Statistical Meetings, to be held in Seattle, Washington, August 8–13, 2015.

Preference is given to students presenting a paper or poster at the conference in the area of survey research. In addition, applications must be supported by a current SRMS member or a faculty advisor. Approximately six awards will be granted to cover conference expenses up to \$800. Also included are a one-year student membership in the ASA and SRMS and attendance at one half-day JSM continuing education course. Winners are expected to attend JSM sessions and the SRMS business meeting to be recognized. Previous student travel award winners and JSM 2015 student paper competition winners are not eligible for this award.

Application forms, due December 12, are available at www.amstat.org/sections/srms/travelapp_2015.pdf. Questions may be directed to Jill A. Dever at jdever@rti.org. ■

This month in ASA's history ...

OCTOBER

2002

On October 25, 2002, the ASA Northwest Ohio Chapter hosted its first Statistics Career Day. The event was held in the new student union at Bowling Green State University. More than 100 people, mostly students, attended the event.



**nQuery Advisor + nTerim 3.0
Now Available**

85% of organisations
with clinical trials approved in 2013 used

nQuery Advisor + nTerim
for sample size & power.

350 tables
available for
calculating sample
size and power

Trustworthy
Accurate
User-Friendly
Software

Favored by top
Pharma & Biotech
companies
worldwide

New subscription
licensing which
offers up to 66%
savings

Renowned
support and
development
team

Isn't it time you made to switch to nQuery Advisor + nTerim?

Our client & support services team are here to help you every step of the way.

www.statsols.com/amstat

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.

and staff. All qualified candidates are encouraged to apply and will receive consideration for employment without regard to race, sex, sexual orientation, age, religion, national origin, marital status, veteran status, disability or other categories protected by law.

Florida

■ Assistant, Associate, or Full Professor Positions. UF is recruiting tenure-track positions (one assistant professor, two associate/full professors) within the department of biostatistics, administered by college of medicine and college of public health and health professions. Qualifications include a doctoral degree in biostatistics, statistics, or related discipline. Application review ongoing for associate/full professor positions. Assistant professor deadline date December 30, 2014. For additional information, visit <http://hr.php.ufl.edu/faculty-job-postings>. The University of Florida is an Equal Employment Opportunity Institution dedicated to building a broadly diverse and inclusive faculty and staff. If an accommodation due to a disability is needed to apply for this position please call (352) 392-2477 or The Florida Relay System at (800) 955-8771 (TDD). Searches are conducted in accordance with Florida's Sunshine Law.

Indiana

■ Assistant, Associate, or Full Professor of Statistics. The University of Notre Dame has committed four new faculty positions to the department of applied and computational mathematics and statistics (ACMS) to be filled over the next two years. This year, we seek to hire two statisticians in any areas of research that build on our existing activities. Applications should be submitted through www.MathJobs.org AA/EOE.

Kentucky

■ University of Kentucky. Assistant professor, tenure track, biostatistics (public health), beginning 08/15. Potential for

California

■ RAND Corporation is seeking PhD statisticians for exciting opportunities to collaborate on multidisciplinary public policy research projects. Openings exist for recent graduates and experienced statisticians. See our ad in the September *Amstat News* for details or go to www.rand.org/statistics. Applications received by December 1, 2014, will receive priority. Applications must be submitted online following the instructions at www.rand.org/statistics/jobs.html (search 'PhD Statistician'). Send questions to Lou_Mariano@rand.org. EO/AA Employer.

Colorado

■ The department of mathematical and statistical sciences at the University of Colorado Denver invites applications for a tenure-track assistant professor in statistics beginning August 2015. We seek candidates with excellent research potential and strong commitment to quality

teaching. Application review begins 11/15/2014. For more information, see the full posting at www.jobsatcu.com or contact michael.ferrara@ucdenver.edu. The University of Colorado Denver is committed to diversity and equality in education and employment.

District of Columbia

■ Georgetown University's McDonough School of Business invites applications for a faculty position in business statistics at associate or full professor level, commencing fall 2015. Distinguished record of research and teaching excellence required. Candidates interested in business analytics particularly encouraged. Send cover letter, CV, and recent papers to opimfacrecr-stats@georgetown.edu. Deadline is October 31, 2014, or until the position is filled. Georgetown University is an Equal Opportunity, Affirmative Action Employer fully dedicated to achieving a diverse faculty

demonstrated excellence in methodological and collaborative research and in teaching public health professional students and biostatistics students. Selection begins 12/1/14 and continues until filled. CV, three reference letters to Richard Kryscio, 230 Sanders Brown Center on Aging, 800 South Limestone St., University of Kentucky, Lexington, KY 40536-0236. kryscio@email.uky.edu The University of Kentucky is an affirmative action, equal opportunity employer.

Massachusetts

■ Mathematics department MIT seeking to fill combined teaching and research positions as instructor, assistant professor and higher in statistics, beginning September 2015. Appointments based mainly on exceptional research qualifications. PhD required by

employment start date. See full classified and instructions to submit online, in October and November, at www.mathjobs.org. Applications should be complete by December 1, 2014. Massachusetts Institute of Technology is an Equal Opportunity Affirmative Action Employer.

■ The Department of Mathematics at Bridgewater State University invites applications for a tenure-track assistant professorship beginning in September 2015. The department is seeking a mathematical statistician or probability theorist who is passionate about teaching and dedicated to working with undergraduate students. The candidate must possess a PhD by September 1, 2015. To view full details and to apply, visit www.Click2Apply.net/smfbh2y EOE.

New Jersey

■ Janssen Research & Development, LLC, a Johnson & Johnson Company, is currently recruiting for a scientific director of statistical modeling to be located in Titusville, NJ. To view the full job description and to apply, please visit careers.jnj.com and search for the scientific director of statistical modeling position using the requisition number 0940140725. EOE.

New York

■ Vassar College (Poughkeepsie NY; in the Mid-Hudson Valley) invites applications for an assistant professor, tenure-track position in statistics to begin fall 2015. Ideal candidate should be passionate about both teaching undergraduates and actively engaging in research, and willing to help grow the statistics program. For full consideration, complete applications should be received by November 1, 2014. Candidates should apply electronically by visiting <https://employment.vassar.edu/applicants/Central?quickFind=51655> Vassar College is an equal opportunity/affirmative action employer and is strongly and actively committed to diversity within its community. Applications from members of historically underrepresented groups are especially encouraged.

Pennsylvania

■ The Wharton Statistics Department, University of Pennsylvania, seeks applicants for a full-time, tenure-track assistant professor position, appointment beginning July 2015. Candidates should show outstanding capacity and achievement in research, along with excellent teaching skills. Applicants must have a PhD (expected completion by June 30, 2016, is acceptable) from an accredited institution. Please visit our website to apply: <https://statistics.wharton.upenn.edu/recruiting/facultypositions>. Questions can be sent to statistics.recruit@wharton.upenn.edu. The University of Pennsylvania is an EOE. Minorities / Women / Individuals



DREXEL UNIVERSITY
School of
Public Health

Drexel University School of Public Health invites applications for the position of Chair and Professor in the Department of Epidemiology and Biostatistics.

Drexel School of Public Health is a diverse, urban school of public health with a unique commitment to public health practice and experiential learning. With the recent arrival of Dean Ana Diez Roux, the School has redoubled its commitment to improving urban public health, eliminating health disparities, and conducting policy-relevant research. Candidates should have an outstanding record of scholarship and demonstrated success building a program of externally funded research as well as dedication to and deep experience in teaching and mentorship in epidemiology or biostatistics. Competitive candidates will also be able to show their potential for successfully managing a growing academic department. Applicants should submit a cover letter describing relevant experience and goals and curriculum vitae via email to nc96@drexel.edu. Interested candidates may direct any questions to the search committee chair, Yvonne L. Michael, michaely@drexel.edu, 267-359-6064 or to Ana V. Diez Roux, Dean, at avd37@drexel.edu.

with disabilities / Protected Veterans are encouraged to apply.

■ Penn State Statistics Department - Faculty Positions. Open-rank tenure-track positions available in statistics department, pending available funding, beginning August 2015. PhD in statistics or related field, excellent research and teaching credentials. Application instructions at www.stat.psu.edu and mathjobs.org. Screening begins November 15. Employment requires successful completion of background check(s) in accordance with university policies. Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to minorities, women, veterans, disabled individuals, and other protected groups.

Department of Statistics Tenure-Track Assistant Professors



The Department of Statistics (<http://statistics.gmu.edu>), George Mason University (GMU), Fairfax, Virginia, is seeking candidates for up to two tenure-track assistant professors.

The candidate should have a Ph.D. in Statistics or closely related field, be prepared to conduct independent and collaborative research, and to teach and mentor at the advanced graduate level. Research areas of the Department include applied probability, biostatistics, data exploration, federal statistics, high-dimensional data analysis, statistical computing, and theoretical statistics. The Department offers M.S. and Ph.D. degrees in Statistical Science, M.S. in Biostatistics, and a concentration in the M.S. in Data Analytics Engineering. The Department is located in the Volgenau School of Engineering, which occupies a new building on our rapidly growing campus in the high-tech corridor of northern Virginia, 30 minutes from downtown Washington and two international airports. GMU is a growing research university of over 33,000 students and offers competitive salaries and faculty rental housing on campus.

For full consideration, applicants must apply for position number F9846z at jobs.gmu.edu; complete and submit the online faculty application; and upload a cover letter, CV, teaching statement, research statement, transcript, and the names and contact information for three references. Please upload your research statement using the link for Other Docs. The review of applications will begin November 1, 2014, and continue until the position is filled.

George Mason University is an equal opportunity employer encouraging diversity.



INFORMATICS FACULTY POSITIONS

The University of Iowa Department of Biostatistics invites applications as part of a university-wide Informatics Initiative. Applicants will be considered at the ranks Assistant, Associate, Full Professor, or fixed-term Associate appointment level. Individuals with expertise and research interests in statistical computing, graphics, visualization, inference from biomedical images, algorithms, data analytics, and machine learning are of particular interest.

For the complete position description and electronic application information visit <http://jobs.uiowa.edu/> (requisition #64879). Applications only accepted online. Applications received by November 1, 2014 will receive full consideration.

The University of Iowa is an AA/EOE.

Open-rank Faculty Position in Biostatistics Group Health Research Institute, Seattle, WA

Group Health Research Institute (GHRI) is seeking an experienced doctorate-level faculty member in biostatistics to collaborate on multidisciplinary research teams and lead independent methods research in a setting with access to rich electronic health care data.

GHRI (www.grouphealthresearch.org) is an internationally recognized academic research center that conducts non-proprietary research, primarily through federally funded grants and contracts that total about \$45 million annually. The faculty consists of 35 doctorate-level researchers trained in medicine, biostatistics, epidemiology, behavioral science and economics. Programmatic research areas include pharmacoepidemiology, cancer prevention, behavioral medicine, health informatics, and aging. GHRI is part of a vibrant Seattle research community, including the University of Washington and Fred Hutchinson Cancer Research Center. GHRI is also a member of many large, national research networks, including PCORI's Clinical Data Research Network, NIH's Collaboratory, and FDA's Sentinel Initiative. The Biostatistics Unit (www.grouphealthresearch.org/research/areas/biostatistics.aspx) is comprised of 4 PhD biostatistician investigators and 9 MS biostatisticians. Biostatistical research areas of emphasis include correlated data, Bayesian methods, diagnostic testing, survival analysis, missing data, and sequential testing. All biostatistician investigators have affiliate faculty appointments at the University of Washington. GHRI's position as an administrative unit within Group Health, a large not-for-profit health care delivery system, provides an ideal natural laboratory to study important health and biostatistical issues through clinical trials, observational studies, and qualitative research. Group Health is an AA/EOE.

Appointment is open rank (Assistant, Associate or Senior Investigator). Preference will be given to someone with a demonstrated ability to both collaborate on multidisciplinary research teams and to successfully lead their own research program. Applicants must have a doctoral degree (PhD or equivalent) in Biostatistics or Statistics, excellent oral and written communication skills, and a strong interest in interdisciplinary collaboration.

Submit letter of interest, CV, and a research statement to Stephen Perry (perry_s@ghc.org). Questions can be directed to the Search Chair, Jennifer Clark Nelson, PhD (nelson.jl@ghc.org).



GroupHealth.

Possibilities and Probabilities

If working in an environment that values individuality and diversity and allows you to innovate, engage in problem solving, and achieve your professional goals appeals to you, then the Census Bureau is the place for you.

Your work as a Mathematical Statistician at the Census Bureau

- Design sample surveys and analyze the data collected.
- Design and analyze experiments to improve survey questionnaires and interview procedures.
- Improve statistical methods for modeling and adjustment of seasonal time series.
- Perform research on statistical methodology that will improve the quality and value of the data collected.
- Publish research papers and technical documentation of your work

Requirements

- U.S. citizenship
- Bachelor's, Master's or Ph.D with at least 24 semester hours in math and statistics (see website for more specifics on required coursework)

Apply at www.census.gov, click on Jobs@census, Headquarters and NPC Employment Opportunities, Mathematical Statistician

The U.S. Census Bureau is an Equal Opportunity Employer.

U S C E N S U S B U R E A U
Helping You Make Informed Decisions

U.S. Department of Commerce,
Economics and Statistics Administration,
U.S. Census Bureau

■ GlaxoSmithKline (GSK) pharmaceutical nonclinical statistics department in Philadelphia area is hiring/will hire interns to work full time from Jan-Jun or Jun-Dec, 2015. The position is/will be posted online and managed by third party ZeroChaos in late Sep., 2014 and late Mar., 2015, respectively. Applicants must be current PhD or MS students majoring in statistics or related field. To apply, please go to <http://www.zerochaos.com/GSK>. Statistical Sciences North America department in GSK provides equal employment opportunities to applicants regardless of gender, race, religion, age, color, national origin, handicap, or sexual orientation.

■ Assistant/Associate Teaching Professor. Department of statistics, Carnegie Mellon University, Pittsburgh, PA. Teaching professor, rank (assistant, associate, or full) to be determined. This position emphasizes teaching, student advising, curriculum development, and supervising collaborative research projects. PhD in statistics, biostatistics, or related area required. See www.stat.cmu.edu/faculty-search or email hiring@stat.cmu.edu for details. Apply online at <https://webapps.cs.cmu.edu/FacultyApplication/Statistics>. Application screening begins immediately, continues until positions close. Women and minorities are encouraged to apply. AA/EOE.

■ Tenure-track/Visiting. Department of statistics, Carnegie Mellon University, Pittsburgh, PA. 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/faculty-search (email: hiring@stat.cmu.edu). Apply online: <https://webapps.cs.cmu.edu/FacultyApplication/Statistics>. Application screening begins immediately, continues until positions close. Women and minorities encouraged to apply. AA/EOE.

Texas

■ Open-rank tenure track faculty, Department of Biostatistics, MD Anderson Cancer Center. We are seeking strong research leaders who can thrive in an interdisciplinary research environment, with particular interest in those who can develop methods and work on applications involving integrating multiple data types and/or correlated cancer imaging data. See www.mdanderson.org/careers/career-opportunities/faculty-careers/index.html for complete details on the position. Send cover letter, CV, and research plan to biostat-search@mdanderson.org. www.mdanderson.org/careers/career-opportunities/faculty-careers/index.html MD Anderson Cancer Center is an equal opportunity employer and does not discriminate on the basis of race, color, national origin, gender, sexual orientation, age, religion, disability or veteran status except where such distinction is required by law.

International

■ The Institute of Statistics at the National Tsing Hua University, TAIWAN, invites applications for 1–2 tenure-track faculty positions, with research interest in Big Data preferred. Send cover letter, CV, publications, and three letters of reference to stat@stat.nthu.edu.tw. Visit stat.web.nthu.edu.tw for more information. Application deadlines: 10/30/2014 with start date 2/1/2015, or 12/31/2014 with start date 8/1/2015. EOE.

Ontario

■ Statistics & Actuarial Science - Two Lecturer Positions. Applications invited for two definite-term lecturer positions in statistics and actuarial science for a term of fewer than two years. Graduate degree in actuarial or statistical sciences required. Strong teaching skills are essential. Apply to sas-chair@uwaterloo.ca. Include cover letter, CV, and at least three reference letters. See full advertisement <https://math.uwaterloo.ca/statistics-and-actuarial-science/available-positions> Closing: November 15, 2014. University of Waterloo is an AA/EOE. ■

NC STATE UNIVERSITY Department of Statistics Tenure-Track Assistant and Associate Professor Positions

The Department of Statistics at North Carolina State University seeks to hire two tenure-track professors to begin in August 2015.

The first position is at the assistant professor level. We seek individuals with strong potential to excel in teaching and to develop an independent research program, preferably with an emphasis on big-data applications. This position is partially funded by the College of Agriculture and Life Sciences, and thus the applicant is expected to collaborate with scientists from the ecological and agricultural sciences. To apply, please visit <http://jobs.ncsu.edu/postings/39816>.

The second position is at the assistant or associate level. Applicants may have interest in theoretical or methodological research in any area of statistics, but high priority will be given to individuals with strong computational skills, interest in high-dimensional data analysis, and ability and desire to supervise graduate student research. Excellence in teaching is also a key expectation. To apply, please visit <http://jobs.ncsu.edu/postings/39456>.

The Department provides a dynamic environment for teaching, research and collaborations across disciplines. Inclusiveness and diversity are academic imperatives and thus are university goals. We are particularly interested in candidates who have experience working with students from diverse backgrounds and a demonstrated commitment to improving access to higher education for students from underrepresented groups. The Department's location in the Research Triangle provides rich opportunities for interactions with industry; other universities, including Duke University and the University of North Carolina at Chapel Hill; and government agencies. Faculty enjoy collaborations with medical researchers at Duke, environmental scientists at the EPA research facility, pharmaceutical researchers at Glaxo-SmithKline, and software developers at SAS Institute, among many others. The Department is also a founding cooperator of the National Institute of Statistical Sciences (NISS) and the NSF-funded Statistical and Applied Mathematical Sciences Institute (SAMSI), both located nearby in Research Triangle Park.

All applicants must have a Ph.D. in Statistics, Biostatistics or relevant field by the time of employment. Processing of applications will begin December 1, 2014, and continue until the position is filled. Questions about the position may be directed to the Search Committee Chair, Brian Reich (stat_search@stat.ncsu.edu).

NCSU is an equal opportunity and affirmative action employer. In addition, NC State University welcomes all persons without regard to sexual orientation or genetic information.



BIG DREAMS. BOLD FUTURE.

Joining the USF Team is now easier than ever with our on-line application!

Senior Biostatistician

The Health Informatics Institute (HII) at the University of South Florida is seeking an Associate/Full Professor in Biostatistics to fill a non-tenure earning position as a Senior Biostatistician. The Institute is NIH funded as a data coordinating center for several large clinical networks and actively participates in the design and conduct of epidemiological studies and clinical trials.

This position will conduct collaborative research and provide active support for ongoing Institute activities, especially the TEDDY type 1 diabetes study. Opportunities exist for collaborations in other NIH funded and privately funded type 1 diabetes research and disease prevention projects. The Institute is seeking candidates with expertise in clinical trials; however other areas of statistical application are sought after as well. Opportunities exist for teaching and graduate student mentoring, if desired.

Qualifications: All candidates must have earned a Ph.D. degree in Biostatistics, Computer Science, Physics, Math, Biology, or a related discipline, and have demonstrated productivity and leadership in their chosen field, and should complement existing strengths in the Institute, which include epidemiology, biostatistics, clinical genetics, statistical genetics and bioinformatics. The successful candidate will have also demonstrated excellence and creativity in research. The level of appointment will be commensurate with qualifications and experience and salary will be based upon the University of South Florida pay scale. The incumbent must be a U.S. citizen or permanent resident.

How to Apply: Applicants should send a letter of application, curriculum vitae, and a statement of interest as pdf files to Tara.Thornton@epi.usf.edu. Candidates should also arrange for three letters of recommendation to be sent directly to the above email address. Applicants are encouraged to submit materials as soon as possible.

About the Health Informatics Institute: The HII is comprised of a diverse team of 25 faculty and more than 100 staff with expertise in biostatistics, epidemiology, health informatics, computer science, genetics, nutrition, psychology, pediatrics, public health, clinical trials, and health services research. With funding from the National Institutes of Health, Department of Defense, and other sources, the Institute has an annual budget exceeding \$50 million and provides the technical means to facilitate interaction and contributions in knowledge among physicians and patients throughout the U.S. and international communities. By strengthening this vital network, the Institute aims to improve research on many different types of diseases. For more information about the HII, please visit <http://health.usf.edu/medicine/pediatrics/epidemiology/index.htm>. For more information about the TEDDY study, please visit <https://teddy.epi.usf.edu/>.

USF is an Equal Opportunity/Equal Access University.

USF UNIVERSITY OF
SOUTH FLORIDA

• TAMPA • ST. PETERSBURG • SARASOTA - MANATEE

Survey Sampling Statistician

EOE

Westat is an employee-owned corporation headquartered in the suburbs of Washington, DC (Rockville, Maryland). We provide statistical consulting and survey research to the agencies of the U.S. Government and to a broad range of business and institutional clients. With a strong technical and managerial staff and a long record of quality research, Westat has become one of the leading survey research and statistical consulting organizations in the United States.

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.

Our statistical efforts continue to expand in areas such as the environment, energy, health, education, and human resources. Westat statisticians are actively involved in teaching graduate-level courses in statistical methods and survey methodology in collaborative arrangements with area colleges and universities.

We are currently recruiting for the following statistical position:

Survey Sampling Statistician

Responsibilities include: developing sample designs (determining stratification and allocation to strata; determine sample size based on differences and power; determine optimal clustering; and select sample); selecting and/or constructing appropriate sample frame; developing and documenting weighting plan which includes non-response adjustment and bench-marking; developing and conducting imputation for item nonresponse and estimating sampling errors using appropriate software; writing specifications for programmers; and preparing reports on sample design, weighting procedures and other methodological issues. Candidates would benefit from knowing SAS and other statistical software packages; although candidates are not required to do programming. A master's or doctoral degree in statistics is required with 3 or more years of relevant experience. Coursework in sample survey design is highly desirable.

Westat offers excellent growth opportunities and an outstanding benefits package including life and health insurance, an Employee Stock Ownership Plan (ESOP), a 401(k) plan, flexible spending accounts, professional development, and tuition assistance. To apply, go to www.westat.com/careers.



An Employee-Owned
Research Corporation*

Visit the ASA JobWeb online TODAY!

<http://jobs.amstat.org>



UNIVERSITY OF PENNSYLVANIA PERELMAN SCHOOL OF MEDICINE



The Division of Biostatistics in the Department of Biostatistics and Epidemiology at the University of Pennsylvania Perelman School of Medicine seeks highly qualified candidates for standing faculty positions in both clinician educator (non-tenure) track and tenure track at the Assistant, Associate, or full Professor level. Academic rank will be commensurate with credentials and experience. A doctoral degree in biostatistics, statistics, or a related discipline is required. Review of applications will begin on September 30, 2014 and will continue to be accepted after this date, until the positions are filled. The expected start date is July 2015 or later.

Tenure track applicants will focus primarily on methodological research, with secondary emphasis on collaborative research projects within the School of Medicine.

Clinician Educator track applicants will focus primarily on collaborative research as co-investigators, with secondary emphasis on methodological research. Applicants with collaborative research interests in all clinical research areas will be considered.

For both tracks, applicants with biostatistical research interests in meta-analysis, structural equation modeling, psychometrics (test/scale development, item response theory), survival analysis, causal models (mediation analysis, instrumental variables), nonparametric statistics, and specialized biostatistical methods for next generation sequence data are especially encouraged to apply. Applicants in other areas of research will also be considered. There is a rich mix of ongoing biomedical research projects in the Perelman School of Medicine to provide motivation and opportunities for the development of novel statistical methods on wide ranging topics.

Candidates for both tracks are expected to have a strong commitment to teaching and must demonstrate outstanding research productivity. Primary teaching responsibilities include participation in departmental training programs (PhD and MS in biostatistics and PhD and MSCE in clinical epidemiology).

The Graduate Group in Epidemiology and Biostatistics, jointly with the Department of Statistics in the Wharton School, offers degree programs leading to both the Doctor of Philosophy (PhD) and Master of Science (MS) in Biostatistics.

The University of Pennsylvania, founded by Benjamin Franklin, is a world-class research institution, located near the heart of Philadelphia. All of Penn's 12 schools are located within walking distance of one another. The Penn Perelman School of Medicine is one of the top ranked medical schools in NIH funding.

We seek candidates who embrace and reflect diversity in the broadest sense. The University of Pennsylvania is an affirmative action/equal opportunity employer. Qualified applicants should send a cover letter indicating the specific position to which they are applying, curriculum vitae, three letters of reference, and a statement of research interests to:

Clinician Educator: Apply for this position online at: http://www.med.upenn.edu/apps/faculty_ad/index.php/g/d3705?&order_param=post_date&order_direction=DESC

Tenure Track: Apply for this position online at: http://www.med.upenn.edu/apps/faculty_ad/index.php/g/d3706?&order_param=post_date&order_direction=DESC

AMSTATNEWS

ADVERTISING DIRECTORY

Listed below are our display advertisements only. If you are looking for job-placement ads, please see the professional opportunities section. For more job listings or more information about advertising, please visit www.amstat.org.

misc. products and services

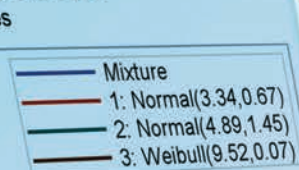
Fields-CANSSI.....	p. 40
Penn State World Campus.....	p. 6

professional opportunities

Drexel University School of Public Health.....	p. 43
George Mason University.....	p. 44
Group Health Research Institute.....	p. 44
North Carolina State University.....	p. 46
U.S. Census Bureau.....	p. 45
The University of Iowa.....	p. 44
University of Pennsylvania, Perelman School of Medicine.....	p. 47
University of South Florida.....	p. 46
Westat.....	p. 47

software

Cytel Inc.....	p. 21
JMP, software from SAS.....	cover 4
Minitab Inc.....	centerfold
NCSS.....	p. 7
Salford Systems.....	p. 36
SAS Institute Inc.....	cover 3
StataCorp.....	p. 30
Statistical Solutions.....	p. 41
StatSoft, Inc.....	cover 2



Statistics

Two releases of SAS/STAT® software this year means even more statistical capabilities. Highlights include:

SAS/STAT 13.2

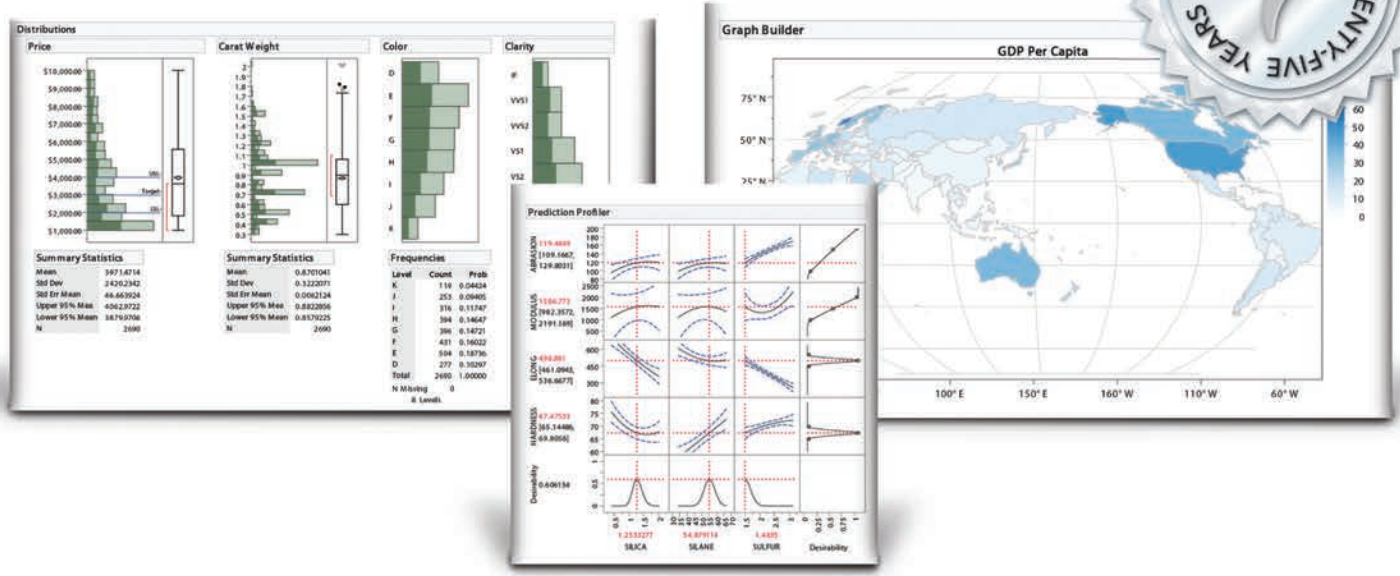
- ▶ **Weighted GEE methods.** Deal with drop-outs in longitudinal studies with a method that produces unbiased estimates under the missing-at-random (MAR) assumption.
- ▶ **Analysis for spatial point patterns.** Understand locations of random events, such as crimes or lightning strikes, and how other spatial factors influence event intensity.
- ▶ **Proportional hazards regression models for interval-censored data.** Apply Cox regression models when you have interval-censored data.
- ▶ **Nested multilevel nonlinear mixed models.** Fit hierarchical models often used in the analysis of pharmacokinetics data.

SAS/STAT 13.1

- ▶ **Sensitivity analysis for multiple imputation.** Assess sensitivity of multiple imputation to the missing at random assumption with pattern-mixture models.
- ▶ **Survival analysis for interval-censored data.** Compute nonparametric estimates of the survival function for interval-censored data.
- ▶ **Bayesian choice models.** Use Bayesian discrete choice analysis to model consumer decisions in choosing products or selecting from multiple alternatives.
- ▶ **Competing risk models.** Analyze time-to-event data with competing risks using the method of Fine and Gray (1999).
- ▶ **Item response models.** Use item response models to calibrate test items and evaluate respondents' abilities.



to learn more
[support.sas.com/
 statnewreleases](http://support.sas.com/statnewreleases)



SHARE

Statistical discoveries fit for sharing

Introduced in 1989 with scientists and engineers in mind, JMP® software has rich data visualization tools that make statistical discovery easy and efficient. Its diverse graphical output lets you convey findings with clear, concise and compelling visualizations. A sampling of its capabilities:

- Regression, GLM and ANOVA
- Generalized Regression: Ridge, Lasso, Elastic Net*
- Mixed Models and Repeated Measures*
- Univariate and Bivariate Analysis
- Multivariate Analysis
- Data Mining Capabilities: Cross-Validation, Multi-Layer Neural Networks, Bootstrap Forests, Gradient-Boosted Decision Trees, Model Comparison*
- Nonlinear Modeling
- SAS®, R, MATLAB and Microsoft Excel Connections
- Time Series Analysis
- Design of Experiments
- Consumer and Market Research Methods
- Categorical Data Analysis
- Reliability and Survival Analysis
- Quality and Process Control
- One-Click Bootstrap*
- Data Visualization, Mapping and Animated Graphs

*JMP Pro Only

Try JMP software for yourself at jmp.com/trial



Available for Mac® and Windows

