October 2018 • Issue #496

AMSTATNEWS

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ALSO:

Florence Nightingale Day: How to Get Involved

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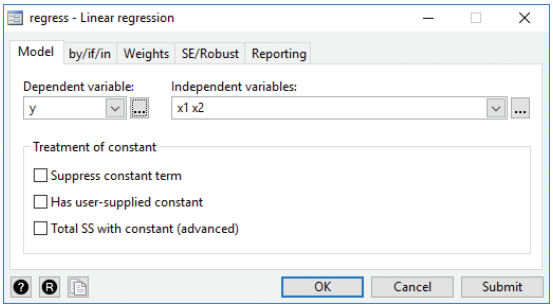
You know you can do this in Stata



and this

```
. logistic y x1 x2
```

But did you know you can do this?

```
void hello()
{
    printf("Hello, Mata!\n")
}
```

```
x[|1,1 \ 4,4|] = I(4)
```

```
A = (3, 1, 4 \ 1, 5, 9 \ 2, 6, 5)
eigensystem(A, X=., L=.)
```

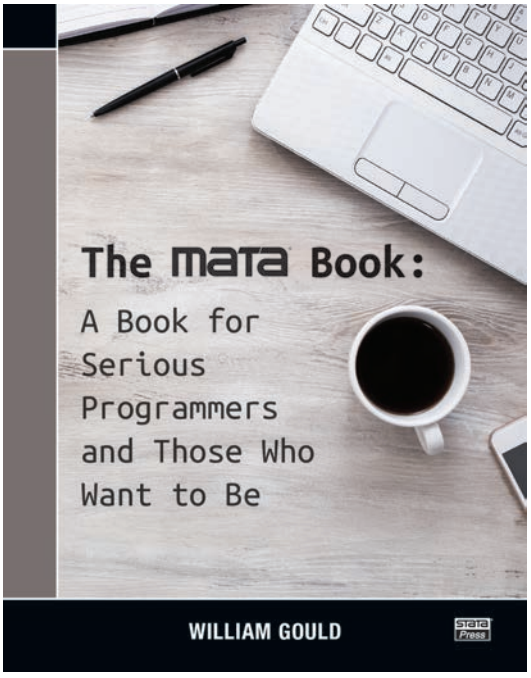
```
p = &a
*p = 4
```

```
url="http://www.somewebsite.net/..."
lines = cat(url)
divs = select(lines, regexm(lines,"<div"))
```

```
struct coord
{
    real scalar x
    real scalar y
}
```

```
real scalar Foo::bar(numeric matrix y)
{
    this.y = y
    this.init()
}
```

```
res = invsym(x)[|1,1 \ 4,4|]
```



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Order at **stata.com/amstat-mata-book**.

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AMSTATNEWS

OCTOBER 2018 • ISSUE #496

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

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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.

features

Celebrate Florence Nightingale Day–Page 16

columns

This column focuses on what statisticians do when they are not being statisticians. If you would like to share your pastime with readers, please email Megan Murphy, *Amstat News* managing editor, at *megan@amstat.org.*

Online Articles

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

In his essay, "Ambiguity: The Biggest Challenge Lies Ahead," George Cobb—professor emeritus of mathematics and statistics at Mount Holyoke—looks at the big and open secret that hides in plain sight: Inference from data cannot be reduced to rules. Read his suggestions for challenging students to think about ambiguity in science, misconceptions they may have, how practicing scientists think about ambiguity in their use of statistics, and how we can develop effective strategies for teaching at *http://magazine.amstat.org*.

STATtr@k
A WEBSITE FOR NEW STATISTICS PROFESSIONALS

In this month's STAT*tr@k*, PhD student and ASA-AAAS Mass Media Fellow Irineo Cabreros tells us what he learned about journalism while writing for the science desk at *Slate* magazine. *http://stattrak.amstat.org*

IN MEMORIAM Sadly, **Albert Philip Shulte** passed away recently. He was active in many mathematics associations, including NCTM (National Council of Teachers of Mathematics) and ICOTS (International Conference on Teaching Statistics). In addition, he wrote a number of mathematics text books, including *What Are My Chances?* To read his complete obituary, visit *http://magazine.amstat.org*.

CORRECTION Lyndsay Noble's last name was spelled incorrectly in the September issue of *Amstat News*. We regret the error.

departments

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member news

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Leading Through Teaching and JSM 2018 Memorable Moments

JSM 2018 is in the rear-view mirror but still having quite an impact on many of us. This month's issue of *Amstat News* contains highlights from the meeting and articles contributed by those who had a hand in making it such a success. If you are like me, you will first flip through the pages to find photos of your friends or be reminded of the many fun and entertaining moments! But after that, be sure to check out the articles. And if you are among those who were unable to travel to Vancouver or otherwise missed the meeting this year, stories about some of the memorable sessions are there for the taking.

In keeping with this year's theme, #LeadWithStatistics, I want to talk about how important it is to lead through teaching and highlight a few of the many ways the ASA helps us do this.

At nearly every JSM since 2007, we have held a Meeting Within a Meeting (MWM) for middle- and high-school teachers. I noticed these events on past programs, but paid little attention until this year, when my daughter—Kate, a middle-school math teacher—was able to attend. Now in her 10th year as an educator—that noblest of all professions (paraphrasing A.P.J. Abdul Kalam, former science teacher and president of India)—she is always looking for new ways to weave probability theory and data analysis into her lessons and encourage her students' statistical thinking. And did this year's MWM workshop deliver! She came away with wonderful ideas for teaching tools that are directly relevant to her classroom goals and appropriate for her students' skill levels.

"I loved being able to connect with other math educators and sharing different ways we use statistics in the classroom," said Kate. "Even though I don't teach a statistics course in middle school, I feel better equipped to help prepare my students to be statistical thinkers by incorporating some of the problems and activities I took away from the wonderful presenters at the MWM workshop."

We talk a lot about data science—its growth in today's marketplace, its relationship to the field of statistics, and its impact on our profession. We worry that those receiving certificates or degrees in data science may not be getting enough exposure to fundamental statistical theory. After all, what good is the fanciest tool for data mining if you stop short of making appropriate inference from it?

The ASA endorsed guidelines for an undergraduate curriculum in data science a few years ago and emphasized keeping statistics in the mix of computer science and mathematics courses.

MWM is a perfect example of how we also support early data science education. Among the many activities offered this year were some involving data collection and data visualization, just the kinds of ideas teachers can use to plant a little data science seed in the minds of future statisticians!

In Katherine Halvorsen's article about MWM later in this issue, you can get an idea of the content and flow of the workshop, as well as the presenters and attendees. Rebecca Nichols, ASA's director of education, oversees the logistics of the workshop, and the ASA's K–12 educational ambassador, Chris Franklin, is one of the presenters. What a powerful trio of women leaders in statistics education affecting teachers from across the US. Hats off to all three for their work in making this event accessible and memorable for teachers everywhere.

Two other highly successful educational programs are highlighted in this issue. The JSM Diversity Mentoring Program was held Sunday through Wednesday, concluding another highly successful offering from the ASA Committee on Minorities in Statistics. An article highlighting our 2018 educational ambassadors from Pakistan and Thailand is also included in this issue, as is a call for 2020 ambassadors. Both high-impact programs expand our reach into the larger statistical community and effectively leverage many of the educational opportunities offered at JSM to benefit others.

My final education-related shout out is to wish the Statistical Education Section a happy 70th birthday, which they celebrated at JSM.

One of my favorite aspects of JSM technical programs, also mentioned in my corner of the July issue of *Amstat News*, are special sessions such as the introductory overview lectures and late-breaking sessions. In the past, these lectures have focused on areas of statistics that had begun to generate widespread interest among members. Topics relating

Photo by Jon Gardiner/UNC-Chapel Hill

Lisa LaVange

The Statistical Education Section celebrated its 70th year at JSM 2018.

to disease outbreaks, such as Ebola, or politically charged topics, such as climate change, for example, have been featured in late-breaking sessions, just as our role in understanding and contributing to these areas as statisticians came to the forefront.

For JSM 2018, one late-breaking session featured machine learning methods that drive critical decisions but also come under scrutiny for lack of transparency in their use. A second was devoted to a timely topic concerning the practice of our profession, namely sexual misconduct at statistical gatherings. A panel of statistical experts from different sectors of our society convened to discuss the topic. Leslie McClure, chair of the ASA Task Force on Sexual Harassment and Assault, was one of the panelists.

That same task force has been hard at work for more than eight months now, drafting recommendations for the ASA Board to adopt in revising our conduct policy and developing a data-collection instrument to hear from ASA members about their experiences. The task force recommendations will be posted for public comment in the coming weeks, and we look forward to hearing from members about them. Your input will be valuable in guiding the board as they consider policy revisions on this important matter.

A more comprehensive summary of JSM 2018 can be found later in this issue. Program Chair Christian Léger provides a terrific overview of meeting highlights, but a few that stand out to me are honoring Daniel Kaspryzyk, Marie Davidian, and Alicia Cariquirry as our newest Founders; celebrating (and yes, even dancing) with our 60 newest ASA Fellows; and learning from Susan Murphy's COPSS lecture that Cole Porter championed experimental design in one of his many songs.

Looking back on one wonderful week spent in one beautiful city in British Columbia with so many friends and colleagues around, I have a huge smile on my face. Hats off to Christian and his program committee, to the ASA team of hard-working staff members, and to all of you for helping put this latest JSM in the record books as one of the very best!

Lisa LaVange

Highlights of the July 2018 ASA Board of Directors Meeting

ASA President Lisa LaVange convened the July ASA Board meeting at the Fairmont Waterfront Hotel in Vancouver prior to the start of JSM. Highlights of the meeting follow.

Discussion Items

- The board engaged in a series of brainstorm discussions regarding four topics: programmatic needs; membership; accreditation; and data science. Many ideas for follow-up were generated.
- The board reviewed an initial report and recommendations from the Sexual Harassment and Assault Task Force. The recommended policy changes will be circulated to ASA membership for comment prior to final review by the board at its next meeting.

Action Items

- The 2019 ASA budget of about $10.9 million was approved.
- The board approved a change to the charter of Statistics Without Borders (SWB). SWB has grown beyond all expectations and some restructuring was needed to deal with the size and complexity of the organization.
- Funding was granted to partner with the University of Maryland Baltimore County on a series of conferences in Africa designed to build statistical capacity in various regions.
- The board endorsed an ASA statement on conveying forensic findings.
- The board also endorsed the update of "Principles and Best Practices for Post-Election Tabulation Audits."

2018 Board of Directors

- **Lisa LaVange**, President
- **Karen Kafadar**, President-Elect
- **Barry Nussbaum**, Past-President
- **Kathy Ensor**, Third-Year Vice President
- **David Williamson**, Second-Year Vice President
- **Katherine Monti**, First-Year Vice President
- **Paula Roberson**, Third-Year Council of Chapters Representative
- **Julia Sharp**, Second-Year Council of Chapters Representative
- **Don Jang**, First-Year Council of Chapters Representative
- **Eileen King**, Third-Year Council of Sections Representative
- **Jim Lepkowski**, Second-Year Council of Sections Representative
- **Katherine Halvorsen**, First-Year Council of Sections Representative
- **Cynthia Bocci**, International Representative
- **Scott Evans**, Publications Representative
- **Amarjot Kaur**, Treasurer
- **Ron Wasserstein**, Executive Director and Board Secretary

From left: ASA Executive Director Ronald Wasserstein, ASA President Lisa LaVange, and ASA President-elect Karen Kafadar at the July 2018 Board of Directors meeting

Reported Items

- Associate Executive Director and Director of Operations Steve Porzio updated the board on ASA financials for the first half of 2018. All is as expected at the midway point.
- ASA Treasurer Amarjot Kaur also updated the board on the status of the ASA's investments. Market value at midyear was about $20.7 million, down about $100,000 from the start of the year.
- The board received progress reports on the strategic initiatives launched by LaVange. In addition, ASA President-elect Karen Kafadar updated the board on her ideas for 2019.
- Representatives from the Council of Chapters Governing Board (COCGB) and the Council of Sections Governing Board (COSGB) reported on their recent activities with leadership on their minds. The COSGB representative reported on its JSM leadership workshop and data it is collecting about section activities. The COSGB is adding a section service recognition award, mirroring that of the chapters. The COCGB is developing leadership training for chapter officers and council members.
- Donna LaLonde, ASA director of strategic initiatives and outreach, reported that we now have 66 ASA student chapters. She noted that for the second year in a row, we are hosting at JSM a leadership workshop for student chapter officers. A speaker's bureau for student chapters is in development by the ASA's Committee on Membership Retention and Recruitment.
- ASA Director of Science Policy Steve Pierson updated the board on several important matters, including the citizenship question on the decennial census, the nominee for director of the US Census Bureau, the ASA's Count on Stats campaign, the status of science and statistical agency budgets, the proposed consolidation of some federal statistical agencies, the status of the Puerto Rico Institute of Statistics, and the latest on the continued persecution of statistician Andreas Georgiou.
- Phil Kutzko, director of the Math Alliance (The National Alliance for Doctoral Studies in the Mathematical Sciences), and Leslie McClure, a member of its executive committee, provided an overview of the work of the Math Alliance and ways the ASA has been and can be involved.

The board meets again November 16–17 at the ASA office in Alexandria, Virginia. Newly elected board members will participate in a board orientation at that time. ■

Global Project Readies to Tackle Data Science Gap

Details of a global project to beef up the teaching of data studies in high schools throughout the world and train teachers in data science as a science of central importance were recently released by the International Data Science in Schools Project (IDSSP), which interprets data science as an interdisciplinary subject drawing on disciplines including statistics, computer science, mathematics, communication, and soft skills.

"The last decade has seen spectacular growth in data collection and usage in most areas of human endeavor—from government to business, to health, science and the environment," says Rob Gould, a spokesperson for the group. "The scale and complexity of the data now being amassed are far beyond the ability of single computers or individuals to manage. We need teams of data science experts working together in real time, around the world. That is why we have launching an urgent project aimed at meeting the global shortfall in trained data science professionals."

The aim of the IDSSP is to transform the way data science is taught the last two years of secondary school. Its objectives are the following:

1. To ensure school children develop a sufficient understanding and appreciation for how data can be acquired and used to make decisions, so they can make informed judgments in their daily lives as children and then as adults
2. To inspire school students to pursue tertiary studies in data science and its related fields, with a view to a career

The following two curriculum frameworks are being created to support development of a precalculus course in data science that is rigorous, engaging, and accessible to all students:

1. Framework 1 (*Data Science for Students*) is the basis for developing a course with a total of some 240 hours of instruction.
2. Framework 2 (*Data Science for Teachers*) is designed as the basis for guiding the development of teachers from a variety of backgrounds (e.g., mathematics, computer science, science, economics) to teach a data science course well.

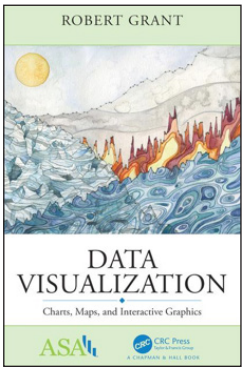
The project is a collaborative activity involving leading computer scientists, statistical scientists, curriculum experts, and teachers from Australia, Canada, England, Germany, The Netherlands, New Zealand, and the United States and supported by several national and international societies, groups, and companies.

"We envisage the material will be used not just in schools, but also as a valuable source of information for data science courses in community colleges and universities and for private study," says Gould.

Draft frameworks will be published for widespread public consultation in early 2019 and completed by August. For more information, email *idssp.info@gmail.com* or visit *www.idssp.org*. ■

Newest Book in ASA-CRC Series Covers Data Visualization

The third book to be published in the ASA-CRC Series on Statistical Reasoning in Science and Society is *Data Visualization: Charts, Maps, and Interactive Graphics* by Robert Grant.



The book is concise, filled with full-color visualizations, and focuses on concepts and ways of thinking about data, rather than algebra or computer code. It features 17 short chapters that can be read in one sitting; each is self-contained, so the reader can easily dip in and out of the book. Topics included are big data, statistical and machine learning models, visual perception, high-dimensional data, and maps and geographic data.

Whether you are a student considering a career in data science, an analyst who wants to learn more about visualization, or the manager of a team working with data, this book will introduce you to a broad range of data visualization methods.

For details about the book, visit the CRC Press website at *www.crcpress.com/Data-Visualization-Charts-Maps-and-Interactive-Graphics/Grant/p/book/9781138707603*. To learn more about Grant, visit *www.robertgrantstats.co.uk*.

Do You Have a Book Idea?

The ASA-CRC series contains short books covering the use of statistics in wide-ranging aspects of professional and everyday life, including the media, science, health, society, politics, law, education, sports, finance, climate, and national security. The books present concepts assuming minimal mathematical background and can be read by a broad audience.

For details about the aims and scope of the series and to get in touch with the editors with your ideas, visit *www.crcpress.com/go/asacrc*.

Meet James Woodworth, NCES Commissioner

James "Lynn" Woodworth comes to the National Center for Education Statistics with a range of experience in education. Before joining NCES, Woodworth worked as lead quantitative research analyst at the Center for Research on Educational Outcomes (CREDO) at Stanford University. Prior to his work at CREDO, he served as a distinguished doctoral fellow in the department of education reform at the University of Arkansas, where he earned a doctorate in education policy. His areas of research include charter schools, online education, and education finance.

Woodworth also holds a master's degree in educational leadership and a bachelor's degree in music education. He served on active duty for six years in the United States Marine Corps and was a public high-school teacher for 11 years before pursuing a research career.

What about this position appealed to you?

I believe making good policy decisions requires access to high-quality data. As such, I have been a user of NCES data for years. I saw the opportunity to take a leadership role at NCES as a way to ensure and improve the quality of data for the entire education research realm. It is my hope that during my time at NCES, I will be able to help expand the types and quality of the data made available to parents, teachers, students, researchers, and policymakers.

Describe the top 2–3 priorities you have for the National Center for Education Statistics.

One of my primary goals while at NCES is to develop an improved measure of socio-economic status (SES). For decades, education researchers have used eligibility for free and reduced lunches under the US Department of Agriculture's National School Lunch Program (NSLP) as a proxy for poverty.

Free and reduced lunch eligibility has never been a good measure of student SES because, as traditionally used, it provides only two categories (eligible and not eligible) and because application for NSLP is voluntary. Students tend to opt out as they age to avoid the stigma of being identified as being "in poverty." Additionally, a few charter schools and private schools do not participate in the NSLP program, which results in under-reporting of students in poverty. Finally, the Department of Agriculture has made recent changes to the NSLP eligibility regulations. While these changes result in increased participation in the NSLP program, they weaken eligibility status as a proxy for poverty in research analyses.

NCES staff had already been working on an alternative measure of SES using data from several sources before I arrived. I hope to be able to bring the development of a new SES to fruition during my time here.

Another goal I have is to improve NCES's website. NCES has a plethora of data available on a wide range of topics, but navigating the website to get to the data can be a daunting task. I plan to work with NCES to develop a more user-friendly, easier-to-navigate website.

What do you see as your biggest challenge(s) for NCES?

NCES is an established government agency with ingrained practices. That means change will likely be slow and incremental. While we definitely don't, for example, want individual whims to result in major changes to longitudinal data collections, change is necessary for improvement. We will have a lot of organizational inertia to overcome to implement improvements to NCES's processes.

How can the statistical community help you?

The greatest assistance the statistical community can give NCES or any government agency is to provide support of our mission to the public. Our government statistical agencies are made up of thousands of people who work hard every day to provide reliable, accurate data to decision-makers and the public for supporting the greater good. At the same time, statistical agencies across the federal government are struggling to gather data because too many individuals refuse to participate in our surveys.

The public is becoming more comfortable with data and demand data be readily available. But at the same time, fewer people are willing to share their individual data than in the past. There seems to be a misunderstanding of the fact that most data or statistics reported by federal agencies are aggregates of the information provided by individual respondents to federal agencies' surveys.

Prior to your tenure, what do you see as the biggest recent accomplishment of the agency?

NCES is a treasure trove of useful data. This makes it hard to cite a single "biggest" accomplishment. However, one of the stronger accomplishments has been the establishment of a school-level finance data collection. For those who have not explored this area of policy, it would probably come as a shock to know many states and districts cannot tell you how much money is spent at a specific school. Because public education finances have long been handled at the district level, the accounting systems have not been organized in a manner that makes reporting of school-level expenditures possible.

Consequently, when researchers have done analyses of per pupil expenditures such as the impact of providing additional funding for students with exceptional needs, they have typically used district-level average spending. That practice may be masking the true impact of such spending.

For example, it assumes additional funding for, say, students in poverty actually equates to additional expenditures in schools serving students in poverty. Only recently has NCES, working with several state departments of education, begun to collect the school-level expenditure data necessary to properly complete such analyses. To me, getting the school-level expenditure data will be a large improvement for the analysis of education funding. It is my hope that during my tenure at NCES, we can partner with every state to improve this critical data collection. ■

Call for Nominations: Editor of *CHANCE*

The American Statistical Association invites nominations and applications for the position of executive editor of *CHANCE*.

CHANCE is a unique magazine intended for everyone interested in the analysis of data. Articles showcase statistical methods in the social, biological, physical, and medical sciences and highlight ideas on statistical computing and graphical presentations of data. Regular departments and columns keep readers informed in such areas as government statistics and sports. *CHANCE* entertains, informs, and encourages sound statistical practice.

The new editor will serve from 2020 through 2022, with the transition beginning in late 2019.

If you know someone who would be right for the editorship of this magazine, please send that person's name, email address, and a brief description of his or her qualifications to ASA Journal and Publications Manager Eric Sampson at *eric@amstat.org*. The search committee will contact your nominee to see if she or he is interested in applying.

Those interested in becoming the next *CHANCE* editor are encouraged to nominate themselves.

Nominations should be made no later than **December 7**.

Applications should be received no later than **February 22, 2019**.

Survey of 2016–2017 Graduates Yields Insights for Current, Prospective Students

Steve Pierson, ASA Director of Science Policy

Is there a typical bachelor's graduate in statistics? Are graduates finding well-paying and satisfying jobs? Can students learn from the data and advice of the graduates responding to this survey?

No, yes, and absolutely!

Reflecting on John Tukey's well-quoted quip that statisticians get to play in everyone's backyard, bachelor's graduates in statistics are going into a rich variety of jobs and graduate studies. With roughly twice as many graduates starting a career as continuing studies, new employees had 171 unique job titles—out of 262 job titles reported—in 230 companies.

They are also being paid well, with a median starting salary of $56,200 and job satisfaction (for salary, security, challenge, responsibility, and advancement) all being in the 75% to 85% range.

The graduates responding to the survey were also generous with their academic and job search advice for current and prospective students, generally urging more computer science and math courses (or even a second major), internships and other applied/real-world experiences, and more attention to writing and communication skills.

The impressions above—and the information presented below—are based on the ASA's two surveys of new bachelor's graduates, one done last year of the 2016 graduates and one done this spring of 2017 graduates.

With the number of students earning bachelor's degrees in statistics in the US quadrupling from 2010 to 2017, the ASA established the survey to better understand the growth. The results are intended to be helpful to the following three main audiences:

1. Current statistics students to inform both their remaining studies and planning for post-graduation
2. Potential statistics students as they decide on a major or majors
3. Faculty and administrators as they advise students, design curricula, and allocate resources

To be especially helpful to the third audience, department-specific reports are provided to departments with sufficient numbers of responding graduates.

The Results

Turning to the survey and results, 292 graduates participated in this year's survey, which was distributed in spring 2018 and asked about employment or graduate student status as of March 5, 2018. Answering the entire questionnaire were 251 students. These numbers are up slightly from the 2016 survey—271 participants, 215 responding to all questions—though the number of universities represented is down from 52 to 47.

In the following, the results from the surveys of 2016 and 2017 graduates are combined. In general, results were similar from 2016 to 2017, but notable exceptions are highlighted below.

Because of the varying engagement of departments and the difficulty of reaching students who have left the US, we can't claim the 466 graduates from both years who responded to the entire survey are representative of the entire population of the 6,188 reported by the National Center for Education Statistics (NCES) for 2016 and 2017. Of those providing gender identities for the ASA survey, 214 were female, 230 were male, four selected "other," and three preferred not to say. The percentage who are female, 47%, is somewhat higher than the 43% in the NCES data.

For citizenship data, where NCES data show 30% of 2016 and 2017 bachelor's degrees going to nonresidents, 17% (74) in the ASA survey reported being non-US citizens (36 from China, seven from South Korea, and four from Canada) and 83% (376) reported being US citizens.

The universities with the most 2016 and 2017 graduates participating in the survey were Brigham Young University (50 students), the University of Illinois at Urbana-Champaign (UIUC) (28), The University of Chicago (17), the University of Michigan (17), Columbia University (13), The Pennsylvania State University (13), and North Carolina State University (10). UIUC had the most graduates represented, 25, in the survey of 2016 graduates.

Information About Undergraduate Studies

A sizable portion of the graduates participating had busy academic schedules with both their courses and non-classroom engagements with statistics. Roughly a third—179—said they graduated with a double major, with the most common companion major being economics and mathematics (Table 1). One hundred twenty-two students indicated they had minored in a field, the most common being mathematics (31), business administration (15), computer science (13), and economics (11).

Table 1: 179 Respondents Double Majored

Field	n	%
Economics	50	27.8
Mathematics	39	21.7
Other	18	10.0
Psychology	16	6.6
Computer Science	8	4.4
Biology	6	3.3
Political Science	6	3.3
Biochemistry	5	2.8
Finance	5	2.8
Physics	4	2.2

To probe the outside-the-classroom learning experiences as undergraduates, the survey asked about internships, research, and capstone projects and how they regarded such experiences for their education and career. One hundred thirty-nine graduates said they did a thesis or capstone project; 211 said they did an off-campus internship or industrial co-op; 177 said they did on-campus research; 34 said they did an NSF Research Experience for Undergraduates; 48 reported other summer research on another campus; and 49 said a DataFest or hack-a-thon. If there was much movement from the 2016 graduates survey to the 2017 graduates survey, it was in relatively large increases for off-campus internship or industrial co-op and on-campus research.

For these experiences, graduates were asked, "How do you feel your above experience(s) affected your current situation?" The open-ended responses, available to view in the online supplemental material at *http://magazine.amstat.org*, seemed to be overwhelmingly positive. Taking an impressionistic (i.e., nonscientific) approach to the responses, the following were typical:

- "Greatly helped me prepare for and obtain my full-time job."
- "They greatly improved my chances and interest in furthering my education."
- "Gave me real-life applications of classroom learning."
- "Good exposure to professionals working in the field."

(The ASA would welcome volunteers willing to do a more scientific analysis of the open-ended responses.)

Despite the generally engaging learning schedules inside and outside the classroom, respondents were relatively vocal when asked what they would do differently. Common themes from the 328 responses—all available to view in the supplemental material online—were taking more computer science, programming, or coding courses and, to a lesser extent, mathematics courses; applying themselves more to their studies; and having more research or hands-on experience. Responses included the following:

- "Improve my coding abilities (e.g., learn SQL)."
- "I would have done more to try to secure an internship."
- "Supplemented with a second major in mathematics."
- "Take more programming/computer science courses."
- "I would have taken more seriously my English/writing classes."
- "Focus on education more than grades."

The advice provided for current statistics students tracked with the responses above of what graduates would have done as students. Programming/coding skills were most frequently recommended, followed by gaining experience through internships and related activities. More mathematics, double majoring, and learning more statistical programming (e.g., R, SAS, SQL) were also recommended, as reflected in these select responses:

- "Learn as much coding as you can."
- "Internships and research help so much in terms of job prospects and self-development!"
- "I strongly recommend double-majoring, as statistics is relevant in almost all subjects these days."
- "Take more math courses. Have fun!"
- "Don't worry about whether you want to have a career in statistics - the skills and the way it helps you learn to think can be helpful no matter what field you end up in."

Students were generally quite positive about how well their undergraduate program prepared them. Eighty-three percent agreed or strongly agreed (7% disagreeing or strongly disagreeing and the balance neither agreeing or disagreeing) their program prepared them to effectively analyze and interpret data critically using statistical models; 77% (11%) to effectively analyze and interpret data critically using computational methods; and 76% (11%) to effectively communicate, both orally and in written form, results of statistical analyses to a variety of audiences.

Regarding their job search, students generally took advantage of help from their statistics department and faculty or the on-campus career counseling center. Two hundred fifty respondents said their statistics department or the faculty provided

MORE ONLINE
To view the supplemental material, visit *http://magazine.amstat.org.*

career guidance; 205, no. Similarly, 247 said they used their on-campus career counseling center; 208, no. Of those who used a campus career counseling center, 153 found it useful though, when elaborating, were more temperate in their remarks. The 145 comments are available in the supplemental material, the following being a small selection:

- "The most useful part was being able to connect with alums and talk about what they do day to day."
- "Mock interview, help me with my résumés and cover letters."
- "When I was considering statistics, they helped me see all of the possible career options that were made available by obtaining the degree."

Table 2: Employment/Student Status

	n	%
Student	166	30.1
Employed	325	58.9
Full-Time Volunteer	5	0.9
Unemployed Seeking	21	3.8
Unemployed Not Seeking	3	0.5
Other	3	0.5
Left US	17	3.1
Full- or Part-Time Intern	12	2.1

After their undergraduate studies, twice as many respondents found jobs as those who continued their studies. Of the 552 respondents, 325 (59%) listed themselves as employed, 166 (30%) as a student, and 21 (4%) unemployed (see Table 2). One hundred seventy listed themselves in full-time degree programs and another 79 (14.3%) of the employed said they were planning to begin a degree program in the future.

Table 3: Characterization of Undergraduate Field

Field	n	%
General Statistics	263	57.2
Applied Statistics	69	15.0
Math with Stats Emphasis	55	12.0
Actuarial Science	35	7.6
Biostatistics	22	4.8
Other	9	2.0
Data Science	6	1.3
Business Analytics	1	0.2
Respondents	460	

Of the 220 who characterized their undergraduate field (Table 3), 62% listed statistics or biostatistics. Three hundred fifty-eight of the respondents graduated from universities for which the highest degree offered was a PhD, 138 graduated from universities for which the highest degree offered was a master's, and 56 graduated from universities for which the highest degree offered was a bachelor's. Three hundred forty-six graduated from a public university; 206 private. Of the 459 who responded to the question, 236 said they had taken AP Statistics.

Employed

The respondents who obtained jobs seem to be well paid and generally satisfied with their jobs. They also work for a diverse and large group of employers with generally unique job titles. The median salary for those employed full time and providing salaries is $56.2K, the 25th and 75th percentiles being $48.0K and $69.5K. For an approximate comparison, see this graph from the American Institute of Physics at *bit.ly/AIP-BA* showing middle-50% salary ranges for 15 fields for the class of 2015. Statistics tracks most closely with mathematics and finance.

For what employment sector these graduates are in, 195 (72%) of the respondents specified company or business; 13 (5%), government contractor; 11 (4%), four-year college or university; 10 (4%), nonprofit organization; 9 (3%), other federal agency; 7 (3%), self-employed and/or consultant; 6 (2%), state or local government; and 5 (2%), hospital or medical facility.

The median salary was the highest for those employed full time by "other federal agency," $66.0K

Table 4: Median Salary by State

State	n	Median ($)
CA	26	58,100
CT	5	43,000
DC	9	63,000
FL	6	59,600
IL	30	57,000
MA	22	66,500
MI	7	56,300
MO	8	55,000
NC	11	52,000
NY	12	73,500
OH	9	52,000
TN	5	38,000
UT	23	52,000
VA	5	56,000
WA	6	56,500
US	239	56,200

Table 5: Frequency of Technical Skills Used by Employees

Use	Quality Control	Solve Technical Problems	Statistics or Advanced Math	Data Analysis	Use/Develop Stat Models	Design Experiments
Rarely/Never	76	29	66	26	102	190
Monthly	27	21	58	21	57	46
Weekly	63	49	75	46	47	18
Daily	97	164	65	170	56	9
Responses	263	263	264	263	262	263

Use	Survey Design	Programming	Comp. Admin.	Query Databases (2017)	Manage Databases (2017)
Rarely/Never	200	76	171	31	39
Monthly	27	32	35	19	24
Weekly	18	38	25	21	20
Daily	17	114	31	71	59
Responses	262	260	262	142	142

Table 6: Frequency of Interpersonal, Communication, Management Skills Used by Employees

Use	Teamwork	Teaching	Public Speaking	Work with Clients	Manage People	Manage Projects	Manage Budgets	Technical Writing	Nontechnical Writing
Rarely/Never	12	141	106	100	184	61	186	86	70
Monthly	15	51	86	32	28	41	32	62	48
Weekly	58	52	50	63	19	70	17	66	61
Daily	179	19	22	67	32	91	27	49	82
Responses	264	263	264	262	263	263	262	263	261

Table 7: Frequency of Specific Tool Use (2017 Graduates Only)

Use	Java	JMP	Minitab	Python	R	SAS	SPSS	SQL	Tableau	Other
Rarely/Never	122	128	131	90	74	101	130	68	103	24
Monthly	6	4	0	21	22	12	4	12	8	0
Weekly	2	4	4	10	14	9	2	21	9	10
Daily	6	0	0	17	29	16	0	39	14	28
Responses	136	136	135	138	139	138	136	140	134	62

(eight reporting). Looking at the other median salaries for which there were seven or more full-time salaries reported, the next-highest median starting salary was in the company or business sector at $60.0K (186 reporting), followed by government contractor at $55.0K (12), nonprofit organization at $46.8K (7), and four-year college or university at $43.0K (10).

Table 4 shows the median salaries for all sectors for the states with an *n* of five or greater.

Most employed graduates received one job offer, and 83% of those responding thought their statistics or statistics-related major was very or somewhat influential in securing their current position. Of the 272 who reported themselves as employed and responded to this question, 140 reported one job offer, 75 reported two, 35 reported three, 10 reported four, and 7 reported five or more job offers.

When describing job search experiences and what might help locate and secure a position, the responses are varied, with many citing internships, career fairs, or career centers; others noting department newsletters or help from professors; and still others referencing job search websites. Here are select responses (with all responses posted in the supplemental material):

- "I was offered the job after an internship."
- "Sent out 10+ applications after extensive research."
- "Send out a résumé to every company you would be interested in working for."
- "I relied heavily on the newsletters that my statistics department sent out frequently (at Brigham Young University). During recruiting seasons, I could get several emails in a day about companies looking for interns or full-time hires."
- "Glassdoor was the most helpful tool in finding a job. I also used LinkedIn and my university's job bridge."
- "It wasn't difficult to find interviews in statistics-related positions, but the positions were competitive, and I was turned down from a few jobs before I found mine."

Job satisfaction in several categories seems quite high. Eighty-four percent were very or somewhat satisfied (16% very or somewhat dissatisfied) with the position they held at the time of filling out the survey. Seventy-nine percent were very or somewhat satisfied with their salary and benefits, 90% with their job security, 78% with the opportunity for advancement, 74% with the intellectual challenge, and 85% with their level of responsibility. These satisfaction levels are generally in the same range as those of physics graduates.

As noted above, the diversity of job titles and number of companies employing statisticians is impressive. There were 171 unique job titles among 262 job titles reported. The most common were data analyst (18), analyst (17), actuarial analyst (16), and data scientist (11). Two hundred thirty-one unique employers (of a total 255) were listed.

The 255 graduates who categorized themselves as employed and provided the state were employed in 38 states and the District of Columbia.

The questionnaire also asked those employed about the frequency of many skills they use in their work. Consistent with the survey of the 2016 graduates, the most used technical skills—as shown in Table 5—are technical problem-solving and data analysis. Managing and querying databases are two skills added for the survey of 2017 graduates and are roughly in the same category with quality control, programming, and statistics/advanced math. Experimental and survey design are the least-used technical skills. For interpersonal, communication, and management skills (Table 6), teamwork is by far the most often and widely used skill, followed by working with clients, project management, and writing.

To understand the tools/languages new bachelor's graduates use, a new question for the 2017 survey revealed relatively modest use at least weekly by those providing answers: SQL (43% used weekly or daily), R (31%), Python (20%), SAS (18%), and Tableau (17%). Thirty-eight respondents reported weekly or daily use of other tools, the most common being Excel (11). If one includes monthly use, R draws almost equal to use of SQL. See Table 7.

Postgraduate Study

One hundred fifty-three respondents reported being in a graduate program, 54 in statistics, 29 in biostatistics, 27 in data science, and 43 others in 15+ other programs—medicine, computer science, economics, and education being the most common with six, five, five, and five, respectively. Compared to the 2016 graduates, there seems to be more interest in biostatistics and data science for the 2017 graduates. Thirty-two of the graduates were enrolled in doctoral programs, 110 in master's, though 54 of the students intend to earn a doctorate. Among the respondents who had accepted employment, 54 said they plan to enroll in a degree program in the next two to three years—25 in a doctoral program and 27 in a master's program.

For the 72 graduates who reported a teaching or research assistant or fellowship as their primary support, the median annual stipend was $19.0K (25th percentile: $12.9K, 75th: $26.3K).

With the survey on a firm setting after two consecutive years of experience, the ASA intends to make this a biannual survey, with the next survey expected to be in 2020 for the 2019 graduates. We are also seeking to implement a survey of master's students. (The American Mathematical Society does an annual survey of doctoral students in the mathematical sciences.) ■

GOOD TO KNOW

This survey was conducted by the Statistical Research Center of the American Institute of Physics (AIP). The ASA provided department names and contacts for the departments granting statistics or biostatistics degrees according to our records.

For the survey of 2016 graduates, AIP reached out to 123 departments, 41 of which provided names and email addresses of their 2015–2016 academic year graduates. The AIP received the names and contact information for 1,017 2016 graduates.

For the survey of 2017 graduates, they again reached out to 123 departments, 44 of which provided names and email addresses of their 2016–2017 academic year graduates. The AIP received the names and contact information for 1,200 2017 graduates.

For both years, AIP reached several dozen departments that didn't provide names and contact information to distribute the survey to their graduates.

The report on the ASA survey of 2016 graduates is available at *bit.ly/2016BachelorsSurvey.*

2018 JSM Diversity Mentoring Program: Why Mentoring Matters

Dionne Swift and Adrian Coles

As a regular activity of the ASA Committee on Minorities in Statistics (CMS), the core objective of the JSM Diversity Mentoring Program (DMP) is to encourage and foster the development of mentoring relationships and networking for historically under-represented minority graduate students, postdoctoral scholars, and early-career professionals with more senior-level statisticians/biostatisticians from academia, government, and industry.

Over the years, this program has been successful in creating enduring mentoring relationships and nurturing a pipeline of minority statistics professionals. It has also helped build a dynamic community in which individuals are committed to the success of the community in addition to individual personal and professional success. In fact, many program participants have repeatedly contributed to the program by serving as mentors and members of the DMP planning team.

Feedback from participants, like that of 2015 participant Oluyemi Oyeniran demonstrate the value of the mentoring relationships formed due to this program: "I [want to thank you] for your support, care, and constructive criticism during my final year of my doctorate program and my job search process. … Your insights and perspective are priceless to my success."

Program Summary

This year's program was held from Sunday, July 29, through Wednesday, August 1, at the Joint Statistical Meetings in Vancouver, BC. It brought together 16 mentor-mentee pairs along with invited contributors for small-group career discussions, one-on-one mentoring, and networking opportunities.

The program included a welcome dinner, during which the matched mentors and mentees were formally introduced, and three scheduled sessions for the entire group of mentors and mentees.

On Monday morning, Dubois Bowman, chair and professor of biostatistics at Columbia University's Mailman School of Public Health (soon to be dean of the University of Michigan School of Public Health), opened the mentoring session by offering a motivating commentary on the power and benefits of mentoring, including practical tips for effective mentoring. He also conveyed the value of mentoring in his career progression. Immediately following his presentation, participants heard from a panel of veteran mentor/mentee pairs who took turns interviewing each other. The pairs shared various ways in which they established trust, patterns of interactions, and boundaries.

During the career session on Tuesday, Emily Butler of GlaxoSmithKline shared tips for job searching, résumé writing, and interviewing. After, in the collaborating session, Adrian Coles of Duke Clinical Research Institute moderated a panel discussion that included successful statisticians in academia, government, and industry who offered advice about effective and active collaboration.

On Wednesday, participants took part in a roundtable discussion about issues proposed by the mentees. Questions ranged from how to select an adviser to how to manage difficult relationships in the workplace. In addition to the scheduled sessions, mentors and mentees met one-on-one throughout the meeting and participated in JSM activities together.

Next year, the 2019 JSM Diversity Mentoring Program will also include a full-day workshop that includes approximately 100 participants, along with the one-on-one mentoring and small-group sessions. Check the Committee on Minorities in Statistics webpage at *http://community.amstat.org/cmis/home* for more information if you are interested in participating in the next program or the CMS' other key initiative, StatFest. ■

MORE ONLINE
Visit the Committee on Minorities in Statistics webpage at *http://community.amstat.org/cmis/home.*

Florence Nightingale Day Urges Students to Discover, Do, Develop

A collaborative effort between the American Statistical Association House of Statistics and Caucus for Women in Statistics (CWS), Florence Nightingale Day is for middle- and high-school students and their teachers to *discover* the opportunities for careers in statistics and data science, *do* activities with data, and *develop* connections. Throughout the day, participants will meet successful women in statistics and data science, take on data challenges, and have fun.

The hub and live streaming location for Florence Nightingale Day 2018 will be Laber Labs at North Carolina State University. There will also be Florence Nightingale Day events in Columbus, Ohio—organized by CWS President Shili Lin and CWS Executive Director Jessica Kohlschmidt—and in Athens, Georgia, hosted by ASA K–12 Statistical Ambassador Christine Franklin, ASA/NCTM Joint Committee Chair Kaycie Maddox, and CWS President-elect Nicole Lazar. Visit *http://bit.ly/FNDay2018* to learn more.

Opportunities for Involvement

The ASA and CWS plan to make Florence Nightingale Day an annual, world-wide event. Visit *http://bit.ly/FNDUpdates* to learn more and sign up to receive updates. Chapter members can also start planning to get involved in next year's event by making connections with local schools and classrooms. Host a local event and visit a classroom to discuss careers in statistics or engage with students in a statistical problem-solving activity. You can also reach out to teachers and schools during the school year with the following activities:

- Share *This*IsStatistics videos and statistics resources with a local teacher or offer to go in to discuss careers in statistics during a career day event (*http://thisisstatistics.org*)
- Mentor a class participating in the *This*IsStatistics fall or spring data challenge for high-school and undergraduate students
- Assist a class participating in What's Going On in This Graph? (*http://bit.ly/InThisGraph*), a free, weekly online feature of the ASA and *New York Times* Learning Network
- Encourage a class to participate in Census at School - US (*ww2.amstat.org/censusatschool*), a free international classroom project that engages students in grades 4–12 in statistical problem solving using their own real data
- Mentor a class involved in the ASA Data Visualization Poster Competition for grades K–12 (*http://bit.ly/ASAPosterComp*) or the ASA Project Competition (written report) for grades 7–12 (*http://bit.ly/ASAProjectComp*)
- Share the Stats+Stories Podcast (*http://bit.ly/StatsAndStories*) or ASA K–12 Education Webinars (*http://bit.ly/EDUWebinars*)
- Mentor a class participating in the International Mathematical Contest in Modeling for high-school and undergraduate students (*http://bit.ly/IntlMCM*). The ASA offers the ASA Data Insights Award for this competition.
- Share the House of Statistics website (*www.houseofstatistics.org*) with a student or teacher
- Encourage a teacher to use or submit K–12 statistics education lesson plans to *www.statisticsteacher.org* and *www.amstat.org/education/stew*
- Write an article or lesson plan for *Statistics Teacher* (*www.statisticsteacher.org*)
- Share the biography of Florence Nightingale and other distinguished statisticians posted at *http://bit.ly/FNBio*
- Share the ASA Statistical Significance pieces that help document the many important contributions statisticians have made (*http://bit.ly/StatSigSeries*)
- Encourage a teacher to sign up for the free one-year trial ASA K–12 teacher membership (*http://bit.ly/ASAK12*)
- Connect a teacher with their local ASA chapter (*http://bit.ly/ASAChapter*)
- Encourage your chapter to send a teacher to the Meeting Within a Meeting (MWM) Statistics Workshop (*www.amstat.org/education/mwm*) for Math and Science Teachers and/or the Beyond AP Statistics (BAPS) Workshop (*www.amstat.org/education/baps*)

Florence Nightingale

- Encourage a classroom to participate in April Mathematics and Statistics Awareness Month activities (*http://bit.ly/AprilMSAM*)
- Share a flier showing free ASA K–12 statistics education resources (*www.amstat.org/asa/education/K-12-Educators.aspx*)
- Encourage statistics students and student chapters (*http://bit.ly/ASASC*) to engage in outreach activities in K–12 classrooms

Other ideas and resources for reaching out to K–12 teachers and students are available at *http://bit.ly/K12Outreach*. Need ideas? Start small by helping a class engage with the Florence Nightingale Day live streaming events.

Part of the ASA mission is to enhance statistics education at all levels. We hope you consider engaging in your community and sharing statistics education and career resources, whether on Florence Nightingale Day or other days throughout the school year. For questions or ideas, contact Donna LaLonde, ASA director of strategic initiatives and outreach, at *DonnaL@amstat.org* or Rebecca Nichols, ASA director of education, at *rebecca@amstat.org*. ■

PASTIMES OF STATISTICIANS

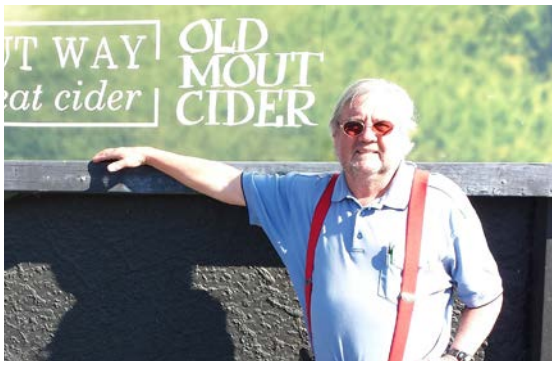
What Does Mike Mout Like to Do When He Is Not Being a Statistician?

Who are you, and what is your statistics position?

Retired. Worked for multiple companies. In my later years, I primarily worked in the financial area with risk models for Fair Isaac (FICO), Capital One, and State Farm Insurance (mainly with their bank division).

Tell us about what you like to do for fun when you are not being a statistician.

I sing. I started singing barbershop in my '20s, but I got involved in opera (due to my wife's influence) while in graduate school (1970–1972). In the late 1970s, I began singing with the San Diego Opera Chorus, which I continued throughout the 1980s and 1990s. In the later years, I was the American Guild of Music Artists representative (*www.musicalartists.org*). I am now singing with the Charleston Men's Chorus (*https://charlestonmenschorus.org*) and Charleston Symphony Orchestra Chorus (*http://charlestonsymphonychorus.org*).



Mike Mout in New Zealand.

What drew you to this hobby, and what keeps you interested?

I have always enjoyed singing and performing on stage. In fact, had I been a little bit more talented, I may have tried to make it a profession. Actually, my son is more talented than I and is a professional opera singer in Hanover, Germany.

Editor's Note: You can see Mout with his choir on the Charleston Men's Chorus website (*https://charlestonmenschorus.org*). He is in the first row, all the way to the left. ■

A TREMENDOUS SUCCESS!

Christian Léger, 2018 JSM Program Committee Chair

MORE ONLINE
Didn't make it to Vancouver? See pictures at *ww2.amstat.org/meetings/jsm/2018.*

The 2018 Joint Statistical Meetings took place in Vancouver, in the beautiful province of British Columbia. With a view of the Vancouver Harbour and the mountains of North Vancouver, the setting of the Vancouver Convention Centre was simply spectacular, especially since the weather was fantastic all week long! The conditions were perfect for exchanging ideas, networking, learning, finding job opportunities, and making new friends.

The meeting was a success, with many opportunities to #LeadWithStatistics—JSM's theme this year. In attendance were 6,346 people (including 3,336 ASA members). There were 925 professional development registrants and 230 exhibitors. The program included scientific sessions of interest to statisticians working in academia, the government, and industry with topics such as clinical trials, precision medicine, high-dimensional data, big data, data science, and machine learning, as well as many topics linked to societal issues.

Thanks to the hard work of the 45 members of the program committee and the contributions of JSM participants, 619 scientific sessions and 61 roundtables were organized. A record number of presentations (more than 3,800) were featured, including 809 individual posters and 430 speed presentations. The popularity of the speed sessions continues to grow; there were 315 and 274 such presentations in JSM 2017 and 2016. These sessions feature a five-minute oral presentation with an electronic poster presented in detail later. The electronic posters allow more flexibility in the type of information conveyed than a regular printed poster.

In 2018, JSM innovated by organizing its first public lecture. Advertised to the local community in Vancouver, it attracted a large crowd on Monday night. In a lecture titled "Born on Friday the Thirteenth: The Curious World of Probabilities," Jeff Rosenthal of the University of Toronto grabbed the attention of teachers, teenagers, parents, JSM participants, and even the audio-visual technicians in the room as he introduced them to the amazing world of statistics and probability. The following four plenary talks were delivered at JSM:

- **ASA President's Address**
  Lisa LaVange, University of North Carolina, "Choose to Lead"
- **ASA President's Invited Address**
  Laura Evans, *The New York Times*, "Helping to Save the Business of Journalism, One Data Insight at a Time"
- **Fisher Lecture**
  Susan Murphy, Harvard University, "The Future: Stratified Micro-Randomized Trials with Applications in Mobile Health"
- **Deming Lecture**
  John L. Eltinge, US Census Bureau, "Improving the Quality and Value of Statistical Information: 14 Questions on Management"

These lectures were outstanding and thought provoking. They can also be viewed at *ww2.amstat.org/jsmwebcasts*.

The introductory overview lectures (IOLs) offer an introduction to important topics such as the deep learning revolution, multivariate data modeling with copulas, leading data science, reproducibility, efficient workflows, teaching statistics, and the statistical and data revolution in the social sciences. The slides for many of these presentations, as well other JSM talks for which speakers agreed to have their slides posted, are available from the online program at *ww2.amstat.org/meetings/jsm/2018/onlineprogram/index.cfm*.

Two late-breaking sessions were presented in Vancouver. Following the #metoo movement that began in the fall of 2017, the spotlight has been on sexual misconduct, including in the statistics community. A panel discussion titled "Addressing Sexual Misconduct in the Statistics Community" drew much attention. Given the importance of the topic, the session was recorded and can be viewed at *www.youtube.com/watch?v=mADOW9wssWM&feature=youtu.be*.

Another late-breaking session was titled "Statistical Issues in Application of Machine Learning to High-Stakes Decisions." Four presentations covered machine learning algorithms, which are increasingly used to inform decisions with direct and lasting human impacts, but which have been subject to much public scrutiny and debate recently regarding the fairness, accuracy, and transparency properties of their tools.

Every year, memorial sessions honor statisticians who have had a major effect on our field and recently passed away. This year, friends and colleagues of Stephen E. Fienberg, Ingram Olkin, Alastair Scott, and Charles Stein offered insight into these leaders' achievements and personalities. A topic-contributed session was also devoted to James R. Thompson.

So many interesting scientific sessions were organized at JSM 2018, but especially noteworthy are the Medallion lectures by Anthony Davison and Ming Yuan, the Noether lectures by Jianqing Fan and Anirban Bhattacharya, and the Sirken lecture by Colm O'Muircheartaigh.

JSM by the Numbers

6,346 Attendees
925 Professional Development Registrants
230 Exhibitors
3,336 ASA Members
619 Sessions
430 Speed Presentations
809 Individual Posters

The success of JSM 2018 is the result of hard work by many people, notably the program chairs from each section or association. Their names appear on the JSM website at *ww2.amstat.org/meetings/jsm/2018/programcommittee.cfm*. If you have reached this point in the article and agree with me, take a few seconds to send your representative a thank you.

While the work of the program committee members is crucial, the ASA meetings staff simplifies our lives tremendously and are the main reason JSM runs so smoothly. Incredible thanks are due to Kathleen Wert, Naomi Friedman, Amanda Conageski, and Christina Link.

Finally, the success of JSM is due to all of you in our community who organized sessions, gave presentations, led roundtables, and actively participated in the meetings.

I wish to conclude by thanking my two associate chairs—Josée Dupuis of Boston University and Ryan Tibshirani of Carnegie Mellon University—as well as the invited and contributed poster chair, Paul McNicholas of McMaster University. The four of us, all Canadians, worked as an executive committee of the program committee, and their contribution to the program was crucial. I also want to thank the members of the 2016 ASA Committee on Meetings, who selected me as program chair. For the first time, a JSM program chair was selected from an institution outside of the United States. I want to thank them for their confidence.

If you get a chance to become involved with JSM, don't hesitate to accept; you will not regret it! I look forward to actively participating in JSM 2019 in Denver! ■

MORE ONLINE
Plenary session webcasts are available at *ww2.amstat.org/jsmwebcasts.*



Left: John Eltinge delivers the 2018 Deming Lecture. **Center:** Winner of the Waller Education Award, Lynne Schofield, with Lisa LaVange. **Right:** Laura Evans (*The New York Times*) delivers the ASA President's Invited Address.

Many Honored at Presidential Address and Awards Ceremony

Carriquiry

Davidian

Kasprzyk

A special feature of the Joint Statistical Meetings is the ASA President's Address and Founders & Fellows Recognition, during which the Founders Award winners and new ASA Fellows are inducted.

The 2018 Founders Award went to **Marie Davidian, Alicia Carriquiry,** and **Dan Kasprzyk.**

Daniel Kasprzyk, NORC at the University of Chicago
For an active career supporting innovations in survey methodology, having designed and directed many large-scale surveys in diverse areas, both domestically and internationally; for two decades of enthusiastic participation in ASA activities, including serving as president of the Washington Statistical Society and vice president of the ASA Board of Directors; and for exemplary contributions to many ASA committees, sections, and councils, including outstanding leadership as chair of ASA's Committee on Statistics and Disability, Council of Chapters Governing Board, and Survey Research Methods Section.

Alicia Carriquiry, Iowa State University
For leadership of the profession at the national level through the National Academies of Science, Engineering, and Medicine; National Institutes of Health; and Environmental Protection Agency; for service to many other statistical organizations; for two decades of enthusiastic participation in ASA activities, including serving as president of the Iowa Chapter and vice president of the ASA Board of Directors; and for serving as an officer of the Biometrics Section, as chair of the Section on Bayesian Statistical Science, as chair of the 1999 JSM Program Committee, and as chair of the JSM Task Force.

Marie Davidian, North Carolina State University
For expansion of the ASA's global reach and strengthening the relationships between statistics and other sciences as ASA president during the International Year of Statistics; for leadership of the profession as chair of the Biometrics Section, Committee on Nominations, Founders Award Committee, and Samuel S. Wilks Memorial Medal Committee; and for thoughtful service as a member of the Awards Council, executive editor of *Biometrics*, co-editor of Wiley StatsRef, and as a member of the editorial boards of *JASA*, *Statistica Sinica*, and *Chemometrics and Intelligent Laboratory Systems*.

Each year, ASA Fellows are nominated by the membership and selected by the ASA Committee on Fellows. The following ASA Fellows were inducted this year:

Todd A. Alonzo
University of Southern California

Dipankar Bandyopadhyay
Virginia Commonwealth University

Moulinath Banerjee
University of Michigan

William C. Bridges
Clemson University

Ying Qing Chen
Fred Hutchinson Cancer Research Center

Yuguo Chen
University of Illinois at Urbana-Champaign

Peter Chien
University of Wisconsin-Madison

The 2018 ASA Fellows

James M. Curran
University of Auckland

Nairanjana Dasgupta
Washington State University

Michael E. Davern
NORC at the University of Chicago

Aurore Delaigle
University of Melbourne

Michael Friendly
York University

Ying Guo
Emory University

Weili He
AbbVie

Peter David Hoff
Duke University

Chiung-Yu Huang
University of California, San Francisco

Donsig Jang
NORC at the University of Chicago

Bing-Yi Jing
Hong Kong University of Science and Technology

Michael W. Kattan
Cleveland Clinic

Christina Kendziorski
University of Wisconsin

Ji-Hyun Lee
University of Florida Health Cancer Center

Jae Kyun Lee
Moffitt Cancer Center

Roger J. Lewis
Berry Consultants, LLC

Mingyao Li
University of Pennsylvania

Ilya A. Lipkovich
IQVIA

Lei Liu
Washington University in St. Louis

Mengling Liu
New York University School of Medicine

Brian D. Marx
Louisiana State University

Leslie Ain McClure
Drexel University

Michael Jay Messner
US Environmental Protection Agency

Diana L. Miglioretti
University of California

Brian A. Millen
Eli Lilly and Company

Kristen Olson
University of Nebraska - Lincoln

Taesung Park
Seoul National University

Dionne L. Price
US Food and Drug Administration

James O. Ramsay
McGill University

Kenneth M. Rice
University of Washington

Paul J. Roback
St. Olaf College

Milo Schield
Augsburg University

Carl James Schwarz
Simon Fraser University

Wei Shen
Eli Lilly and Company

Bryan E. Shepherd
Vanderbilt University School of Medicine

Richard S. Sigman
Statistical Consultant

Steven J. Skates
Massachusetts General Hospital

Aleksandra B. Slavkovic
The Pennsylvania State University

Peter Xuekun Song
University of Michigan

Maya R. Sternberg
US Centers for Disease Control and Prevention

Zhiqiang Tan
Rutgers University

Boxin Tang
Simon Fraser University

Nathan Tintle
Dordt College

Jung-Ying Tzeng
North Carolina State University

Huixia Judy Wang
The George Washington University

Lan Wang
University of Minnesota

William W. Wang
Merck Research Labs

Yichao Wu
University of Illinois at Chicago

Sharon Xiangwen Xie
University of Pennsylvania Perelman School of Medicine

Fang Yao
University of Toronto

Yan Yu
University of Cincinnati

Ying Zhang
Indiana University

Zhengjun Zhang
University of Wisconsin

Zhiwei Zhang
University of California, Riverside

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

Editor Appreciation Award

The following individuals were recognized for their work in publishing educational and insightful ASA journals from 2016–2018:

Montserrat Fuentes
Editor, *JASA* Applications and Case Studies

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

Todd Clark
Co-Editor, *Journal of Business & Economic Statistics*

Rajeev Dehejia
Co-Editor, *Journal of Business & Economic Statistics*

Dianne Cook
Editor, *Journal of Computational and Graphical Statistics*

Soma Roy
Editor, *Journal of Statistics Education*

Jun Shao
Editor, *Journal of Nonparametric Statistics*

David Higdon
Editor, *Journal on Uncertainty Quantification*

Roderick Little
Editor, *Journal of Survey Statistics and Methodology*

Michael Cohen
Editor, *Statistics and Public Policy*

Gertrude Cox Scholarship in Statistics

Born in 1900, Gertrude Cox is fondly known as the "First Lady of Statistics" for her pioneering roles in the predominantly male-dominated statistics discipline. Among her many accolades and accomplishments, she became the first woman—and the first person—to earn a master's degree in statistics from Iowa State University, where she was appointed assistant professor of statistics in 1939. In 1940, she became professor of statistics at North Carolina State University.

Jointly sponsored by the ASA Committee on Women in Statistics and the Caucus for Women in Statistics, the Cox scholarship has been presented annually since 1989 to encourage women to enter statistically oriented professions. This year's Gertrude Cox Scholarship went to **Trang Quynh Nguyen** and **Kelsey Erin Grinde**.

- **Nguyen**, biostatistics PhD student at The Johns Hopkins University, for academic success in spite of nontraditional training; early research achievements in pursuit of improved statistical methodology related to public health, especially for traditionally underserved populations, as evidenced by several publications; contributions to the statistical community via an array of professional activities; and general positive influence on her community.
- **Grinde** for academic success in pursuit of a PhD in biostatistics at the University of Washington, productive and promising research in statistical genetics and related topics, outstanding volunteer participation and efforts to improve mentoring opportunities in her local community, and leadership in recruiting young students to pursue statistical fields.

Edward C. Bryant Scholarship

Established by Westat to honor its co-founder and chair emeritus, this scholarship is awarded to outstanding graduate students in survey statistics to help support their graduate education. The 2018 Edward C. Bryant Scholarship recipient is **Ying Hano** of the University of Maryland, College Park, who is recognized for exceptional scholarship and an outstanding record of publications and presentations as a graduate student.

Mentoring Award

The ASA Mentoring Award honors those recognized by their colleagues for their sustained efforts to champion the work and develop the careers of statisticians.

The 2018 ASA Mentoring Award honoree is **Michael H. Kutner** of Emory University for exceptionally guiding and influencing students and colleagues in both statistics and biomedical research; for dual mentoring to guide statisticians to do better collaborative statistics and biomedical scientists to do better collaborative science with statisticians; for continued guidance and direction provided to students well beyond their graduations and far into their careers; for stressing the role of accurate and honest feedback to his mentees; for fostering not just statistics but statisticians; for enhancing collaborative biostatistics nationwide; and for establishing several awards to recognize the distinguished service to the profession of both current students and graduates.

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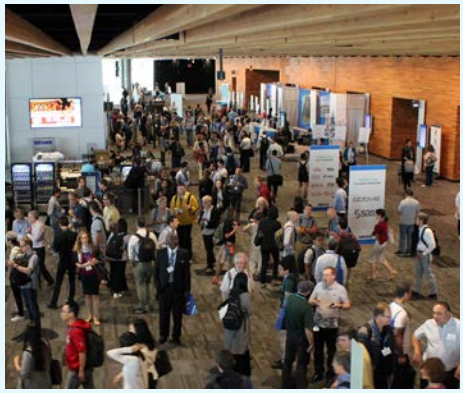

Left: JSM participants do the Macarena at the annual dance party.
Center: ASA President Lisa LaVange speaks to JSM attendees at the President's Address.
Right: JSM attendees mingle in the main hall of the Vancouver Convention Centre.

Award of Outstanding Statistical Application

This award celebrates the authors of a paper that is an outstanding application of statistics in the physical, biological, or medical sciences. The 2018 Outstanding Statistical Application Award honorees are **Peijie Hou** of Takeda Pharmaceutical Company Limited, **Joshua M. Tebbs** of the University of South Carolina, **Christopher R. Bilder** of the University of Nebraska-Lincoln, and **Christopher S. McMahan** of Clemson University.

The authors cleverly reformulate the pool decoding process as a time-inhomogeneous, finite-state Markov chain and provide analytical solutions of prediction accuracy and the expected number of tests. Their methodology is having tremendous impact on public health screening, and their paper, "Hierarchical Group Testing for Multiple Infections," was published in *Biometrics* in 2017.

Causality in Statistics Education Award

Established in 2013 by Judea Pearl, professor of computer science and statistics at UCLA, this award recognizes the work of an individual or team that enhances the teaching and learning of causal inference in introductory statistics coursework. **Jonas Peters** of the University of Copenhagen and **Dominik Janzing** and **Bernhard Schölkopf** of Max Planck Institute for Intelligent Systems, Tübingen, Germany, were awarded the 2018 Causality in Statistics Education prize for their open-access textbook, *Elements of Causal Inference: Foundations and Learning Algorithms*, that provides accessible coverage of the field, unique original content linking causal inference to machine learning and big data applications, and excellent conceptual and computational exercises for students.

Jackie Dietz Best Paper Award

Established in 2011, this award is given to the best paper published in the *Journal of Statistics Education* from the previous year. The 2018 Jackie Dietz Best *Journal of Statistics Education* Paper Award honorees are **Julian Stander** and **Luciana Dalla Valle** from the University of Plymouth, UK, for their paper, "On Enthusing Students About Big Data and Social Media Visualization and Analysis Using R, RStudio, and RMarkdown."

Waller Awards

These honors—the Waller Distinguished Teaching Career and Waller Education awards—were established with a contribution from retired ASA Executive Director Ray Waller and his wife, Carolyn. The former recognizes an individual for sustained excellence in teaching and statistics education, and the latter honors an individual for innovation in the instruction of elementary statistics.

The 2018 Waller Distinguished Teaching Career Award honoree is **Deborah Nolan**, from the University of California, Berkeley, in recognition of her many years of outstanding teaching and contributions and creative efforts in statistical education.

The 2018 Waller Education Award honoree is **Lynne Schofield** of Swarthmore College, who was recognized for her outstanding contributions to and innovations in the teaching of elementary statistics.

Winner of the W.J. Dixon Award for Excellence in Statistical Consulting, Albert Mandansky with Lisa LaVange

W.J. Dixon Award for Excellence in Statistical Consulting

Established through a gift from the family of Wilfrid J. Dixon, this award recognizes outstanding contributions to the practice of statistical consulting. The 2018 W.J. Dixon Award for Excellence in Statistical Consulting recipient is **Albert Madansky** of The University of Chicago for his myriad contributions to the statistical practice of consulting; for advancing the science of our profession through discoveries made in consulting; for instilling statistical rigor in many areas of application; and for many critical contributions of statistical consulting to advance the common good.

Karl E. Peace Award

The Peace award was established by Christopher K. Peace, son of Karl E. Peace, on behalf of the Peace family to honor the life work of his father. The 2018 Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society honoree is **Patrick Ball** for his work in bringing justice to human rights violations across the globe and the pioneering use of statistical design and analysis principles in this important work; for the founding and continued leadership of the Human Rights Data Analysis Group, an organization that provides data-driven testimony in war crime trials and has published reports on human rights violations, including war crimes, refugee displacement, and police violence

Harry V. Roberts Statistical Advocate Award

In 2002, the Chicago Chapter established the Harry V. Roberts Statistical Advocate of the Year Award in honor of Harry V. Roberts, an exemplar of statistical advocacy. The award recognizes the accomplishments and contributions of those who have successfully advocated appropriate and effective uses of statistics and data-analytic approaches in business and the public sector. Additionally, the award recognizes the promotion of statistical reasoning by individuals who may or may not be statisticians.

The 2018 Harry V. Roberts Statistical Advocate of the Year Award honoree is **David Allison** of the University of Indiana. Allison is recognized for his distinguished and longstanding contributions in sound methodology, research integrity, and clear exposition of complex statistical concepts, especially in the globally important fields of nutrition and obesity.

Samuel S. Wilks Memorial Award

The Wilks award honors the memory and distinguished career of Samuel S. Wilks and is bestowed upon a distinguished individual who has made statistical contributions to the advancement of scientific or technical knowledge, ingenious application of existing knowledge, or successful activity in the fostering of cooperative scientific efforts that have been directly involved in matters of national defense or public interest.

The 2018 Wilks award honoree is **Peter J. Bickel** of the University of California, Berkeley. Bickel is recognized for seminal far-reaching contributions to statistical theory and applications, including robust statistics, semi- and nonparametrics, bootstrap, machine learning, high-dimensional inference, network analysis, and computational biology; and for his exemplary record of mentorship and professional service.

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>
> — René Carmona, Paul M. Wythes '55 Professor of Engineering and Finance, Bendheim Center for Finance, ORFE, Princeton University

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香 港 大 學
THE UNIVERSITY OF HONG KONG

Founded in 1911, the University of Hong Kong is committed to the highest international standards of excellence in teaching and research, and has been at the international forefront of academic scholarship for many years. The University has a comprehensive range of study programmes and research disciplines spread across 10 faculties and over 140 academic departments and institutes/centres. There are 28,000 undergraduate and postgraduate students who are recruited globally, and more than 2,000 members of academic and academic-related staff coming from multi-cultural backgrounds, many of whom are internationally renowned.

Tenure-track Associate Professor/Assistant Professor in the Research Division of Mathematical and Statistical Science, Faculty of Science (3 posts) (Ref: 201800940)

The Faculty of Science will be 80 years old in 2019 and to celebrate this anniversary, we are recruiting a cohort of 80th Anniversary professors. This is an unprecedented expansion focused on realizing the Faculty's vision to be pre-eminent in Hong Kong, leading in Asia and highly competitive globally. We are aiming to expand by about 20% over the next year. The first round of hiring has been very successful and we are recruiting 10 more posts in this second round.

The Faculty of Science is one of the larger faculties in HKU with about 130 academic staff in five departments (Chemistry, Earth Sciences, Mathematics, Physics, and Statistics and Actuarial Science) and one school (Biological Sciences) as well as an off-site marine facility, The Swire Institute of Marine Science (SWIMS). The Faculty provides a supportive and friendly environment and is embarking on a programme of recruitment to invest in areas of acknowledged strength and to invest in areas of internationally competitive activity. Information about the Faculty can be obtained at http://www.scifac.hku.hk/. In addition, the Faculty is committed to gender equality and positively welcomes applications from women as well as men. The Faculty will also be happy to consider applications from individuals with their own funding who wish to explore proleptic positions.

To better support research, the Faculty has established a new research division structure and there are six new research divisions:

- Chemistry
- Earth and Planetary Science
- Ecology and Biodiversity
- Mathematical and Statistical Science
- Molecular and Cell Biology
- Physics and Astronomy

The Research Division of Mathematical and Statistical Science covers Pure and Applied Mathematics, Statistics and Actuarial Science. It has strengths in geometry, number theory, optimisation, stochastic analysis and biostatistics with key expertise in complex and algebraic geometry, Lie theory, automorphic form, combinatorial and continuous optimization, actuarial science, time series, survival analysis. We plan to recruit 3-5 new staff in the following areas:

(a) number theory (including representation theory, arithmetic/algebraic geometry)
(b) topological data analysis and related areas (including scientific computing)
(c) big data in environment, society and public health (joint with the Faculty of Business and Economics, please see http://jobs.hku.hk/jd.php?id=201800334)*
(d) bioinformatics (joint with Li Ka Shing Faculty of Medicine, please see http://jobs.hku.hk/jd.php?id=201800751)*
(e) actuarial science (focusing on extreme theory, optimal insurance or applied probability)

* These posts have been advertised previously but remain open, see link for application.

Applications are invited for tenure-track appointments as Associate Professor/Assistant Professor in the Research Division of Mathematical and Statistical Science in the Faculty of Science (for the 3 posts in (a), (b) and (e)), to commence on or before September 30, 2019. The posts will initially be made on a three-year fixed-term basis with the possibility of renewal and with consideration for tenure before the expiry of a second three-year appointment.

Applicants should possess a Ph.D. degree in Mathematics or Statistical Science. They should have research interests that align with or are complementary to one of the identified areas of recruitment in the Research Division. Appointees will have a lighter teaching load during the first contract. The teaching duties will be assigned by the Head of Department of the relevant department that an appointee will join upon appointment.

Annual salaries will be in the following ranges (subject to review from time to time at the entire discretion of the University):

Associate Professor : HK$864,480 – 1,373,880
Assistant Professor : HK$683,280 – 1,018,260
(approximately US$1 = HK$7.8)

A globally competitive remuneration package commensurate with the appointee's qualifications and experience will be offered. At current rates, salaries tax does not exceed 15% of gross income. The appointment will attract a contract-end gratuity and University contribution to a retirement benefits scheme, totaling up to 15% of basic salary, as well as leave, and medical benefits. Housing benefits will be provided as applicable.

Applicants should submit a cover letter, a completed application form, together with an up-to-date C.V., which should include hyperlinks to google scholar profiles and ORCID, a detailed publication list since 2014 with journal impact factor and citations indicated for each publication, a research proposal and a teaching statement to:

https://web.science.hku.hk/job/201800940.html (for posts (a), (b) and (e))

Applicants will also be required to arrange 3 reference letters under confidential cover. It is important to note that at least one of the referees should be able to comment, amongst other things, on the applicant's research ability and his/her contribution to teaching or research in his/her department, while the remaining two should have knowledge of his/her recent academic or employment experience. Referees should submit their reference letters to https://web.science.hku.hk/job/201800940_ref.html. Application form (341/1111) can be downloaded at http://www.hku.hk/apptunit/form-ext.doc. Enquiries about the various posts should be sent to Head, Department of Mathematics (e-mail: ntw@maths.hku.hk), or Head, Department of Statistics & Actuarial Science (e-mail: gyin@hku.hk).

Further particulars can be obtained at http://jobs.hku.hk/. **Closes November 15, 2018**. Interviews are expected to be held from January 7 to 11, 2019.

The University thanks applicants for their interest, but advises that only candidates shortlisted for interviews will be notified of the application result.

The University is an equal opportunities employer and is committed to equality, ethics, inclusivity, diversity and transparency; and is committed to a Non-smoking Policy

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Rho

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SMU

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SPOTTED AT JSM2018

Left: JSM attendees shared why they are the future of data science and statistics on a chalkboard at the ASA booth in the EXPO.
Center: From left: Ryan Tibshirani, associate professor in the department of statistics and the machine learning department at Carnegie Mellon; Dave Zhao, assistant professor in the department of statistics at the University of Illinois at Urbana-Champaign; and Rob Tibshirani, professor of statistics and biomedical data science at Stanford. Not pictured are Andrew Correia, senior data scientist at TripAdvisor, and Ryan Sun, postdoctoral research fellow in the department of biostatistics at the Harvard T.H. Chan School of Public Health.
Right: Qiuyi Wu and Shiyang Ma play a game of giant Jenga at JSM's Opening Mixer.

Statistics in Physical Engineering Sciences Award

Established in 1990, this award recognizes outstanding collaborative endeavors between statisticians and scientists throughout the physical and engineering sciences. The 2018 Statistics in Physical Engineering Sciences Award honorees are **Youngdeok Hwang** of Sungkyunkwan University, South Korea, **Xiao Liu** of the University of Arkansas, and **Kyongmin Yeo** of the IBM Thomas J. Watson Research Center. Together, they're recognized for their work under the broad theme of physics-based spatio-temporal statistical modeling and prediction, which leverages real-time environmental sensor data and fundamental physical knowledge to address key environmental concerns such as urban air quality and extreme weather events and to mitigate pollution and public health risks.

Gottfried E. Noether Awards

The Noether awards were established to recognize distinguished researchers and teachers and to support the field of nonparametric statistics. The 2018 Noether Senior Scholar Award honoree is **Jianqing Fan** of Princeton University for outstanding contributions to the theory, applications, and teaching of nonparametric statistics. The 2018 Noether Junior Scholar Award honoree is **Anirban Bhattacharya** of Texas A&M University for outstanding early-career contributions to nonparametric statistics.

The Sirken Award in Interdisciplinary Survey Methods Research

Monroe G. Sirken created an endowment to recognize a distinguished researcher for contributions to interdisciplinary survey research that improve the theory and methods of collecting, verifying, processing, presenting, or analyzing survey data. The 2018 Sirken Award in Interdisciplinary Survey Methods Research honoree is **Colm O'Muircheartaigh** of The University of Chicago Harris School of Public Policy. O'Muircheartaigh is recognized for significant contributions to the theory and practice of survey sampling, especially for complex designs and surveys in developing countries; for innovative research on nonresponse, response error, response variance, and data quality generally, including the use of latent variable models to describe nonresponse, the study of cognitive aspects of responses to survey questions, and analysis of the impact of interviewers; and for important contributions to the education of sampling statisticians and survey researchers around the world.

Be sure to check the section and chapter announcements for additional award honorees. Also, visit the ASA's list of awards and scholarships at *www.amstat.org/ASA/Your-Career/Awards-and-Scholarships.aspx* to nominate a member you would like to see honored for their work at next year's JSM in Denver, Colorado. ■

Three Honored by COPSS at JSM 2018

Wendy Lou, COPSS Secretary/Treasurer

The Committee of Presidents of Statistical Societies (COPSS) presents awards annually to honor statisticians who have made outstanding contributions to the statistics profession. For 2018, three awards were presented on August 1 during the Joint Statistical Meetings in Vancouver, British Columbia.

From left: Richard J. Samworth, Bin Yu, and Susan A. Murphy

MORE ONLINE

Download slides for the Fisher Lecture from *http://people.seas.harvard.edu/~samurphy/seminars/Fisher08.2018.pdf.*

View the COPSS awards ceremony and Fisher Lecture at *http://bit.ly/COPSSFL.*

Read an interview with Richard J. Samworth at *http://magazine.amstat.org.*

Nominations are sought for the 2019 COPSS awards. View information and nomination procedures at *http://copss.org.*

Richard J. Samworth of the University of Cambridge is the recipient of the 2018 Presidents' Award. This award is presented annually to a young member of a COPSS' participating society in recognition of outstanding contributions to the statistics profession.

The award citation recognized Samworth "for fundamental contributions to nonparametric inference under shape constraints, nonparametric classification, high-dimensional variable selection, and change point estimation; for many substantial contributions to the profession, including editorial service and extensive service to statistical societies; and for the training and mentoring of junior researchers."

Also a recipient of the Royal Statistical Society's Research Award and the Guy Medal in Bronze, Samworth gave the IMS Medallion Lecture at the 2018 Institute of Mathematical Statistics (IMS) meeting just prior to JSM. He is highly regarded as among the most creative statisticians of his age—whose research has great impact on statistics, machine learning, and data science—and a truly superb mentor and adviser for many young and brilliant people.

An interview with Samworth is available online at *http://magazine.amstat.org*.

Bin Yu of the University of California at Berkeley is the recipient of the 2018 Elizabeth L. Scott Award. This award is granted biennially to an individual, male or female, who has helped foster opportunities in statistics for women.

The award citation recognized Yu "for principled leadership in the international scientific community; for commitment and actions toward diversity, equity, and inclusion; for consistently mentoring and encouraging women students and new researchers in statistics and data science; and for scientific contributions to statistical and machine learning methodology at the highest scholarly level."

Yu has served as president of IMS and is a member of the National Academy of Sciences and American Academy of Arts and Sciences. She is described as a powerful voice for women's advancement in the statistics, mathematics, and scientific community. In receiving her award, she encouraged seeking "truth by claiming statistics' central position in data science and embracing new statistical issues such as algorithm fairness, privacy, cyber security, interpretability of machine learning and AI, and accurate election prediction." As a graduate and faculty member of the department of which Elizabeth L. Scott was one of the founding members, Yu expressed gratitude that the award "is also recognition of the Berkeley statistics community—its past and current faculty, students, postdocs, staff, and visitors—for creating and sustaining an open and inclusive intellectual and human environment."

Susan A. Murphy of Harvard University is the recipient of the 2018 R. A. Fisher Award and Lectureship, which honors both the contributions of Sir Ronald Aylmer Fisher and the work of a present-day statistician for the advancement of statistical theory and applications. This annual award recognizes outstanding scholarship in statistical sciences that has had a highly significant impact on statistical methods in scientific investigations.

The award citation recognized Murphy "for scientific contributions to statistical theory and methods at the highest level and for fundamental advances in the innovative use of statistics to further behavioral and mental health research."

In addition to being a member of the National Academy of Sciences and National Academy of Medicine, Murphy is the president-elect of IMS. She is hailed as one of the most outstanding scientists in our discipline. In her lecture, she discussed the design, implementation, and other statistical considerations related to mobile health research and aspired to use statistics and mathematics to affect behavioral science.

The slides for Murphy's lecture, titled "The Future: Stratified Micro-Randomized Trials with Applications in Mobile Health," can be downloaded from *http://people.seas.harvard.edu/~samurphy/seminars/Fisher08.2018.pdf.* ■

2018 SPAIG Award Lauds Forensic Science Collaboration

Willis Jensen, Fanni Natanegara, and Ying Ding

The 2018 SPAIG award, presented during the 2018 Joint Statistical Meetings in Vancouver, recognizes the collaboration between the Center for Statistics and Applications in Forensic Evidence (CSAFE) and the National Institute of Standards and Technology (NIST) for building a statistically sound and scientifically solid foundation for the analysis and interpretation of forensic evidence and contributing to the statistical training of forensic practitioners and legal professionals.

Established in 2002, the SPAIG award highlights outstanding partnerships among academe, industry, and government organizations and promotes new partnerships among these organizations.

We asked Susan Ballou from NIST and Hal Stern from the University of California, Irvine, to answer the following questions about the collaboration:

Can you briefly describe how the collaboration started?

Susan: In 2014, NIST decided to establish a Forensic Science Center of Excellence to assist its work in statistics. NIST grasped that a thorough understanding and contextualizing of the uncertainty associated with every scientific measurement or analytical technique is a critical need in the forensic science community. To meet this critical need, NIST issued a federal funding opportunity announcement. The selected center of excellence proposal would enter into a cooperative agreement with NIST and receive approximately $4 million per year for five years.

Hal: The collaboration of the four universities started in response to a call for proposals to create a center of excellence in forensic statistics that would partner with NIST's efforts in this area. The four principal investigators—Alicia Carriquiry of Iowa State, Steve Fienberg of Carnegie Mellon, Karen Kafadar of the University of Virginia, and me, all statisticians active in forensic science—proposed to create CSAFE to address the need for enhanced statistical methods to analyze pattern and digital evidence. The partnership with NIST grew stronger as we began to partner with NIST scientists and forensic practitioners.

What are the major benefits coming from the collaboration that would not have otherwise happened?

Susan: NIST has been working in this area, but the needed measurement infrastructure to support the vast array of forensic sciences is well-suited to a community-based approach. CSAFE has addressed both the utility of the probabilistic assessments in the forensic science arena and the advancement of useful methods for the presentation of probabilistic methods in the forensics community. From this, CSAFE realized one of the obstacles to the use of probabilistic information is the inability to adequately explain what it means to stakeholders (e.g., investigators, lawyers, judges, and juries) who must use the information to make decisions. This has complimented NIST's strong measurement application allowing a two-pronged approach to support the integration of the research into the forensic science and legal communities.

Hal: The collaboration has benefited forensic science research in several ways. Data collected at NIST (e.g., on bullets and bullet cases) have been used to develop statistical methods. In addition, NIST collaborations with forensic practitioners have enabled us to incorporate practitioners in the research projects.

MORE ONLINE
To view key contributors to this collaboration, visit *www.amstat.org/ASA/Your-Career/Awards/Statistical-Partnerships-Among-Academe-Industry-and-Government-Award.aspx.*

From left to right, Lisa LaVange, ASA President, and some of the key contributors towards the 2018 SPAIG Award, including Hal Stern, William Guthrie, Karen Kafadar, William Eddy, and Alicia Carriquiry.

What have been the most rewarding aspects of the collaboration?

Susan: As a forensic scientist, I found the most rewarding aspect to be CSAFE's realization of the level of difficulty of the task. This realization seemed to vindicate the forensic science profession for its hesitation to embrace statistics. Perhaps the reason why statistics and probabilistic statements have not been embraced by the forensic science community was due to the uncertainty of how to apply it. To address this, CSAFE took its time to learn from practitioners about case specifics, that cases vary, that quality of the evidence varies, that ground truth is rarely known, and that general application of statistics is not simple. At this point, CSAFE dug in and

MORE ONLINE
For information about the SPAIG committee and award, visit *http://bit.ly/SPAIG*. Nominations for the 2019 SPAIG Award are due March 1.

selected and adjusted projects to address the range of difficulty surrounding the task. I found CSAFE's response invigorating.

Hal: An important part of the CSAFE-NIST collaboration has been the development of a number of training programs and seminars that try to teach forensic practitioners, lawyers, and judges about the role of statistics in the analysis of forensic evidence. Participating in these trainings, seminars, and workshops has been extremely rewarding. It is valuable to help others see how statistics can contribute to a better understanding of the uncertainty associated with the conclusions of a forensic analysis.

What advice would you give to individuals and organizations looking to be more collaborative?

Susan: The key to successful collaboration is maintaining an open mind. Do discuss your research and your goals, but keep an open mind to new pathways you may not have considered. Why expend unnecessary energy in areas the other team may have already explored? Listen to their thoughts and freely share your successes or non-successes (failures). In this context, the word failure does not exist. Failing to achieve the planned outcome may, in reality, be a success in demonstrating how not to attempt it. Successful implementation of a collaborative team is supported through mutual trust and respect.

Hal: Collaboration takes time, but is incredibly valuable in ensuring that novel statistical methods are addressing important problems. At the start, any collaboration requires a number of meetings to learn about the culture of the partnering disciplines and to learn how to speak a common language. Once this happens, the combined team can be more effective than what they could have been separately. ■

Educational Ambassadors Sought

The ASA Committee on International Relations in Statistics is seeking qualified nationals from Cuba, Mexico, Nepal, and/or Vietnam to serve as 2019 Educational Ambassadors. In 2019, the ASA will select two educational ambassadors to receive funding to attend the Joint Statistical Meetings and take one or more continuing education (CE) courses in an emerging area of research. The ambassadors will then return to disseminate the subject matter in their home country and/or region.

The application deadline is November 30.

Selected ambassadors will be expected to complete the following by December 2020:

- Attend the 2019 Joint Statistical Meetings in Denver, Colorado, to take CE courses in an emerging area of statistics research (search for Continuing Education Courses under the Advanced Search tab in the online program to view CE courses offered in 2018).
- Return to their home country and, within the next year, offer the equivalent of a one-semester master's-level class with no fewer than 10 students on the subject matter of the CE course and write lecture notes in the language locally deemed most appropriate. Ambassadors are expected to repeat the offering at least once. The committee understands there can be practical and organizational considerations that make this a challenging requirement, so we are prepared to work with the ambassadors to devise an appropriate plan. The ASA will also investigate the possibility of providing further assistance through recorded webinars related to the CE course material.
- Provide periodic updates and submit a final report by December 2020 to the ASA through the Committee on International Relations in Statistics and the ambassador's home institution. The report should describe how the transfer of knowledge was accomplished and how the ambassador invited statisticians from their country to work with them on the subject matter of their course.

The ASA will arrange and pay for the selected ambassadors' airfare, hotel, meeting registration, and CE course registration. The ASA also will reimburse the visa application fee and provide a $500 stipend.

Candidates for the ambassadorship must hold a PhD or equivalent degree in statistics or a related field and be employed at the level of assistant or associate professor at a recognized university or research organization promoting the teaching and application of statistics.

Interested candidates should send the following to committee chair Geert Molenberghs:

1. A curriculum vitae
2. A proposal (at most two pages) describing how the ambassadorship will help disseminate knowledge of statistics in your country and how the ASA's expectations set forth above will be implemented upon your return home
3. A letter from the head of your academic unit (e.g., department chair, director, or dean) indicating institutional support for your dissemination plan ■

Educational Ambassadors Hail from Pakistan, Thailand

From left: Geert Molenberghs, chair of the ASA Committee on International Relations; Saleha Habibullah, 2018 educational ambassador from Pakistan; Seksan Kiatsupaibul, 2018 educational ambassador from Thailand; and David Williamson, an ASA Board member, meet at the Committee on International Relations in Statistics Meeting during JSM in Vancouver.

Saleha Habibullah of the Kinnaird College for Women in Lahore, Pakistan, and Seksan Kiatsupaibul of Chulalongkorn University in Bangkok, Thailand, attended the Joint Statistical Meetings in Vancouver, BC, as the ASA's 2018 educational ambassadors. While there, they attended several continuing education courses, including the following:

- Master the Tidyverse: An Introduction to R for Data Science
- Prediction in Event-Based Clinical Trials
- Data Science for Statisticians
- Nonparametric Regression and Classification for Modern Data Scientists
- Deep Learning, Prediction, and Validation: Innovations in Statistical Modeling and Applications to Medical/Health Big Data

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

Candidates are required to have a PhD in statistics, have an interest in teaching, and be open to study in new research areas. After attending CE courses in emerging areas of research, the educational ambassadors return to their respective countries and teach the subject matter covered in the CE course(s) within the next year to at least 10 students.

"The Educational Ambassador Program significantly expanded my perspective on statistics in the global setting, especially in [a] time when we have to work with computer scientists and engineers to effectively execute data science techniques to solve new problems," said Kiatsupaibul. "Taking courses and meeting people helped me gain new ideas relevant to statistics today that I will bring to my classroom at home. I would like to thank all involved in making this wonderful program happen. I believe this program makes [a] difference in emerging countries, and I hope it is continued in the future."

Geert Molenberghs, chair of the Committee on International Relations in Statistics, commented, "The ASA is a truly international statistical society, showing brilliantly through its successful educational ambassador program!"

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

These educational ambassadors have taught the material learned in JSM short courses in numerous

MORE ONLINE
The committee is seeking 2019 educational ambassador applications from those in Cuba, Mexico, Nepal, and Vietnam. For details, see *www.amstat.org/ASA/Education/Educational-Ambassador.aspx.*

academic courses and workshops carried out in their home countries. Juan Carlos Salazar Uribe, 2014 educational ambassador from Colombia, described his experience as follows:

> The challenges and possibilities of being an educational ambassador are endless, so I focus my attention on promoting novel methodologies on applied longitudinal data among young researchers and promoting statistical thinking and good statistical practices among high-school teachers from different educational institutes here in my city. I think I have completed successfully these two tasks. It [was] an honor to serve as the 2014–2015 ASA educational ambassador; I could not be prouder. ■

K–12 Educators Gather at JSM for Meeting Within a Meeting

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

The American Statistical Association sponsored a two-day Meeting Within a Meeting (MWM) statistics workshop for middle- and high-school mathematics and science teachers July 31–August 1 at the annual 2018 Joint Statistical Meetings (JSM) in Vancouver, British Columbia, Canada.

ASA President Lisa LaVange and ASA Executive Director Ronald Wasserstein speak at 2018's Meeting Within a Meeting.

This year, there were 29 participants, including middle- and high-school teachers, teacher educators, and statisticians interested in professional development and teaching statistics at the middle- and high-school levels. Workshop participants were from both Canada and the United States.

The MWM workshops emphasize the growth of statistical literacy and thinking as teachers explore problems that require them to formulate questions; collect, organize, analyze, and draw conclusions from data; and apply basic concepts of probability. A follow-up program incorporating webinars and email is planned to help keep the teachers who attended MWM and the ASA in contact.

The MWM 2018 program (*www.amstat.org/ASA/Education/MWM/home.aspx*) was designed to enhance educators' understanding of statistics and provide them with hands-on activities they can use in their own classrooms to strengthen the teaching of statistics in their schools. A secondary goal was to encourage cooperation between mathematics and science teachers in the teaching of statistics and to make connections between teachers and local statisticians.

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

Each workshop day consisted of three sessions and a closing period used to reflect on the day's work and allow teachers to comment about the program to the organizers. The workshop sessions were preceded by an overview of the *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report* (*www.amstat.org/asa/education/Guidelines-for-Assessment-and-Instruction-in-Statistics-Education-Reports.aspx*) and other standards relevant to the audience.

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

in discussions about formulating statistical questions and collecting data, measures of center and variability, investigating sampling variability, comparative inferences about two populations, investigating patterns of association in bivariate quantitative data, and statistics as a tool for access and equity.

The sessions in the high-school program on Tuesday included discussions about statistical questions and study design; recognizing data types and the appropriate methods for displaying, summarizing, and comparing them; using the normal distribution as a measure of extremeness; and using randomization tests to make inferences and justify conclusions.

High-school teachers were given the option to attend the second day of the middle-school workshop or statistics education sessions at the Joint Statistical Meetings.

All teachers who attended were given a certificate of participation by the ASA. Also, teachers who register may receive one semester graduate credit hour through Adams State University. The ASA will provide follow-up activities throughout the 2018–2019 school year, including webinars, which are archived at *www.amstat.org/asa/education/K-12-Statistics-Education-Webinars.aspx*.

Katherine Halvorsen of Smith College planned the MWM program, while ASA Director of Education Rebecca Nichols managed the website, registration and evaluation procedures, and logistics of setting up and advertising the conference. Presenters included ASA K–12 Statistical Ambassador Chris Franklin, ASA/NCTM Committee Chair Kaycie Maddox (Northeast Georgia RESA), Anna-Marie Fergusson (University of Auckland, New Zealand), National Council of Supervisors of Mathematics President Connie Schrock (Emporia State University), and Halvorsen. Additionally, Wasserstein, ASA President Lisa LaVange, and Statistical Society of Canada (SSC) Statistical Education Section Chair Bruce Dunham welcomed attendees. Other ASA and SSC members from Vancouver and Washington also welcomed the teachers and joined in the workshop.

Planning has begun for MWM 2019, which will be held in conjunction with JSM in Denver, Colorado. MWM program committee members are encouraging chapters to consider sponsoring one or more teachers from their area to attend the workshops. Registration will begin in March 2019. Questions should be directed to Nichols at *rebecca@amstat.org*. ■

MWM THROUGH THE YEARS

MWM 2017, Baltimore, Maryland

Offered separate workshops for middle- and high-school teachers

MWM 2016, Chicago, Illinois

Offered separate workshops for middle- and high-school teachers

MWM 2015, Seattle, Washington

Offered separate workshops for middle- and high-school teachers

MWM 2014, Boston, Massachusetts

Offered separate workshops for middle- and high-school teachers

MWM 2013, Alexandria, Virginia

Held at the ASA office after JSM as a combined workshop for middle- and high-school teachers

MWM 2012, in San Diego, California

Included separate workshops for middle- and high-school teachers focused on the statistics content in the Common Core State Standards; provided teachers the opportunity to attend the International Census at School workshop for two additional days after MWM

MWM 2011, Miami Beach, Florida

Included separate workshops for middle- and high-school teachers focused on the statistics content in the Common Core State Standards

MWM 2010, Vancouver, British Columbia, Canada

First international MWM workshop jointly sponsored by the ASA and Statistical Society of Canada

MWM 2009, Washington, DC

Included parallel strands for K–4, 5–8, and 9–12 teachers on the first day with a field trip to the US Census Bureau on the second day

MWM 2008, Denver, Colorado

Expanded to a two-day format that included separate strands for K–4, 5–8, and 9–12 teachers

MWM 2007, Salt Lake City, Utah

First MWM, focused on middle-school math and science teachers

Carol Gotway Crawford, Howard Hogan Honored with Mentoring Award

Howard Hogan and Carol Gotway Crawford are dual recipients of the 2018 Jeanne E. Griffith Mentoring Award.

Carol Gotway Crawford and Howard Hogan are dual recipients of the 2018 Jeanne E. Griffith Mentoring Award, which recognizes individuals working in federal, state, and local government agencies for their efforts in mentoring junior statistical staff.

The award committee hosted an awards ceremony and reception July 11 to honor Crawford and Hogan. Family, friends, and colleagues joined friends of Jeanne Griffith, the award committee, and the Interagency Council on Statistical Policy (ICSP) at this event, marking the 16th annual presentation of this award and the 10th year the Government Statistics Section (GSS) has managed the award process.

The Award

The Jeanne E. Griffith Mentoring award honors Griffith, who died in 2001 after working for more than 25 years in the federal statistical system. The award acknowledges supervisors, technical directors, team coordinators, or other members of federal, state, or local government statistical staff who make unique efforts to mentor and encourage younger staff at all levels to learn, grow, and recognize and seize career opportunities. The award includes a plaque and a $1,000 honorarium.

The 2018 Award Recipients

Crawford is the director of the Center for Design, Methods, and Analysis Applied Research and Methods (ARM) Team of the US Government Accountability Office (GAO).

The co-workers who nominated Crawford emphasize that she is recognized as an innovative and strategic thinker, seasoned federal government executive, and an internationally recognized leader in geospatial analysis and geographic information systems. In addition to her numerous professional achievements, she is known for going out of her way to mentor and encourage junior staff at all levels to learn, grow, and recognize and seek career opportunities.

One co-worker commented, "As a mentor to many junior staff members, Dr. Gotway Crawford is readily accessible, always listening, supportive, motivational, and inspiring."

Another noted that "in mentoring and supervising, Carol has stressed more than technical skills. She motivated and provided me with feedback to build my self-confidence and to prepare for career growth."

Yet another stated that "what is also staggering is how the efforts of one leader, one particular person, can truly make a difference in advancing the professional careers and collegial- and personal life-balance of so many junior statisticians and other staffers."

In her position at the GAO, Crawford provides leadership and direction to a staff of methodologists, social science analysts, statisticians, and survey specialists who provide consultative expertise in sampling, collecting, and analyzing statistical and other data, assessing data reliability, and developing technical sections of GAO products. Crawford also plans and directs all program activities necessary to providing sophisticated analysis in support of GAO's audits and evaluations of federal programs.

Prior to joining GAO, Crawford worked at the US Department of Agriculture (USDA) from 2014–2017 as the deputy director for science and planning in the Research and Development Division of the National Agricultural Statistics Service (NASS). She served in research management and science leadership by advising the administrator of NASS, director of the Research and Development Division, and director of the Methodology Division on statistical issues and methodology affecting NASS programs. She also served as a research statistician in mathematical statistics for agricultural surveys and censuses, geospatial techniques, and statistical modeling for estimation and process measurement.

Before joining USDA, Crawford spent 18 years in federal service with the Centers for Disease Control and Prevention in Atlanta, Georgia, where she held a variety of roles. Early on, Crawford served as a research statistician with the National Center for Environmental Health, where she developed and applied innovative statistical methods for study designs in environmental health investigations.

Hogan is the chief demographer at the US Census Bureau, where he has had a distinguished career. He has worked across many statistical programs, including census coverage measurement, economic surveys, census operations, and demographic programs. He has also held many important positions, from analyst to associate director to his current position.

Hogan's co-workers who nominated him tell a story of a mentor who is knowledgeable, accessible, enthusiastic, experienced, and engaged. They also describe a mentor who develops close friendships and takes a sincere interest in the lives and careers of the people he works with.

As mentioned by his co-workers in their nomination letters, a good mentor might be knowledgeable, easy to approach, or eager to help. A great mentor is *all* of these. Hogan's strengths, according to his nominators, include expertise across a range of academic disciplines, the fact that "statisticians, demographers, sociologists, and economists turn to him for advice and guidance" on their analyses, and that he is readily accessible. The nomination letters mention his "door is always open" for people to "pop on up" and talk.

His co-workers also comment about his enthusiasm toward working with junior staff. Even when Hogan advanced to senior positions, he remained accessible to junior staff and enjoyed opportunities to advise them.

2019 Jeanne E. Griffith Mentoring Award

Nominations for the 2019 award can be submitted beginning January 2. The nomination package can be mailed or emailed to the following addresses:

The Jeanne E. Griffith Mentoring Award Committee
c/o The American Statistical Association
732 N. Washington Street
Alexandria, VA 22314-1943

Email: *rick@amstat.org*

If you have questions about the award, contact Rick Peterson at *rick@amstat.org* or (703) 684-1221. You may also contact the current chair of the award committee, Bill Mockovak, at *Mockovak.William@bls.gov.*

Hogan also fosters an atmosphere of learning by organizing study groups and other forums for people to engage one another. For several years, he has hosted a demography study group that meets regularly during lunch to discuss journal articles.

Hogan is a seasoned senior manager who has helped several of his co-workers make the challenging transition to management. One co-worker commented that Hogan never "tells me what to do, but helps me navigate the path to reach my own decisions."

Finally, as one co-worker ponders Hogan's future retirement, he comments that this event will make him very sad, as it means the loss of a colleague who has contributed so much to his professional development. He goes on to state, "I can't think of anyone at the Census Bureau who has been more willing to mentor junior staff, in whatever capacity they need, to develop as analysts, managers, and professionals." These qualities capture the essence of the Jeanne E. Griffith Mentoring Award.

2018 Selection Committee

The 2018 Selection Committee was chaired by Bill Mockovak. Other members include Anna Nevius, Joy Sharp, Cynthia Ogden, and Diane Willimack. In addition, Kevin Cecco continued to provide valuable support to the committee through his fundraising efforts. ■

F. Dubois Bowman, former chair of the biostatistics department at Columbia University's Mailman School of Public Health, will become the 12th dean of the University of Michigan School of Public Health beginning October 15.

F. Dubois Bowman, former chair of biostatistics at Columbia University's Mailman School of Public Health and incoming dean of the University of Michigan School of Public Health

Bowman is a world-leading researcher in developing and applying biostatistical methods for complex neuroimaging data. These have helped reveal the patterns of disruption in psychiatric diseases such as Parkinson's and Alzheimer's and mental disorders such as depression. As he noted in the *Annual Review of Statistics and Its Application* [*https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2405888*],"Neuroimaging data present numerous challenges for statistical analysis, including the vast amounts of data collected from each individual and the complex temporal and spatial dependencies present in the data."

Commenting on his appointment [*https://sph.umich.edu/news/home-releases/dean-071918.html*], Bowman said, "We live in a time when public health concerns about environmental threats, substance misuse, emerging infections, obesity, aging, mental health, noncommunicable diseases, and health care coverage all loom large. As one of the world's pre-eminent schools of public health, U-M is poised to play a leading role in providing solutions by generating evidence through science, driving policy, education, and engagement at local community, national, and global levels."

Bowman earned a BS in mathematics from Morehouse College, where he was a member of the Phi Beta Kappa honor society. He earned a master's in biostatistics from the University of Michigan and a PhD in biostatistics from The University of North Carolina at Chapel Hill. He is an elected fellow of the American Statistical Association, served as president of the Eastern North American Region of the International Biometric Society, and received the James Grizzle Distinguished Alumni Award from The University of North Carolina. He has also served as associate editor of *Biometrics* and the *Journal of the American Statistical Association*. ■

Don Rubin, Edoardo Airoldi, and Vishesh Karwa joined the department of statistical science at the Temple University Fox School of Business.

Rubin—professor of statistics at Yau Mathematics Center, Tsinghua University, and professor emeritus at Harvard University—has been appointed Murray Schusterman Senior Research Fellow.

Rubin is a fellow/member/honorary member of the Woodrow Wilson Society, Guggenheim Memorial Foundation, Alexander von Humboldt Foundation, American Statistical Association, Institute of Mathematical Statistics, International Statistical Institute, American Association for the Advancement of Science, American Academy of Arts and Sciences, European Association of Methodology, British Academy, and US National Academy of Sciences.

As of 2018, he has authored/coauthored about 450 publications (including 10 books), has four joint patents, and is one of the most highly cited authors in the world, with nearly 250,000 citations, including 20,000 in 2017 alone (Google Scholar). Of his 25 publications with more than 1,000 citations each, Rubin solely authored nine of them.

Rubin has received honorary doctorate degrees from Otto Friedrich University, Bamberg, Germany; the University of Ljubljana, Slovenia; Universidad Santo Tomás, Bogotá, Colombia; Uppsala University, Sweden; and Northwestern University, Evanston, Illinois. He has also received honorary professorships from the University of Utrecht, The Netherlands; Shanghai Finance University, China; Nanjing University of Science & Technology, China; Xi'an University of Technology, China; and University of the Free State, Republic of South Africa. He is a widely sought international lecturer on statistical topics.

Airoldi will join the department of statistical science in fall 2018 as the Millard E. Gladfelter Professor of Statistics and Data Science. He will also serve as director of the Fox School's Data Science Center.

Airoldi comes from Harvard University, where he served since 2009 as a full-time faculty member in the department of statistics. He founded the Harvard Laboratory for Applied Statistics and Data Science and served as director there until 2017. Additionally, he has held visiting positions at MIT, Yale University, and Microsoft Research and served as a research associate at Princeton University.

A distinguished researcher, Airoldi has authored more than 140 publications with more than 12,000 citations. His work focuses on statistical theory and methods for designing and analyzing experiments on large networks and, more generally, on modeling and inferential issues that arise in analyses that leverage network data in some way. His work has appeared in journals across statistics, computer science, and general science, including *Annals of Statistics,*

Journal of the American Statistical Association, Journal of Machine Learning Research, Proceedings of the National Academy of Sciences and *Nature.*

Airoldi has received a Sloan Fellowship, the Shutzer Fellowship from the Radcliffe Institute of Advanced Studies, a National Science Foundation CAREER Award, and an Office of Naval Research Young Investigator Program Award, among others. He delivered a plenary talk at the National Academy of Sciences Sackler Colloquium titled "Causal Inference and Big Data" in 2015 and gave an Institute of Mathematical Sciences Medallion Lecture at the Joint Statistical Meetings in 2017.

Airoldi earned a PhD in computer science from Carnegie Mellon University, where he also worked for a master of science degree in statistics and statistical and computational learning. He earned a bachelor of science in mathematical statistics and economics from Bocconi University, Italy.

Vishesh Karwa joined the department of statistical science as an assistant professor. He is also a Patrick J. McGovern Research Fellow at the Simons Institute, Berkeley. Vishesh has a broad set of research interests; some of his current research includes statistical foundations of data privacy, machine learning, causal inference in networks, network models, and algebraic statistics.

Prior to joining Temple, Karwa spent a year in the department of statistics at The Ohio State University as an assistant professor. Before that, he was a postdoctoral fellow in the departments of statistics and computer science at Harvard University and a visiting research scientist in the department of statistics at Carnegie Mellon University.

Karwa earned a PhD from the department of statistics at The Pennsylvania State University, where he also earned a master of science degree in civil engineering. His undergraduate degree is in civil engineering from the Indian Institute of Technology, Kharagpur, India. ■

Donna Spiegelman, Susan Dwight Bliss Professor of Biostatistics at the Yale School of Public Health (YSPH), has been named director of the school's newly established Center for Methods of Implementation and Prevention Science (CMIPS).

Spiegelman, who also serves as professor in the department of statistics and data science, will work to promote the development of methods to accelerate the speed and breadth of adoption of research findings into public health practice and develop and assess sustainable, cost-effective interventions to improve public health domestically and around the world.

With her CMIPS colleagues, she will lead research on quantitative and qualitative methods for implementation and prevention science in global public health and quantitative and qualitative design and planning of global health projects in such areas as HIV/AIDS; cancer; diabetes; cardiovascular disease prevention; mental, environmental, and reproductive health promotion; and substance abuse. The new center will also serve as a major interface between biostatisticians, epidemiologists, social scientists, and health economists across several schools in the university.

"We are fortunate to have Dr. Spiegelman joining the YSPH to spearhead this center that will be integral in both the development of new methods for research, as well as serving as a platform for original projects addressing some of the world's most urgent public health issues," said Sten Vermund, dean of the Yale School of Public Health.

Spiegelman brings two investigator-initiated grants and an NIH Director's Pioneer Award with her from the Harvard School of Public Health. She is the first biostatistician to receive the NIH Director's Pioneer Award, a $5 million award given to scientists who propose pioneering approaches to major challenges in biomedical and behavioral research.

Spiegelman joins YSPH from the Harvard T.H. Chan School of Public Health, where she is professor emerita of epidemiologic methods in the departments of epidemiology, biostatistics, nutrition, and global health and population. Her earlier research was motivated by problems that arise in epidemiology and require biostatistical solutions. She focused on methods for study design and data analysis that reduce bias in estimation and inference due to measurement error or misclassification in the exposure variable. She has extensive experience solving methodological issues that arise in longitudinal investigations, clinical trials, and large-scale public health effectiveness evaluations. At Yale, she will continue to work in this area. ■

ASQ (formerly the American Society for Quality) announced on March 21 that ASA members **Ronald D. Snee**, president and founder of Snee Associates, LLC, and **Geoff Vining**, professor of statistics at Virginia Tech, were elected by the ASQ Board of Directors as honorary members. In its 72-year history, ASQ has elected only 29 honorary members, 14 of whom are statisticians.

Snee, who worked at the DuPont Company for 24 years prior to starting his consulting career, is a Fellow of the American Statistical Association, ASQ, and American Association for the Advancement of Science. He has been awarded the ASA's Deming Lecture;

Dixon Consulting Excellence and Gerry Hahn Quality and Productivity Achievement awards; and ASQ's Shewhart, Grant, and Distinguished Service medals. He is a frequent speaker and has published seven books and more than 300 papers in the fields of statistics, quality, performance improvement, and management. His work has been recognized by 25 major awards and honors.

Vining

Snee

Previously, Vining—a Fellow of ASA—received the 2010 ASQ Shewhart Medal, 2015 European Network for Business and Industrial Statistics Box Medal, and 2011 ASQ Statistics Division's William G. Hunter Award, which generally are recognized as the top-three annual career awards in industrial statistics and quality engineering. Vining also received an Honorary Doctor of Technology from Luleå Technical University (Sweden) in November 2017.

Snee was noted for his role in advancing the application of statistical methods and reliable problem-solving methodologies by organizational leaders and team members across the globe in a wide cross-setting of industries to improve decision-making and quality/process improvement and achieve performance excellence.

Vining's citation noted his leadership within ASQ at all levels of the society; his extensive contributions to the quality body of knowledge through peer-reviewed journal articles and books; and his efforts to promote industrial statistics in North America, Europe, Asia, and Latin America.

Election as an honorary member requires a unanimous vote of the ASQ Board of Directors. Honorary members are individuals who have made enduring contributions to the profession of quality and the allied arts and sciences. Election is restricted to individuals who are so well known and so clearly pre-eminent in the profession that there should be almost no doubt of their being worthy of such recognition. Election does not require being an ASQ member. There are only six honorary members currently alive today, four of whom are statisticians.

Statisticians who have been chosen as honorary members previously include Walter Shewhart, Harold Dodge, Mason Wescott, Eugene Grant, Edwards Deming, Ellis Ott, Harry Romig, George Box, Genichi Taguchi, Stu Hunter, Lloyd Nelson, and Doug Montgomery. Snee and Vining are the 28th and 29th persons elected to this honor. ■

chapternews

Boston Chapter Honors Herman Chernoff on 95th Birthday

Herman Chernoff enjoys a symposium honoring both his significant contributions to the statistics field and his 95th birthday.
Photo: Sally Thurston

Herman Chernoff, who needs no introduction to statisticians, turned 95 years old in July. To commemorate this event, a day-long symposium was held in his honor at Harvard University April 27.

The symposium was co-sponsored by the Boston Chapter, Harvard Statistics Department, and newly formed New England Statistics Society. It was held at Harvard's Hilles Community Hall and attended by more than 100 people.

The symposium featured talks by former students, collaborators, and researchers influenced by Chernoff's work, as well as reflections on him by audience members. This continued during dinner, which lasted well into the night.

Henry Braun, a student of Chernoff's at Stanford, summarized his career as follows:

> Herman's work is characterized by creative use of mathematical and statistical ideas. His work in asymptotics, sequential analysis, and stochastic control are all deserving of admiration and accolades. But beyond theory, Herman has been much engaged with real-world problems in various domains. Some of the problems have spurred theoretical developments and others practical solutions—those eponymous faces are a lovely example of a wonderfully creative mind at work. From state lotteries to the Kennedy assassination, Herman has applied his gifts to great effect to a wide variety of real-world problems. For more than 20 years now, Herman has collaborated in research on statistical issues in molecular biology and genetics—and I certainly would not venture to guess what's next on his research agenda! But given his good taste in problem selection, I expect it will be an interesting one.

chapternews

Student Chapters Host Data Science Hackathon

Students participate in a hackathon at The George Washington University, Washington DC, April 28, 2018.

April 28 started early at The George Washington University as students armed with laptops, notepads, and coding manuals filed in for the inaugural "Data Challenge DC" hackathon.

Co-hosted by the George Mason and George Washington University ASA student chapters and sponsored by The George Washington University Department of Statistics, more than 30 graduate students from across the DC metro area participated in the seven-hour event.

The students, organized into eight teams of four people, worked to extract interesting relationships, hidden structure, and new insights from the Global Terrorism Database. After six hours of feverish modeling and analysis, the teams presented their results to a panel of six seasoned data scientists and statisticians for judging.

"Many hackathons are all-night affairs designed with undergraduate students in mind," said Glenn Hui, lead organizer. "We wanted to arrange an event geared toward graduate students."

Xiang Li, event co-lead, added, "We also focused on making the competitive aspect secondary. It was more of a clinic. We sought industry professionals to serve as mentor-coaches to help the students instead of simply judging the results."

Volunteering their time as mentor-coaches were Mikhail Flom of IBM, Tigran Markaryan of Ipsos and George Mason University, Leanna Moron of Child Trends, Gonzalo Rivera of Westat, Pranav Sachdev of Mercer, and Judy Wang of The George Washington University. By encouraging slow starters, inspiring ideas, and motivating progress, they helped every team finish on time and with a sense of accomplishment. The mentor-coaches brought the event to a close by recognizing the three teams winning the visualization, methodology, and insightfulness awards. ■

chapternews

Pittsburgh

Statisticians from the Pittsburgh Chapter participated as judges in the 2018 Intel International Science and Engineering Fair (ISEF), held May 13–18 at the David L. Lawrence Convention Center in downtown Pittsburgh, Pennsylvania.

Students participating were in grades 9–12 and earned the right to compete by winning a top prize at a local, regional, state, or national science fair. More than 20 volunteer judges (including Pittsburgh Chapter members and several out-of-town guests from other ASA chapters) were deployed to evaluate more than 1,300 science projects by students from around the world who represented a wide variety of scientific and engineering disciplines.

On Tuesday, the volunteers screened every ISEF project and selected just under 200 that incorporated advanced statistical analysis for a detailed round of scoring. The top 20 projects were selected for the final interview round. On Wednesday morning, the judges returned to conduct face-to-face interviews and select the top three winners.

The first-place winner was Erin Smith of Shawnee Mission West High School in Overland Park, Kansas. Her project title was "FacePrint: A Novel Differential Diagnostic and Monitoring Tool for Parkinson's Disease, Essential Tremor, and Atypical Parkinsonism Using Facial Behavioral Biomarkers and Dynamic Video Footage Tracking with Machine Learning." Hers was an impressive application, with clear and focused real-world application to Parkinson's disease and related conditions. Smith received $1,500 from the ASA as the winner of the top overall statistics prize.

The second-place winner, Marvin Li of James M. Bennett High School in Salisbury, Maryland, received a $1,000 prize for "Machine Learning Algorithms for Satellite Remote Sensing of Ocean Color in Coastal Waters." Li analyzed satellite data and validated a new algorithm for assessing water quality that outperformed the current NASA algorithm, which performs well in open ocean but less so for coastal waters.

The third-place winner was Suraj Modi of Mountain View High School in Lawrenceville, Georgia, who received a $500 prize for "A Rapid Prediction Method for Epileptic Seizures Using Machine Learning Algorithms." Modi developed an app that could analyze EEG (electroencephalogram) data and reliably identify patterns of brain waves associated with an impending seizure 7–9 minutes before onset.

As president of the ASA's Pittsburgh Chapter, Andrew Althouse of the University of Pittsburgh School of Medicine attended the special awards ceremony to present ASA certificates to the winners, who also received one-year student memberships to the ASA and one-year subscriptions to *Significance* and *CHANCE*.

ASA members who volunteered as judges were impressed by the depth of research methods and approaches the students applied to problems across specialties like medicine, energy, materials sciences, plant sciences, molecular biology, and computational biology. The students' projects summarized background literature, purposeful hypotheses, detailed statistical analyses, and interpretation of their findings. Statistical methods that extended far beyond the scope of K–12 education, some even beyond traditional undergraduate statistics coursework, showed that these students brought a modern and sophisticated perspective to their work.

In addition to reviewing the projects, judges participated in extended outreach to students beyond the top winners. On the second day of review, the judges circulated among the students to distribute books and copies of *CHANCE* or *Significance* magazine to those who had shown facility with statistical methods in completing their project. The students seemed genuinely impressed that professional statisticians took notice of their work, and many were delighted to receive a book or magazine for further reading.

Chris Malone from Winona State University presented a symposium Monday for ISEF finalists, teachers, and mentors. Approximately 100 people were in attendance as Malone gave a talk titled "Best Practices for Incorporating Statistics and Charts in Your Project." After the symposium, enthusiastic finalists and teachers had many questions about specific science fair projects and the broader role of statistics in K–12 science education and beyond.

The ASA will participate in next year's ISEF, which will be held in Phoenix, Arizona, May 12–17, 2019. Those interested in participating are encouraged to contact Tom Short at *tomshortjr@yahoo.com*. ■

New Jersey

The ASA New Jersey Chapter held its 39th annual spring symposium June 29 at Rutgers RWJ Medical School. "Advances in Data Visualization and Exploration Techniques" was the theme.

Jing Gong, president of the chapter, welcomed nearly 60 people and gave a short presentation summarizing 2018 chapter activities. Distinguished speakers and their topics included the following:

- Mark Hansen of Columbia University, Computational Propaganda
- Douglas Robinson of Novartis, Using Dynamic Displays to Maximize the Value of Data
- Sanjay Matange of SAS Institute, Clinical Graphics Using SAS
- Naomi Robbins of NBR, How to Avoid Some Common Graphical Mistakes
- Zhiheng Xu of FDA/CDRH, Data Mining and Visualization in the Regulation of Medical Devices

The talks were followed by a panel discussion and three posters were on display by Gary Chung, Michael Fundator, and Ejiro Gbaje. ■

North Carolina Hosts CAS Webinar Viewing

Attendees listen to Heather Smith and Eric Vance discuss ways to improve collaboration skills.

The North Carolina Chapter hosted a live viewing of the Committee on Applied Statisticians' (CAS) collaboration webinar, "Putting the Pieces Together," at the Statistical and Applied Mathematical Sciences Institute (SAMSI) in July.

CAS has organized 10 webinars covering various aspects of collaboration over the past year. "Putting the Pieces Together" was the final webinar in the series, in which Heather Smith of Cal Poly San Luis Obispo and Eric Vance of the University of Colorado Boulder discuss their perspectives on improving collaborative skills. Their talk covered the ASCCR framework (attitude, structure, content, communication, relationship) and how to apply it to collaborative work as a statistician.

Emily Griffith, director of the Statistical Consulting Core at North Carolina State University, led the NC ASA's live discussion after the webinar, using questions Eric Vance provided in advance.

Viewers shared ideas about the different considerations found in academic collaborations versus industry projects; the best strategies for advanced preparation and discussing timelines, milestones, and deadlines for expected work effort; and ways to incorporate good questions, including incorporating the ideas presented in the webinar into their own voices during collaborative meetings.

More information about the CAS webinar series, including recordings and slides for all webinars, can be found on the CAS website at *http://community.amstat.org/cas/new-item*. Details about the live viewing and upcoming NC ASA initiatives can be found at *http://community.amstat.org/northcarolina/home.*

sectionnews

This year's Statistical Computing and Graphics Award winners at JSM 2018

Statistical Computing and Statistical Graphics

The Statistical Computing and Graphics Award of the ASA Statistical Computing and Statistical Graphics sections recognizes an individual or team for innovation in computing, software, or graphics that has had an impact on statistical practice or research. The prize carries with it a cash award of $5,000, plus an allowance of up to $1,000 for travel to the next Joint Statistical Meetings, where the award is be presented.

Qualifications

The prize-winning contribution will have had significant and lasting impact on statistical computing, software, or graphics.

Members of the awards committee depend on the ASA membership to submit nominations. Committee members will review the nominations and make the final determination of who, if anyone, should receive the award. The award may not be given to a sitting member of the awards committee or a sitting member of the executive committee of the Statistical Computing Section or Statistical Graphics Section.

Nomination and Award Dates

Nominations are due by November 15 for an award in the following year. The award is presented at the Joint Statistical Meetings the same year. Nominations should be submitted as a complete packet, consisting of the following:

- A nomination letter, no longer than four pages, addressing points in the selection criteria
- The nominee's curriculum vita(e)
- A minimum of three (and no more than four) supporting letters, each no longer than two pages

Selection Process

Members of the awards committee will consist of the chairs and past chairs of the Statistical Computing and Statistical Graphics sections. The selection process is handled by the awards chairs of the Statistical Computing Section and Statistical Graphics Section. Nominations and questions should be sent to *jun.yan@uconn.edu*.

Past awardees include Bill Cleveland (2016) and Robert Gentleman and Ross Ihaka (2010). ■

Physical and Engineering Sciences

Yili Hong, SPES JSM Program Chair; Pete Hovey, SPES Chair; and Xinwei Deng, JRC Program Committee Chair

SPES had a good year of representation at JSM 2018, sponsoring four invited sessions, three topic-contributed sessions, four contributed sessions, one contributed poster session, and four roundtable discussions. SPES also co-sponsored five sessions and one speed session.

Newly Elected SPES Officers

- Robert Gramacy, Chair-elect
- Mary Frances Dorn, JSM Program Chair-elect
- Kimberly Kaufeld, Council of Sections Representative 2019–2021

Joint Research Conference 2018 Wrap-Up

The 2018 Joint Research Conference was hosted by Los Alamos National Laboratory and took place in Santa Fe, New Mexico, June 11–14. This is a joint meeting of the 25th Spring Research Conference on Statistics in Industry and Technology and the 35th Quality and Productivity Research Conference. It attracted

about 140 attendees, including about 133 conference attendees and 42 short course attendees (with some attending both) from the US, Canada, Europe, and Asia. Attendees included academic faculty and students and researchers and practitioners from industry.

We kept the SRC tradition of diversifying the program topics, exploring important problems, and bridging the academic research and industrial application gap. As the program and local arrangement committee, we have tried our best to organize sessions, accommodate attendees, and provide financial help to students.

Overall, JRC 2018 was deemed successful. More information can be found on the conference website at *www.cvent.com/events/joint-research-conference/event-summary-2bf39a1d96194e5584e2d-22a70df0c31.aspx*. ■

Statistical Education

The Statistical Education Section had a successful JSM 2018 under Program Chair Kelly McConville and Roundtable/Birds-of-a-Feather Chair Stacey Hancock. There was a workshop for graduate students preparing to teach, an invited introductory overview lecture, five invited panels/sessions, six topic-contributed panels/sessions, five contributed paper sessions, one traditional poster session, one speed poster session, one roundtable, and eight birds-of-a-feather discussions.

Carol Blumberg and Rebecca Nichols organized a four-table booth, a combined effort by the Statistical Education Section, Teaching of Statistics in the Health Sciences Section, History of Statistics interest group, and Business Analytics/Statistics Education interest group. All helped create a one-stop shop for all things educational and historical.

Slides from JSM 2018 talks will be available on the section's website at *http://community.amstat.org/statisticaleducationsection/home*. If you gave a presentation and haven't yet uploaded your slides for sharing on the section website, you can still do so at *bit.ly/jsm18-stated* using the naming convention Last Name, First Name - Talk Title - Session Number.pdf.

The section congratulates members named Fellow, as well as all education award honorees. View the list of winners at *http://magazine.amstat.org*. To nominate a member for Fellow, contact Paul Roback, Fellows Committee chair, at *roback@stolaf.edu*.

The following items of interest to section members were discussed at the open meeting:

- This year, we received National Science Foundation (NSF) support to offer a pre-JSM workshop for 25 graduate students interested in statistics and data science education. The workshop was held Saturday with Allan Rossman, Mine Çetinkaya-Rundel, Nick Horton, and Ulrike Genschel presenting (and Nandini Kannan from NSF). We are sponsoring an online community for the rest of the academic year and exploring options for next year.
- Our mentoring program entered its third year with 20 mentees matched to mentors. We have slightly more mentors than mentees currently. Applications for the next year will open in the spring. Contact Matt Hayat, 2018 chair, at *mhayat@gsu.edu* with questions.
- The section has been soliciting feedback from members about two proposals regarding how data science education relates to our section efforts. A charter committee will review the section charter, and a current committee will evaluate our efforts with respect to data science.
- Registration for the Electronic Undergraduate Statistics Research Conference (eUSR) (*www.causeweb.org/usproc/eusrc/2018*) is open. This free conference will take place November 2 and is open to all undergraduate students and faculty. If you have any questions about eUSR, send an email to Kelly McConville at *kmcconv1@swarthmore.edu*.
- USCOTS 2019 (US Conference on Teaching Statistics) will take place May 16–18. Details about the program will be posted on *www.causeweb.org/cause/uscots/uscots19*. The theme is "Evaluating Evidence."
- The section's blog at *https://statisticseducatio.wixsite.com/mysite* provides a modern way to keep up with the latest section news. It is mobile device–friendly, and you can subscribe to receive email notifications. Send any ideas for posts to Kay Endriss, communications officer, at *ekendriss@gmail.com*.

Details from the business meeting will be posted to the section's website at *http://community.amstat.org/statisticaleducationsection/home*. ■

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 and additional information on 65 word ads can be found *ww2.amstat.org/ads*

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 *https://jobs.amstat.org/jobseekers.*

California

■ Johnson & Johnson Surgical Vision (JJSV) is recruiting for a Senior Statistician to be located in Milpitas, CA. JJSV designs, manufactures, and distributes products for the surgical treatment of anterior segment ophthalmic disorders, most notably cataract removal. The Johnson & Johnson Surgical Vision goal is improving sight throughout a patient's lifetime. Contact Us: *jlunay@its.jnj.com* EOE.

District of Columbia

■ Assistant or Associate Research Professor of Epidemiology and Biostatistics. Basic duties: Serve as co-Investigator on existing multi-center study. Will contribute to the design, analysis and publication of major papers in leading medical journals. Applicants must have Doctorate in Statistics, Biostatistics or Epidemiology w/strong credentials in statistical methodology. Review of applications begins on 9/22/2018 and is ongoing until the position is filled. Apply online at: *www.gwu.jobs/postings/55041* EOE/AA.

Florida

■ The University of Central Florida, College of Medicine (UCF-COM) seeks excellent candidates for two non-tenure earning faculty positions to help form a core of biostatisticians within the College of Medicine's Office of Research. These biostatisticians will participate in multi-disciplinary research in public health and work closely with other scientists to accomplish public-health-related research goals. Send applications to *Brittany.hofmann@ucf.edu*. EOE.

Indiana

■ Purdue University Fort Wayne Department of Mathematical Sciences invites applications for a tenure track position in Data Sciences and Applied Statistics. A PhD in Data Science, Statistics or related field is required by spring 2019. Details on teaching, research, and service duties can be found at *www.pfw.edu/math*. Send curriculum vita, graduate transcripts, teaching philosophy statement, evidence of teaching effectiveness, and three reference letters to *mcfarlas@pfw.edu*. EOE.

■ Two faculty positions (rank commensurate with experience/qualifications), Department of Biostatistics/Indiana University School of Medicine, Indianapolis, IN. Duties: statistical research, teaching, collaborative research. PhD in biostatistics, statistics or related field, excellent communication skills required; Practical experience preferred. Competitive salary/excellent benefits. Submit CV, research/teaching statements, 3 references to: *indiana.peopleadmin.com/postings/4951* EEO/AA, M/F/D/V.

Perelman School of Medicine
University of Pennsylvania

University of Pennsylvania Perelman School of Medicine Director of Biostatistics, Associate or Full Professor

The Department of Biostatistics, Epidemiology and Informatics at the Perelman School of Medicine at the University of Pennsylvania seeks candidates for an Associate or Full Professor position in either the non-tenure clinician-educator track or the tenure track. Applicants must have a Ph.D. or equivalent degree.

The department seeks candidates at the rank of Associate or Full Professor to fill an open position as Director of the Biostatistics Division. The Division of Biostatistics is the academic home for 34 primary faculty within a vibrant multidisciplinary academic department comprised of three divisions – Biostatistics, Epidemiology and Informatics with a total of 52 primary faculty. The candidate will also assume the role of Director of the Biostatistics Unit within the Center for Clinical Epidemiology and Biostatistics (CCEB). The CCEB is an interdisciplinary and interdepartmental program that links clinical epidemiology and biostatistics within the Perelman School of Medicine, the University of Pennsylvania Health System, and the Penn community.

Applicants must have a Ph.D. or equivalent degree in biostatistics, statistics or a related field with extensive research experience in the health sciences. Candidates must have an internationally recognized record of scholarship and have demonstrated successful academic research leadership experience. The successful candidate will be a visionary leader, dedicated to faculty career development, and strong advocacy for methodological, collaborative and team-oriented research, as well as training the next generations of biostatistics scientists. A demonstrated track record as the principal investigator of methodological programs supported by extramural grant funding is strongly preferred.

Candidates are expected to have a strong commitment to mentoring and educating the next generation of biostatisticians, epidemiologists, and bioinformaticians. The Graduate Group in Epidemiology and Biostatistics (GGEB) offers degree programs leading to both the Doctor of Philosophy (PhD) and Master of Science (MS) in Biostatistics. Since admitting its first cohort of biostatistics students in 2000, the program has grown to its current enrollment of 34 PhD and 4 MS students. The GGEB also offers a Master of Science in Clinical Epidemiology (MSCE) with approximately 30 new students per year, and a PhD in Epidemiology with 4-6 new students per year, many whom have remained at Penn as faculty and have active research programs within the CCEB.

Review of applications will begin immediately and will continue to be accepted until the position is filled. The expected start date is July 2019.

We seek candidates who embrace and reflect diversity in the broadest sense.

The University of Pennsylvania is an EOE. Minorities/Women/Individuals with disabilities/Protected Veterans are encouraged to apply. Apply for this position online at: *https://www.med.upenn.edu/apps/faculty_ad/index.php/d5106*

Louisiana

■ Department Head/Chair of Experimental Statistics (Tenured). College of Agriculture - Department of Experimental Statistics, Louisiana State University. Louisiana State University A&M and LSU Agricultural Center, Baton Rouge, LA seek candidates for Department Head of the Department of Experimental Statistics (EXST). Applicants should have a PhD in Statistics. *bit.ly/LSUDeptHeadEXST.* EOE.

Maryland

■ The Division of Intramural Population Health Research of the Eunice Kennedy Shriver National Institute of Child Health and Human Development is seeking a dynamic leader and internationally recognized methodologist to serve as Chief of the Biostatistics and Bioinformatics Branch. For information about the position contact Dr. Stephen Gilman, Senior Investigator and Chief, Social and Behavioral Sciences Branch (*stephen.gilman@nih.gov*). *http://bit.ly/NICHD-BBBChief* EOE.

Massachusetts

■ Amherst College invites applications for a lecturer in statistics with the appointment to begin on July 1, 2019. This full-time position has an initial three-year term and includes teaching five courses per year, and some other responsibilities. See the full ad and submit applications at MathJobs.Org. All applications received by December 17, 2018, will be guaranteed consideration. Questions can be addressed to *mathstats@amherst.edu*. EOE.

■ The Department of Mathematical Sciences at Bentley University, located in Waltham, Massachusetts, invites applications for a tenure track position beginning Fall 2019. We seek candidates to add to our strengths in applied statistics, data science, machine learning, and applied mathematics. The rank and salary will be commensurate with experience. To learn more and to apply, please go to *jobs.bentley.edu/postings/4088.* EOE.

Michigan

■ The Survey Research Center in the Institute for Social Research at the University of Michigan invites applications from outstanding candidates for Research Professor with doctorate in social science area. For details about this position, see: *bit.ly/UMichResearchProf.* Applicants should submit a cover letter, CV, names of references, and one or two publications. Documents should be sent to *srcsearches@umich.edu.* Reference position #160375. *www.src.isr.umich.edu.* EOE.

Minnesota

■ The School of Statistics at the University of Minnesota invites applications for two full-time, tenure-track positions to begin fall 2019. Appointments will be 100% time over the nine-month academic year (late-August to late-May). Appointments will be at the rank of tenure-track assistant professor, depending on qualifications and experience. For details, visit *humanresources.umn.edu/jobs* (reference Job Opening ID 325807). EOE.

New Jersey

■ Assistant Professor, Statistics/Data Science/Computational Mathematics. Full-time, tenure-track starting Fall 2019. PhD in Statistics, Mathematics or related discipline. The successful candidate is expected to develop and maintain an active, visible, extramurally-funded research with outstanding scholarship, and to demonstrate excellence in teaching and mentoring graduate and undergraduate students. Preference given to applicants who will contribute to Rowan's existing interdisciplinary research. Details and application procedure: *bit.ly/RowanAsstProfMath*. EOE/AA.

Rhode Island

■ The Center for Statistical Sciences at Brown University has immediate openings for staff Biostatisticians for studies of imaging and diagnostic test evaluation. Candidates should have masters or doctorate in Biostatistics, Statistics, or Data Science, and exposure to health care research. Excellent verbal and written communication skills, and experience in data analysis and the use of statistical packages required. Apply online for position #REQ131501 at *bit.ly/BrownBiostatsJobs*. EOE/AA.

The Williams College Department of Mathematics and Statistics invites applications for a new tenure-track position in Statistics, beginning fall 2019, at the rank of assistant professor. A more senior appointment is also possible for a qualified candidate at a later stage in their career. The candidate should have a Ph.D. in Statistics or a closely related field by the time of appointment. We are seeking candidates who show evidence and/or promise of excellence in teaching and a strong research program that can engage undergraduate students. The candidate will become the seventh tenure-track statistician in the department, joining a vibrant and innovative group of statisticians with an established statistics major. For more information on the Department of Mathematics and Statistics, visit *http://math.williams.edu/*.

Candidates may apply via *https://apply.interfolio.com/50978* by uploading a cover letter addressed to Professor Richard De Veaux, a curriculum vitae, a teaching statement, a description of research plans, and three letters of recommendation on teaching and research. The Department is committed to building a diverse and inclusive community. In your application materials, we also ask you to address how your teaching, scholarship, mentorship and/or community service might support Williams's commitment to diversity and inclusion.

Expectations: The teaching load is two courses per 12-week semester and a winter term course every other January. The candidate will be expected to teach introductory statistics, core courses for the statistics major, and elective courses in their areas of interest. The successful candidate will establish an independent research program that results in scholarly publications. Williams College provides broad support for start-up funds, funding for student research assistants, faculty professional development funds, and a shared computer cluster for parallel computation.

Review of applications will begin on or after October 1st and will continue until the position is filled. All offers of employment are contingent upon completion of a background check. Further information is available at *https://faculty.williams.edu/prospective-faculty/background-check-policy/*. Williams College is a coeducational liberal arts institution located in the Berkshire Hills of western Massachusetts. The college has built its reputation on outstanding teaching and scholarship and on the academic excellence of its approximately 2,000 students. Please visit the Williams College website (*http://www.williams.edu*). Beyond meeting fully its legal obligations for non-discrimination, Williams College is committed to building a diverse and inclusive community where members from all backgrounds can live, learn, and thrive.

Williams College

HARVARD UNIVERSITY – DEPARTMENT OF STATISTICS
PROFESSOR OF STATISTICS

The Department of Statistics seeks to appoint one position at the tenured (Full Professor) level for the 2019-2020 academic year. We seek strong candidates in any field of statistics and probability as well as in any interdisciplinary areas where innovative and principled use of statistics and/or probability is of vital importance.

The appointee will teach and advise students at the undergraduate and graduate levels and will be expected to develop innovative courses at both levels. The appointee will also undertake administrative responsibilities in the department and be expected to participate in the intellectual life of the Division of Science, Harvard University, and the wider scholarly community.

The Department is keenly interested in diversifying its faculty and encourages applications from diverse candidates, including from women and minorities.

Please submit the following materials through the ARIeS portal (http://academicpositions.harvard.edu/postings/8408). Applications should include cover letter, *curriculum vitae,* evidence of teaching excellence (e.g., course evaluations, if available), statements of teaching and research interests, representative publications, and contact information for at least five references. Letters of nomination from third parties are also welcome.

Contact: Search Committee c/o Karen Barkow (karen_barkow@harvard.edu), 1 Oxford St., Cambridge, MA 02138

Applications submitted by December 15, 2018 will ensure consideration during the current academic year.

We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law.

TEMPLE UNIVERSITY

Tenured/Tenure-Track Faculty Positions

The Department of Statistical Science at Temple University invites applications for multiple positions to begin in Fall 2019. The search is open to all faculty ranks. Candidates are expected to maintain an active and rigorous research program in statistical science. Responsibilities include teaching, research, and doctoral student research supervision. The preferred qualifications for the Assistant Professor position include post-doctoral or previous faculty experience with a strong publication record. Salary is highly competitive and commensurate with qualifications. To apply, please visit *www.fox.temple.edu/cms_academics/dept/statistics/recruiting.*

TEMPLE UNIVERSITY

Non-Tenure Track and Adjunct Faculty Positions in Statistical Science/Business Analytics

The Department of Statistical Science at Temple University invites applications for non-tenure research track, non-tenure teaching track, and adjunct faculty positions to begin in August 2018. Candidates must hold a Ph.D. degree (for the research track) or a master's degree (for the teaching track/part-time adjunct), and must have a strong background in data analytics, statistics, or a closely related field. Teaching responsibilities include introductory as well as advanced level statistics courses, visualization, and data mining. Temple University has a well-defined career path for non-tenure track (NTT) faculty. At Temple, NTT faculty can lead, get promoted, and become administrators Salary is highly competitive and commensurate with qualifications. Applications will be accepted until the positions are filled. To apply, please visit *www.fox.temple.edu/cms_academics/dept/statistics/recruiting.dept/statistics/recruiting.*

Utah

■ Full-time tenure-track or tenured appointments at the level of Assistant, Associate, or Full Professor in all areas of statistics. These positions are part of a University-wide cluster hiring effort in statistics, with particular emphasis in mathematics, computer science, and bioengineering. Successful candidates will have strong interdisciplinary interests. Please see our website at *www.math.utah.edu/positions* for application requirements. Applications must be completed through *www.mathjobs.org/jobs/Utah*. EOE/AA.

Washington

■ Kaiser Permanente Washington Health Research Institute seeks a doctoral-level faculty researcher to lead independent methodological research & collaborate with multidisciplinary research teams on observational studies & pragmatic clinical trials. Using healthcare system data, the position will involve collaboration in areas such as aging, behavioral medicine, cancer, health informatics, immunizations & pharmacoepidemiology. Complete description at *http://bit.ly/KPWashingtonBiostatDr*. Submit letter of interest & résumé (or CV) to *Annie.J.Shaffer@kp.org*. EOE.

UT Health San Antonio

Department of Epidemiology and Biostatistics

Assistant/Associate Biostatistician Faculty Position

The Department of Epidemiology and Biostatistics (DEB) at UT Health San Antonio (UTHSA) seeks one experienced, doctorate-level faculty biostatistician for a tenure-track faculty position at the rank of Assistant/Associate Professor. Candidates are expected to have expertise in longitudinal data, survival analysis, methods for large healthcare databases, statistical genomics applied to clinical outcomes, or clinical trial design. This position provides an opportunity to collaborate with a multidisciplinary research team as well as to lead independent methodological research in a setting with access to a large, ethnically diverse population.

The DEB at UTHSA has 16 full-time faculty and 27 staff with a number of additional affiliate faculty. Research interests of the faculty include translational science, clinical- and population-based investigation, the application of epidemiological and biostatistical principles to clinical problem solving, formulation of health policy, and the development of new epidemiological and statistical methods for clinical trial design, analysis of "Big Data", clinical decision support systems, and statistical genomics.

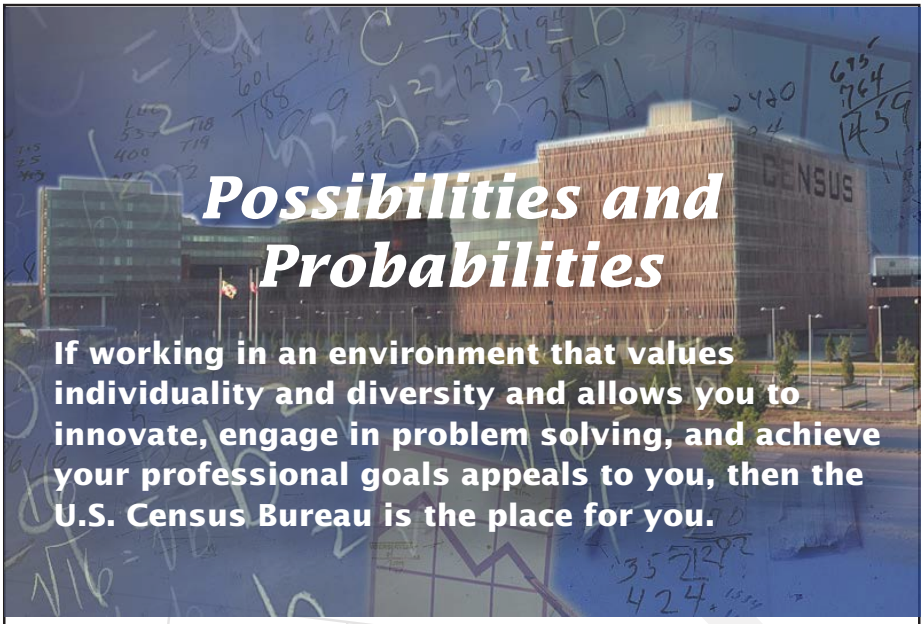
The mission of the DEB is to develop and enhance population-based, clinical and translational research in clinical and community settings, to develop epidemiologic, biostatistical and medical informatics resources, and to promote the educational mission of the Joe R. & Teresa Lozano Long School of Medicine by teaching epidemiology, biostatistics, and critical appraisal of the medical literature to students, house-staff, and faculty. The DEB is also the home of the Biostatistics and Informatics Core which includes faculty and Masters trained researchers who serve the UTHSA.

The DEB plays an integral role in UTHSA's research and educational missions by enhancing the programs to prevent disease, to promote health, to deliver quality health care, and to inform health policy decisions. Depending on the research interests of the selected candidate, there are opportunities to collaborate with colleagues within the medical, nursing, and dental schools as well as other health sciences departments.

This position is a tenure-track and a 12-month appointment. Appointment is open rank (Assistant/Associate level). Preference will be given to someone with a demonstrated ability to both collaborate on multidisciplinary research teams and to successfully lead their own research program. Applicants must have a doctoral degree (PhD or equivalent) in Biostatistics or Statistics, excellent communication skills, and a strong interest in interdisciplinary collaboration.

For full consideration, please visit the UT Health Careers Faculty applicant portal at: http://uthscsa.edu/hr/employment.asp to apply for position #17000315 and upload 1) a cover letter stating career goals and the relevance of the candidate's training and experience to the position; 2) a current CV; 3) a personal statement describing the candidate's research plan and teaching experience; and 4) names and contact information of three references.

All faculty appointments are designated as security sensitive positions. UT Health San Antonio is an Equal Employment Opportunity/Affirmative Action Employer including protected veterans and persons with disabilities.



Your Work as a Mathematical Statistician at the Census Bureau

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Apply at www.census.gov, click on Census Careers, Type of Position, Professional/Scientific/Technical, Math Statistician

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U.S. CENSUS BUREAU
census.gov

International

■ SUNY Korea, a global campus of Stony Brook University, invites applications for the position of tenure-track faculty, starting spring 2019. Qualifications: American education experience, fluent English; PhD in statistics or a related field. To apply, send the following items to *myoungshic.jhun@stonybrook.edu*: cover letter, CV, teaching statement, research statement, list of at least three references. Applications will be accepted until the position is filled. *www.sunykorea.ac.kr.* EOE. ■

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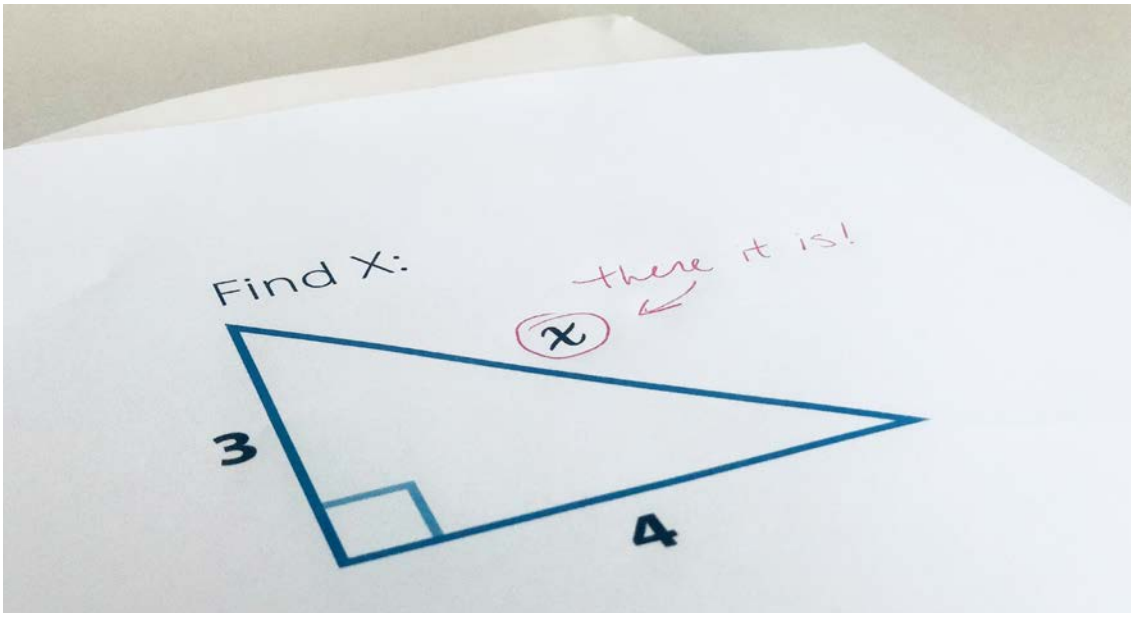
We asked our followers...

Heard any good math and statistics jokes?



Next month, we'll ask: Statisticians, what book do you recommend for nonstatisticians about statistics? Tag @AmstatNews with your answer.

Terry Walsh Here's looking at Euclid!

Robert Weiss How many statisticians does it take to change a light bulb? That depends on the model.

Sara Venkatraman What does a geometric random variable become after having a cup of coffee? A hypergeometric random variable!

Kel Zou "Statistics are like a bikini. What they reveal is suggestive, but what they conceal is vital." (Aaron Levenstein, 1911–1986.)

Nick Johnson Q: Why didn't Newton prove the impossibility theorem for quintics?
A: He wasn't Abel!

Lindsay Brock What do we say to the guy who invented zero? Thanks for nothing!

Sean
@seanlacey
I know a few but to be honest some are average and some are mean.

Lucy
@LucyStats
There are only two types of people. Those who can extrapolate from incomplete data.

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