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

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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.



Online

Make the most of your ASA membership

Visit the ASA Members Only site: www.amstat.org/membersonly.

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



Make sure to check out the ASA's new look on page 4.

Correction

In the December issue, the article "Highlights of the 11th International Conference on Health Policy Statistics" contained an error in the last sentence. It has been corrected online and can be viewed at <http://magazine.amstat.org/blog/2015/12/01/ichps>.

In the December issue we accidentally ran a photo of Danyu Lin on page 31 instead of Xihong Lin. We apologize for the error.

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Remembering 2015, Anticipating 2016

As I begin my year as ASA president, I would like to reflect on the year that has passed and tell you about some exciting opportunities for the coming year. It may seem strange that I would reflect on the past year when my presidency is just starting, but, in fact, the role of president-elect turns out to be quite a big job! As soon as the newly elected president is announced, the work (and fun!) begins. And so does the appreciation for the hundreds of members who contribute their time and energy to making the ASA a successful organization.

My first assignment was to appoint the program chair and choose the theme for JSM 2016. I chose “The Extraordinary Power of Statistics,” and was pleased Jeffrey Morris was willing to serve as program chair.

In the old days (five years ago), the president-elect made almost all the committee appointments for the coming year. Although the president-elect is ultimately responsible for the appointments, the work is now divided among seven entities, including three individuals (president-elect, executive director, publications representative) and four councils. With more than 50 committees and hundreds of volunteer members, I am greatly indebted to the council chairs and vice chairs—including Nat Schenker and Nicole Lazar (Awards Council), Jeri Mulrow and Roxy Peck (Education Council), Jim Rosenberger and Holly Shulman (Membership Council), and Rob Santos and Russ Lenth (Professional Issues and Visibility Council)—for making the bulk of those appointments. And thanks to all the members who agreed to serve on these committees, as well as to all of you who participate in section and chapter governance. The ASA truly is a membership organization!

I love to travel, meet new people, and learn about the activities of statisticians beyond my daily contacts. As president-elect, I had the opportunity to visit Virginia Tech and learn more about Eric Vance’s LISA project (<http://bit.ly/1HVm9cd>) and to help Winona State launch their undergraduate data science major (www.winona.edu/data-science), fortuitously occurring at the same time my department at UC Irvine was initiating a similar program (<http://bit.ly/1RaLEZH>). I also had the opportunity to visit some local chapters and would particularly like to thank Deb Stiver

from the Nevada Chapter and Thuan Nguyen and Mara Tableman from the Oregon Chapter for their invitations and hospitality.

And finally, by the time this column appears, I will have represented the ASA as keynote speaker at the International Indian Statistical Association conference in Pune, India, and the Second International Conference on Statistics in Dhaka, Bangladesh. I look forward to more of these trips and the chance to meet more of our members in 2016.

If you too love to travel, you will have two opportunities this year to travel with other ASA members on international exchange trips. You are invited to join an ASA delegation to Ecuador (<http://bit.ly/1NMUyGb>) in May, which I will be co-leading with outgoing ASA Vice President Jim Rosenberger. One of the highlights of the trip will be a visit to Ecuador’s first technical research university, Yachay Tech, which just enrolled its first students in spring of 2015. We will be meeting with Yachay’s chancellor, Daniel Larson, who is also helping to arrange meetings with faculty and students for our visit. A program will be available for accompanying persons, and a four-day cultural extension to the Galapagos Islands will be available at the end of the trip.

The other trip, still in the planning stages, will be to South Africa in September. Both trips are being organized by Professionals Abroad, which also arranged a successful ASA trip to Cuba led by 2013 ASA President Marie Davidian.

If you are a regular reader of the President’s Corner in *Amstat News*, you will have noticed each president has introduced three or four initiatives for the benefit of the profession and membership. These initiatives are based on our strategic plan (www.amstat.org/about/strategicplan.cfm). It will come as no surprise to those who know my work that my initiatives will focus on education and public statistical literacy. This latter category is addressed through two media-related initiatives. I will outline the initiatives below and report on them in more detail in future columns.

Media Training for Statisticians

Have you ever been contacted by the media to explain your work? Have you seen a news story using statistics that didn’t quite get things right? Have you



Jessica Utts



ASA's New Look

Amy Farris, ASA Director of Membership Development and Marketing

As you will no doubt notice in the new year, the American Statistical Association has unveiled a new look. We are proud to announce that, in consultation with the board of directors and a sample of members, we have created a new logo and refreshed the ASA brand. Our hope is to reflect the continuing growth of statistics and data science.

Members connect with the ASA in countless ways and across all media. Our new logo reflects this reality and allows responsive design on the smallest screens as well as in print.

As the year progresses, we will fully integrate this new design into our materials, including a new, fully redesigned website. We appreciate your commitment to the ASA and welcome your support as we make this exciting transition.

thought about writing an editorial or a media report about your work? If so, then this initiative is for you. Chaired by ASA Vice President Rob Santos, the Media Training for Statisticians Working Group (<http://bit.ly/1RFoc6d>) is charged with developing a media training program for ASA members and making recommendations for delivering it.

Statistical Ambassadors

While having media training available to all ASA members would be helpful, our profession needs to be more proactive in promoting statistical literacy and working with the media. The ASA recently developed a successful collaboration with Sense About Science USA to make available the website Stats.org. The multiple purposes of the website include offering help to journalists who want to write about statistical topics and providing articles that directly address statistical issues in the news. The purpose of the Statistical Ambassadors Roundtable Working Group (<http://bit.ly/1mbckg8>), chaired by ASA Board member Wendy Lou, is to develop a panel of selected statisticians who will serve as a point of contact for the media. There will

be an application process to become a statistical ambassador, and those selected will receive more intensive media training. The ambassadors will also write material for Stats.org.

Information About Careers in Statistics for AP Statistics Students

ASA recently launched ThisisStatistics (<http://thisisstatistics.org>), a campaign to educate students, teachers, counselors, and parents about career options in statistics. Advanced Placement (AP) Statistics classrooms provide a natural audience for this campaign. It is predicted that more than 200,000 students will take the AP Statistics exam this year, with many more taking the course but not the exam. These hundreds of thousands of students learn how to do statistics, but generally do not understand that statistics is a career option. The Careers in Statistics Working Group (<http://bit.ly/1YZFdKn>), led by ASA Board member Anna Nevius, is charged with developing plans for getting this career information into AP classrooms. The working group includes AP Statistics teachers and college faculty with extensive involvement in the AP program.

Statistical Education Research Priorities

Research in statistical education has received increased attention and funding from the National Science Foundation and other sources in recent years. While there are individuals doing great work in this area at their own institutions, the collective effort could benefit from strategic planning and setting of priorities. The purpose of the Statistical Education Research Priorities Working Group (<http://bit.ly/21PPT3>), chaired by ASA Director of Strategic Initiatives and Outreach Donna LaLonde, is to hold one or two workshops to develop a white paper on research priorities. The report will be shared with education researchers and funding agencies to help guide future research in statistical education.

And speaking of initiatives, the annual deadline for submitting member initiative proposals (<http://bit.ly/11VF7dy>) is February 3. ASA members and groups are invited to submit proposals for activities that support the ASA's mission. Examples of proposals funded in the past are available on the website.

I wish you all a happy and successful 2016!

Highlights of the November 2015 Board of Directors Meeting

Ron Wasserstein, ASA Executive Director

ASA President David Morganstein welcomed the board to the ASA's headquarters in Alexandria, Virginia, for its final meeting of the year. He especially welcomed incoming 2016 board members, who participated as part of their orientation. The highlights of the meeting follow.

Discussion items

- **ASA statement on graphical displays:** The board received a recommendation from the Scientific and Public Affairs Advisory Committee for a statement on graphical displays, prompted by two well-publicized bad examples of graphics. The committee received feedback from the board for future drafts of the statement.
- **Increasing international membership:** The board discussed a possible program for reaching out to international members in collaboration with the International Statistical Institute.
- **ASA statement on p -values:** The board reviewed a draft statement and made suggestions that will be addressed in a final draft expected soon.
- **Data science:** The board discussed when and how to mention data science (scientists) in the ASA's many communications venues to be appropriately inclusive as the "Big Tent for Statistics."
- **Ethical guidelines:** Howard Hogan, chair of the ASA's Committee on Professional Ethics, reported on the progress of revising the ASA's Ethical Guidelines for Statistical Practice. A final recommendation for revisions to the guidelines will come to the board during 2016.

Action items

- The board created on a pilot basis a new role, the ASA K-12 Statistical Ambassador. Christine Franklin of the University of Georgia will serve as the first person in this role, beginning in the fall of 2016.
- The board endorsed in principle a white paper on good clinical practices, delegating final approval to the executive committee. The paper, which is being developed by a committee jointly appointed by the ASA and Drug Information Association, spells out elements of the body of knowledge needed by statisticians to ensure they meet the ICH standard E-6 for good clinical practice.

2015 Board of Directors

David Morganstein, President
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Jeri Mulrow, Second-Year Vice President
Rob Santos, First-Year Vice President
Mary Kwasny, Third-Year Council of Chapters Representative
Dan Jeske, Second-Year Council of Chapters Representative
Wendy Lou, First-Year Council of Chapters Representative
Dick De Veaux, Third-Year Council of Sections Representative
Cyndy Long, Second-Year Council of Sections Representative
Anna Nevius, First-Year Council of Sections Representative
Ming-Yen Cheng, International Representative
David van Dyk, Publications Representative
Ron Wasserstein, Executive Director and Board Secretary

- The Board approved the annual report of the ASA's Strategic Plan Review Committee. The report calls for the development and implementation of a plan to systematically update the strategic plan during 2016.
- The Advisory Committee on Forensic Science was changed from an ad hoc committee to a continuing committee.
- The name of the Committee on Gay and Lesbian Concerns in Statistics was changed to the ASA LGBT Concerns Committee.
- The board recommended the creation of an "external nominations and awards advisory committee" (official name to be determined) to help get statisticians appointed to high-visibility

positions (e.g., National Science Board) and nominated for general science awards (e.g., National Academy of Sciences members). Details will be worked out soon.

Reported Items

- Associate Executive Director and Director of Operations Steve Porzio reported on the 2015 ASA financials as the end of September. He reported that JSM 2015 set another attendance record, eclipsing the record set at JSM 2014 in Boston. He said the ASA is in good financial condition and that 2015 net income is expected to be well in the black.
- ASA Director of Development Amanda Malloy updated the board on the ASA's development program, including the membership giving campaign, planned giving, and corporate partnerships. She reported on the formation of the Helen Walker Society to recognize lead donors and the 1839 Society to recognize donors of planned gifts. Both of these societies will be launched at JSM 2016. Malloy also announced the creation of a new scholarship for students or new professionals to attend the Conference on Statistical Practice. The scholarship is funded by an endowment created by John Bartko.
- ASA Director of Science Policy Steve Pierson updated the Board on the ASA's advocacy efforts. He pointed out the status of various federal statistical agencies with respect to the FY2016 budget and reported that the ASA continues to play a lead role in educating House members on the issues associated with making the American Community Survey voluntary.
- ASA Vice President Jeri Mulrow reported to the board on the activities of the committees and sections that make up the ASA's Education Council. For each, she reported on its major accomplishments of the past year and its anticipated activities for the coming year. Regular communication between the board and the various committees is essential to efficient operation of the association.
- Equally important to the efficiency and effectiveness of the ASA are the chapters and sections, so, as it always does, the board heard detailed reports from the governing boards of both groups and their respective activities. The annual report of chapters was summarized for the board. The board approved revisions to the charter of the Council of Sections.

2016 Board of Directors

Jessica Utts, President

Barry Nussbaum, President-elect

David Morganstein, Past President

Mingxiu Hu, Treasurer

Jeri Mulrow, Third-Year Vice President

Rob Santos, Second-Year Vice President

Kathy Ensor, First-Year Vice President

Dan Jeske, Third-Year Council of Chapters Representative

Wendy Lou, Second-Year Council of Chapters Representative

Paula Roberson, First-Year Council of Chapters Representative

Cyndy Long, Third-Year Council of Sections Representative

Anna Nevius, Second-Year Council of Sections Representative

Eileen King, First-Year Council of Sections Representative

Ming-Yen Cheng, International Representative

David van Dyk, Publications Representative

Ron Wasserstein, Executive Director and Board Secretary

- The board was updated on the status of President Morganstein's four strategic initiatives for 2015: (1) further developing mentoring programs and recognizing outstanding mentors within the ASA; (2) Stats 101; (3) the JSM docent program; and (4) the Stats.org collaboration. All these initiatives have gone or are going well.
- President-elect Jessica Utts reported on the progress of her strategic initiatives for 2016. (All initiatives of the ASA presidents are based on the ASA's strategic plan.) The four initiatives are: (1) getting information about careers in statistics into high-school statistics classes; (2) prioritizing the statistics education research agenda (as a help to funders); (3) developing media training for statisticians; and (4) creating a "statistical ambassadors roundtable." Groups have been formed to address each initiative, and the work of these groups is solidly underway.

The ASA Board meets again April 8–9 in Alexandria, Virginia, for its first meeting of 2016. ■

John Bartko Provides Scholarship to Promising Students

The mission of the American Statistical Association is to support excellence in the development, application, and dissemination of statistical science. When you consider the activities that contribute to this goal, it is likely the list includes meetings, education, accreditation, and publications. Not captured in this list is the willingness of the community to support students and early-career statisticians. John Bartko acted on this commitment to ensuring excellence by providing a scholarship so students and early-career statisticians will be able to actively participate in the professional community.

The deadline to submit an application for this scholarship has passed, but it will be awarded annually to help promising young statisticians attend the ASA Conference on Statistical Practice (www.amstat.org/meetings/csp/2016/index.cfm). The award will provide up to \$1,000 for registration and travel support. To be eligible for the award, the applicant must be a U.S. citizen who is in at least the second year of a master's degree program in statistics or biostatistics or who has completed



John Bartko

such a program within the two years prior to the award date.

Bartko joined the United States Public Health Service (USPHS) Commissioned Corps and was stationed at the National Institutes of Health (NIH)-National Institute of Mental Health (NIMH), where he served for 33 years until his retirement in 1995. His professional accomplishments include being an ASA fellow, PSTAT-accredited statistician, and past statistical editor of the *American Journal of Psychiatry*.

His contributions to the corps continued after retirement. In 2000, he became a founder of the Commissioned Corps Music Ensemble, the first time the corps formalized a volunteer musical group, becoming the "Surgeon General's Own."

Bartko shared this reflection on his motivation for endowing this award. "Statistics has provided me with a wonderfully fulfilling professional life. My career spans 33 years at the National Institutes of Health in Bethesda, Maryland, followed by 20 years as a consultant. I count attendance at the annual ASA meetings important adjuncts to my professional development. The former smaller ASA winter meetings were special in that they allowed for more focused statistical topics and networking. The current CSP meetings offer these same advantages and additionally provide invaluable statistical practice educational tools and promote career development for younger statisticians. These meetings are so important that it is my desire to provide support to others, allowing them to experience their professional richness." ■

Get Ready to Vote in ASA's 2016 Election

The 2016 ASA election opens March 15 at 12:01 a.m. EST and closes May 1 at 11:59 p.m. PST.

To prepare, visit www.amstat.org/membership and check the following:

- **Membership expiration.** If your membership expires at the time we are launching the election, you will not receive a ballot.
- **Section membership.** To vote for section officers, you must be a member of that section.
- **Email address.** All ballots are delivered via email. If the email you have on file at the ASA is incorrect, you will not receive your ballot. This year, you can vote on your computer, smartphone, or other electronic device.
- **Whitelist.** Add support@votenet.com to your email safe list. This action will ensure the proper delivery of key election information. Instructions for whitelisting can be found at www.aweber.com/blog/how-to-whitelist-us.

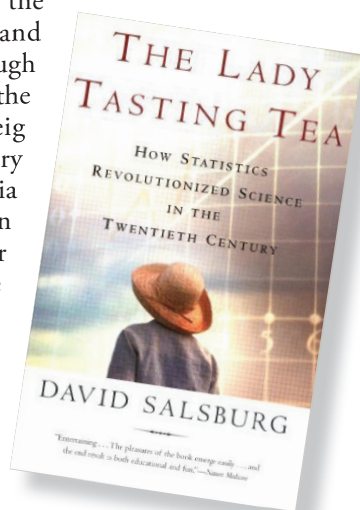
STAFF SPOTLIGHT

Lara Harmon

I joined the American Statistical Association about three—no, five; it's already five—months ago, as your marketing and online community coordinator. My first taste of ASA was being thrown right into JSM 2015, so I hit the ground running. Since then, I've been dedicating my time to learning my way around the ASA Community website, planning ways to improve it for you, ordering swag for upcoming events, helping out new student chapters, and taking stock of the ASA Store. (One of my goals is to get some cat-themed #statlady gear in production ...)

I've worked and played online for years now. As a theatre BA (playwright/dramaturg), I graduated right as the recession hit and was lucky enough to be hired by the Roy Rosenzweig Center for History and New Media at George Mason University. After working there as a social media and content manager for several projects, I moved on to the ASA. Here, I work with many tools that are old friends (it's rare to see me logged off of Twitter @Amstat_Lara) and am enjoying learning others that are new to me.

My online community work and play has made me friends all over the world. As a result, I read and understand German very well and translate short fiction in my spare time. (I'm not published yet, but I have a lovely science fantasy story about ready-to-see publishers.) My Spanish comprehension is good enough that I can read children's novels. I also know a spattering of French, Japanese, and Irish, and my bucket list includes working my way through all 15+ courses on Duolingo. Communication, community, and the equitable



Lara Harmon is looking for suggestions for further reading about statistics. So far, many people have recommended David Salsburg's *The Lady Tasting Tea*. Tweet your favorites to @Amstat_Lara.

exchange of ideas are my life, and both my language hobbies and work here at the ASA tie into those passions.

By the way, if you have recommendations for popular books about statistics and data science, I'm eager to hear them! Tweet titles to me at @Amstat_Lara. (So far, people are passionate about David Salsburg's *The Lady Tasting Tea*.) The more I learn about the language of data science and statistics, the more clearly I can understand your needs and the more unobtrusively I can move around behind the scenes to meet them.

I'm looking forward to working with you! ■

ASA LEADERS REMINISCE

Dick Scheaffer

Jim Cochran

In the 13th installment of the Amstat News series of interviews with ASA presidents and executive directors, we feature a discussion with 2001 President Richard L. Scheaffer.

Q What was your original major when you matriculated at Lycoming College? How did this start you down the path of studying to become a statistician?

A I was always interested in mathematics, an interest enhanced by excellent high-school math teachers from whom I took three years of algebra. I can still remember the excitement that came when I first understood the logic of deductive proof in plane geometry. Desiring to follow in the footsteps of these outstanding teachers, I decided to major in mathematics. The head of the math department at Lycoming took me under her wing and told me—yes, told me—I was going to graduate school at Bucknell University, where she had already secured a scholarship for me. At Bucknell, I came under the influence of William Mendenhall, who was creating excitement for the statistics program he was developing there. I soon learned statistics offered interesting applications of mathematics—and I was hooked. One of my mentors there told me I was going on for a doctorate. What did I know?

Q You have published highly regarded textbooks in a wide variety of areas, including survey sampling, probability, mathematical statistics, and introductory statistics. What motivated these books, and what is your philosophy on producing and maintaining successful textbooks that cover such a diverse set of topics?

A A genuine fondness for teaching carried over from my original goal of being a high-school math teacher. At Florida, where I was now on the faculty but still under the direction of Bill Mendenhall, we decided to develop a wide range of undergraduate courses to meet the needs of various disciplines and set the stage for an undergraduate major in statistics. In those days, there were very few statistics textbooks written for undergraduates, and so we set out to develop our own class notes, many of which became textbooks. Although some of these books contain theory, a primary emphasis was always on real-world applications that demonstrated the practical uses of

Upon earning his PhD in statistics from Florida State University in 1968, **Richard Scheaffer** joined the faculty of the University of Florida, where he served as chair of the department of statistics for 12 years and is now professor emeritus. Scheaffer is a fellow and founder of the ASA and a past president of the Conference Board of the Mathematical Sciences. He has published numerous papers in the statistical literature, mostly on sampling issues, and is coauthor of six college-level textbooks covering introductory statistics, sampling, probability, and mathematical statistics.

Scheaffer has concentrated much of his professional effort on improving statistics education throughout the school and college curricula. Among other efforts, he has served as chair of the ASA Section on Education, directed the task force that developed the Advanced Placement Statistics Program of the College Board and served as the program's first chief faculty consultant, and served on the Mathematical Sciences Education Board of the National Academy of Sciences.



statistics. We focused on making the books both student and teacher friendly, realizing that not all teachers of statistics were statisticians.

Q You were one of the developers of the Quantitative Literacy Project (QLP), so you were instrumental in establishing the basis of the data analysis component in the National Council of Teachers of Mathematics' curriculum standards. How did the QLP come about, and how difficult was it to convince our colleagues in mathematics education of the importance of this data analysis component?

A Almost everything that has to do with statistics education at the K–12 level in the United States has some root connection to Fred Mosteller.



From left: Mary Fleming, ASA Program Director Judith Dill, and ASA Project Leader for Education Richard Scheaffer attend an open house for the Center for Statistics Education in 1998.

Among other contributions, Fred organized the ASA-NCTM Joint Committee in the 1960s—and it is still going strong—to bring a greater emphasis on statistics into school mathematics. It is not surprising, then, that some folks appointed to that committee were disciples of the Tukey approach to data analysis. By the time I was appointed to the committee in 1980, it was chaired by Jim Swift, a fantastic high-school teacher from Canada who had developed his own material for teaching data analysis to his math kids. We quickly saw that this novel work needed to be developed a little more formally for publication to wider audiences. We also saw that we needed funds to do this. To shorten a long story, we succeeded in obtaining NSF grants to develop these materials and, perhaps more importantly, to give workshops for teachers across the country. We thought the term statistics would scare off both the granting authorities and the teachers, so we decided to call it quantitative literacy.

As to support from the mathematics community, we obviously had great support among teachers through NCTM from the very start. We also had strong support from much of the mathematics education community. John Dossey, one of the leaders of that community, was also president of NCTM at the time and a strong supporter of statistics. The main objections came from the research mathematicians, who saw possible value in teaching some statistical notions somewhere in the school curriculum, but strongly objected to teaching it as part of the mathematics curriculum.

Q The QLP began more than 30 years ago. What has been its impact over the intervening years?

A The NCTM curriculum standards of 1989 listed data analysis as one of the main strands of the mathematics curriculum, which took courage and foresight on their part. The College Board was coming on board at about this same time, both

with their own K–12 curriculum guidelines and a renewed dialogue on the possibility of developing an Advance Placement Statistics course. As to the latter, we had to answer two key questions: What is to be the content of such a course? Are there teachers already in the field who can teach it? We had ready answers: The content would be built around the Tukey model for data analysis and the cadre of teachers capable of teaching this material would come from participants in our QLP workshops. But it still took 12 years, 1985 to 1997, to get to the first AP Statistics exam. More recently, statistics viewed from this same data analysis perspective is the basis of the influential K–12 GAISE Report and has been embedded in the Common Core State Standards.

The success of the QLP approach to teaching basic statistical concepts depended not only on a data-analytic approach, but also on hands-on, active learning. Hoping to affect a similar laboratory approach to college teaching of introductory statistics, we decided to adapt and expand our QLP workshop ideas toward that effort. The result was the Activity Based Statistics book that has seen some success in increasing the use of activities in college classrooms—but not to the degree we would have liked.

Q Were there any topics that you felt were important, but were unable to incorporate?

A First, what do I mean by the Tukey approach to data analysis? It is more than drawing box plots. To paraphrase the master, this includes ways of planning the gathering of data, procedures for analyzing data, techniques for interpreting the results of such procedures, and the necessary machinery of mathematical statistics that apply to the latter. We tried to cover the essence of these areas, using simulation rather than mathematical theory as the essential tool for interpretation. These four areas are practically the outline for the AP Statistics course.

Speaking now for myself, I would like to see more emphasis on statistical modeling, which generally requires use of regression analysis with more than one explanatory variable. We can now do that easily with the computational power available, but it has not gotten far as the basis of even college-level introductory statistics. Relating to an earlier point, our research mathematician friends do see great value in modeling.

Q You have put a great deal of effort into initiatives designed to increase statistical/quantitative literacy. What does your experience suggest is the greatest impediment to achieving a numerate society?

A Math phobia emanating from poor teaching of mathematics in earlier generations, a simplistic

NEXT MONTH
Please return to this column next month, when we will feature an interview with 1992 ASA President Katherine K. Wallman.

view of mathematics as arithmetic, and a reluctance to embrace new approaches and new topics. Learn the times tables and perhaps long division the way I did and leave the rest for experts. Kids love data; adults hate data. Somewhere along the way, something crucial went wrong. My view is that an even greater emphasis on statistical thinking through real applications of interest to students will enhance both statistical and mathematical thinking.

Q What were the most important accomplishments achieved/issues addressed by the ASA during your presidency?

A The board was heavily involved in building issues. The Duke Street location was no longer adequate for the future envisioned for the ASA and

the site originally chosen for a new building had significant problems, which never were overcome.

On the financial side, there were concerns about income loss on journals due, in part, to online publication. This led to the establishment of a committee to plan a long-term development campaign, which was derailed by building issues, but has recently gained new life.

Amid all of that, the ASA continued to expand its support of statistics education at the school and college levels. For example, the Consortium for the Advancement of Undergraduate Statistics Education arose from an ASA strategic initiative and has become the leading U.S. organization for supporting and advancing the resources, professional development, outreach, and research in undergraduate statistics education. ■

Entries Invited for Statistical Significance Competition

The Scientific and Public Affairs Advisory Committee (SPAAC) invites all JSM 2016 poster contributors to compete for a policy applications prize in its fifth Statistical Significance competition. A prize of \$250 will be awarded to the presenter with the JSM poster that includes a Statistical Significance piece the judges deem describes the best contribution of statistics to society.

Statistical Significance is a short, one-page illustration of the value of statistics to society within the context of the research problem dealt with in the poster submitted for JSM presentation. The objective is to illustrate to a lay person how the statistical solution to the problem presented in the poster would help form decisions that improve society in specific areas such as health, agriculture, economy, education, manufacturing, and medicine. The piece should be clearly written to convey the beneficial role of statistics in a concise and unambiguous manner. The most effective Statistical Significance pieces are easy to develop, simple in exposition,



enlightening, and fun to read. See www.amstat.org/policy/statsig.cfm for examples.

Contest participants must include a one-page Statistical Significance piece with their poster presentation at JSM. Both the scientific merit of the poster and the

Statistical Significance piece will be judged.

A panel of judges appointed by the SPAAC will visit the posters during a topic-contributed session on August 2 and determine a winner by the morning of August 3. The winner will be notified immediately thereafter.

Participation in this competition is only available to contributed poster authors who submit their poster abstract by the JSM deadline of February 1. To enter, email your intention to compete and your abstract number to Sree Meleth at smeleth@rti.org by midnight February 22. Feel free to contact Meleth with any questions.

A Recipe for Successful Collaborations

A JSM 2015 Panel Discussion

Dongseok Choi, John E. Kolassa, Mani Lakshminarayanan, Barry D. Nussbaum, A. James O'Malley, Wei Shen, and Kelly H. Zou

the emergence of complex and high dimensional big data as such challenges are common across all sectors. The discussion was extremely valuable to statisticians across diverse areas of statistical practice, especially to those in smaller institutions or organizations for whom collaborations may not have existed when they joined.

According to a Cisco blog piece (<http://bit.ly/1OwkLtm>) written by Dominguez (2011), the Chairman of Google, Eric Schmidt, once said, "When you say collaboration, the average 45-year-old thinks they know what you're talking about: teams sitting down, having a nice conversation with nice objectives and a nice attitude."

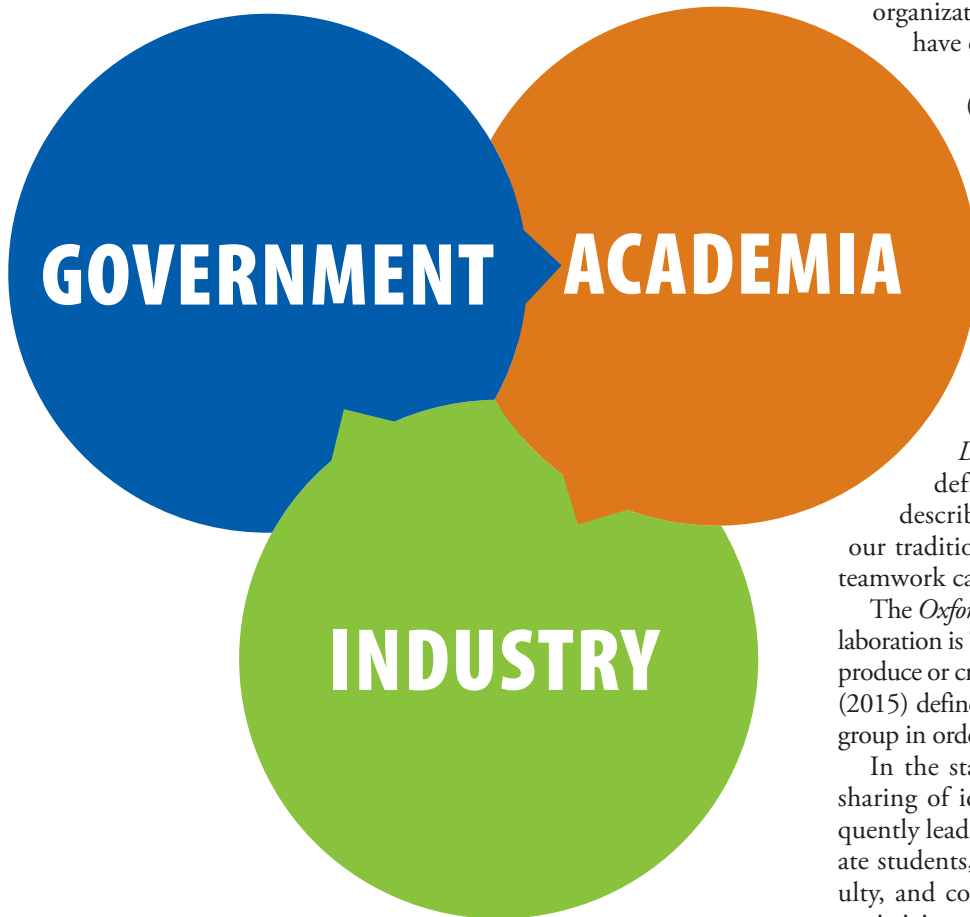
Schrage (1990) wrote in his book, *No More Teams!: Mastering the Dynamics of Creative Collaboration!*, defined the following: "Collaboration describes a process of value creation that our traditional structures of communication and teamwork can't achieve."

The *Oxford English Dictionary* (2015) says that collaboration is "The action of working with someone to produce or create something," while *Merriam-Webster* (2015) defines it as "to work with another person or group in order to achieve or do something."

In the statistical field and related professions, sharing of ideas from different organizations frequently leads to exchange visits, support for graduate students, consulting jobs, grant award for faculty, and continuing education opportunities for statisticians outside of academe. Through these activities statistical problems from outside academe become case studies in the classroom and dissertation topics. The intellectual exchange is a key component of partnerships. Below are a few thoughts on the collaborative processes.

Definitions and Views

There are several fruitful examples based on collaboration by different career sectors. For example, an academic statistician may collaborate with colleagues within the university, through formal statistical support structures created by the institution, or through more *ad hoc* arrangements. Collaborators may be researchers from other academic, industrial, or governmental institutions that reach out for collaboration.

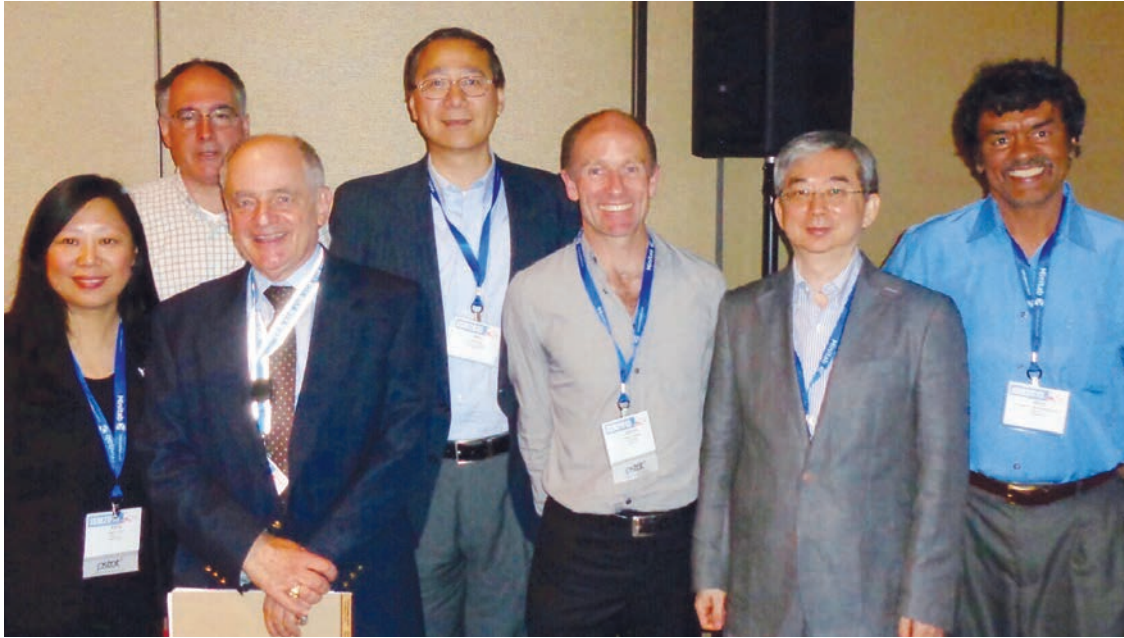


EDITOR'S NOTE
The views expressed in this article may not necessarily reflect those of the authors' employers.

During the 2015 Joint Statistical Meetings (JSM) in Seattle, Washington, the American Statistical Association (ASA), through its Committee on Statistical Partnerships among Academe, Industry and Government (SPAIG) and several co-sponsors, highlighted cutting-edge collaborative projects through successful partnerships between academia, industry, and/or government organizations.

Six distinguished statisticians, herein the "panel," from various professional sectors offered valuable thoughts and advice on how statisticians may form vital collaborations across sectors.

This session had a wide appeal, given the increasing focus on inter-disciplinary research and



The panel members, from left: Kelly H. Zou, John E. Kolassa, Barry Nussbaum, Wei Shen, A. James O'Malley, Dongseok Choi, and Mani Lakshminarayanan

Government may not seek collaboration, *per se*. However they do look for innovative, creative ways to do things. Many of these could involve internships or cooperative agreements with universities, for example, through requests for applications in terms of grant-funding.

Formation and Process

The demands for statistical collaborations have been steadily increasing during the last decade or two in particular with “omics” (e.g., genomics, proteomics or metabolomics) data, and there will be likely even stronger demands with big data. However, finding a right collaborator or forming a partnership may not be easy even with today's internet or simple notification service. In our experience, a collaborator has been traditionally sought by personal connections or at professional conferences. Interestingly, a recent trend of open competitions for data analysis, e.g., the Netflix prize or Kaggle competitions, may become a new way of finding consultant or collaboration in the future.

One might use the terms collaboration and consultation to refer to work with other researchers whose area of expertise is not statistics. Consultation connotes a short-term arrangement in which the primary intellectual contribution of the statistician is the selection and application of the proper known statistical designs and techniques within the boundaries of the problem specified by the soliciting party; collaboration connotes a longer-term relationship in which statistical ideas may be involved from the problem identification to the implementation phase of a problem with

new statistical methodology possibly being developed to solve novel statistical problems in the field to which it is applied. Sometimes, a consultation may evolve into a long-term collaboration.

How to Measure Success

Necessity is the mother of invention. Here, a problem that really needs a solution is the main element leading to a collaborative success. The criteria for successful collaboration can be different for each party. A statistician, who is a faculty member at a university, may need to demonstrate academic productivity and scientific innovation through significant contributions to human knowledge and theoretical development. This contribution is generally made through publications in peer-reviewed journals and conference proceedings. Industry collaborators may be driven more by incentives such as new inventions and innovation through appropriate application of theory developed by academia, as well as business values added, and thus they may hold their collaborating partners to tight deadlines or expenditures in order to meet budgets.

For example, Rutgers, The State University of New Jersey and Pfizer have received a recent SPAIG Award. Pfizer generously supported statisticians from Rutgers through sponsorship of joint workshops and seminars, through collaboration with Rutgers faculty, with funds for Rutgers students, and with internship opportunities for Rutgers doctoral and Master's level students.

Another SPAIG Award has recognized the strong and enduring relationship between Baylor

University and Eli Lilly, which has brought methodological enhancements to both clinical and non-clinical pharmaceutical applications. Successful collaboration has paved the way for partnerships between Eli Lilly and other universities. The number of graduate students and faculty supported by Eli Lilly, as well as the hiring of Baylor graduate students, indicated that the partnership is highly valued by both entities.

One obstacle to forming collaborations across domains is that academe, industry, and government entities may have very different values in terms of measuring success. Academics may be less inclined to partake in important collaborations if they do not involve cutting-edge techniques, and they may shy away from collaborations where confidentiality may prohibit publication. Government or regulators may be resistant to adopting new statistical methods until they have been thoroughly vetted firstly in the literature and secondly through their own filtration process.

Yet despite these challenges, it is possible to form collaborations across these sectors if one is willing to understand the position(s) of the other parties and compromise in realistic ways. In the academic world, the tightening of research funders has led to a widening of criteria for promotion in many institutions and increased recognition of the work products that can arise from collaborations with industry and government. Even unsuccessful collaboration could have imbedded the seeds for an alternative approach, potentially resulting in successful collaboration in the future.

Collaborations

The ASA recognizes that the elements of statistical analysis can best be applied in conjunction with subject matter experts. Typically these may be found in other organizations....hence the recognition of outstanding collaborations.

In the era of the big tent of statistics, there will be more innovative ideas and cutting-edge products as a result of successful collaborations. The mission of SPAIG is to identify, lead, and promote initiatives that foster partnerships between academe and business, industry, & government (B/I/G). The SPAIG aims to help ASA member through the following activities:

1. Establish a partnership award recognizing successful partnership efforts between academe and B/I/G

2. Promote periodic JSM sessions that focus on partnership case studies and other relevant partnering
3. Recommend and support periodic salary surveys of B/I/G statisticians
4. Maintain a SPAIG web site to communicate partnership activities, progress on SPAIG initiatives, the partnership award program, and other SPAIG information

The annual SPAIG award recognized successful collaborations. It is currently on hiatus, pending a revision of the requirements, which could provide incentives to new collaborations and recognize individuals, not just their organization.

Reflection and Remarks

Statistical societies, such as the ASA, provide the most important encouragements to collaboration in the form of the JSM conferences, as well as other statistical activities, which allow for the discussion of existing collaborations and the dissemination of the products of such collaborations. Statistical societies encourage collaboration by sponsoring journals in which the fruits of our labors may be displayed.

Notably, the ASA maintains a registry of consultants (www.amstat.org/consultantdirectory) that can be manually searched by area of specialty. This directory provides a wonderful service to individuals and organizations seeking statistical help and has result in a substantial number of consulting and collaborative relationships between statisticians and collaborators in a multitude of fields.

In the future, it is possible to imagine the registry linking to the ASA's accreditation process, i.e., PStat[®] or GStat[®], such that a statistician gains credit for validated work they perform in collaborations that manifested from the information provided on the site.

We thank our predecessors in the field who made these opportunities possible. Statistical societies might further this fostering of collaboration by offering registries of people seeking statistical collaborators to complement the registry of statistician contacts and their areas of expertise. The ASA and other statistical societies may consider maintaining a list of past, ongoing, and current collaborations and the work products. This effort may provide further illustration of the benefits on working with a statistician to subject-matter experts by encouraging some of them to seek statistical help when they might not otherwise. ■

MORE ONLINE

For more about the panelists and further reading about this topic, please see <http://bit.ly/1UAEwU>.

For more about Kaggle competitions: www.kaggle.com.

The ASA maintains a registry of consultants. To view the registry, visit www.amstat.org/consultantdirectory.



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A Virginia-based nonprofit partnered with Statistics without Borders to evaluate their Myanmar program and find ways to scale up their work on maternal and infant health care.

Lessons from Statistics without Borders Maternal and Infant Care Survey

Monica Dashen

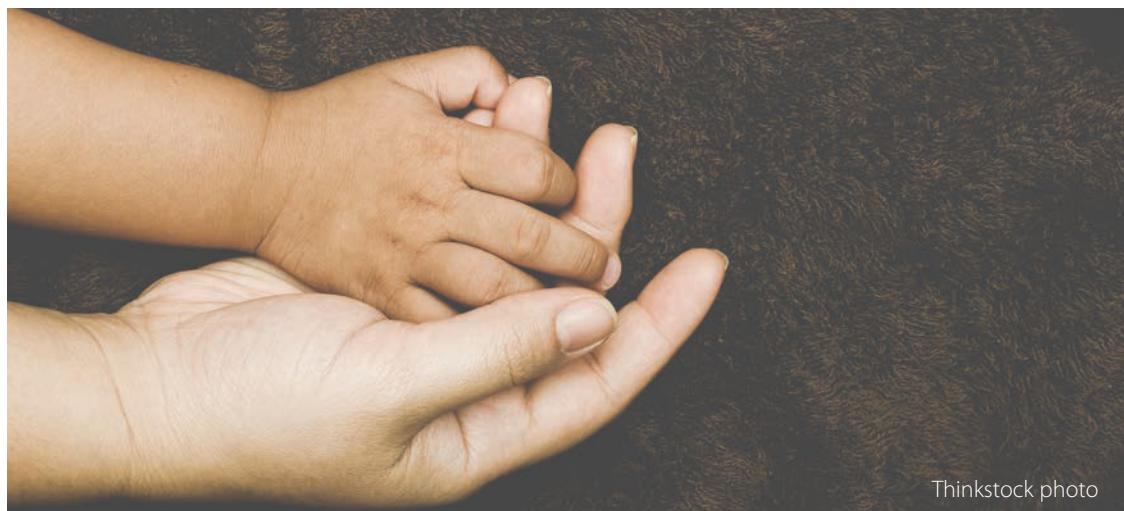
In 2011, the military junta that had ruled Myanmar (and changed the name from Burma) for more than two decades, undertook vast reforms. The 2008 military-drafted constitution remained, and the new president—Thein Sein—was a high-ranking general. But the new government formally became civilian and the opposition leader, Aung San Suu Kyi, now holds a seat in parliament. In the process of democratization, Thein Sein, signed peace treaties with various ethnic minority rebels. Recently, Myanmar held a national election.

Meanwhile, Global Community Service Foundation (GCSF), located in Virginia, has been running a small charity in the Inle Lake area of

Myanmar <http://globalcommunityservice.org>. In 1995, GCSF started building homes in the area and, in 2010, launched a maternal and infant care program. Retired government midwives (dubbed GCSF midwives) regularly travel to a prescribed set of villages and distribute prenatal vitamins, as well as advise the women about getting tetanus shots and worm pills from their local government midwife.

Now that the government is in the process of democratization, GCSF would like to expand its maternal and infant care program to more Inle Lake villages. To do so, GCSF needed to show the effectiveness of their program and find ways to scale up. GCSF partnered with Statistics without Borders

Monica Dashen is a stay-at-home mother of three children who worked at the Office of Survey Methods and Research in the Bureau of Labor Statistics for years. She now enjoys applying her knowledge and skills to humanitarian projects.



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The survey was fairly straightforward, as it covered the well-known maternal and infant care turf. SwB interviewed 322 women capable of having children about their fertility history, medical care, knowledge, and beliefs.

(Maria Suchowski and the author) to formulate a program evaluation and find ways of expansion.

This SwB-GCSF collaboration sought to find out whether the GCSF program matters and identify critical knowledge gaps of maternal and infant care among mothers and health care workers. The plan was to compare the main part of Inle Lake, serviced by GCSF, to the lower part, not serviced by GCSF. Using the two-stage cluster sampling method, SwB interviewed 322 females capable of having children about their fertility history, medical care, knowledge, and beliefs.

The survey was fairly straightforward, as it covered the well-known maternal and infant care turf. The two most time-consuming components were questionnaire design and survey implementation.

Questionnaire Design

No “off-the-shelf” questionnaire existed. The two major maternal and infant care surveys—Demographic Health Survey (DHS), sponsored by USAID, and Multi Indicator Cluster survey (MICS), sponsored by UNICEF—did not meet GCSF’s needs, so SwB designed a questionnaire from scratch, which was difficult because GCSF did not keep detailed records and it was not clear what the midwives did and did not do. To circumvent this problem, SwB conducted an initial study in which GCSF providers told us about their services, training, schedules, supplies, and so forth. Unfortunately, the midwives did not provide a detailed account of their services. To fill in the

gaps, SwB relied on the DHS to identify possible services such as checking for worms and high blood pressure. SwB also conducted a focus group involving mothers from a GCSF-sponsored village and conversed with a USAID Burmese doctor about maternal and infant care.

The questionnaire was not built in isolation in the United States and implemented in Myanmar. Rather, it was piloted three times and underwent wording changes after each pilot. Knowing the survey would be the first survey the mothers ever took, SwB sought to make it as Burmese as possible. For example, an interviewer pointed out that asking whether families eat together was silly, as that is the custom. The intent was to find out whether women ate table scraps, so the question was deleted.

SwB’s efforts paid off. The Burmese mothers wanted to be involved in the full survey and were willing to spend the time. There were 53 recorded refusals/vacancies. Of the 53, 39 were reported as vacancies. A closer look at the data indicated the mothers were either at work or at a festival. During the interview, the mothers chatted about their birth history and dietary habits and beliefs. To prevent the fetus from having diarrhea, for instance, many pregnant mothers listed at least 10 types of beans they avoided, along with an extensive list of other healthy foods. (The women reported eating rice with a smattering of meats and vegetables.) Later, the translators surrendered their red pens and simply wrote “beans,” instead of translating each bean type.

SwB Helps NGOs Focusing on Vulnerability of Women and Children

Statistics without Borders (SwB) researchers along with SciMetrika—a nongovernmental organization (NGO) with technical capacity but few resources—focused on the social and economic consequences of the Haitian earthquake. In a 2014 *Statistical Journal of the IAOS* article, “A Nationally Representative Economic Survey Five Months after the Haitian Earthquake,” Ryung Kim, James Ashley, and Mary Corcoran found that more women were unemployed than men and there was an increase in the number of orphans. Such findings provide for more targeted interventions.

SwB members also have focused on innovative methods in field research. When a list of addresses was incomplete in war-torn Sierra Leone, SwB researchers Sowmya Rao and Gary Shapiro, together with Theresa Diaz, the principal UNICEF investigator, devised a way to draw a representative sample for a child mortality survey. Global positioning systems (GPS) mobile devices allowed the interviewers to map the houses in various neighborhoods. Later, when a random sample was selected, the interviewer returned to the household with the device to collect data, as

the survey was already programmed in. Such innovations cut costs and increase efficiency. Their results were published in the 2012 *CHANCE* article “Use of GPS-Enabled Mobile Devices to Conduct Health Surveys: Child Mortality in Sierra Leone.”

In another instance, SwB researchers Michiko Wolcott, Joseph Pollack, and Minh Tran, together with Cat Graham and Chris Thompson of Humanity Road, collaborated to harness the power of social media in emergency situations. Using typhoon Haiyan as a case study, the group sought to provide a quick method for locating victims and defining priority damage areas by tweet counts. Such methods replace the more time-consuming search and rescue methods. Their results were published in a 2015 *Statistical Journal of the IAOS* article, “A Guide to Social Media Emergency Management Analytics: Understanding Its Place Through Typhoon Haiyan Tweets.”

Together, these examples highlight the general vulnerability of women and children in emergencies and the need for more targeted intervention of these populations in any emergency recovery process.

Survey Implementation

Two lessons were learned in the implementation of the survey. The first lesson is that it took more time than expected due to the following three obstacles:

- GCSF staff and the interview team had to be brought up to speed on survey practices. For example, SwB members devised manuals based on the MICS and DHS manuals that describe implementation of standard practices in a developing country. In another instance, the interview team underwent a two-day training session that involved familiarization with the questionnaire and interview protocol.
- Access to all 20 villages (10 GCSF and 10 non-GCSF-sponsored villages) had to be gained. The GCSF staff—the original interview team—could only go to the villages they serviced. After many attempts to find interviewers who could visit all the villages, SwB finally garnered interviewers who were nurse aides at a local clinic.
- SwB had to gain cooperation from the respondents. Permission from local village heads was given and blessings from a top monk were granted after we gave gifts of rose-scented soaps. Also, goodwill was generated for the survey after GCSF made arrangements for and covered the costs of a mother delivering a healthy baby at a local hospital. The mother, who was in the final pilot study, reported a series of miscarriages and stillbirths.

No ‘off-the-shelf’ questionnaire existed. The two major maternal and infant care surveys did not meet GCSF’s needs, so SwB designed a questionnaire from scratch.

The second lesson learned is that implementing a full-scale survey is local; it cannot be done remotely. On-the-fly decisions were made based on field conditions. Someone familiar with the survey process should be present at the start. During training, the importance of interviewing all women of child-bearing age, regardless of marital status, was pointed out. Questions about single women arose. After some back and forth, it was clear that women living alone were a rarity. Single women usually reside with their parents or in-laws. (A widowed woman typically remains with her in-laws after her husband’s death.) As it turned out, there were some women living alone who were interviewed.

The team interviewed 322 women residing in 20 villages. Homes were selected using the random walk method. To prevent response fabrication, the supervisor confirmed all interviewer routes and conducted re-interviews. The supervisor usually interviewed health care workers as the team travelled down the lake.

Implementation is a collaborative process. No one person can do it alone, and the investment in training time pays off. During training, the team was instructed not to make village substitutions; however, it arrived to empty villages early on. The mothers were at a nearby village for an all-day festival. But by calling the village head beforehand to ask the moms to stay and arriving earlier, the team was able to meet with the mothers another day.

The lack of records proved to be an obstacle in the initial data analyses, and no pre-natal care differences were found between the GCSF and non-GCSF-sponsored villages. Turning back to the records, it became apparent that the exact number of times midwives visited each village to distribute vitamins or perform checks was unknown. Eventually, SwB identified those villages served the longest—five years. The three

villages served for less than two years were dropped from the analyses. Looked at this way, the data showed the GCSF program does matter. Mothers from GCSF-sponsored villages reported receiving more pre-natal care services than those from non-GCSF-sponsored villages.

The post-natal and neo-natal care questions derived from a conversation with a USAID Burmese doctor provided a direction for program expansion. Analyses indicated many of the mothers were unaware of post-natal danger signs (or maternal problems after birth). However, the doctors and nurse aides felt obliged to clarify misconceptions after each interview.

Finally, the GCSF-SwB survey showed the need for additional medical training for auxiliary midwives, community health care workers, and village women.

For more information about or to volunteer for Statistics without Borders, visit <http://community.amstat.org/statisticswithoutborders/home>. ■

Submissions Sought for New Journal

Submissions are being accepted for the new peer-reviewed journal *Observational Studies*. The journal is diamond open access, which means no charges for readers and no charges for authors.

A highlight of the first issue is a reprint of William Cochran’s paper “Observational Studies,” followed by comments from current researchers in observational studies: Norman Breslow; Thomas Cook; David Cox and Nanny Wermuth; Stephen Fienberg; Joseph Gastwirth and Barry Graubard; Andrew Gelman; Ben Hansen and Adam Sales; Miguel Hernan; Jennifer Hill; Judea Pearl; Paul Rosenbaum; Donald Rubin; Herbert Smith; Mark van der Laan; Tyler VanderWeele; and Stephen West.

For details, visit the journal’s website at <http://obsstudies.org>.

American Football, Ski-Jumping, Hockey, Ultrarunning Featured

Mark E. Glickman, *JQAS* Editor-in-Chief

The December 2015 issue (volume 11, issue 4) of the *Journal of Quantitative Analysis in Sports (JQAS)* consists of four articles with applications to hockey, American football, ski-jumping, and ultrarunning.

“A Finite Mixture Latent Trajectory Model for Modeling Ultrarunners’ Behavior in a 24-Hour Race” by **Francesco Bartolucci** and **Thomas Brendan Murphy** is the editor’s choice article for this issue and available for free download for the next 12 months. The article develops a model for ultrarunners’ performance that accounts for different strategies and behaviors for modulating speed and rest propensity throughout a race. The model assumes speed and rest trajectories can be described via latent clusters and that cluster membership may depend on runner covariates. The model is demonstrated on ultrarunner outcomes from the International Association of Ultrarunners 2013 World Championship.

“Riding a Probabilistic Support Vector Machine to the Stanley Cup” by **Simon Demers** compares the predictive performance of various team metrics in the context of NHL playoffs. Metrics were compared in the context of 105 best-of-seven NHL playoff series that took place between 2008 and 2014 using a relevance vector machine learning approach and the more common support vector machine (SVM). The probabilistic SVM results were used to derive playoff performance expectations for NHL teams and identify playoff under-achievers and over-achievers.

In “Consistency, Accuracy, and Fairness: A Study of Discretionary Penalties in the NFL,” **Kevin Snyder** and **Michael Lopez** evaluate the consistency of specific discretionary penalties in NFL football. The authors focus on examining the occurrence of holding and pass interference calls. After accounting for game and play specific variables, the authors find through a generalized linear mixed modeling approach that the probability



An article on ultrarunning is the editor’s choice article for the December 2015 issue of *JQAS*.

of both penalty types is low at the beginning and ends of the game, but high in the middle.

Finally, “Fair Compensation for Gate and Wind Conditions in Ski Jumping—Estimated from Competition Data Using a Mixed Model” by **Magne Aldrin** investigates the fairness of the existing compensation system in competitive ski-jumping by an analysis of the results from 80 competitions. The compensation system is intended to account for differential wind conditions and the gate from which ski-jumpers start, but the question of whether the adjustment is reflected in jump performance is raised. The analysis is performed by examining the fit of various mixed effect regression models and results in a conclusion that the existing compensation system requires improvements to account for head winds and tail winds.

These articles are available to all members of the Section on Statistics in Sports and on a subscription basis from the *JQAS* website, which can be found at www.degruyter.com/view/jjqas. Also, prospective authors can find the journal’s aims and scope and manuscript submission instructions there. ■



This is Statistics Widens Reach

New profiles include Obama campaign data chief

Since its launch at the 2014 Joint Statistical Meetings, the This is Statistics (TiS) website (<http://thisisstatistics.org>) has averaged more than 3,000 unique visitors per month and its five videos have been watched nearly 50,000 times. The number of likes on its Facebook page is approaching 5,000, and the Twitter account has 2,600 followers. Still, the public relations campaign aimed at making students aware of the benefits of taking a statistics course (or courses) and the opportunities a career in statistics offers is in its early stages. Much work remains to be done to reach students and those who help influence their educational and career decisions.

New profiles, news stories, and videos were added over the last several months. The profiles incorporate statisticians and data scientists, including Rayid Ghani, the Obama campaign's data chief. Recent news stories center on the demand for statisticians and the growing number of students taking statistics courses and/or seeking statistics degrees. Several videos also were released, including videos produced by ASA student chapters and a professionally produced video featuring Megan Price of the Human Rights Data Analysis Group. The communications firm executing the TiS campaign—Stanton Communications—also pitched many stories to the media about the tremendous growth in statistics degrees and the demand for statisticians.

In addition to keeping the website fresh with new profiles and news items, new activities including more direct outreach to teachers and counselors are planned for 2016. ASA President Jessica Utts also has an initiative—"Statistics Careers for AP Statistics and other K–12 Classrooms," chaired by ASA Board member Anna Nevius—that is already advising on how to better reach high-school students.

New Resources

The newest materials for This is Statistics include the following:

PROFILES

- **Detroit Fire Department Statistician Cassie DeWitt** (<http://bit.ly/1QyEr4d>)
- **Georgetown Professor Kimberly Sellers** (<http://bit.ly/1SQGtfg>)
- **Obama Campaign Data Chief Rayid Ghani** (<http://bit.ly/1RcLh0P>)
- **Pegged Software Data Scientist Shannon Cebron** (<http://bit.ly/1OVAPY6>)

VIDEO

- **Megan Price of the Human Rights Data Analysis Group** (<http://youtu.be/orW01w8a4zY>)

NEWS STORIES/PRESS RELEASES

- **Wharton Statistics Program 'Bursting at the Seams'** (<http://bit.ly/21SmmTS>)
- **Seattle Times: Statistics Careers Are Hot** (<http://bit.ly/1TDu1zB>)
- **Demand for Statisticians** (<http://bit.ly/1IXT8HH>)

Share the TiS resources and URL with your networks, especially students, parents, teachers, and counselors. Also, see "How You Can Help" for more ways to get the word out about statistics. ■

First Electronic Undergraduate Research Conference a Success

Plans underway for next year

The Consortium for the Advancement of Undergraduate Statistics Education (CAUSE) and the ASA sponsored the first electronic undergraduate statistics conference October 2, 2015. More than 200 undergraduate students and their professors participated in a series of keynote talks, plenary talks, a careers panel, and student e-posters.

Keynote talks by Benjamin Baumer, assistant professor of statistics and data science at Smith College and former statistical analyst for baseball operations of the New York Mets, and Rachel Schutt, chief data scientist at News Corp and adjunct professor of statistics at Columbia University, were among the many sessions. In

addition to individual students and professors participating remotely, some colleges and universities had satellite conference locations where classrooms full of students and professors participated together. For example approximately 40 students viewed a live stream at Grinnell College.

The 2016 conference, which will be held October 21, is an opportunity for students to present their class projects and research and to hear other students and professors share their work. Also, students—from introductory statistics to capstone/summer research—can submit their work to the Undergraduate Statistics Project Competition (USPROC). Submissions are due by May 31 at www.causeweb.org/usproc. ■

MORE ONLINE

All the presentations are archived at www.causeweb.org/usproc/eusrc.

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Finding Leadership Careers in Quality Management



Daniel Smith is a process manager at Cox Communications, where he has worked since 2005.

He completed his undergraduate studies at Emory University and earned an MBA with a concentration in statistics at the Georgia Institute of Technology, where he also received his Six Sigma training. Smith currently holds a master black belt certification in Six Sigma management.

In the March 2014 issue of *Amstat News*, I wrote an article designed to assist professionals seeking employment in the quality management field (“Finding Careers in Quality Management,” <http://bit.ly/1I9jStW>). The article essentially recommended taking steps to increase your personal certifications, study advanced analytics software, and learn to speak intelligently about statistics. Each section offered advice about how to achieve those goals and was intended to reach those who were entering the workforce or interested in changing career paths. This article will seek to take the next step by offering career advice to mathematics professionals seeking to advance in this career path at their company.

I have noticed that this task can be slightly more daunting for those working in analytics positions within quality management. For some

reason, they often are labeled as number crunchers, not leaders. There seems to be the assumption that if people are good with advanced analytics, then they likely are not good at managing people, which most leadership positions will require. I believe this perception exists because the skills you need to advance into a leadership position often have little to do with being an analytical expert. However, combining the analytical skills you already possess with the following advice should make achieving that goal a little more attainable.

Be Able to Speak Publicly About Statistics

“According to most studies, people’s number-one fear is public speaking. Number two is death. Death is number two. Does that sound right?”

This means to the average person, if you go to a funeral, you're better off in the casket than doing the eulogy." – Jerry Seinfeld

When I started my career in quality management more than 10 years ago, I had absolutely no interest in speaking publicly. I didn't think I was particularly good at it, nor did I have any interest in becoming good at it. I wanted to focus on my job, deal directly with my boss, and—if my work was good—advance up the corporate ladder. Being a good public speaker is not mandatory for advancement, but it can be an enormous help. It shows initiative, courage, and leadership.

There are formal courses that can assist with becoming proficient at public speaking, but for many people it becomes a natural transformation. For me, it began with meetings. I began speaking more in both informal and formal project meetings. At first, the meetings were small, and then they began to grow. Soon, I was speaking in larger meetings with more managers and directors present. Eventually, I was invited to speak at corporate summit meetings in front of 100 people. Keep in mind that while I was having the opportunity to speak publicly, I still didn't think I was great at it. However, like most things in life, the more experience you get, the better you become.

Mentor / Teach Others

Any leadership position you interview for is going to ask you about your experience managing people. For people who do not have this experience, it can be a frustrating wall to break through. It seems like a catch-22. You typically hear things like, "I can't get promoted to a management role because I don't have experience managing people, and I can't get experience managing people because I'm not in a management role."

While frustrating to hear, it does not mean you're powerless. Many companies have formal internship programs and are seeking mentors to aid in their development. Ask your boss if they would be willing to allow you to manage an intern.

This also does not necessarily have to take place within your company. Many schools and universities in your region will be looking for seasoned professionals to assist with the development of

Becoming comfortable with public speaking, mentoring others, and joining a professional organization may not be what you were taught in school, but they will go a long way in aiding your climb to a leadership position.

their students. Developing talent is a key trait of many leadership roles, and any experience you can point to in this regard will greatly aid your attempt to find a role like this for yourself.

Teaching opportunities are also more abundant at most companies than you may realize. This could be one on one or in larger groups. My company has monthly meetings during which the topics rotate. Anyone who feels up to it can apply to teach a session. And it's a great way to get public speaking experience.

Join a Professional Organization

As members of the ASA, you already have this covered. Hopefully you already realize the value that comes with joining a professional organization outside your company, but this value increases enormously when you want to move into a leadership position. In addition to having access to information others may not or the abundant network of professionals you can now connect with, it also demonstrates that you are interested in continual learning and keeping up with industry trends. Directors who place people in leadership roles will take notice.

Many of the tips in this article are not obvious. I think most people have the mindset that if they do good work, they will likely get promoted into a leadership role. But without experience managing people, that can be harder to achieve than most people realize, especially in today's ultra-competitive job market. Becoming comfortable with public speaking, mentoring others, and joining a professional organization may not be what you were taught in school, but they will go a long way in aiding your climb to a leadership position within your analytical field. ■

TELL US | What is a great gift for a

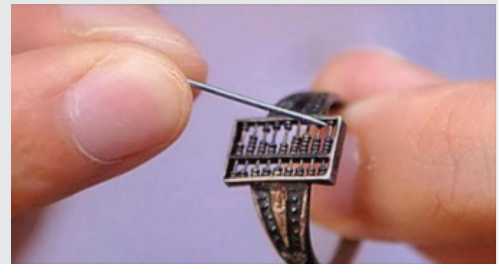
We asked our Twitter and Facebook followers to respond. Here are some of our favorite answers.



PhiLoThought

@PhiLoThought

Maybe an abacus ring like this:



Ariel Astrid Finno

@arealdatageek

a Mobius strip?

Ian Soboroff

@ian_soboroff

urns and colored balls

Elaine Eisenbeisz

@OmegaStatistics

coffee is always great
(stats fuel!) and
personally this stats
diva loves chocolate.
Or vodka works too.
Merry Xmas!



statistician?

Kevin Wright

@kw_stat

Non-transitive dice.

Fabian Gil

@Fe_Gil

A bag of assorted dice, a biased coin

Thomas B Macaulay

@LordMacaulay

Easy! A copy of Cox & Donnelly's *Principles of Applied Statistics*, and/or a copy of *Advanced R*

by @hadleywickham Cheers!

Basti Hoffmeister

@neuhier_

A paper without p -values? #statgifts

Katherine Evans

@CausalKathy

Thesis whiskey



A Yat Mostafa

SPSS program full version for my laptop (as a beginner in statistics).

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Data Science: The Evolution or the Extinction of Statistics?



Jennifer Lewis Priestley is a professor of applied statistics and data science at Kennesaw State University, where she is the director of the Center for Statistics and Analytical Services. She oversees the PhD program in advanced analytics and data science and teaches courses in applied statistics at the undergraduate, master's, and PhD levels.

MORE ONLINE
Check out Tommy Jones' article, "The Identity of Statistics in Data Science," at <http://bit.ly/1ZcrCQ3>.

As a discipline, I think statistics—and by association statisticians—are going through a midlife crisis. Just look around a typical university. Where is statistics housed? Mathematics? The business school? Engineering? Humanities? All of the above? Who are we? This crisis of identity has been accelerated by this new term “data science.” Is it a discipline? Is it an application of statistics? Is it an application of computer science? Is it a buzz word just having its moment?

I agree with Tommy Jones in his *Amstat News* article, “The Identity of Statistics in Data Science,” when he says the “... conversation around data science betrays an anxiety about our identity.”

As the director of one of the country's first PhD programs in data science and a professor of statistics, I believe data science is the full-length mirror we have needed to hold up in front of our discipline for a long time so we can examine how we look from multiple angles. As any middle-aged woman will tell you, full-length mirrors contribute to anxiety.

As we turn in front of this mirror, there are angles that are not working for us. Theoretical statistics is increasingly a bastion of academia. While there will always be a need for PhD theoretical statisticians in universities, a BS in theoretical statistics—defined by derivations of theorems and execution of formulas completely by hand with no experience with real data—does not prepare undergraduates to work in a 21st-century economy. And, as most theoretical statisticians will tell you, if someone does want to pursue a PhD in statistics, they are better served pursuing an undergraduate degree in mathematics.

The other side of this angle is “business statistics” (“statistics-for-students-who-could-not-handle-the-math-in-real-statistics” in most universities), where students work with Excel spreadsheets characterized by 100 rows and three columns and they generate means and standard deviations—and in the advanced course, pivot tables. These courses also do a huge disservice to students and, similarly, do not prepare graduates to work in a 21st-century economy.

The 100% theoretical approach to statistics and the “statistics lite” approach are both bad for our discipline because of the same issue—data. Neither approach prepares students to work with real-world data. If you scan typical job advertisements, any position hiring a statistician will likely include required skills such as programming, analytical software experience (e.g., SAS), database management (e.g., SQL), and writing and communication. This is because the days of being a “data diva” are over—statisticians are expected in most companies to have some ability to extract, transport, load, clean, analyze, model, and “tell the story” of their results. This is particularly true in small companies. And even if they don't have to do all points in the chain for every project, developing a working knowledge of how data are collected, stored, extracted, cleaned ... makes for better models ... and more complete communication of results.

But as we pivot in the mirror, data science is also allowing us to show off angles of our discipline that are sorely needed—by everyone. At my university, we have an MS in applied statistics. We will have companies from diverse disciplines such as health care, retail, finance, and energy recruiting the same student. Why would companies from such different domains be interested in the same student? Because they are all trying to solve the same problem! They are all trying to translate massive amounts of data into meaningful information to solve a problem and then explain the solution to their boss or their client.

This set of requirements is almost ubiquitous—and it's certainly multidisciplinary. I think it's a point of evolution for our discipline and has become the definition of the 21st-century statistician—converting data into information to solve problems or discover patterns and then telling the story. More than any other academic discipline, statistics (applied statistics) is needed by every other discipline. To use a dated phrase (we are in midlife after all), “our dance card is full.”



So what about data science? Who are these people, and how are they different from us?

Again, a brief example from my own university. We have an undergraduate minor (not a BS) in applied statistics. This minor requires students to take five elective courses in applied statistics. This minor is not required for any undergraduate on campus. And yet, in any given semester, we have well more than 100 undergraduate students who have declared a formal minor in applied statistics. These students come from all the colleges across campus and from dozens of departments. We have biology majors sitting next to sociology majors sitting next to finance majors all solving the same problems. It's the most popular minor field of study in the history of the university. Again—multidisciplinary. All of a sudden, everyone wants to study applied statistics.

So what about data science? Who are these people, and how are they different from us?

The definitions of data science are converging around the intersection of mathematics, statistics, and computer science—with some area of application (e.g., finance, biology, political science). I have heard data scientists referred to equally as “the computer scientist who was the best of his peers in his statistics courses” and “the

statistician who was the best of his peers in his computer science courses.”

I referenced that I am an applied statistician running a PhD program in analytics and data science. While data scientists can do a great many things I can't do—mainly in the areas of coding, API development, web scraping, and machine learning—they would be hard pressed to compete with a PhD student in statistics in supervised modeling techniques or variable reduction methods. Earlier this year, an article on the Simply Statistics blog, “Why Big Data Is in Trouble: They Forgot About Applied Statistics,” (<http://bit.ly/1qZpbjq>) highlighted the issue of how a rush to the excitement of machine learning, text mining, and neural networks missed the importance of basic statistical concepts regarding the behavior of data—including variation, confidence, and distributions. Which lead to bad decisions.

So, where does this leave us statisticians? I believe data science is good for us. In fact, it's great for us. People need us in new and exciting ways—to help them translate the data into information to tell a story. The “science of data” is becoming a nascent discipline that is lifting all boats. That nascent scientific discipline needs us. ■

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Deadlines and Awards	Nominations	Questions
February 1, 2016		
Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society	Pam Craven <i>pamela@amstat.org</i>	Paul S. Albert <i>albertp@mail.nih.gov</i>
ASA W. J. Dixon Award for Excellence in Statistical Consulting	Pam Craven <i>pamela@amstat.org</i>	
February 15, 2016		
Causality in Statistics Education Award	<i>educinfo@amstat.org</i>	
Harry V. Roberts Statistical Advocate of the Year Award	Pam Craven <i>pamela@amstat.org</i>	Mary J. Kwasny <i>m-kwasny@northwestern.edu</i>
ASA Samuel S. Wilks Memorial Medal	Pam Craven <i>pamela@amstat.org</i>	Lynne Billard <i>lynne@stat.uga.edu</i>
ASA Waller Distinguished Teaching Career Award	Pam Craven <i>pamela@amstat.org</i>	Bradley A. Hartlaub <i>hartlaub@kenyon.edu</i>
ASA Waller Education Award	Pam Craven <i>pamela@amstat.org</i>	Bradley A. Hartlaub <i>hartlaub@kenyon.edu</i>
ASA W. J. Youden Award in Interlaboratory Testing	Pam Craven <i>pamela@amstat.org</i>	Blaza Toman <i>blaza.toman@nist.gov</i>
February 20, 2016		
ASA Statistics in the Physical and Engineering Sciences Award	Philip J. Ramsey <i>pjrstats@aol.com</i>	Philip J. Ramsey <i>pjrstats@aol.com</i>
February 23, 2016		
ASA Gertrude M. Cox Scholarship	Pam Craven <i>pamela@amstat.org</i>	Eloise E. Kaizar <i>ekaizar@stat.osu.edu</i>
March 1, 2016		
ASA Edward C. Bryant Scholarship	Pam Craven <i>pamela@amstat.org</i>	Pushpal Mukhopadhyay <i>pushpal.mukhopadhyay@sas.com</i>
ASA Excellence in Statistical Reporting Award	Pam Craven <i>pamela@amstat.org</i>	Morteza Marzjarani <i>mortkm2@yahoo.com</i>
ASA Fellows	<i>www.amstat.org</i>	
ASA Mentoring Award	Pam Craven <i>pamela@amstat.org</i>	David R. Morganstein <i>davidmorganstein@westat.com</i>
ASA Outstanding Statistical Application Award	Pam Craven <i>pamela@amstat.org</i>	DuBois Bowman <i>dubois.bowman@columbia.edu</i>
March 15, 2016		
ASA Founders Award	Pam Craven <i>pamela@amstat.org</i>	David R. Morganstein <i>davidmorganstein@westat.com</i>

Spiegelman Award

The Applied Public Health Statistics Section of the American Public Health Association (APHA) invites nominations for the 2016 Mortimer Spiegelman Award, which honors a statistician below the age of 40 in the calendar year of the award who has made outstanding contributions to health statistics, especially public health statistics.

The award was established in 1970 and is presented annually at the APHA meeting. It serves the following three purposes:

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

To be eligible, a candidate must satisfy one of the following two criteria:

- He/she cannot turn 40 before December 31, 2016
- For those who may have gone to school at a later age but are still early career, the candidate must have received their terminal statistics-related degree in 2006 or later

Nominations are due April 1, 2016. Email a nominating letter that states the candidate's date of birth and how their contributions relate to public health concerns, up to three letters of support, and the candidate's CV to the award committee chair, Debashis Ghosh, at debashis.ghosh@ucdenver.edu. ■

Waksberg Award

The journal *Survey Methodology* established an annual invited paper series in honor of Joe Waksberg to recognize his contributions to survey methodology. Each year, a prominent survey statistician is chosen to write a paper that reviews the development and current state of an important topic in the field of survey methodology. The paper reflects the mixture of theory and practice that characterized Joe Waksberg's work.

The recipient of the Waksberg Award will receive an honorarium and give the 2017 Waksberg Invited Address at the Statistics Canada Symposium, to be held in the autumn of 2017. The paper will be published in a future issue of *Survey Methodology* (Targeted for December 2017).

The author of the 2017 Waksberg paper will be selected by a four-person committee appoint-

Recent Waksberg Award Honorees

Don Dillman (2016)

Robert Groves (2015)

Connie Citro (2014)

Ken Brewer (2013)

Lars Lyberg (2012)

ed by *Survey Methodology* and the American Statistical Association. Nomination of individuals to be considered as authors or suggestions for topics should be sent before February 28 to Tommy Wright, committee chair, at tommy.wright@census.gov. ■

Mu Sigma Rho

Mu Sigma Rho invites academic institutions to nominate outstanding teaching faculty for the Mu Sigma Rho William D. Warde Statistics Education Award. The recipient must have evidence of excellence in classroom teaching in the statistics discipline and a lifetime devotion to statistics education.

Each academic institution is allowed one nomination per year. In the event that more than one nomination is received from a single institution in a year, only the first will be considered. Any college or institution may nominate a potential recipient, regardless of whether the institution has an active Mu Sigma Rho chapter.

Each nomination should include the following:

- A cover letter
- The nominee's curriculum vita
- A summary of the nominee's teaching and educational activities
- A draft of a citation briefly describing the nominee's accomplishments

- At least three letters supporting the nomination, of which at least two come from present or former students and at least one comes from a colleague

If a nominee is not selected for the award, the nomination will remain active for three years, unless the institution chooses to put forward another nominee.

Nominations should be sent to Ananda Jayawardhana at ajawardhana@pittstate.edu by February 1. Please include all nomination material in a single PDF document.

The recipient of the award will be notified on or before March 15 and be presented a plaque during the Sunday awards ceremony at JSM 2016 in Chicago.

Questions regarding this award can be emailed to Jayawardhana.

Information about how to join or start a chapter of Mu Sigma Rho can be found at <http://bit.ly/1mjVUCl>. ■

COPSS Announces Award Honorees

Members of the Committee of Presidents of Statistical Societies (COPSS) presented their 2015 awards at the August Joint Statistical Meetings (JSM) in Seattle, Washington.

The winner of the 2015 Presidents' Award is **John Storey** of Princeton University, Berkeley, for transformative and ground-breaking research on the theory, methods, and applications of inference methods, particularly significance testing applied to high-dimensional data analysis problems; important development and application of statistics to modern biological and medical research; and service to the field of statistics through interdisciplinary activities.

The 2015 Fisher Lecturer is **Stephen E. Fienberg** of Carnegie Mellon University for wide-ranging and highly influential contributions to the theory and practice of statistics; fundamental advances in methodology, interpretation, and computation in the analysis of categorical data; broad-reaching contributions to statistical methods for sample surveys; seminal work on record linkage, privacy, and social network analysis; outstanding and prolific service to the profession and to society; and being a role model, advocate, and mentor for young statisticians. His lecture was titled "R.A. Fisher and the Statistical ABCs."

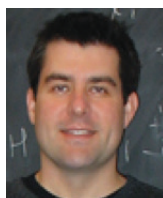
Danyu Lin of The University of North Carolina at Chapel Hill was honored with the

2015 G. W. Snedecor Award for foundational contributions to the field of biometrics, especially for semiparametric regression models with censored data; influential work in genome-wide association studies and next-generation sequencing studies; and steadfast service to the profession.

Francesca Dominici of the Harvard T. H. Chan School of Public Health was honored with the 2015 F. N. David Award for her premier research in biostatistics and public health, including development of statistical methods for the analysis of large observational data with the ultimate goal of addressing important questions in environmental health science, health-related impacts of climate change, and public health; outstanding contribution to research on outdoor air pollution and health, which has formed the critical basis for policies on air quality; leadership in multidisciplinary collaborations for policy-relevant

research; commitment to scientific research at the highest level, with studies designed to improve public health; and being an insightful mentor and exemplary role model for future generations of statisticians, especially young women.

These awards are jointly sponsored by COPSS founding partner members—the American Statistical Association, Institute of Mathematical Statistics, Eastern and Western regions of the International Biometric Society, and Statistical Society of Canada. ■



Storey



Lin



Fienberg



Dominici

Sujit Ghosh of North Carolina State University was selected for the 2016 Hind Rattan Award, given by the Non-Resident Indians (NRI) Welfare Society of India.

"The Hind Rattan (Hindi phrase translated to English as "Jewel of India") is one of the highest Indian diasporic awards granted annually to nonresident Indian citizens by the NRI Welfare

Society of India, an organization under the umbrella of the Government of India. The award is granted at the society's annual congress, held in conjunction with national Pravasi Bharatiya Divas celebrations. The award ceremony is attended by senior members of the Government of India and of the Supreme Court of India."

Visit www.nriwelfaresociety.com for details.



Salford Systems is excited to introduce its new **BLOG**, Simply Salford, and **PODCAST**, Afternoon Analytics, coming in 2016!

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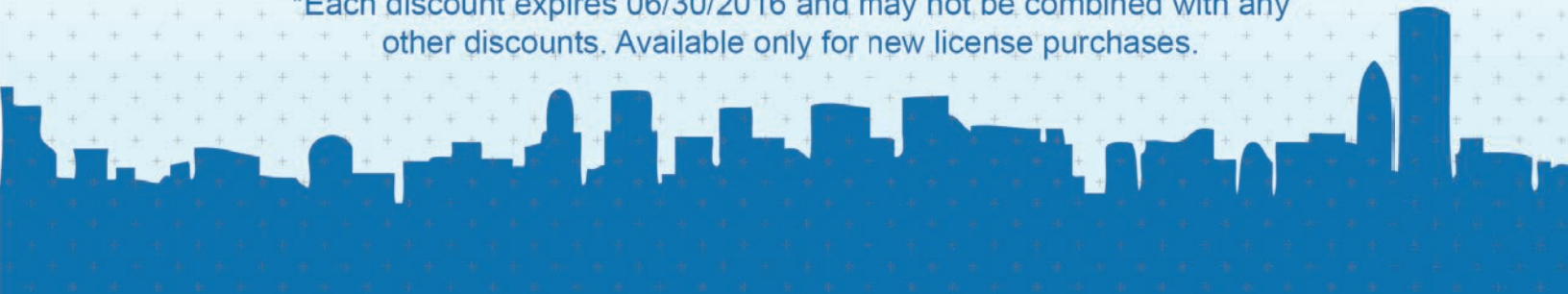
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Challenges and Innovations in Pharmaceutical Products Development Focus of Duke Symposium

About 250 people attended the Duke-Industry Statistics Symposium October 22–23 at the Trent Semans Center on the Duke University Campus. The annual symposium—organized by the department of biostatistics and bioinformatics in the Duke University School of Medicine—was established to promote research and collaboration among colleagues from industry, academia, and regulatory agencies and explore challenging issues and recent advances related to the pharmaceutical/clinical development of drugs and devices.

This year's theme was “Challenges and Innovations in Pharmaceutical Products Development.” The first day led with the following half-day short courses that covered critical topics in clinical research:

- Adaptive Clinical Trial Design – Case Studies (Shiowjen Lee, FDA; Annie Lin, FDA)
- Analytical Similarity Assessment in Biosimilar Studies (Yi Tsong, FDA; Shein-Chung Chow, Duke)
- Phase II Clinical Trial Design and Dose Finding (Naitee Ting, Boehringer-Ingelheim)
- Biomarker Utilities in Adaptive Trials (Mark Chang, AMAG Pharmaceuticals)

The short courses attracted participants from both industry and academia.

Liz DeLong, chair of the department of biostatistics and bioinformatics at Duke, and Rene Kubiak, head of U.S. statistics at Boehringer-Ingelheim, opened the Friday session with welcoming remarks. Yi Tsong from the FDA's Center for Drug Evaluation and Research gave the keynote address, titled “Duality of Significance Tests and Confidence Intervals in Drug Development.” This was followed by nine parallel sessions that offered 30 invited presentations on topics including advanced survival analysis, Bayesian noninferiority



Symposium Leadership (from left): Xiaofei Wang (Duke), Rene Kubiak (Boehringer-Ingelheim), Yi Tsong (FDA), Liz Delong (Duke), Maura Stokes (SAS), and Shein-Chung Chow (Duke)



Yi Tsong of the FDA's Center for Drug Evaluation and Research gives the keynote address.

trials, bioequivalence and biosimilars, data-monitoring committees, dose finding and selection in clinical phase, enrichment design for clinical trials, randomized concentration-controlled trials, and subgrouping analysis.

The symposium also attracted a number of posters from industry and academia. Prizes for best posters were awarded to Hyang Kim from PAREXEL and Laine Thomas, Tongrong Wang, and Meng Chen from Duke University.

The program and invited talks can be downloaded from <http://bit.ly/1Qi2G8A>. ■

10 ASA Members Selected as AAAS Fellows

In October, the American Association for the Advancement of Science council elected 347 members as fellows. These individuals will be recognized for their contributions to science and technology at the fellows forum during the AAAS annual meeting in Washington, DC. The new fellows received a certificate and a blue and gold rosette as a symbol of their distinguished accomplishments.

The ASA members elected as fellows to AAAS include the following:

Michael Paul Cohen, *American Institutes for Research*: For significant statistical research, especially methods for designing large-scale federal surveys, and for fostering interdisciplinary communication through many years of generous service to professional societies.

Bruce A. Craig, *Purdue University*: For important contributions to science through collaboration between the biological sciences and statistics and for administrative leadership and mentoring in statistical consulting and collaboration.

Thomas A. DiPrete, *Columbia University*: For distinguished contributions to sociology, particularly in the fields of stratification and social inequality, sociology of education, and statistical methodology.

Patricia A. Jacobs, *Naval Postgraduate School*: For career accomplishments in applied probability and statistical methods supporting national security and as a dedicated educator of future strategic leaders.

Alan F. Karr, *RTI International*: For outstanding leadership and distinguished contributions to interdisciplinary statistical research, particularly for theoretical point processes, data confidentiality, and software reliability.

Stephen Portnoy, *University of Illinois at Urbana-Champaign*: For contributions to asymptotic theory and quantile processes, leadership in the development of robust regression methods, and for building significant collaborations between statistical sciences and ecology.

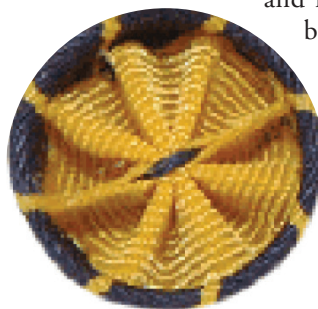
James Matthew Robins, *Harvard University*: For extraordinary and distinguished development of the entire field of causal inference, particularly marginal structural models, mediation analyses, time-dependent confounding, and doubly robust estimation techniques.

Daniel O. Stram, *Keck School of Medicine of University of Southern California*: For development and application of innovative statistical procedures for laboratory, clinical, and field studies and

for signature collaborations in genomics, cancer treatment, and radiation effects.

Chih-Ling Tsai, *University of California, Davis*: For distinguished contributions to statistical theory and application, particularly for regression and time series model selection as well as dimension reduction, and for excellence in teaching.

Alyson G. Wilson, *North Carolina State University*: For research contributions to Bayesian reliability and for a commitment to strengthening the scientific underpinnings of national security through significant statistical innovations and leadership. ■



Rosette awarded to AAAS fellows



ADVANCING SCIENCE, SERVING SOCIETY

MORE ONLINE
The entire list
can be viewed at
<http://bit.ly/1IHKE2i>.

Obituaries

Asit Prakas Basu

Asit Prakas Basu, 78, emeritus professor of statistics at the University of Missouri, died October 19, 2015, in Columbia, Missouri.

Basu was a fellow of the American Statistical Association, Institute of Mathematical Statistics, American Association for the Advancement of Science, and Royal Statistical Society and an elected member of the International Statistical Institute.

He was also a life member of the Calcutta Statistical Association and a member of the ASA for more than 50 years.

He is survived by his wife, Sandra, and sons, Amit and Shumit.

Sholom Wacholder

Sholom Wacholder, a senior investigator at the National Cancer Institute (NCI), died on October 4, 2015, at his home in Rockville, Maryland.

Wacholder, a statistician by training, worked in the epidemiology and genetics division of the NCI for the past 30 years, exploring the causes of cancer from natural history studies through clinical trials. He was the lead statistician for the NCI study of the natural history of the human papillomavirus (HPV) and cancer. Wacholder spoke about his contributions to this body of work in a video titled "In Their Own Words: Dr. Sholom Wacholder," (<http://1.usa.gov/1IQs7LG>), completed in 2010.

Wacholder began working in genetic epidemiology with the Washington Ashkenazi Study and was one of the first to develop kin-cohort analysis, a novel sampling approach to eliminate statistical bias from studies of genetically similar populations. He was a key statistical consultant and analyst of the Cancer Genetic Markers of Susceptibility (CGEMS) project from its inception, thereby laying the foundation for the many disease-specific genome-wide association studies conducted over the past decade.

His interest in childhood cancers led him to research electromagnetic fields and childhood acute lymphocytic leukemia and later to pursue the inheritance of osteogenic sarcoma, a cancer that targets adolescents and young adults. He

was also a key collaborator on large, comprehensive case-control studies of lung cancer and renal cell cancer.

Wacholder earned a PhD in biomathematics from the University of Washington in 1982. He was a fellow of the American Statistical Association and an elected member of the American Epidemiological Society. He served on the editorial boards of numerous journals, including *Epidemiology*, *Cancer Epidemiology Biomarkers and Prevention*, *Journal of the National Cancer Institute*, and *American Journal of Epidemiology*.

He is survived by his wife, Michelle; their two adult sons, Aaron and Jonah; his sisters and brother; and many nieces and nephews.

To read more about Wacholder's life and legacy, visit <http://1.usa.gov/1Qp0sUB>

Joel Ager

Joel Ager, a longtime faculty member of the Wayne State University School of Medicine, died November 15, 2015, at the age of 87.

Ager joined Wayne State University as an assistant professor of psychology in 1958, rising to the rank of full professor in 1975. He retired from the department of psychology in 1998, but continued working with the university and helped launch the Center for Healthcare Effectiveness Research in 1994. Ager served as interim director of the center from 1995 to 1997. He joined the department of family medicine and public health sciences in 2006 and continued his work as a part-time faculty member until his death.

A consummate researcher with fervor for exactitude, Ager served as a principal investigator for four National Institutes of Health grants on family planning services provision and as co-principal investigator for numerous other grants, including a number in the area of the effects of fetal exposure to alcohol and drugs on child development.

In addition to his academic accomplishments, he was an avid bird watcher and traveler.

Ager was predeceased by his wife, Elizabeth Cramer, in 1995 and is survived by his three children, his sister, and five grandchildren.

To read more about Ager's life, visit <http://bit.ly/1Mdin98>.



Attendees visit the 25 presentations at the poster session during the Fall Research Conference.

Twin Cities Chapter Fall Conference Draws 160

Grant Weller

The Twin Cities Chapter held its first Fall Research Conference October 30 at Mayo Clinic in Rochester, Minnesota. The conference was held in conjunction with the half-day ASA Council of Chapters traveling short courses “Bayesian Methods for Evidence Synthesis and Network Meta-Analyses,” taught by chapter member Brad Carlin of the University of Minnesota Division of Biostatistics. More than 130 people attended the short course, and more than 160 attended the afternoon events.

In the invited speaker session, attendees learned about the latest research in envelope methodology from R. Dennis Cook of the University of Minnesota School of Statistics. Dan Schaid of the Mayo Clinic Statistical Genetics and Genetic Epidemiology Lab presented methods for testing for pleiotropy and Ted Lystig of Medtronic discussed design considerations for medical device trials.

The conference concluded with a poster session with 25 participants. The chapter sponsored student

poster competitions for both undergraduate and graduate students. Mark Ruprecht of the University of Minnesota won the undergraduate competition for “A Nonparametric Look at Self-Esteem Development,” while Cynthia Basu of the University of Minnesota Division of Biostatistics won the graduate student competition for her poster, “Hierarchical Bayesian Models for Understanding The Pharmacokinetics and Pharmacodynamics of Lorenzo’s Oil.” Nate Helwig of the University of Minnesota School of Statistics advised Ruprecht on his project, while Carlin advised Basu.

The conference helped chapter membership grow, which has increased to nearly 300 people. Members hail from several large academic departments at the University of Minnesota and Mayo Clinic, as well as health care research and medical device manufacturing firms, liberal arts colleges, and other local organizations.

Conference materials are available at www.AmStatMN.org/events.html. ■



The audience fills in for Brad Carlin’s short course lecture.

sectionnews

Biometrics

*Edited by Sheng Luo,
Biometrics Section Publications Officer*

Abstract submissions for contributed and topic-contributed papers will be accepted online until February 1.

Topic-contributed sessions are a nice alternative to contributed sessions because they are organized around a central topic, the talks are longer (20 minutes, rather than 15), and one can have discussants.

Sessions typically consist of five participants (i.e., four speakers and one discussant or three speakers and two discussants). Those interested in organizing a topic-contributed session should notify the 2016 JSM Biometrics Section chair,

Dipankar Bandyopadhyay (bandyop@vcuhealth.org), and submit a proposal online by January 15. See <http://bit.ly/1YaII Gy> for instructions.

Also consider proposing a topic-contributed panel session. Panel sessions have 3–6 panelists and the session submission format involves one abstract for all speakers. Note that if each speaker wishes to provide an abstract, speak on a specific topic, and submit an individual paper for *JSM Proceedings*, their session should be a paper session. ■

Physical and Engineering Sciences

A call for papers for the Fall Technical Conference and a message from the 2016 chair of the Section on Physical and Engineering Sciences, Jennifer Van Mullekom, can be found at <http://magazine.amstat.org>. ■

sectionnews

Quality and Productivity

William Brenneman, 2016 Section Chair

I am pleased to be able to serve as the 2016 chair of the Quality and Productivity (Q&P) Section. Q&P has focused on how the development, teaching, and application of statistical tools and thinking can improve quality and productivity. We will continue this focus—along with the tradition Q&P has regarding conference leadership and planning, scholarships and awards, connecting members through news communications and the ASA Community, and webinars on topics of interest to the members—and infuse the leadership with diverse backgrounds.

Quality and productivity has been and always will be a crucial aspect of successful enterprises, and statistics plays a major role in that success.

Q&P will support the following three main conferences this year:

2016 Quality and Productivity Research Conference

QPRC will be held in Tempe, Arizona, June 14–16, with a short course offered on June 13. The theme of this year's conference is "Integrating Quality and Statistics: A Transformative Alliance." The goal is to stimulate interdisciplinary research among statisticians, scientists, and engineers in quality and productivity, industrial needs, and the physical and engineering sciences. Statistical issues and research approaches drawn from collaborative research will be highlighted.

We invite you to contribute a talk or poster presentation. To submit a contributed paper or poster, submit title, authors, and a short abstract (single page only) to Connie Borrer at conni@asu.edu by March 1. Also, indicate your preference for a talk or poster presentation.

In conjunction with the QPRC, the Mary G. and Joseph Natrella scholarship offers a \$3,500 grant and \$500 travel stipend to students pursuing full-time graduate work with demonstrated interest in quality and statistics. For more information, visit the scholarship website at <http://bit.ly/1O5iGdo>.

For further information and conference updates, visit the conference website at www.qprc2016.com.

2016 Joint Statistical Meetings

The 2016 Joint Statistical Meetings (JSM) will be held from July 30 to August 4 in Chicago,

Illinois. The theme of this year's conference is "The Extraordinary Power of Statistics." JSM is one of the largest statistical events held, with more than 6,000 attendees expected this year.

Q&P will sponsor two invited sessions, titled "The Extraordinary Power of Designed Experiments" and "Powerful Experimental Designs for Non-Gaussian Responses." These sessions will feature prominent speakers, and Q&P members are encouraged to attend.

There are numerous ways to present your work at JSM, including topic-contributed and contributed sessions, roundtable discussions, and more. Visit <http://bit.ly/1QHfXpy> for details.

Q&P will offer up to three travel awards of \$400 each for students enrolled in a graduate program with a concentration in applied statistics and/or quality management to attend JSM. Student applicants must show a demonstrated interest in quality applications, as evidenced by course work, research topic, or prior work experience. Applicants either presenting a paper or participating in a poster session will receive extra consideration. Applications will be accepted through February 1. Complete information about the award and how to apply is posted at <http://bit.ly/1vZQVZd>.

As we get closer to JSM, stay tuned for more information about other Q&P events, including the SPES/Q&P mixer. See you in Chicago!

2016 Fall Technical Conference

The 60th Fall Technical Conference (FTC) will be held on October 6–7 in Minneapolis, Minnesota. The theme of this year's conference is "Statistics & Quality: Twin Pillars of Excellence." The goal is to engage researchers and practitioners in a dialogue that leads to more effective use of statistics to improve quality and foster innovation.

If you are interested in presenting an applied or expository paper in any of the categories of statistics, quality, experimental design, or tutorial/case studies, contact any committee member listed on the call for papers at <http://bit.ly/1QHg04F>. Work should be strongly justified by application to a problem in engineering, manufacturing, Big Data, process/chemical industry, physical sciences, or a service industry. The program committee welcomes any suggestions for special session topics or speakers. The deadline for abstract submission is February 26.

Finally, these conferences and all the activities and benefits Q&P provides could not be completed without the help of volunteers. I give a big thank you to all who served in 2015 and all who will serve in 2016. If you would like to volunteer, send me an email at brenneman.wa@pg.com. I would love to hear from you! ■

February

»*18–20—American Statistical Association Conference on Statistical Practice, San Diego, California

For more information, visit www.amstat.org/meetings/csp/2016 or contact Amanda Conageski, 732 N. Washington St., Alexandria, VA 22314; (703) 684-1221; amandac@amstat.org.

March

»1–4—12th German Probability and Statistics Days 2016 - Bochumer Stochastik-Tage, Bochum, Germany

For details, visit www.gpsd-2016.de or contact Sabrina Wolf, Dufourstr. 15, Leipzig, International 04107; +49 341 24 05 96 – 79; swolf@eventlab.org.

»*2–4—CoDA 2016: Conference on Data Analysis, Santa Fe, New Mexico

For more information, visit cnls.lanl.gov/coda or contact Kary Myers, 824 Dunlap St., Apt B, Santa Fe, NM 87501; karymyers@gmail.com.

»16–18—International MultiConference of Engineers and Computer Scientists 2016, Hong Kong

For more information, visit www.iaeng.org/IMECS2016 or contact IAENG Secretariat, Unit 1, 1/F, 37-39 Hung To Road, Hong Kong, International HK; (852) 3169-3427; imecs@iaeng.org

»28–29—International Conference and Expo on Cataract and Refractive Surgery, Atlanta, Georgia

For details, visit cataract.conference-series.com or contact Claire Hatton, 2360 Corporate Circle, Suite 400, Henderson, NV 89074-7722; (888) 843-8169; clairehatton01@gmail.com.

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

* Indicates events sponsored by the ASA or one of its sections, chapters, or committees

» Indicates events posted since the previous issue

28–29—World Bioinformatics 2016, Valencia, Spain

For more information, visit <http://bit.ly/1MdCqUG> or contact Kathaline Lewis, 2360 Corporate Circle, Henderson, NV 89074-7722; (702) 508-5200, worldbioinformatics@omicsgroup.com.

»29–30—7th World Cardiothoracic Meeting, Atlanta, Georgia

For more information, visit cardiothoracic.conferenceseries.com or contact Steve Rogers, Hilton Atlanta Airport, 1031 Virginia Ave., Atlanta, GA 30354; (702) 508-5200; cardiothoracic@conferenceseries.com.

SAVE THE DATE

Conference on Statistical Issues in Clinical Trials

This year's conference, to be held April 13 on the University of Pennsylvania campus in Philadelphia, will offer a broad discussion of adaptive clinical trial designs, focusing on what we have learned about their advantages and disadvantages, how to optimize their use, and pitfalls to avoid in their operation. Speakers and panelists will include statisticians, clinicians, and bioethicists with experience in adaptively designed trials.

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

Speakers: Frank Bretz, Novartis Pharmaceuticals; Lisa LaVange, FDA; Max Parmar, University College London; Michael Proschan, NIAID; Peter Thall, MD Anderson Cancer Center; Bruce Turnbull, Cornell University

Panel Discussants: Jason Connor, Berry Consultants; Angela DeMichele, University of Pennsylvania; Valerie Durkalski-Mauldin, MUSC; Steven Joffe, University of Pennsylvania; Lisa LaVange, FDA; Janet Wittes, Statistics Collaborative.

For details, contact Catherine Smith at Smithcat@upenn.edu or (215) 573-2728.

April

»1–2—Information-Theoretic Methods of Inference, Cambridge, United Kingdom

For details, visit <http://bit.ly/1m2fk4u> or contact Arnob Alam, 4400 Massachusetts Ave., NW, Washington, DC 20016; (202) 885-3770; info-metrics@american.edu.

»*5–8—SIAM Conference on Uncertainty Quantification, Lausanne, Switzerland

For details, visit www.siam.org/meetings/uq16 or contact James Berger, Box 90251, Durham, NC 27708; (919) 684-4531; berger@stat.duke.edu.

»18–20—4th International Conference on Blood Malignancies and Treatment, Dubai, United Arab Emirates

For details, visit bloodmalignancies.conferenceseries.com or contact Shelena Ashley, 2360 Corporate Circle, Suite 400, Henderson, NV 89074-7722; (888) 843-8169; ishelenahere@gmail.com.

May

»*1–3—28th Annual Kansas State University Conference on Applied Statistics in Agriculture, Manhattan, Kansas

For more information, visit <http://bit.ly/1NPVnb5> or contact Jo Blackburn, 101 Dickens Hall, 1116 Mid-Campus Drive North, Kansas State University, Manhattan, KS 66502; (785) 532-0511; jablack@ksu.edu.

»5–7—2016 SIAM International Conference on Data Mining, Miami, Florida

For more information, visit www.siam.org/meetings/sdm16 or contact Nicole Erle, 3600 Market St., 6th Floor, Philadelphia, PA 19104; (215) 382-9800; erle@siam.org.

»23–25—61st Annual Meeting of the Brazilian Region of the International Biometric Society (RBras), Salvador, Brazil

For more information, visit www.RBras2016.org or contact Paulo Rodrigues, Federal University of Bahia, Salvador, International 40170110; +557193749078; paulo.canas@gmail.com.

25–28—12th International Conference on Order Statistical Data, Piraeus, Greece

For details, contact George Iliopoulos, 80 Karaoli and Dimitriou St., Piraeus, International 18534, Greece; +302104142406; geh@unipi.gr.

June

»6–10—Statistical Challenges in Modern Astronomy VI, Pittsburgh, Pennsylvania

For details, visit www.scma6.org or contact Chad Schafer, 5000 Forbes Ave., Pittsburgh, PA 15213; cschafer@cmu.edu.

»9–10—International Conference on Nuclear Medicine and Radiation Therapy, Cologne, Germany

For details, visit nuclearmedicine.conferenceseries.com or contact Amelia Johnson, 2360 Corporate Circle, Suite 400, Henderson, NV 89074-7722; (702) 508-5200; nuclearmedicine@conferenceseries.com.

»10–11—Advances in Statistics, Probability, and Mathematical Physics: A Conference in Honor of Eugenio Regazzini, Pavia, Italy

For more information, visit <http://bit.ly/222DZk3> or contact Antonio Lijoi, via san Felice 5, Pavia, International 27100, Italy; +39 0382 986220; lijoi@unipv.it.

»12–18—AMS Mathematics Research Community on Algebraic Statistics, Snowbird, Utah

For details, visit <http://bit.ly/1J7BnWn> or contact Tom Barr, 201 Charles St., Providence, RI 02904; (401) 455-4101; thb@ams.org.

»12–15—The 25th ICSA Applied Statistics Symposium 2016, Atlanta, Georgia

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

13–17—ISBA 2016 World Meeting, Santa Margherita di Pula, Italy

For details, visit www.isba2016.org or contact Michele Guindani, Box 90251, Duke University, Durham, NC 27708-0251; (713) 563-4285; micheleguindani@gmail.com.

15–18—Second International Congress on Actuarial Science and Quantitative Finance, Cartagena, Colombia

For details, visit icasqf.org or contact Jaime Londoño, Cra 27 # 64-60, Manizales, International 170004, Colombia; jalononol@unal.edu.co.

»19–22—36th International Symposium on Forecasting, Santander, Spain

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

*20–23—Fifth International Conference on Establishment Surveys, Geneva, Switzerland

For more information, visit www.portal-stat.admin.ch/ices5 or contact Polly Phipps, 2 Massachusetts Ave. NE, Washington, DC 20212; (202) 691-7513; phipp.polly@bls.gov.

MORE ONLINE
To view the complete list of statistics meetings and workshops, visit www.amstat.org/datetime.

»29–7/1—The 2016
International Conference of
Computational Statistics and
Data Engineering, London,
United Kingdom

For more information, visit <http://bit.ly/1RkKS8> or contact IAENG Secretariat, Unit 1, 1/F, 37-39 Hung To Road, Hong Kong, International HK; (852) 3169-3427; wce@iaeng.org.

July

»10–15—2016 International
Biometric Conference, Victoria,
Canada

For details, visit biometricconference.org or contact Dee Ann Walker, 1444 I Street NW, Washington, DC 20005; (202) 712-9049; dawalker@bostrom.com.

»11–12—International
Conference on COPD, Brisbane,
Australia

For details, visit copd.conferenceseries.com or contact Clara Williams, 2360 Corporate Circle, Suite 400, Henderson, NV 89074-7722; (888) 843-8169; copd@conferenceseries.com.

*30–8/4—2016 Joint Statistical
Meetings, Chicago, Illinois

For details, contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; (703) 684-1221; meetings@amstat.org.

August

5–8—SIAM Conference on
Uncertainty Quantification
(UQ16), Lausanne, Switzerland

For more information, visit <http://bit.ly/1UnNnu> or contact Frank Kunkle, 3600 Market St., 6th Floor, Philadelphia, PA 19104; (267) 350-6388; kunkle@siam.org.

»11–13—International
Conference on Anatomy and
Physiology, Birmingham, United
Kingdom

For more information, visit anatomy-physiology.conferenceseries.com or contact Eva Simons, 2360 Corporate Circle, Suite 400, Henderson NV 89074-7722; (888) 843-8169; anatomy-physiology@conferenceseries.com.

»17–19—Small Area Estimation
Conference 2016, Maastricht,
The Netherlands

For details, visit www.sae2016.nl or contact Bart Buelens, CBS-weg 11, Heerlen, International 6401 CZ, Netherlands; +31455706000; sae2016@cbs.nl.

22–23—5th International
Conference on Computational
Systems Biology, Philadelphia,
Pennsylvania

For more information, visit www.systemsbiology.conference-series.com or contact Mark Twain, 2360 Corporate Circle, Suite 400, Henderson NV 89074-7722; (888) 843-8169, systemsbiology@omicsgroup.com.

September

»*28–30—2016 ASA
Biopharmaceutical Section
Regulatory-Industry Statistics
Workshop, Washington, DC

For more information, visit <http://bit.ly/1P36sRq> or contact ASA Meetings, 732 N. Washington St., Alexandria, VA 22314; (703) 684-1221; meetings@amstat.org.

October

»20–22—Women in Statistics
and Data Science Conference,
Charlotte, North Carolina

For more information, visit www.amstat.org/meetings/wds/2016 or contact ASA Meetings, 732 N. Washington St., Alexandria, VA 22314; (703) 684-1221; meetings@amstat.org.

November

»9–13—International
Conference on Questionnaire
Design, Development,
Evaluation, and Testing (QDET2),
Miami, Florida

For more information, visit www.amstat.org/meetings/qdet2 or contact ASA Meetings, 732 N. Washington St., Alexandria, VA 22314; (703) 684-1221; meetings@amstat.org.

December

»6–8—The 15th Conference of
International Association for
Official Statistics (IAOS), Abu
Dhabi, United Arab Emirates

For details, visit www.iaos2016.ae or contact Kris Olarte, 9F Dubai World Trade Centre Building, Sheikh Zayed Road, Dubai, International 124752, United Arab Emirates; +971 4 311 6359; kris.olarte@mci-group.com.

2017

February

»*23–25—2017 American
Statistical Association
Conference on Statistical
Practice, Jacksonville, Florida

For more information, contact ASA Meetings, 732 N. Washington St., Alexandria, VA 22314; (703) 684-1221; meetings@amstat.org.

July

*29–8/3—2017 Joint Statistical
Meetings, Baltimore, Maryland

For details, contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; (703) 684-1221; meetings@amstat.org. ■

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.

California

■ University of California, Santa Barbara, Department of Statistics and Applied Probability invites applications for a tenure-track assistant professor position in statistics; starting 7/1/2016. Qualifications: research/teaching excellence; PhD in statistics, biostatistics or related fields. Candidates who can contribute to the diversity of excellence of the academic community through research, teaching and service are particularly encouraged to apply. An EO/AA employer. Additional information at: <http://bit.ly/1RCoJWj>. An EO/AA employer.

Georgia

■ Kennesaw State University is now accepting applications for a nine-month, tenure-track assistant professor of applied statistics faculty position in the department of statistics and analytical sciences, which begins August 1, 2016. Candidates should possess expertise in applied statistics. Responsibilities will include teaching, scholarship, and service. An earned doctorate in statistics or the foreign equivalents, or its equivalent in training, ability, and/or experience is required. Kennesaw State University, a member of the University System of Georgia, is an equal opportunity/affirmative action employer and does not discriminate on the basis of age, color, disability, national origin, race, religion, sex, sexual orientation, and/or veteran status. Georgia is an open records state.

Indiana

■ Eli Lilly and Company is looking for an industrial statistician to join their team! This person should have a PhD in statistics, biostatistics or a related field OR a MS in statistics, biostatistics or a related field with at least 5 years industrial experience. Qualified candidates must be legally authorized to be employed in the United States. Please submit applications at <http://bit.ly/22551BR>. Lilly is an EEO/affirmative action employer and does not discriminate on the basis of age, race, color, religion, gender, sexual orientation, gender identity, gender expression, national origin, protected veteran status, disability or any other legally protected status.



香港中文大學
The Chinese University of Hong Kong

Applications are invited for:-

Department of Statistics
Professor / Associate Professor / Assistant Professor
(Ref. 1516/097(060)/2)

The Department invites applications and nominations for a Professorship / Associate Professorship / Assistant Professorship.

Applicants should have (i) a PhD degree in statistics or a related field; (ii) high-quality research output; and (iii) a strong track record in teaching in the area of statistical theory and methodology. Appointment to the appropriate rank will be considered with reference to the candidate's qualifications and experience.

Appointment will normally be made on contract basis for up to three years initially, which, subject to mutual agreement, may lead to longer-term appointment or substantiation later.

Review of applications will begin on January 18, 2016 and will continue until the post is filled.

Further information about the Department is available at <http://www.sta.cuhk.edu.hk>.

Salary and Fringe Benefits

Salary will be highly competitive, commensurate with qualifications and experience. The University offers a comprehensive fringe benefit package, including medical care, plus a contract-end gratuity for an appointment of two years or longer, and housing benefits for eligible appointee. Further information about the University and the general terms of service for appointments is available at <https://www2.per.cuhk.edu.hk/>. The terms mentioned herein are for reference only and are subject to revision by the University.

Application Procedure

Application forms are obtainable (a) at <https://www2.per.cuhk.edu.hk/>, or (b) in person/by mail with a stamped, self-addressed envelope from the Personnel Office, The Chinese University of Hong Kong, Shatin, Hong Kong.

Please send a cover letter, full curriculum vitae, statement of research and teaching interests, and copies of up to five recent publications (in .pdf format) to the Department of Statistics by e-mail to statdept@cuhk.edu.hk, preferably by January 15, 2016. Please also arrange three letters of recommendation to be forwarded by referees directly to statdept@cuhk.edu.hk.

Please quote the reference number and mark 'Application – Confidential' on cover. The Personal Information Collection Statement will be provided upon request.

■ IPFW Department of Mathematical Sciences invites applications for a tenure-track position in statistics, applied statistics, or actuarial science. A PhD in statistics or related field is required by fall 2016. Preference areas are multivariate analysis, discrete data analysis, or stochastic processes. Send letter of application, curriculum vita, graduate transcripts, evidence of teaching effectiveness with philosophy, and three reference letters to mcfarlas@ipfw.edu. Indiana-Purdue University Fort Wayne is an EOE.

Maine

■ The University of Maine Department of Mathematics and Statistics is seeking to fill at least one tenure-track assistant professorship beginning August 2016, invites applications from statisticians in mathematical statistics and/or in applied statistical research and consulting in the applied, biological and social sciences. Candidates must possess a PhD by August 1, 2016. To view full details and to apply visit: <http://bit.ly/1XWTdCr>. EOE.

Massachusetts

■ The department of mathematical sciences at Bentley University—an independent, private business university located in suburban Boston—is seeking to fill a full-time tenure-track assistant position in applied statistics or closely related field beginning in fall 2016. For more details please visit www.Click2Apply0/j6k9mwtnmg. AA/EOE.

■ Tufts University School of Nutrition is searching for an assistant, associate or full professor in data analytics and an assistant, associate or full professor in biostatistics. Interested candidates should submit a cover letter summarizing qualifications with a statement of research, contact information for three professional references, and curriculum vitae through the online submission system at www.nutrition.tufts.edu/about/jobs-at-friedman. AA/EOE.

Minnesota

■ The biostatistics division, school of public health, University of Minnesota, seeks applicant for tenured associate director of the division Coordinating Center for Biometric Research. Requirements include leadership experience in coordinating/conducting multi-center clinical trials. Candidates should have a research record in clinical trial design, conduct, and analysis, as well as a history of externally funded collaborative research. Longer ad: www.sph.umn.edu/biostatistics. Applicants should apply online: <https://goo.gl/NUfMmy>. EOE.

■ The biostatistics division, school of public health, University of Minnesota seeks applicants for two asst./assoc. tenured/tenure-track faculty positions. Especially interested in individuals with academic and research records in methods, and software for handling Big Data in the biomedical sciences, especially using machine learning techniques, or spatial/spatiotemporal statistics, especially as applied in environmental or climatological science. Longer ad: www.sph.umn.edu/biostatistics. Applicants should apply online: <https://goo.gl/dkBHwf>. EOE.

■ The University of Minnesota Duluth Mathematics and Statistics Department has two tenure-track associate/assistant professor positions available fall 2016. Job duties include: teaching, research & service to the department, university and discipline. PhD is required in statistics or equivalent awarded/confirmed by 7/1/16. Applications must be submitted online at www1.umn.edu/ohr/employment/; search for job opening 305709 for complete requirements and instructions. The University of Minnesota provides equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression.

To learn more about diversity at the U: <http://diversity.umn.edu>.

Montana

■ The University of Montana assistant professor in statistics (tenure-track) for fall 2016. PhD in statistics or related field and commitment to research, teaching, and collaboration/consulting. Documented evidence of teaching excellence required. For information: hs.umn.edu/math/, 406-243-5311, azure@mso.umn.edu. Applications (résumé, transcripts, teaching and research statements, 3 recommendation letters) to: Search Committee, Dept. of Mathematical Sciences, University of Montana, Missoula, MT 59812-0864. Screening begins January 15, 2016. The University of Montana is an equal opportunity/affirmative action employer and encourages applications from women, minorities, Vietnam era veterans, and persons with disabilities. This position announcement can be made available in alternative formats upon request.

New Hampshire

■ A PhD statistician or biostatistician is sought for a two-year post-doctoral fellowship in the department of biomedical data science at Dartmouth College. The successful candidate will work under the mentorship of senior biostatisticians and an econometrician developing methods for analyzing observational time-to-event data with the aid of instrumental variables. Email letter of intent and curriculum vitae to Julie.R.Doherty@Dartmouth.edu. Dartmouth College is an equal opportunity/affirmative action employer with a strong commitment to diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, minorities, individuals with disabilities, veterans or any other legally protected group.

New York

■ The Marist College Department of Mathematics invites applications for a tenure-track faculty position to begin fall 2016.

Applications can be submitted through the Marist job site at <http://jobs.marist.edu>. Review of applications will begin immediately and will continue until the position is filled. AA/EOE.

■ The Cornell University Department of Statistical Science invites applications for a faculty position at all ranks. Applications will be accepted until the position is filled. Application materials must be submitted at: academicjobsonline.org/ajol/jobs/6681. Diversity and inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, protected veterans, and individuals with disabilities.

■ The Cornell University Department of Biological Statistics and Computational Biology in the College of Agriculture and Life Sciences invites applications for a tenure-track, 9-month position at the assistant or associate professor level with an expected starting date of July 1, 2016. Applications should be submitted to www.bsbc.cornell.edu. Please visit www.bsbc.cornell.edu for more information on the position and department. College of Agriculture and Life Sciences at Cornell University is an AA/EOE.

North Carolina

■ The UNC Department of Statistics and Operations Research is seeking applications for tenure-track faculty position in probability to start in the fall of 2016. Applicants should have strong training in probability, the potential to maintain a strong research program in this field and the ability to collaborate with other faculty members. For more information and to apply, click <http://bit.ly/1R7ZkVn>. University of North Carolina, Chapel Hill is an EOE.

■ Associate director, biostatistics. Expand your career with PharPoint Research Inc.— a growing and highly reputable CRO based in North Carolina. This newly created “hands on” role will suit a senior level biostatistician seeking the opportunity to utilize and expand on existing skills and experience in a variety of therapeutic areas and projects, while working with a progressive, highly talented team. More information at: <http://pharpoint.com/careers/jobopenings>. EOE.

DEPARTMENT OF STATISTICS | COLUMBIA UNIVERSITY

Lecturer in Discipline Position Starting Fall 2016

The Department of Statistics invites applications for multiple positions at the rank of Lecturer in Discipline to begin July 1, 2016. These are full-time appointments with multi-year renewals contingent on successful reviews. One of these positions is targeted to participate in the Department's burgeoning MA Hybrid Program.

Lecturers in Discipline are officers in the University who meet a programmatic need for instruction in specialized fields. The selected candidates will be expected to teach 3 courses per semester. A Ph.D. in statistics or related field and a commitment to high quality teaching at both the undergraduate and MA levels in statistics and/or probability are required. Experience with online education is desirable but not required. Candidates will be expected to participate in the full gamut of statistics education including curriculum improvement, modifying and developing courses, and exploring new strategies for the teaching of statistics.

The department currently consists of 30 faculty members, 45 PhD students, and over 200 MA students. The department has been expanding rapidly and, like the University itself, is an extraordinarily vibrant academic community. For further information about the department and our activities, centers, research areas, and curricular programs, please go to our web page at: <http://www.stat.columbia.edu>. All applications must be submitted through Columbia's online Recruitment of Academic Personnel System (RAPS) and must include the following materials: cover letter, curriculum vitae, statement of teaching philosophy, research statement, evidence of teaching effectiveness, one writing sample or publication, and the names of 3 references into the system. Applicants also should arrange for three letters of recommendation to be uploaded on their behalf. For more information and to apply, please go to: <https://academicjobs.columbia.edu/applicants/Central?quickFind=61754>

Inquiries may be made to dk@stat.columbia.edu

Review of applications begins on January 15, 2016 and will continue until the positions are filled.

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Faculty Position in Applied Statistics/Biostatistics Department of Mathematical Sciences

The Department of Mathematical Sciences at New Jersey Institute of Technology (NJIT) seeks candidates to fill a tenure-track position at the Assistant/Associate Professor level in the general area of Applied Statistics/Biostatistics. The Department is particularly interested in candidates whose research interests focus on the development and application of statistical methods for problems in topics dealing with the challenges of “Big Data” analysis, including but not limited to, data mining, machine learning, multiple testing, high-dimensional data, computational statistics, and Bayesian statistics.

Candidates should have a PhD in Statistics or Biostatistics with strong research, funding and teaching potential for consideration at the Assistant Professor level. An appropriate record of accomplishments in classroom teaching, mentoring doctoral students, research publication, and funding at the Associate or Full Professor level is expected. At the university's discretion, the education and experience prerequisites may be excepted where the candidate can demonstrate to the satisfaction of the university, an equivalent combination of education and experience specifically preparing the candidate for success in the position.

To apply, visit <https://njit.jobs> and search posting number 0603035. Submit cover letter, resume/CV, research and teaching statements, teaching evaluations if available, and names and contact information for at least four references. Review of applications will begin immediately and will continue until the position is filled.

DMS offers BS, MS & PhD degrees, with tracks in the PhD program in Applied Probability and Statistics as well as Applied Mathematics. Many opportunities exist for collaboration with other departments within NJIT and biostatisticians and clinical researchers at nearby Rutgers Biomedical and Health Sciences, the Public Health Research Institute, and the International Center for Public Health, all within walking distance of NJIT.

For more information about DMS faculty and programs, visit <http://math.njit.edu>. To build a diverse workforce, NJIT encourages applications from individuals with disabilities, minorities, veterans and women. EEO employer.

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Assistant Professor of Biostatistics

The Department of Biostatistics and Epidemiology seeks highly qualified candidates for standing faculty positions at the Assistant Professor level in either the clinician-educator (non-tenure) track or tenure track. Academic rank and track will be commensurate with credentials and experience. A doctoral degree in biostatistics or statistics is required. Review of applications will begin on November 30, 2015 and continue until the positions are filled. The expected start date is July 2016 or later.

Applicants with biostatistical research interests in health outcomes research, translational research, or genomics research with a focus on next generation sequence data are especially encouraged to apply. 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 PhD and MS training programs.

We seek candidates who embrace and reflect diversity in the broadest sense. The University of Pennsylvania is an affirmative action/equal opportunity employer.

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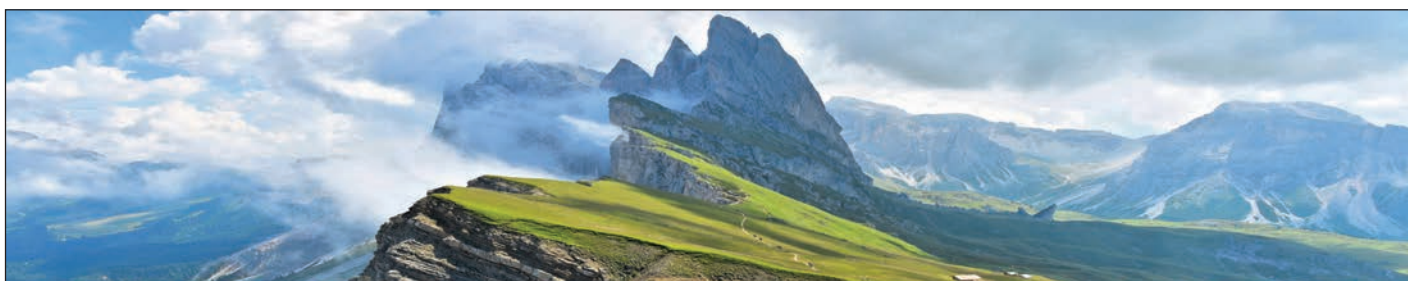
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Ohio

■ The Wright State University Department of Mathematics and Statistics invites applications for the director of the Statistical Consulting Center (SCC) with a tenured position in statistics at the rank of associate or full professor starting fall 2016. The department seeks applicants in all areas of statistics who have consulting experience and who can expand the center's engagement in a university wide biostatistics initiative. <http://bit.ly/1rHmQU>. Wright State University, an equal opportunity/affirmative action employer, is committed to an inclusive environment and strongly encourages applications from minorities, females, veterans and individuals with disabilities.

Oregon

■ The Oregon State University Department of Statistics invites applications for two open-rank 9-month tenure-track faculty positions, starting September 16, 2016, one of which is anticipated to be at the senior level. These positions will contribute data science research and the new graduate online



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Pennsylvania

■ The Penn State University Department of Statistics seeks a fixed term lecturer position in applied statistics to teach and coordinate instruction in the department's online programs beginning 2016. The position requires a doctorate in statistics, applied statistics or a closely related field and a proven ability in teaching. Duties include developing and teaching online courses. See: <http://bit.ly/1M1goV9>. Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status. **CAMPUS SECURITY CRIME STATISTICS:** For more about safety at Penn State, go to www.police.psu.edu/clery.



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Senior Manager, Statistical Computing Unit This position requires candidates to have a strong statistical or other quantitative background and at minimum a master's degree in computer science, statistics, math, physics, or a related data science degree coupled with at least 10 years of experience in statistical or other data-intensive computing. Five years of supervisory experience is also required.

Statistical Analyst This position requires a master's degree in statistics, survey research, or other related quantitative field coupled with 5 or more years in sample survey analysis or a Ph.D. in statistics, survey research, or other related quantitative field and 3 or more years in sample survey analysis.

Survey Sampling Statistician This position requires a master's degree in survey sampling, statistics, survey research, or a related field with 5 or more years in sample survey work or a Ph.D. in survey sampling, statistics, survey research, or a related field and 3 or more years in sample survey work.

Data Scientist The position requires candidates to have a computational and applied statistical background. At a minimum a master's degree in statistics, survey methodology, computer science, or a related applied quantitative social science field coupled with at least 3 years of experience in statistical computing.

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FACULTY POSITIONS IN STATISTICS 2016

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The Computer, Electrical, and Mathematical Sciences and Engineering Division at King Abdullah University of Science and Technology (KAUST) invites applications for faculty positions in Statistics at all levels (Assistant, Associate, and Full Professor) beginning in the Fall of 2016. Candidates applying for a position of Assistant Professor should have an excellent potential for high impact research. Candidates applying for Associate and Full Professor positions should have a distinguished track record in research and a strong commitment to service and teaching at graduate level.

KAUST is an international, graduate research university dedicated to advancing science and technology through interdisciplinary research, education, and innovation. Located in Saudi Arabia, on the western shores of the Red Sea, KAUST offers superb research facilities, generous baseline research funding, and internationally competitive salaries, together with unmatched living conditions for individuals and families. The generous social policy coupled to the top-quality research facilities have succeeded in attracting top international faculty, scientists, engineers, and students making KAUST into the only university worldwide where fundamental goal-oriented and curiosity-driven research is employed to address the world most pressing challenges related to water, food and energy sustainability as well as their impact on the environment.

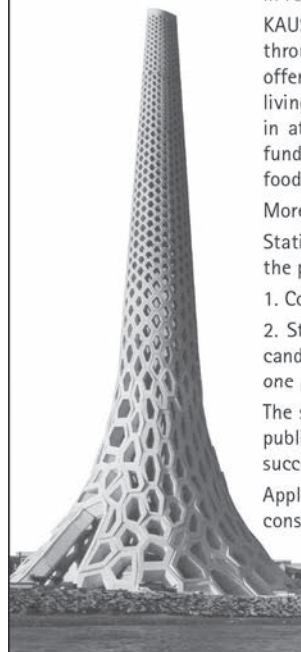
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Statistics (<http://stat.kaust.edu.sa>) is within the Computer, Electrical, and Mathematical Sciences and Engineering Division, and part of the program on Applied Mathematics and Computational Science. We are interested in applicants with background primarily in:

1. Computational statistics: time series and functional data analysis;
2. Statistical models for extreme data scales: design, modeling, and analysis of complex computer experiments; although excellent candidates with other expertise in statistics related to sciences and engineering are encouraged to apply as well. It is envisioned that one position be filled by a candidate whose research is based on the paradigm of Bayesian statistics.

The successful candidate will have a doctoral degree in Statistics or equivalent, experience in interdisciplinary research, and a strong publication record commensurate with the level of the post he/she applies for. For senior positions, the evidence of track record in successful attracting external funding and independent research is essential.

Applicants should apply at <http://apptkr.com/701326>. Applications will be evaluated as soon as they are received, and taken into consideration until the positions are filled.



■ West Chester University invites applications for an assistant/associate tenure-track professor of statistics. All areas of statistics are encouraged to apply. For more details and to apply online visit <http://bit.ly/1NTIDe3>. West Chester University is an affirmative action/equal opportunity employer. Women, minorities, veterans and persons with disabilities are encouraged to apply. The filling of this position is contingent upon available funding.

■ Assistant/associate-level position in the department of epidemiology and biostatistics. The department of epidemiology & biostatistics at the Drexel University Dornsife School of Public Health invites applicants for a tenure-track/tenured position at the assistant/associate level in biostatistics. Please apply online at www.Drexeljobs.com. Search in department 6906. Please contact Nancy Colon-Anderson, administrative assistant, phone: (267) 359-6204, email: nanderson@drexel.edu if you have any questions. Drexel University is an equal opportunity/affirmative action

employer and is proactively committed to diversity and inclusion in all of its policies, practices and services. We are especially interested in qualified candidates who can contribute to the diversity and excellence of our academic community.

■ The Wharton Department of Statistics, University of Pennsylvania, is seeking full-time, tenure-track faculty at any level: assistant, associate, or full professor, appointment beginning July 2016. Applicants should show outstanding capacity in research and teaching. Applicants must have a PhD (expected completion by June 30, 2017 is acceptable) from an accredited institution. Please visit our website to apply: <http://whr.tn/1YWGguz>. Questions should be sent to statistics.recruit@wharton.upenn.edu. The University of Pennsylvania is an EOE. Minorities / women / individuals with disabilities / protected veterans are encouraged to apply.

Texas

■ Tenure-track assistant professor position in statistics or biostatistics beginning fall 2016 (<http://bit.ly/1IMnW8T>). A PhD degree is required. Apply for requisition ID5154BR at www.texastech.edu/careers. Have three letters of reference sent to Misty Rangel, Department of Mathematics and Statistics, Texas Tech University, Lubbock, TX 79409-1042. As an equal employment opportunity/affirmative action employer, Texas Tech University is dedicated to the goal of building a culturally diverse faculty committed to teaching and working in a multicultural environment. We actively encourage applications from all those who can contribute, through their research, teaching, and/or service, to the diversity and excellence of the academic community at Texas Tech University. The university welcomes applications from minorities, women, veterans, persons with disabilities, and dual-career couples.

Utah

■ Assistant professor-biostatistics. The Utah Valley University Department of Mathematics seeks applicants at the rank of assistant professor (tenure-track) of biostatistics starting August 2016. Specialization in the area of biostatistics or similar is preferred. Must have a PhD in statistics or biostatistics or equivalent area. ABD accepted. Teaching load will be 12 credit hours/

semester on average. For more information & to apply visit: www.uvu.jobs. UVU is an equal opportunity employer.

Virginia

■ The University of Richmond Department of Mathematics and Computer Science invites applications for a tenure-track position in statistics at the level of assistant professor. Candidates must have completed a PhD in any area of theoretical or applied statistics by the August start date. For more information on the position, please go to <http://math.richmond.edu>. University of Richmond is an AA/EOE.

Wisconsin

■ UW-Madison, SMPH, Department of Ophthalmology & Visual Sciences is seeking applicants for a full-time biostatistician. Candidates must have a master's degree in biostatistics, statistics, public health, or related field with an emphasis in biostatistics. Compensation is based on qualifications. For more information please go to: <http://bit.ly/1HRhIPF>. EOE.

International

■ Assistant professor in statistics (permanent) mathematical sciences, University of Nottingham, UK. Closing Date: Friday 29 January 2016. Salary £34233 to £45954 per annum, depending on skills and experience. Salary progression beyond this scale is subject to performance. Applications are invited from outstanding candidates. This post is available from 1 September 2016. Informal enquiries: Professor Andrew Wood, tel: +44 (0) 115 9514983 or email: andrew.wood@nottingham.ac.uk. To apply <http://bit.ly/1OQdNls>. EOE.

■ Wang Yanan Institute for Studies in Economics and School of Economics, Xiamen University, China. Full-time, tenure-track/tenured professorship positions in statistics beginning September 2016. Preferred areas of specializations are theoretical and applied statistics. PhD in statistics or probability theory must be completed by August 2016. Send applications, including cover letter, CV, samples of research work, and three reference letters, to recruit.wise.xmu@gmail.com before June 30. EOE. ■

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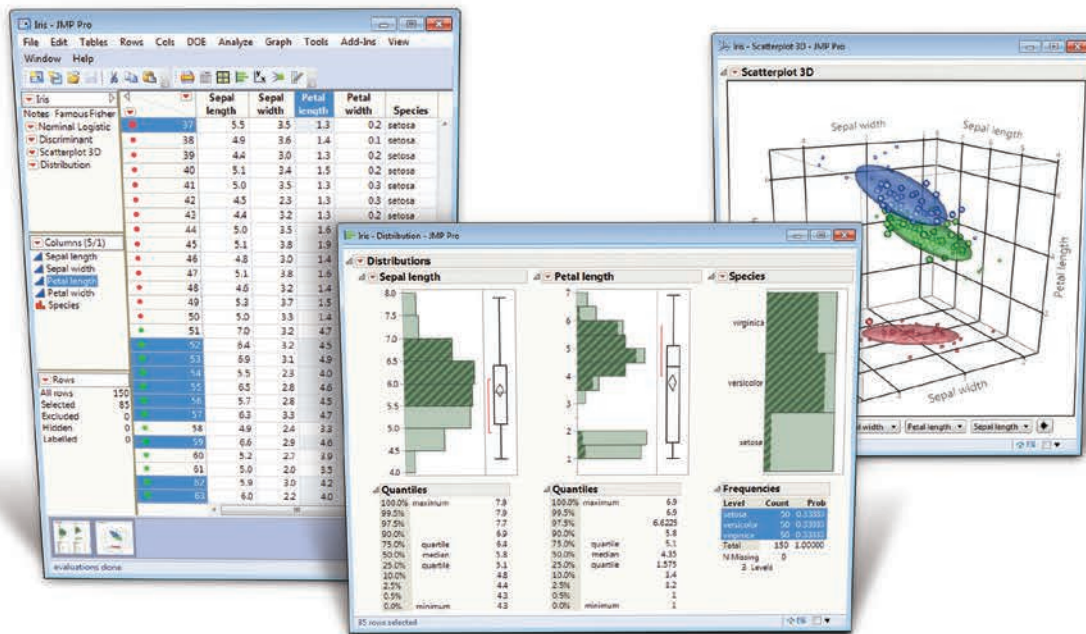
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