

July 2019 • Issue #505

# AMSTATNEWS

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



ASA Members Elect  
**ROBERT  
SANTOS** *and*  
**DIONNE PRICE**  
to Association Leadership



**ALSO:**

ASA Task Force on  
Sexual Harassment  
and Assault Provides  
Summary Report

Inaugural Leadership  
Challenge Ends With  
Many Winners



DENVER, COLORADO

**JSM2019**

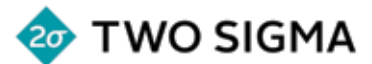
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JULY 2019 • ISSUE #505

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

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**Data for Good Highlights at JSM 2019**

This column is written for those interested in learning about the world of Data for Good, where statistical analysis is dedicated to good causes that benefit our lives, our communities, and our world. If you would like to know more or have ideas for articles, contact David Corliss at [davidjcorliss@peace-work.org](mailto:davidjcorliss@peace-work.org).

# Nominations Wanted

The University of Alabama at Birmingham (UAB) School of Public Health and Department of Biostatistics request nominations for the **Janet L. Norwood Award for Outstanding Achievement by a Woman in the Statistical Sciences**.



The award recipient will be invited to deliver a lecture at the UAB award ceremony and receive money for travel, the award, and a \$5,000 prize. Acceptance of the award is conditional on delivering the lecture at UAB on September 10.

For details about the award and nomination requirements, visit [www.soph.uab.edu/awards/norwoodaward](http://www.soph.uab.edu/awards/norwoodaward).

The deadline for nominations is July 15. Electronic submission of nominations is encouraged.

Dear Editor,

I was delighted to see your centerfold featuring five trail-blazing female statisticians. Non-Americans may find it odd that, apart from Florence Nightingale, they were all US-based. There is the rest of the world, you know! (In particular, the role of women in soviet statistics was important.)



Regarding **Florence Nightingale**, her only accomplishment that you mentioned was the coxcomb chart. This is sad because, arguably, this was invented by William Farr, not Nightingale. He certainly should be equally credited, and his social obstacles—although a man—were possibly more severe than those confronting Nightingale, who came from a very privileged social class position. Also, Nightingale's more important achievements were in the area of hospital administration, not coxcombs. Her formidable energy, forcefulness, and impressive net of social connections and skills at political use of statistical evidence were all crucial here. Coxcombs are far less important!

For those interested in Florence Nightingale, a bicentenary conference that will commemorate her statistical work is being planned for February 28, 2020, in London, and all are welcome. Details will be at [www.radstats.org.uk](http://www.radstats.org.uk).

John Bibby

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# 2019 Joint Statistical Meetings Worth Attending in Person?

This year, the Joint Statistical Meetings (JSM) will be held in Denver, Colorado. They are “Joint” because they are sponsored jointly by the ASA, Institute of Mathematical Statistics, Statistical Society of Canada, International Biometric Society (ENAR and WJAR), and seven other statistical organizations; “Statistical” because all involved identify—to varying extents—with the field of statistics; and “Meetings” because the conference consists of meetings of sections and committees, as well as technical sessions, short courses, information tables, career services, book and software exhibits, and other activities. It can be overwhelming!

Has it always been this way? Has JSM become too large? Should we adopt a format from other societies to allow only refereed or invited sessions? More essentially, are in-person meetings an anachronistic concept whose time has come and can be replaced by virtual interactions, which are less costly and much less effort to organize?

These questions prompted me to return to one of my favorite presidential addresses by Dr. W. Michael O’Fallon, the ASA’s 95th president in 2000. (Who remembers ASA president’s addresses? I confess, I do not remember many, but I do remember this one.)

Dr. O’Fallon traced the history of the “annual ASA meeting” which, by its 70th in 1908, was judged to be a remarkable success because it attracted a total of 40 people (versus 6,000+ today)—record-breaking attendance because the ASA finally decided it was time to hold it outside Boston, where the previous 69 had been held!

A major change in the Annual Meeting occurred during the second and third decades of the 20th century (1909–1928), when ASA presidents were encouraged to pursue “loose collaboration with other associations, [especially] the American Economics Association. Indeed, the board minutes often contained instructions to the president to make every effort to determine when the economists were to meet and to schedule the ASA meeting accordingly.”

We no longer tie our meetings to suit the economists’ timetable, but we do coordinate our dates (seven years in advance) with our JSM partners. Starting in 1944, a program committee (versus solely

the ASA president) organized the Annual Meeting; sessions of contributed papers were added in 1947 to the invited sessions; and ASA sections were invited to participate directly in planning the scientific program in 1950. In tracing the history, Dr. O’Fallon brought to light the developments leading to the current JSM and, most importantly, the value of flexibility and recognizing when change is needed. Our 40th ASA president, Helen Walker, also recognized the need to hold an annual meeting in 1944, following a two-year hiatus due to World War II.

Technology has changed many aspects of JSM. The majority of attendees today opt out of the hardcopy version of the program, choosing instead to view sessions on their phones or tablets via the JSM app, and presentations are far more elaborate than they were even 10 years ago. In fact, many of these presentations and/or the research behind them are available online before or after the meetings! Is JSM even necessary?

One interesting anecdote Dr. O’Fallon recalled from the 1930s was “a conflict that had a major impact on our profession, our association, and our meetings”: the balance between applications (on which the ASA had largely focused) and methodology (driven by “mathematical statisticians”). It is reminiscent of the debate we face today between “statisticians” and “data scientists.” That conflict led to the founding in 1935 of the Institute of Mathematical Statistics. What will today’s debate bring?

Last month, ASA Executive Director Ron Wasserstein and I attended the ACM-IMS Interdisciplinary Summit on the Foundations of Data Science in San Francisco, co-chaired by Jeannette Wing (computer science) and David Madigan (statistics). It was the first of many anticipated annual meetings with multiple partners in the vein of JSM. The program included presentations and panels by impressive researchers and developers, and it was streamed live. It prompts the question: Why attend the meeting in person at all? Or, any meeting, for that matter, when a paper or pre-print might be available on the internet?

Dr. O’Fallon asked the same question in 2000: “Why not a virtual meeting where we post our



Karen Kafadar

presentations on our personal websites and have the meeting program provide author, title, and URL?” (Actually, most of us do that now!) “Will this type of social and professional discourse be enough to hold us together as a professional society? I think not.”

Nor do I. Ron knew our in-person attendance at the data science summit would be useful—in some ways we could predict, but also in ways we could not. For me, it reinforced the value of in-person meetings. Several speakers raised my awareness about future areas of importance in which statisticians should be involved, as well as the value, risks, and consequences of “machine learning” algorithms. Some speakers were intentionally provocative, as is needed for a meeting in which statisticians, mathematicians, and computer scientists are still working on ways to ensure effective collaboration as “data science.”

Xiao-Li Meng raised the problem of ensuring accurate inferences arising from the privatization of the data forthcoming in the US 2020 Decennial Census and urged the audience to engage in problems raised by differential privacy. (JSM offers a short course on this topic Tuesday morning, as well as six sessions throughout the meeting.)

Several speakers talked about the value of “black box” algorithms, particularly their stunning successes in marketing and health care. Others talked about methods for validating, improving, and characterizing these algorithms, especially quantifying the uncertainties.

One highly notable comment came from panelist Andrew Gelman: “The ‘algorithmic bias’ that concerns me is not so much a bias in [the accuracy in] an algorithm so much as a social bias arising from the demand for, and expectation of, certainty.” (This sentence reminded me of comments from a 1984 JSM Panel of Distinguished Statisticians—including George Box, Sir David Cox, Morris Hansen, and C.R. Rao—when John Tukey said, “Our greatest failure as statisticians has been our failure to communicate to the average layperson the notion of uncertainty.” Andrew’s statement suggests we’ve not come very far!) Even those data science summit attendees who were reading and sending text messages, or working on their computers, during the talks were more engaged in the discussion than is possible when viewing a session remotely!

Like our 2000 ASA president, I have come to believe in the irreplaceable value of in-person contact. JSM remains one of the world’s largest meetings of statisticians. It offers a full range of topics in statistical theory, methods, and algorithms involved in all the applications in which statistics can “Make an Impact.” JSM Program Chair Richard Levine and his program committee, whose members were elected by ASA sections and JSM partners, have been working hard to

ensure diversity in technical sessions, invited panels, introductory overview lectures, and workshops. We encourage you to search the online program for timely and important topics, including “big data” surveys, causal inference, Census 2020, data science education, deep learning, differential privacy, analyses of and inferences from microbiome data and electronic health records, reproducible research, statistical foundations and research, teaching data science, statistical communication and collaboration, and uncertainty quantification and visualization.

Rich’s committee has worked hard to ensure a broad range of methodologies, applications, and educational and career opportunities throughout the entire JSM, including Thursday! Wendy Meiring has facilitated your appreciation of the Sunday evening invited poster session by organizing the posters around themes: geophysical modeling, learning analytics, medical imaging/neuroscience, object-oriented data analysis, uncertainty quantification. It’s a terrific opportunity to interact, one-on-one, with the presenters.

Other notable sessions include the special free Public Lecture Sunday at 6 p.m., during which Mark Glickman will update the application of methods for author attribution used by David Wallace and Frederick Mosteller in 1964 for “The Federalist Papers: Hamilton or Madison?” to “The Beatles: Lennon or McCartney?”

We will have a broad array of topics in our plenary addresses and special lectures, IMS Presidential Address, the Wald and Medallion lectures, and the annual Fisher Lecture. I am thrilled that this honored list will include Teresa Sullivan, president emerita of the University of Virginia, who will speak as my invited speaker (Monday at 4 p.m.) about the 2020 Census from her perspective as a quantitative sociologist. These featured events will be complemented by a “late-breaking” session, numerous invited and contributed talks, and poster sessions.

The size of the meetings—26 parallel sessions in addition to the plenary sessions each afternoon—can be both a blessing and a curse. But mostly I believe it is the former, in part because the JSM Program Committee has tried to include your suggestions for improvements over the years. We hope this year’s JSM will offer you at least this much. Please come this year to learn something new, to develop and deepen your professional collaborations, and especially to tell us what JSM can do to make it even more relevant and valuable to you—our participants—next year!



# ASA Task Force on Sexual Harassment and Assault Provides Summary Report

In an effort to proactively address issues around sexual misconduct and gender discrimination, the ASA Board of Directors approved the formation of the Task Force on Sexual Harassment and Assault at their November 2017 meeting and appointed members from a cross-section of the ASA membership. The task force was charged with assessing the extent of sexual harassment and assault in the ASA community, reviewing best practices of professional and academic organizations, and making recommendations to the ASA Board.

The task force has provided forward-thinking strategies to help the ASA continue fostering an environment of equity and inclusion, where all members feel safe. Having completed our assigned tasks, we take this opportunity to report to the membership on the work we've done and what has been done by the ASA Board of Directors.

The task force met via video conference every other week for more than a year to address its charge and find ways to improve the climate in the field of statistics broadly, as well as for the ASA specifically. When we started our work, we had no idea about the depth of discussions awaiting us. By design, the members of the task force represent different personal and professional perspectives, so our discussions informed by this diversity were fruitful. We spent numerous hours trying to ensure that we pave the way for the ASA to lead changes not only in policy, but in climate, going forward.

The full task force report to the ASA Board can be found at <http://bit.ly/2KdGrE7>.

## Revised ASA Activities Conduct Policy

The task force work commenced with a fairly comprehensive review of professional organizations' conduct policies for their activities, including the existing ASA conduct policy. As the #MeToo movement gained momentum during this time, the explosion of new policies and procedures in scholarly societies, institutions of higher education, and professional organizations made this task especially challenging, but we did our best to stay on top of new information as it became available to us.

Reviewing new and existing policies from other professional organizations was informative in revising the ASA's Conduct Policy and provided us with several templates from which to "borrow." The task force spent a lot of time drafting and revising an ASA Activities Conduct Policy ([www.amstat.org/](http://www.amstat.org/)

## Task Force Members

**Leslie A. McClure** (Chair)

Drexel University Dornsife School of Public Health

**Emma K. T. Benn**

Icahn School of Medicine at Mount Sinai

**Maryclare Griffin**

Cornell University

**Ji-Hyun Lee**

University of Florida

**Sally C. Morton**

Virginia Tech

**Jean Opsomer**

Westat

**Robert Santos**

Urban Institute

**Theresa Utlaut**

Intel Corporation

**Donna LaLonde** (ASA Liaison)

*ASA/Meetings/Meeting-Conduct-Policy.aspx*), which was approved by the ASA Board on November 30, 2018. As recommended by the task force, the board will regularly review the policy, make revisions as necessary, and make the policy visible to the membership in a variety of ways.

## Study of the Occurrence of Sexual Misconduct at ASA Events

At the same time the task force was revising the ASA's conduct policy, members of the task force with expertise in survey sampling and research design developed a statement of work (SOW) providing two paths to sampling the ASA Community about the occurrence of sexual misconduct in the community: a rigorous survey embedded in an informal census or exclusive use of an informal collection of feedback via a census. We recognized that a rigorous sample survey could provide

statistically valid prevalence estimates of harassment/abuse but at a high cost. Collection of feedback from a census of general membership (besides those who were sampled) could validate that the occurrence of harassment/abuse exists without the expense and burden of producing statistical estimates. Moreover, we anticipated some ASA members might want to share their experiences and deserved a confidential platform to share their stories, regardless of whether they fell into a “random sample.” As such, we adopted a strategy that allowed members the opportunity to discuss the merits of alternative approaches.

The SOW formed the basis of the request for proposals (RFP) the ASA published to attract bids from external organizations for developing and implementing the questionnaire, as well as analyzing the data collected. After a comprehensive review process, Langer Research Associates was selected. The adopted methodology was a general call for feedback via a census of membership. In consultation with the task force and after review of previous studies, Langer Research Associates developed the Sexual and Gender-Based Misconduct at American Statistical Association questionnaire. Drafts were refined in further discussion with ASA representatives, evaluation by an ASA-appointed academic expert, and further review and comment by the ASA Task Force on Sexual Harassment and Assault. Respondents were promised anonymity, and the instrument and all communications were reviewed by an external institutional review board (IRB) prior to distribution.

The final report by Langer can be found at <http://bit.ly/2X42K57>.

### Summary of Langer Final Report

The restricted-access online questionnaire was open for participation by ASA members from October 11–28, 2018. All members listed in the association’s then-current membership database received an introductory email from ASA Executive Director Ronald Wasserstein on October 10; an initial invitation from Langer Research Associates on October 11; and reminder invitations on October 17, 22, and 25, provided they did not opt out of receiving email communications from the ASA. All members were encouraged to provide feedback, whether or not they had experienced sexual- or gender-based misconduct.

Out of 15,769 listed members, 3,507 participated (22%), including 316 who started but did not complete the questionnaire and whose answers

were retained. Since they were not able to ascertain whether the experiences of those who participated in the study are different from those who chose not to participate, the researchers acknowledge the results cannot be used to produce valid statistical estimates. Nonetheless, the results reflect real experiences and concerns of the 3,500+ ASA members who responded and, as such, deserve recognition and consideration in all deliberations. Even one instance of harassment or assault deserves action.

The demographic composition of the participant population resembles the available demographic data on the full ASA membership. The largest differences reflect fewer Asian and student members among study participants than in the full ASA membership and more white and regular members. Appendix A of the Langer Report compares the demographic characteristics for those participating in the study to those in the full ASA membership.

The final report submitted by Langer Research Associates provides a detailed analysis of the collected data and includes unedited (with the exception that names were redacted) comments from participants. For the purpose of this summary, we highlight the following key perceptions:

- Given what they have heard or experienced, 15% of feedback contributors regard sexual harassment at ASA events to be a problem or a major problem. Women and men say so about equally.
- Nineteen percent of study participants—23% of women and 15% of men—consider other inappropriate gender-based behavior to be a problem or a major problem at ASA events. Such behavior may include gender-based disrespect, condescension, or objectification.
- Thirteen percent of women (and 2% of men) have been warned by friends or colleagues to be on guard against sexually inappropriate behavior by a fellow attendee at an ASA event.
- Four percent of women (and 1% of men) have been warned to avoid specific ASA events because individuals who engaged in sexually inappropriate behavior might be in attendance.

We also asked about experiences at academic or professional events unrelated to ASA activities. The responses make it clear that harassment and assault



are broad problems and in no way limited to ASA events. Fifty-eight percent of women who responded reported having experienced sexual harassment or behavior that may have been harassing in a workplace, graduate program, or other career-related venue or meeting. This compares with 14% at ASA events among the study participants. Though the survey did not ask about this explicitly, respondents noted they have experienced gender discrimination in a variety of ways.

Comments and suggestions for ASA policy development on the issue of sexual harassment were also solicited. More than 800 members responded. Many comments focused on the need for better distribution of the Meeting Conduct Policy, to whom a report should be made, transparency of the process for investigating allegations, and clarification of the consequences if a violation was confirmed. In addition to these focused actions, there were comments suggesting the need for change not only in policy but in the ASA's culture. This included calls for greater diversity throughout the association and addressing disrespect, as well as outright harassment. Several comments also mentioned the provision of alcohol at ASA events.

This summary of the report, as well as the full text of the study, was provided to the ASA Board as part of the task force's final report.

### **Anonymous Reporting for Victims of Sexual Misconduct**

During our early discussions, the task force quickly uncovered a need for improved reporting mechanisms for victims of sexual misconduct during ASA-sponsored activities and strongly encouraged this avenue be through an external resource. As a result, an ombuds service was put into place for the 2018 Joint Statistical Meetings (JSM). The first ombuds service was successful in that it was used for the intended purposes, although some feedback suggested the service was not adequately publicized. However, it was generally agreed on that this was a successful avenue for providing victims of sexual misconduct at ASA-sponsored activities an anonymous resource, and the ombuds service has since been included at subsequent ASA-sponsored conferences.

Further, prior to submission of the task force's final report, the board requested that ASA staff draft an RFP to develop a permanent contract with a service that can provide not only a confidential reporting mechanism, but also investigation and

adjudication services for sexual misconduct reports. Publicizing these resources to ASA members going forward will be a priority, and data will be collected regarding the use of the ombuds service.

### **Recommendations Regarding Policy Changes**

In addition to the revised ASA Activities Conduct Policy, the task force made other recommendations to the board regarding changes to policy surrounding sexual misconduct. We once again relied on information from other professional organizations to guide our discussions, but quickly found there was no uniform process for managing reports of misconduct. That said, the information we learned from that research did help guide our recommendations, the most prominent of which was that these reports be handled externally from the ASA as much as was feasible. There were several reasons for this recommendation, including protecting the identities of parties involved and eliminating opportunities for bias in decision-making. As described above, the board is moving forward with identifying an ombuds service that can serve in this role.

The task force did not make any other specific recommendations regarding policy for governing confirmed cases of sexual misconduct, but provided the ASA Board with a summary of the discussions we had about the process for dealing with such cases. The ASA Board, during their April, 2019, meeting, outlined a process for reporting and investigating cases of sexual misconduct. The details of the process will be fully explained in a future *Amstat News* article. In brief, the board will work with a professional firm to ensure processes are in place so individuals can report incidents of misconduct at ASA activities and all such reports can be appropriately addressed in a timely fashion and in a manner designed to protect the privacy of the individuals involved to the extent possible during the time the matter is under investigation. The task force acknowledges the support and contributions of the ASA Board of Directors.

In addition to the concrete changes the board is putting into place as a result of the task force's recommendations, ASA committees, sections, and chapters continue to explore and implement practices that help create a culture of inclusion and equity for all ASA members. Our community efforts will ensure the work begun by the task force will have an effect on all present and future ASA members. ■



# ASA Members Elect **ROBERT SANTOS**

*and*



# **DIONNE PRICE** to Association Leadership

American Statistical Association members elected Robert L. Santos as the association's 116th president. Santos, vice president and chief methodologist at the Urban Institute, will begin a three-year term on the ASA Board of Directors in January 2020 as president-elect. Dionne L. Price was elected vice president and will also start a three-year term in 2020. Price is director of the Division of Biometrics IV in the Office of Biostatistics in the Food and Drug Administration Office of Translational Sciences, Center for Drug Evaluation and Research.

In his candidate's statement (<https://magazine.amstat.org/blog/2019/03/01/2020candidates>) and further laid out on his candidacy website (<https://robthinkbig.org>), Santos proposed the ASA reconsider what an association should be in contemporary society, with an eye to attracting and retaining young professionals and reinforcing its relevance. He outlined broad plans to build community within the ASA, increase support of member-based work, and offer pilot training that focuses on the role of critical thinking for statisticians in project teams.

Santos has a long history of service and leadership in the ASA—since joining the ASA in 1977—and the broader community. He has served on both the ASA and Washington Statistical Society boards of directors and held many committee and section officer positions. The ASA has

recognized his leadership, service, and contributions through ASA fellowship and the Founder's Award. He has also served as president of the American Association for Public Opinion Research; worked in academic and commercial research organizations; and participated extensively in study sections, federal committees, and National Academy of Sciences panels.

In her candidate statement (<https://magazine.amstat.org/blog/2019/03/01/2020candidates/#vicepresident>), Price focused on the intersection of awareness, sound statistical science, and adaptability. Specifically, she highlighted the need to do the following:

- Continue to explore alternative avenues to reach and expose younger generations to statistics and its global impact
- Build greater awareness of the benefits of membership
- Ensure statistics is properly used to answer questions of interest through the community staying current and engaged and becoming leaders outside the community
- Adapt to societal, scientific, educational, and other challenges
- Play an active role in society to ensure the value of statisticians is not diminished
- Assess our approaches and welcome novel ideas for further advancement of the profession

The ASA membership also elected the following:

- **Ji-Hyun Lee**, University of Florida and University of Florida Health Cancer Center, as Council of Chapters Representative to the ASA Board
- **Rebecca Hubbard**, University of Pennsylvania, as Council of Sections Representative to the ASA Board
- **Alexandra (Alex) Schmidt**, McGill University, as International Representative to the ASA Board

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### **Council of Sections**

### **Representative 2020–2022**

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# Put the Data in DataFest™

Rob Gould

The ASA DataFest—held every Spring at more than 40 colleges and universities around the world—brings together a community of undergraduate students, faculty, graduate students, and data professionals. But without the data, there is no DataFest, which is why we are asking for help in finding data for future DataFests.

A data set and challenge contributed by an organization are the heart of ASA DataFest. Previous data donors include the Los Angeles Police Department, Kiva.com, eHarmony, GridPoint, Edmunds.com, Ticketmaster, Expedia.com, and Indeed.com.

The Canadian National Sports Institute sponsored the 2019 event by providing GPS and accelerometer data for the Canadian National Women's Rugby 7 team for every game in the previous season. The data also included daily health and training data.

Ming-Chang Tsai, the researcher who provided the data, challenged students to describe the role of fatigue in the team's play. Several thousand students worked on this problem from a variety of viewpoints. Some applied factor analysis or other approaches to convert the daily self-reported information about exertion, sleep quality, and mood into a single "fatigue" score. They then used this score to evaluate the effectiveness of training drills. Others provided striking visualizations that examined the multivariate relationships between self-reported measures and training-day outcomes. One team from Pomona College scraped players' Instagram feeds to discover when and where the team traveled for away games and found fatigue spiked when games were too close to long flights.

An informational meeting will take place Monday, July 29, from 9:00 a.m. to 10:30 a.m. in Mineral Hall A of the Hyatt at the Joint Statistical Meetings in Denver for those interested in having their students compete in the next DataFest or "donating" data.

The primary quality we look for in a data set is personality; we want students to know there are humans behind the data who are truly interested in what the students might discover. A good data set will be rich and complex. Ideally, it will have at least 100 relevant and unique variables and provide students of all levels and backgrounds with numerous "pathways" for meeting the challenge.

Due to logistical constraints, we cannot ask students to sign nondisclosure agreements, so we expect to work with the data donor through an iterative process from August through February to

provide a data set that meets our criteria while also satisfying the data donors' confidentiality and proprietary interests.

Donating data provides your organization with the opportunity to reach out to thousands of talented and up-and-coming data professionals from a variety of institutions.

If you have access to data that might be suitable for DataFest, contact Rob Gould at [rgould@stat.ucla.edu](mailto:rgould@stat.ucla.edu) or Donna LaLonde at [DonnaL@amstat.org](mailto:DonnaL@amstat.org). Details about DataFest can be found at [ww2.amstat.org/education/datafest/index.cfm](http://ww2.amstat.org/education/datafest/index.cfm). ■

## Biopharmaceutical Applied Statistics Symposium

The 26th meeting of the Biopharmaceutical Applied Statistics Symposium (BASS XXVI) will be held October 21–24 at the Hilton Charlotte University Place in Charlotte, North Carolina. One-hour tutorials on diverse topics pertinent to the research, clinical development, and regulation of pharmaceuticals will be presented by speakers from academia, the pharmaceutical industry, and the US Food and Drug Administration (FDA).

BASS will also offer a poster session and short courses, and Sally Morton will deliver the keynote address. Other popular features of BASS include the reception dinner and FDA/industry/academia session.

BASS is a nonprofit entity established to support graduate studies in biostatistics. It has supported more than 50 master's or doctoral degree students in biostatistics.

For further information, visit [www.bassconference.org](http://www.bassconference.org) or contact the BASS registrar at [rewhitworth@gmail.com](mailto:rewhitworth@gmail.com) or BASS chair, Tony Segreti, at (919) 417-5181 or [segretia@bellsouth.net](mailto:segretia@bellsouth.net).

# Meet Jason Brown

*Associate Commissioner for the Office of Research, Evaluation, and Statistics*

**Jason Brown** has been the associate commissioner for the Office of Research, Evaluation, and Statistics at the Social Security Administration since November 2018. Prior to this position, he served as the director of the Office of Microeconomic Analysis and acting assistant secretary for economic policy/acting chief economist with the Department of the Treasury. Throughout his career, Brown has conducted research and policy analysis on a range of topics related to health and aging. He holds a PhD in economics from Stanford University and a BA in economics from Texas A&M University.



## What about this position appealed to you?

Social Security is a trillion-dollar program that has a profound effect on the most vulnerable people in society and on the economy as a whole. The Office of Research, Evaluation, and Statistics (ORES) helps the public and policymakers—whether they are workers, claimants, or members of Congress—understand the program through data, statistics, and research so they can make informed decisions. I was a consumer of the office's work for years and knew the talent and dedication of the staff. It is a privilege to have the opportunity to work with them to shed light on important policy issues.

## Describe the top two or three priorities you have for the SSA Office of Research, Evaluation, and Statistics.

The work of ORES consists of extracting administrative data, producing statistics and research from that data, and disseminating those research and statistics. My priorities are to continue to fulfill these obligations through the principles established by the Committee on National Statistics for federal statistical agencies: produce information relevant to public policy; build credibility through quality and accuracy; maintain our data sources' trust (primarily workers and beneficiaries) by properly using and protecting their information; and produce objective research and statistics free of political influence. By adhering to these principles, we can continue to be an important and trusted source of information about Social Security programs.

## What do you see as your biggest challenge(s) for the ORES?

We have access to a trove of administrative data that we use for statistical and research purposes, and there is high demand for the data both internally and externally. We are always reassessing our priorities and determining the highest-value use of our resources and time; there are always more data sets and statistics you would like to create, and more research you would like to undertake, than you have the resources for. And because the data development and research processes take time, we need to anticipate the most relevant questions we will need to answer.

## What kind of support from the broader statistical community do you look for?

Although I've spent my career as an economist in the federal government, I'm new to the federal statistical community and have a lot to learn. Fortunately, the Interagency Council on Statistical Policy has a terrific network of experts who have considerable experience in many of the same questions and issues I face at ORES. The Committee on National Statistics is also a great resource for guidance and wisdom on meeting our statistical objectives. As we implement the Foundations for Evidence-Based Policymaking Act, I will be looking to these organizations and others for their ideas and knowledge of how best to fulfill the expectations placed on us as a federal statistical agency.

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

Thinking more long term, I am impressed by the vision that has put ORES in the position of producing so much valuable data, statistics, and research. We create approximately 700 extracts from administrative data every year for statistical and research use. We publish around 1,000 statistical tables and charts every year. Our researchers produce around 30 research products a year, and we support around 60 additional papers a year through our Retirement and Disability Research Consortium. As a result of all of this work, the public and policymakers know an awful lot about the very large, complex program we are tasked with studying, and we stand ready to inform new questions as they emerge. ■

# Inaugural Leadership Challenge Ends With Many Winners

Donna LaLonde and Anna Nevius



Some of the team representatives stop for a picture with a few of the ASA Board members during the inaugural leadership challenge. From left: Khuzaima Hameed, Lin Dong, Eric Rose, Yeng Saanchi, Anna Nevius, Keltin Grimes, Evidence Matangi, Hannah Weeks, Barry Nussbaum, Lisa LaVange, and Donna LaLonde

Develop and present a business plan outlining strategies for recruitment and retention of students and early-career members of the American Statistical Association. This formidable challenge was presented to teams participating in the inaugural Leadership Institute Challenge. Teams from North Carolina State University, Purdue University, and Vanderbilt took up the challenge and worked for nine months to develop business plans for how the ASA should approach this strategic and important goal.

The members of the North Carolina State University team—Lin Dong, Eric Rose, Yeng Saanchi, Khuzaima Hameed, and Keltin Grimes—worked together as members of Eric Laber's group. Dong, Rose, Saanchi, and Hameed are PhD students, while Grimes is an Enola High School student who does research with the

group. They were coached by Wendy Lou, the PhD program director and biostatistics division head in the Dalla Lana School of Public Health at the University of Toronto.

Will A. Eagan, who is a PhD candidate in the department of statistics, served as the team leader for the Purdue University team. His teammates were Evidence Matangi, a PhD candidate; Tyler Netherly, an undergraduate student; Hui (Sophie) Sun, a PhD candidate; and Margaret (Maggie) Christy, a graduate student in the department of biostatistics at Indiana University and Purdue University alumna. They were all current or former members of the Purdue ASA Student Chapter and coached by 2017 ASA President Barry Nusbaum.

The Vanderbilt University team was led by Hannah Weeks, who is a PhD candidate in the department of biostatistics. Her teammates were Elizabeth Sigworth and Sarah Lotspeich,

also PhD candidates in the department of biostatistics, and Vanderbilt alumnae Allison Hainline of GlaxoSmithKline and Lucy D'Agostino McGowan, a postdoctoral fellow at The Johns Hopkins University. They were coached by Lisa Lupinacci, associate vice president for late development statistics at Merck & Co., Inc.

The informal kickoff for the challenge occurred at the end of the JSM 2018 Workshop for Student Chapters, when members of the Vanderbilt and Purdue teams had an opportunity to meet with their coaches. Formally, the challenge began when the expectations for the business plan and schedule for the academic year were shared with the teams.

As the teams began working on their business plans—which required an executive summary, SWOT analysis, strategies, and budget—they were supported by their coaches. Anna Nevius of the

FDA and Donna LaLonde of the ASA were also available to answer questions and identify resources. Amy Farris, ASA director of marketing and membership development, described current and past membership activities via a video interview and provided current membership data. We were all working toward the culminating experience of presenting plans to the ASA Board.

We met with the teams via Zoom video conference and created a shared Google drive, which contributed to a collaborative experience. Since the mission of the Leadership Institute is to support the development of leaders at all stages of a career trajectory, we also met in virtual meet-ups to explore leadership topics. The first meet-up included a presentation by Lupinacci on success factors in the early-career setting. Bill Sollecito, a clinical professor in the Public Health Leadership Program at The University of North Carolina Gillings School of Global Public Health, shared insights on developing vision statements. We concluded the meet-up series with a conversation with 2018 ASA President Lisa LaVange and Nussbaum, who talked about their paths to leadership in the ASA.

The ASA Board used a scoring rubric with the categories content, delivery, response to questions, and overall impressions. Each board member rated the presentation in each of these categories using a scale of 1 (very weak) to 5 (great). It was the consensus of the board that all the teams identified strategies that should be considered, so they were all declared winners.

Ideas that emerged from the presentations and subsequent discussions demonstrated the teams' thoughtful and innovative approaches to the challenge. For example, the Purdue team

suggested a focus on corporate departmental membership. This was their strategy for maintaining those members who are no longer students and now work in industry. The team suggested the competitive advantage is that now ASA membership becomes part of serving as a statistician for a company.

The concept of "prospecting in your own backyard" was explored by the Vanderbilt team. This strategy draws the distinction between prospecting in external groups that are potentially too broad (such as entire universities) and targeted recruiting at meetings. The Vanderbilt team encouraged the ASA to make everyone a "membership expert," so recruiting of new members was truly an association effort.

Complementing these recommendations, the NC State team focused on engagement. They proposed annual information sessions at participating universities for current and incoming students hosted by a local ASA member (or chapter) who would advocate for the benefits of membership. Their plan also suggested online engagement as key to maintaining membership. The team suggested the ASA host discussions on platforms such as Reddit, Facebook, Instagram, and Twitter, which would allow members and non-members to interact.

The next leadership challenge will be launched at the end of August. To learn more about the challenge, join us at the JSM student chapter workshop Monday, July 29, from 10:30 a.m. to noon in the Hyatt Regency Capitol Ballroom 1 or participate in a virtual information meet-up. Complete the form at <http://bit.ly/2ZwRFqE> if you would like to receive email updates on the challenge and the time and date for the virtual meet-up. ■

## Significance Considers Francis Galton's Legacy

The June issue of *Significance* is out in digital format and focuses on the legacy of Francis Galton, statistical pioneer and eugenicist. How should we best commemorate Galton's statistical achievements while not downplaying or overlooking his disturbing views on race?

Also in this issue, as the Cricket World Cup begins, we delve into the history and development of a game-changing statistical idea: the Duckworth-Lewis method.

### Plus:

- **Simon Raper** explores the philosophical ideas of Karl Pearson and his belief that parameters and distributions, not things, are the proper object of scientific study.
- **Gian Carlo Di-Luvi** uses text mining to determine the net sentiment of Grammy-winning albums of the year.
- **Suzanne Thornton, Brittany Green, and Emma Benn** offer advice for greater LGBT+ inclusion in statistics and data science.
- **R. Allan Reese** has a "hole" lot of questions about one of the most dramatic scientific images of our age.

Access the digital version of *Significance* through the ASA or RSS members' portal at <https://rss.onlinelibrary.wiley.com/journal/17409713>.

*Significance* is online at [www.significancemagazine.com](http://www.significancemagazine.com).



# STATISTICAL IMPACT

## Competition

*Drop-In Meeting to  
Be Held at JSM*

A drop-in information session will take place Monday, July 29, from 2:30 p.m. to 3:30 p.m. in Room 204 of the convention center for the Statistical Impact Competition.

The competition will help identify areas of research, practice, or public policy in which the statistical sciences have made a substantial impact, as well as emerging domains ripe for contributions from statisticians.

Impact is defined as contributions that advance science, inform public policy, and/or contribute to a world in which decisions are data-driven. Had we issued this challenge 20 years ago, the winner in the emerging domains category may

have been genomics. What might it be today? And what critical role will our discipline play in it?

Using publicly available data sets, teams will submit responses to the challenge in either or both categories: significant contributions and emerging domain. Teams will submit their top suggestions in either or both categories and provide rationale for their rankings. The rationale must include the methodology and explicitly describe the data sets used in developing the ranking.

Learn more, including information about dates and prizes, by attending the meeting or filling out and submitting the form at <http://bit.ly/Stats-Impact> to receive a formal announcement about the competition.





# Organizing a Successful Local Career Fair

Brian Gaines, NC ASA Treasurer

Travis Knapp from SAS delivers an elevator pitch to begin the fair while Emily Griffith, NC ASA president, listens at the podium.

Inspired by the success of the ASA's Career Service at the Joint Statistical Meetings and the well-documented analytics skills gap, NC ASA organized a career information fair as a service to their statistics community (<https://community.amstat.org/northcarolina/blogs/2019/career-information-fair>). Attendees learned about the variety of opportunities available to statisticians and data scientists at local organizations. The fair was attended by more than 75 statistics students and professionals, and more than a dozen companies and universities in the Triangle area participated.

## Structure

One important decision in organizing the career fair was determining the format. Their goal was to give attendees a chance to learn more about different types of careers in statistics in addition to hosting a traditional career fair.

The event began with a series of introductions and elevator pitches from each organization.



Representatives from RTI International await the start of the fair.

This provided an overview of the company, a chance to advertise open job opportunities, and a glimpse into the work of the company's professional statisticians. After the introductions, attendees had 90 minutes to visit individually with the companies and universities.

They were unsure how well this format would work, but it went well and feedback was almost universally positive. An unexpected benefit of the speed format was it assisted in the networking between organizations. For example, two organizations exchanged contact information in hopes of pursuing joint projects.

## Recruitment

One of the most important aspects of planning the fair was to recruit an attractive and diverse collection of organizations. By using NC ASA's industry contacts (<https://community.amstat.org/northcarolina/industryinterests>) and recruiting friends and colleagues, they were able to do just that. Fourteen organizations agreed to participate in the fair, including several big employers of statisticians in the area and representatives from the three major universities that constitute the vertices of the Triangle.

To recruit attendees, NC ASA advertised the event via its listserv and enlisted its Scholastic Council to help spread the word. More than 100 individuals registered, 88% of which were students.

## Reflections and Takeaways

Organizing a career fair takes a lot of work and planning, but it was well worth it based on the turnout and feedback NC ASA received. All seven of the organizations that filled out the post-fair survey indicated they would attend a similar career fair next year. Comments from the job seekers were also positive.

Suggestions for improvement included making the elevator pitches and current job openings available beforehand.

Many ASA chapters are positioned well to organize similar events. Contact Brian Gaines, NC ASA treasurer, at [Brian.Gaines@sas.com](mailto:Brian.Gaines@sas.com) if you have questions or would like more information about the logistics. ■



Travis Knapp (left) and Fang Chen (right) from SAS discuss career opportunities with an attendee.



Elizabeth Mannshardt from the US Environmental Protection Agency and the NC ASA past president speak with young professionals at the fair.



Ruchir Shah of Sciome delivers an elevator pitch at the beginning of the fair.

# Biopharmaceutical Section Safety Working Group Offers Update

Judy Li, Amit Bhattacharyya, and William (Bill) Wang, ASA Biopharmaceutical Section Safety Working Group

Safety assessment, monitoring, and safety surveillance—also referred to as pharmacovigilance—is a key component of the pharmaceutical product development life cycle. Pharmacovigilance is defined as “the science and activities relating to the detection, assessment, understanding, and prevention of adverse effects or any drug-related problem, according to the World Health Organization’s 2002 report titled *The Importance of Pharmacovigilance: Safety Monitoring of Medicinal Products*.”

In the past, most pharmacovigilance departments at biopharmaceutical companies focused on the handling of individual adverse event reports. However, there has been a shift from individual cases to aggregate analysis to identify potential adverse drug reactions in recent years. While individual adverse event case handling remains relevant for understanding specifics of each case, the expectations for marketing authorization holders and clinical trial sponsors have increased in aggregate safety evaluation in drug development, life cycle management, and post-marketing surveillance.

Statistical methodology for safety assessment for monitoring and reporting will need to be further developed to match that for efficacy. In addition to evolving improved methodologies to support safety evaluation, our new complex world will require a multidisciplinary approach. No longer will the “safety doc” be alone in determining and explaining safety issues with the simple analysis used in years past. That said, statisticians also need to enhance their knowledge of the clinical aspects and safety background so they can interpret the safety concerns in drug development. What’s needed is a true medical-statistical joint venture to develop the models in the 21st century for safety evaluation.

The industry has been slowly preparing itself for such a collaborative approach over the last few years. In 2014, the ASA’s Biopharmaceutical Section started a safety working group (ASA BIOP-SWG) that included members from both regulatory agencies and industry. The working group initially focused on design and analysis of cardiovascular safety outcome trials for type II

diabetes drugs. Later, it expanded into a systematic review of multisource safety data and corresponding analysis strategies.

In parallel, another dedicated working group was formed in 2015 to further empower the biostatistics community in quantitative safety monitoring. One initiative of this safety monitoring working group was to focus on a systematic review of statistical methodologies on safety monitoring, which include Bayesian and frequentist methods, blinded versus unblinded safety monitoring, individual case analysis versus aggregate meta-analyses, pre-marketing versus post-marketing evaluation, static versus dynamic safety reviews, and methods of safety data visualization.

Another initiative was to perform a thought-leader interview and industry survey on the current practices and future direction of statistical safety statistics practice, tools, and methods. In addition, a systematic review of safety regulations at both global and regional levels (e.g., US, EU, Japan, China) was conducted and published.

To cultivate interdisciplinary collaboration, the aforementioned two efforts were integrated and expanded into one joint interdisciplinary working group between the ASA Biopharmaceutical Section and the DIA scientific communities in 2019. The collaboration between the ASA and DIA—a global, member-driven organization mobilizing life sciences and health care professionals—offers an opportunity for cross-functional global innovations. In service of this cause, the team has assembled industry, regulatory, and academic experts in drug safety and statistics to develop a series of contributions. These include, but are not limited to, the following:

- Develop interdisciplinary frameworks for aggregate safety assessment planning and visual tools to enable/enhance cross-disciplinary collaboration (workstream 1/WS1)
- Deep dive into various safety assessment and monitoring methodologies, including safety-enabled benefit-risk evaluation and machine learning methods (WS2)

- Investigate design/analysis approaches for the integration and bridging of randomized controlled trials and real-world evidence for safety decision-making (WS3)

The working group has been productive in the pursuit of strategic and methodological advances in bringing clinical safety assessment, monitoring, and reporting to patient safety in clinical trials. Using 2018 as an example, the working group has done the following:

- Expanded WS1 into a fully operational and highly productive ASA-DIA working group in safety evaluation
- Started an interactive safety graphics (ISG) interdisciplinary task force to develop a fit-for-purpose visualization tool
- Established the safety-enabling benefit-risk task force and contributed to the DIA get-the-question-right series
- Established a new WS3, “Integrating RCT/RWE for Safety Decision-Making”
- Grown into a sizable multidisciplinary working group with ~ 40 statisticians and ~10 physicians across industry, regulatory, and academic researchers
- Presented at more than six scientific conferences, delivered more than 12 presentations and three short courses, and published more than three manuscripts
- Established a leadership council to enhance our procedure/guidelines for enrolling membership, working together, and publishing together

The working group had a great start in 2019, with the following new activities:

- A benefit-risk assessment planning task force was formed, building on our aggregate safety assessment planning task that started in 2018
- An interactive visualization tool was developed to evaluate drug-induced serious hepatotoxicity by our ISG task force

- A new safety paper series with the DIA *Therapeutic Innovation & Regulatory Science* journal (<https://journals.sagepub.com/doi/10.1177/2168479018793130>) was started. In the near term, the paper series will include a summary of our industry survey on safety monitoring (<https://journals.sagepub.com/doi/pdf/10.1177/2168479018779973>), a review of the global safety regulatory landscape on aggregate safety assessment (<https://journals.sagepub.com/doi/abs/10.1177/2168479019841314>), and a framework for aggregate safety assessment planning

- A book project, *Quantitative Methodologies and Interdisciplinary Practice for Safety Monitoring and Benefit-Risk Evaluation* (running title) has been initiated

- At least six scientific sessions and three short courses will be offered at various scientific conferences by our working group. These include the following:

- Two short courses, a presentation, and a “content hub” at the 2019 DIA annual meeting in San Diego, focusing on topics of safety evaluation and interactive graphics
- Two topic-contributed sessions at the 2019 Joint Statistical Meetings in Denver
- An invited session on the visualization of clinical trial data at the 2019 Midwest Biopharmaceutical Statistics Workshop
- One short course and two invited sessions at the 2019 ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop

Through these various multidisciplinary efforts, the ASA BIOP-SWG is changing how drug safety and benefit-risk are incorporated into clinical development programs, which includes assessment, monitoring, and reporting as part of the regulatory submission and review. This will bring to fruition a coherent drug safety lifecycle based on sound clinical judgment and statistical rigor. ■

**MORE ONLINE**  
For more information, visit the ASA BIOP-SWG website at <https://community.amstat.org/biop/workinggroups/safety/safety-home>.

# Real-World Significance Beyond $P$ -Value: Leadership Forum Discusses Impact of Moving Beyond Statistical Significance

Ruixiao Lu



From left: Peng Yang, Ron Yu, Ron Wasserstein, Steven Goodman, Imola Fodor, Jing Huang, Ruixiao Lu, Chris Barker, Whedy Wang, Jing Du, and Li Zhang

A leadership forum titled “Real-World Significance Beyond the  $P$ -Value” took place May 21 in the San Francisco Bay area, bringing together experts on the topic. The event was hosted by DahShu ([www.dahshu.org](http://www.dahshu.org)), a 501(c)(3) non-profit organization promoting research and education in data science, and co-sponsored by the San Francisco Bay Area Chapter (SFASA, [www.sfasa.org](http://www.sfasa.org)). More than 100 people attended in person, while more than 200 participated online.

Before the panel started, Jing Huang of Veracyte and the founding president of DahShu, introduced the organization and future events. Ron Yu of Gilead Sciences and president-elect of SFASA, reviewed the history and activities of the chapter. Both called for more volunteers to build the community of statistics and data science.

Ruixiao Lu of Genomic Health—a cofounder of DahShu, past president of SFASA, and vice chair of District 6—made opening remarks and moderated the panel. A quick poll from the in-person attendees showed a majority of the audience didn’t think  $p$ -values or statistical significance should be abandoned.

Four prominent panelists shared their perspectives. Ron Wasserstein, ASA executive director, was the first presenter. He gave an overview of the 2016 ASA statement on  $p$ -values and the latest *TAS* special issue on statistical inference. He discussed the rationale of the proposal to abandon statistical significance and restated the importance of good statistical practice, proper use of statistical methods, and transparent reporting to promoting reproducibility and replicability. He also announced that Regina Nuzzo will be joining the ASA staff as senior adviser for statistics communication and media innovation. In this role, she will help the ASA improve communication of statistics policy issues, bring more statistics to journalists and journalism, and enhance public engagement and communication skills for statisticians and statistics students.

The second presenter was Steven Goodman of Stanford University. He gave a talk titled “ $P$ -Values and Epistemology of Biomedical Research,” which highlighted the role of statistical rules as social technologies, not just technical tools, to aid collective data interpretation and decision-making, as well as serve as

guideposts for non-experts. He referred to the *JAMA* publication in April by his colleague John Ioannidis about the importance of predefined rules and pre-specified analyses and argued that banning statistical significance could have unknown and unintended adverse social effects and foster confusion. He proposed using Bayes factors, particularly minimum Bayes factors, and illustrated why they are improvements over  $p$ -values. He concluded by saying there are no quick fixes and changing statistical practices must be accepted and driven by scientists reforming their own fields. He thinks the ASA and others need to develop a multifaceted strategy partnering and learning from sociologists, historians, and philosophers of science.

Whedy Wang and Imola Fodor spoke from their industry experiences as leaders in their institutions. Wang is vice president of biometrics at Theravance Biopharma. She discussed the use of  $p$ -value in confirmatory clinical trials, which are typically well-controlled phase III studies designed with an understanding of the clinical evidence—including scientific assumptions and effect sizes—generated from previous phases. The review and regulatory approval pathway the FDA established includes the consideration of statistical significance to control the type I errors in such settings. Wang discussed the impact of lowering the  $p$ -value threshold, as suggested by Daniel J. Benjamin and James O. Berger in the *TAS* special issue, on the sample size and development cost for a new product. She also illustrated the kind of clinical evidence beyond  $p$ -values reported and considered in regulatory submissions. She suggested that rather than abandoning the statistical significance ship, researchers should focus on proper interpretation of  $p$ -values, promoting good statistical practice with the goal of upholding high scientific rigor and integrity—communicating not just the signal of treatment effect but also the uncertainty.

Fodor, global head of oncology biostatistics for early development and the hematology franchise at Genentech/Roche, provided a cross-functional perspective, summarized the discussions in her work community, and shared her recommendations for what a practicing statistician should do: Do not abandon significance; understand its proper use; and communicate clearly and transparently. She also encouraged critical statistical thinking with scientific curiosity, proactive and collaborative communications, and education of the broader community to increase statistical and scientific literacy.

An active 30-minute floor discussion followed the panelist presentations. Attendees, mostly practicing statisticians in research institutes and health care industries, shared their stories and sought advice from the panelists. The event wrapped up after more than two hours of discussion. ■

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# Things I Wish I Knew at the Start of My Career in Academia

Murali Haran, Karen Bandeen-Roche, Nicholas Horton, Mimi Kim, and Glenn Johnson

## SPEAKERS

**Murali Haran**, professor and head of the department of statistics at Penn State University (statistics department in large research university); **Karen Bandeen-Roche**, Hurley Dorrier Professor and chair of the department of biostatistics at Johns Hopkins Bloomberg School of Public Health (biostatistics department); and **Nicholas Horton**, Beitzel Professor of Technology and Society in the department of mathematics and statistics at Amherst College (selective liberal arts college) contributed as speakers for this event.

Looking for advice on how to best advance your statistics career in academia? What better way than to ask a few experienced and veteran statisticians what their journey has been like? What were the good decisions they think they made, and what lessons were learned along the way? What mistakes did they make, and how did they move forward?

This is exactly what the National Institute of Statistical Sciences (NISS) Academic Affiliates committee did. On April 23, three academics were invited from three disparate academic environments to share their thoughts about what is important to consider when you want to ensure a career path will be both successful and satisfying.

## Think Beyond the First Few Years

Rather than focusing solely on the first few years—which for most people ends up being primarily about getting through tenure—think in terms of building a fulfilling career. Right from the beginning, junior faculty are strongly encouraged to become involved in activities that will help them do what they enjoy, which includes building collaborations within statistics and (depending on the individual's interests) with researchers in other disciplines. It is also important to be open to conversations with colleagues, give talks, attend seminars, travel to conferences, and contribute to your department and profession. These activities will become

part of your professional identity. By being open and engaged, you are also more likely to work on interesting and innovative research topics. Of course, you should also make sure you spend enough time on activities that help you be productive, such as finishing research papers and regularly submitting grants.

It is important to understand that you need to be thoughtful about how you manage all your activities. A crucial skill of those whose careers have been successful is that they are able to temper their efforts by making good decisions regarding the following:

- Choosing which research projects to become involved in
- Managing time properly
- Learning from the examples of those who have come before them

There is a lot to navigate as a new faculty member, so it is valuable to have good mentors to help you along the way, especially with decisions.

## Be Cognizant of Your Well-Being

If your body and mind are not on healthy tracks, it is difficult to achieve long-term satisfaction in any area. Doing everything on the list of expected accomplishments for yourself and everybody else might win you prestigious awards, but the emotional and physical toll can be devastating. Instead, try to steer yourself in healthier directions by taking health (all kinds) seriously, pursuing your own academic passions and interests, and finding time for nonacademic activities that are important to you.

It is not always easy to see when you are in this kind of trouble. For this reason, developing a career mentor—someone you can talk to and who will advise your involvement and activity—is key. It is possible to find such mentors at your university (they do not have to be in your department) or even outside your university. Professional societies can also be helpful for this (the American Statistical Association has mentoring programs).

All these strategies will help your career growth be much more sustainable. And if you do fall off



track, don't despair. This happens more frequently than you may imagine. It absolutely is possible to recover and thrive!

### Teaching the Next Generation

Being engrossed in your own line of research is important; however, being able to balance your research with good teaching is important at small institutions. Moreover, as a role model for your students, understanding the shift occurring in undergraduate institutions in terms of statistics and data science and being able to help articulate these changes into the curriculum is important. It is also important for your institution and the profession. Co-curricular opportunities such as DataFest and StatFest are examples of ways to help your students develop important skills and capacities, as well as demonstrate your passion for teaching, research, and the profession.

### Takeaways

All three speakers spent time at the end of the session responding to questions from attendees, and the following takeaways were reemphasized:

- Make sure you build time into your schedule to work regularly on your own research (e.g., from 8–10 am, no email, no meetings, just research). Focus on your research at a time of day when your mind is the freshest.
- Learn by example (study successful grant applications; high-impact papers; or someone else's course notes, faculty report, and tenure dossier). This is time efficient and will help you do better with each of these tasks. Time management is an important part of being successful.
- Get mentors for different aspects of your career development (research, teaching, work-life balance). You need to be able to regularly turn to people you trust. They may be junior, senior, or outside your department. Identify good mentors—usually balanced/happy people, successful researchers, and good teachers. Don't wait for people to ask you.
- Work on research topics that are interesting to you. Get comments from friends and colleagues. Work on more than one subject area, but not too many. This reduces risk and also helps give you something to switch to when you are stuck.

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**Above all, don't neglect your mental and physical health. It is important to make time for hobbies and relaxation. Try to achieve a work/life balance that works for you.**

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- The publication process can be challenging, and revising and resubmitting a paper can be tedious. But virtually every revised paper is an improvement over the original. Listen to what reviewers say, make the changes you think are appropriate, and respond respectfully.
- Teaching well is central to your job and an important part of being a scholar. It clarifies your thinking about the field (this happens even when teaching the most basic courses), helps you learn to communicate clearly, and can even provide new research ideas. However, you shouldn't allow teaching to encroach upon protected research time. For instance, after a certain point, do not keep trying to improve your notes, slides, homework problems, etc.

Work to identify grant programs well suited to your research. Ask mentors for comments or ideas for where to submit. The grant process can be frustrating, but perseverance is critical.

Treat everyone with respect, including faculty, staff, and students. Remember that, even as junior faculty, you have the power to stand up for yourself. You can learn to be firm but polite; do not burn bridges.

Everyone experiences professional and personal challenges, setbacks, and failures—persist and do not hesitate to seek out help when necessary.

Get yourself out there. Go to conferences, give talks, be active in professional societies. These relationships you build outside the institution are valuable for career development and fulfillment. Professional involvement and service is ideal for overcoming shyness and honing networking skills.

Above all, don't neglect your mental and physical health. It is important to make time for hobbies and relaxation. Try to achieve a work/life balance that works for you. ■

The NISS Academic Affiliates committee hosts several virtual meet-ups during the spring and fall semesters. Information about this meet-up and previous and future events, including event recordings, is available on the NISS website at [www.niss.org](http://www.niss.org).

STATtr@k

# Beyond the Technical: Connecting Data Skills to Business Skills

Adam Kovarik



Adam Kovarik serves as the vice president of data science and business analytics at the Career Education Corporation. He is a devoted father, blessed husband, and passionate soccer fan.

As statisticians, mathematicians, data scientists, and the like, we (generally) know much more about the numbers in front of us than our peers do. This truism often compels us to dive directly into the deep end of an analysis; we are prone to lose sight of the team members treading water in the shallows.

As I have spent several years in the corporate world, allow me to share with you a few lessons I have learned along the way. Before we dig in, I know this will seem like I am dismissing the value of our technical expertise. Quite the contrary. Your expertise is what will make you the most indispensable individual in your company's arsenal. What I hope to convey in the next several paragraphs is how valuable your expertise is *when paired with the needs of your organization*.

## Remember Your Audience

Do you see those people sitting around the table during your presentation on predicting a customer's value? They are business majors, engineers, marketing minds, operations managers, and human resource consultants, to name a few. They do not want nor do they need the nominal difference in AICc for the three models you ran. They do not want nor do they need a discourse on the importance of bootstrapping as a validation method. They have decisions to make and a bottom line to impact. You are in that room giving that presentation for one simple reason: to improve the business.

If you are not in that room giving the presentation, perhaps it is because you need to learn this lesson. Your business could be making widgets, selling software, or catering parties; it does not matter. Those people at the desk want the tools and information at their fingertips to make the business better. Focusing on the minutia may sell your intellect, but it may also disconnect you from the true goals of the organization. Once this happens, your analysis becomes a footnote.

## Quality Is Paramount

You spent eight hours putting together an analysis on revenue impact. Now spend eight hours validating your outcome. Perhaps that is overkill, but I exaggerate if only to stress the importance. You will be unambiguously judged by the accuracy of your figures, more so than by any other characteristic a "data person" is presumed to possess. This means you must unconditionally adopt a routine inclusive of quality assurance.

Clear your mind, go for a walk, have a bite to eat, watch some Netflix in the cafeteria; do whatever fits to remove your brain from the task. I find surfing /r/funny on Reddit to be a great resource here. Once you are back, it is time to review the analysis you just put together. Start with the basics. If your analysis involves organization revenue, review the detail in one P/L group. Do you have a robust model that predicts customer retention? Make sure your independent variables are accurate by reviewing a sample of customers one-by-one.

The swiftest way to lose your credibility is to overlook an obviously noticeable data error. There will be irregularities you did not see coming, or alternative views you did not prepare. However, if your senior vice president is the one to spot that the number of customers in your analysis only added up to 50% of the actual, do not expect him/her to accept your conclusion so readily and resolutely. We all want to hit the long ball, but fail to pick up a routine grounder and you will quickly lose your chance to be in the starting lineup next game.

## Focus on the Finish

*Planes, Trains, and Automobiles* is one of my favorite movies of all time. Tradition in my household demands we watch it every Thanksgiving between football games. For those who do not know the plot, Neal (Steve Martin) is determinedly trying to get home for the holiday after wrapping up a business



trip. Along the way, he befriends a traveling salesman by the name of Del (John Candy). After a bevy of mishaps, unfortunate circumstances, and a few tears—ostensibly the result of Del’s involvement—Neal finally makes it home to see his family on Thanksgiving. Alongside him as he walks into his house is none other than Del.

The beauty I have always found in this concluding scene is the pure delight expressed by Neal’s wife, notwithstanding her husband’s extreme tardiness and the apparent stranger standing in her foyer. She focused on what was important—that her husband was home—not on the trial and tribulations he overcame to make it there.

A long-winded analogy to express this point: Do not detail your journey when you are at the table. We do not want to treat your model like a black box; however, we do not want to be so caught up in the nuance that we lose sight of the core discussion. Believe me, this will be to your benefit, as well. The more background you present, the more opportunity there will be for individuals to take the discussion down a rabbit hole. Again, remember you are in that seat to help the company get to the right answer. If the journey you took to get that answer involved a canceled flight, a disgusting motel room, and a horrendous car accident, save those stories for sidebar conversations.

### Listen, Listen, Listen (and Write)

The other day, my wife was explaining to me the Saturday plans for our kids’ soccer games. With two boys on two teams playing at two locations, it takes a bit of logistical magic to get everyone where they need to be on time. Unfortunately, for everyone involved, she was telling me these plans while *How It’s Made* was on. It was an especially intriguing segment involving the construction of ballpoint pens. Suffice to say, I had no idea what the plans were when Saturday morning arrived. I winged it, got my older son to soccer on time, but forgot the team snacks.

When you are in a meeting or on a call to take in a request or prepare for a project, *listen*. Listen

to what the problem statement is. Listen to the key stakeholders as they express their needs. Then write down what you hear. If I had a nickel for every time I watched a junior analyst passively participate in a meeting while failing to take notes, I would have a large bag of nickels. Worse yet, be the individual who starts solving the problem in his/her head in the midst of the meeting. That’s a sure-fire way for your deliverable to miss the mark. Establish a note-taking system early and consistently. Use OneNote, Evernote, Notepad, paper and pencil. . . . It does not matter. Your future self will thank you.

### The Tools Might Actually Be Irrelevant

Blasphemy, I know; however, hear me out on this one. Who reading this does not receive the typical monthly invite to participate in a “do you prefer R or Python” survey from some content provider looking for a quick hit? Meanwhile, SAS users are screaming from the corner. Can you code in Java? How strong are your Shiny skills? Have you ever met Cassandra? In this era of warp-speed technological advancement, the tools at our disposal seem endless. The truth is the sooner you recognize the tools are a means to an end, the sooner you will focus more on the “end” and less on the “tool.” If you know how to build a house, using a hammer or a nail gun will both work. Sure, one is quicker than the other, but people will appreciate the building—not the construction method—in the end.

### Keep Learning

Now that I told you the tools are not quite as critical as you presume, let me remind you to keep learning. If you do not know R yet, start learning. If you spend all day in SAS but have trouble understanding how your BI team pulled the data you are analyzing, pick up a book on SQL. In your current role, do not focus on the tools; focus on the outcome. However, if you want your insights to be stronger, your turnaround times shorter, your presentations more impactful and—perhaps most importantly—your paychecks to be bigger, build your skillset. ■

## STATS4GOOD

## Data for Good Highlights at JSM 2019



With a PhD in statistical astrophysics, David Corliss leads a data science team at Fiat Chrysler. He serves on the steering committee for the Conference on Statistical Practice and is the founder of Peace-Work, a volunteer cooperative of statisticians and data scientists providing analytic support for charitable groups and applying statistical methods in issue-driven advocacy.

The Joint Statistical Meetings is one of the largest gatherings of statisticians in the world, making it one of the most important ways to learn about Data for Good, see presentations on the latest methodologies, get involved with new projects, and discuss the important challenges we face every day. JSM's theme this year is *Statistics: Making an Impact*, and Data for Good is one of the best ways to make a huge impact with statistical science.

With so many presentations and other activities at JSM, it's easy to become overwhelmed. Using the search engine on the JSM website's main page (it's in the upper-right corner), you can look for the sessions, subjects, presentations, and authors you want to see. Even if you won't be attending JSM, searching the presentations is one of the best ways to find out about new developments, get in contact with researchers, and begin using statistics to support the cases and causes that mean the most.

Looking through the opportunities at JSM this year, here are just a few that stand out (but there are many more):

- On Sunday at 4:00 p.m., the Social Statistics Section is sponsoring a session (#50) with papers on measuring discrimination and its impact. Examples include salary differentials by gender, the impact of voter ID laws, and bias in predictive policing algorithms. These papers

are important both for their subject and also for learning methods that can be applied to other areas. For example, the biased predictor variables in Lynne Billard's paper on salary differences by gender are a problem affecting many types of discrimination.

- On Monday at 8:30 a.m., you can start your day with Administrative Income Data, Survey Data, and Inequality (#106). Subjects include evaluating the distribution of personal income, income tax non-compliance, and a historical review of President Johnson's war on poverty. In addition, Bruce D. Meyer and Derek Wu will present on a new way to estimate poverty—something critical today in my view—with Mollie Orshansky's original poverty line estimates of the 1960s only updated for inflation, not rebuilt from first principles. As a result, longitudinal changes have undermined the degree to which the official numbers reflect the reality of poverty in America today.
- On Thursday at 10:30 a.m., there will be an important session (#630) on machine learning applications in criminal justice and how to address some of the problems found there. Kristian Lum from Human Rights Data Analysis Group will

present an algorithm for removing sensitive data, Richard Berk and Ayya Elzarka from the University of Pennsylvania will speak about fairness in risk forecasting in criminal justice, and Cynthia Rudin from Duke will present on the hot topic of black box models. These applications touch on some of the most important issues in Data for Good today, and the methods to be presented can be used in areas beyond criminal justice.

In addition to topics specific to Data for Good, JSM attendees will want to look for presentation about statistical methodologies needed in our research. For example, there will be a session titled Multiple Imputation Monday at 8:30 a.m. On Tuesday at 10:30 a.m., Andrew Hoegh will present a multiscale spatiotemporal model for forecasting civil unrest. Methodological presentations such as these are essential for learning the latest techniques to be applied in a wide variety of areas.

On Sunday at 4:00 p.m., there will be a session titled Improving Data Collection: Challenges in Survey Practice from the Government Statistics, Social Statistics, and Survey Research Methods sections. This takes place at the same time as the discrimination session, so I'll be reading the papers in the JSM Proceedings and trying to catch up with some of the authors to discuss their work in person.

# Proposals, Abstracts Sought for ICES VI



INTERNATIONAL CONFERENCE ON  
**ESTABLISHMENT STATISTICS**

NEW ORLEANS, LOUISIANA • JUNE 15-18, 2020

Students and early-career statisticians will want to check out new topics. Statistics Without Borders has a session on Sunday at 2:00 p.m. that will introduce you to the work of this leading Data for Good organization. Also, keep in mind that one of the best ways for people to get started in Data for Good is providing statistical analysis for a group to which you already have a connection. Look for presentations in an area in which you are volunteering now and see how you can get involved.

Posters are another great way to meet new people and learn about new frontiers and methodologies in Data for Good. Rajarshi Dey and Andrei Pavelescu's poster on gerrymandering and Nilesh Shah's investigation of racial bias in calling one type of penalty in football games sound like good ones to have on your list.

JSM is the biggest event of the year. A little careful planning can go a long way toward turning it into opportunities for *Statistics: Making an Impact*. Even if you aren't going to JSM, have a look on the website to find other people and projects in your areas of interest and be sure to look at the *JSM Proceedings* when they come out. On a personal note, I hope to have the opportunity to meet and talk with many of you this year at JSM! If not, you can write me at [davidjcorliss@gmail.com](mailto:davidjcorliss@gmail.com). I am always interested in receiving input, feedback, and ideas for what you would like to see here each month. ■

ICES VI, the sixth in the series of International Conferences on Establishment Statistics, is designed to look at the key issues and methods pertaining to establishment surveys. We invite you to submit proposals and abstracts for a topic-contributed session by August 15. They will be reviewed, and submitters will be notified by September 10 about whether their submissions have been accepted.

A topic-contributed session is planned in advance by one or more organizers and includes five speakers presenting on a shared topic. Up to two of the speakers may be discussants, and each speaker has 20 minutes to present.

Submissions for contributed and speed sessions open October 16 and close December 3.

Contributed paper sessions consist of four 20-minute oral presentations. These sessions are assigned a chair, and 20 minutes at the end of the session are reserved for floor discussion. Contributed paper sessions will be arranged by the ICES VI Program Committee from submitted contributed paper abstracts.

Speed sessions are a combination of both an oral and poster presentation. These are intended to encourage face-to-face discussion and provide the opportunity to display graphic and tabular material. Each speed session begins with a five-minute overview presentation. Following this, authors will remain next to their poster for the duration of the session to answer questions and discuss their work. Each author is provided a 4-foot-high by 8-foot-wide (122 cm by 244 cm) bulletin board on which to display a summary of their paper. Note that poster presenters are not supplied with audio-visual equipment or electricity. Poster sessions will be arranged by the ICES VI Program Committee from submitted abstracts.

For more information and to submit a proposal or abstract, visit [ww2.amstat.org/meetings/ices/2020/submitanabstract.cfm](http://ww2.amstat.org/meetings/ices/2020/submitanabstract.cfm). ■

# In Anticipation of ICHPS ...

## *A Conversation with Long-Term Excellence Award Winner* **Don Hedeker**

Throughout the past 20 years, the International Conference on Health Policy Statistics (ICHPS) has played a vital role in the dissemination of statistical methods in health policy and health services research. In preparation for the next conference, which will take place in January 2020, we're running a series of interviews with previous Health Policy Statistics Section award winners.

The following is an interview between Juned Siddique and Don Hedeker, conducted in 2015 in honor of Don being awarded the Long-Term Excellence Award.

**Juned:** Your degree is in quantitative psychology from The University of Chicago. Could you tell us a little bit about the Department of Behavioral Sciences Committee on Research Methodology and Quantitative Psychology, which granted your degree?

**Don:** It was a small committee within psychology. Darrell Bock taught courses on multivariate statistics, on loglinear modeling, on item response theory. And Don Fiske taught courses on research methodology—designing studies, evaluation research—so I took courses like that. Steve Shevell taught a class on mathematical psychology, and also one on experimental design. But there weren't that many, because it was a small group, so we were encouraged to take classes in statistics, in econometrics, in other areas. And so I took a lot of courses, actually, in statistics at that time.

**Juned:** Do you feel like it was a good choice to study quantitative psychology versus something more traditional like statistics or biostatistics, or even economics?

**Don:** You know, I've often thought about that. What was really good about quantitative psychology was that because it was a small committee, we took classes in other areas, whereas if I were strictly in a biostat program, I might not have done that. So, the benefit was I learned how sociologists applied statistics, how econometricians applied statistics, how

statisticians thought about statistics, how psychologists did, and I got exposed to, in particular, latent variable models in psychology.

At that time—this was in the 1980s—there wasn't that much exposure to latent variable models of any type in statistics, per se. But in psychology, you can't measure IQ or personality with a blood test, right, so it's all latent variables, really. And so is ability in taking an educational test; that's a latent variable. So, I think that exposure really helped.

**Juned:** Music has been a big part of your life for a long time. Could you talk about your interest in music, how it began, and your current band, the Polkaholics?

**Don:** I was one of those kids who grew up in the '60s, and I saw the Beatles on the *Ed Sullivan Show* when I was five or six years old and I thought, wow! It just blew my mind. It was like I want to get a guitar. As soon as I saw that, I wanted to sign up. And then when I was in high school, I started playing in bands. We played at sock hops and high-school events. I played in bands here at The University of Chicago. My biggest musical claim to fame is in spring of 1980, when I was a senior here at U of C. They had the Ramones playing at Ida Noyes Hall, and we got to open for the Ramones.

And how I started the Polkaholics was this. When I was in high school, I played in a band where we played a couple weddings. And if you play a wedding in Chicago, you have to play a polka song. I remember learning "Beer Barrel Polka," and I was like, wow, this is kind of cool, actually. That was my impression back when I was in high school. And then it kind of stopped there.

And then, you know, in the '90s, me and my wife, Vera, we went to thrift stores a lot to get outlandish clothes, and eventually my closet got completely filled. I couldn't fit any more clothes, so I started looking at the records. And I saw these polka records and it just kind of intrigued me, so I started buying them.

You know, Iggy Pop, he once said he had to find his own blues, and I felt that way, too. I've got to find my own music. And so, to me, polka connected with my ethnic background and growing up in



The Polkaholics at the May Fest in Lincoln Square in 2014. From left: Blitz Linster on bass and vocals, Action Jackson on drums and vocals, and Dandy Don Hedeker on guitar and vocals. Photo by Vera Gavrilovic

Chicago, and so I thought, wow, maybe we can play this music with our standard rock instrumentation. So, when we started, it was just like, can we even pull this off? And we did, and it was like, wow, this is so much fun. So, 18 years later, here it is, and we're still going.

**Juned:** Returning to statistics, it seems like a lot of your ideas for statistical work come from your collaborations.

**Don:** Exactly. I think collaboration, for a biostatistician, is really important because, throughout my career, I've always tried to develop methods that can be used, and not some statistical thing that nobody's going to use. So, when you deal with actual research in some substantive areas, you come to learn how they're doing things and how you can improve upon that. Much of my statistical developments and software have been through collaboration and trying to improve upon the methods my colleagues are using, and trying also to make methods they can use.

**Juned:** You and Robert Gibbons wrote a book on longitudinal data [*Longitudinal Data Analysis*]. How did you decide to do that?

**Don:** When we first started it, there really wasn't too much out there in terms of good books on longitudinal data. Now, of course, there are several very good, excellent books on longitudinal data in different areas.



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Again, the idea is to disseminate and try to present the methodology in a way that's not overwhelming technically. It's a fine line you've got to walk. You don't want to make it so simple that you lose meaning. So, trying to strike that right balance.

**Juned:** What does the future hold for you? Do you have any ongoing projects underway or new methodological areas?

**Don:** Yes, definitely. I have a grant from NHLBI [National Heart, Lung, and Blood Institute] with Genevieve Dunton from the University of Southern California to further develop the software we've been working on for mixed location scale models. What I've developed is to allow multiple random effects in terms of the mean, so intercept and trend, things like that. You have multiple random effects there, and then to build a second model where the random effects from the first model influence a subject's outcome. So that was the nature of the grant, and we're working on methodology for that. And that's going well. ■

**MORE ONLINE**  
Read the full interview at [www.healthstats.org/articles/Interview%20with%20Don%20Hedeker%202016.pdf](http://www.healthstats.org/articles/Interview%20with%20Don%20Hedeker%202016.pdf).

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# Invited Session Proposals Sought for JSM 2020

David Banks, JSM 2020 Program Chair

**H**i, folks! This is simple. It is time to start planning the 2020 Joint Statistical Meetings. To that end, the 2020 Program Committee is soliciting proposals for invited sessions. (And in a few months, we shall be soliciting proposals for topic-contributed sessions, and later on, asking for invited posters, contributed posters, and contributed talks.)

## Invited Paper and Panel Sessions

The process for submitting a proposal is straightforward. For the standard invited session, there are usually three speakers and perhaps a discussant, and the session has unity of theme. For the standard panel, you will have perhaps five to seven speakers who collectively address some interesting topic. JSM usually has many more standard sessions than panel sessions.

Once you have chosen your participants, identify up to three sponsors. You will provide a ranked list of these sponsors when you submit your session proposal online. A sponsor can be an ASA section, an interest group, an affiliated society (e.g., IMS, ENAR, SSC, etc.) or perhaps a journal. It is probably smart to have a short conversation with the section program chair, interest group chair, program committee representative from the affiliated society, or the relevant journal editor to ensure your proposal aligns with the goals of those groups. You can find most of these people on the JSM Program Committee list ([url](#)), which will be on the 2020 JSM website when it goes live at the end of this month.

When you submit a proposal, you will need to provide a title, a few sentences describing the session, and a list of speakers with their affiliations and the titles of their talks. If your speakers can provide abstracts, that is even better. Titles and abstracts may be changed later, so these are not binding. But the more detail you can provide, the more serious your proposal appears.



Philadelphia, Pennsylvania, August 1-6, 2020

The competition for invited session slots is intense. My advice is that a strong proposal has diverse speakers: gender balance is good, and so is having a mix of seniority (e.g., a new researcher or practitioner, a mid-career person, and someone who is clearly senior). Topicality is also important; a fresh session that addresses new ideas, applications, or theory is much more attractive than one rehashing settled science. And if your topic aligns with the ASA president's theme, that carries weight. Wendy Martinez has chosen the theme "Everyone Counts: Data for the Public Good."

Most invited sessions are sponsored by ASA sections. Each section gets at least one guaranteed invited session, which is selected by the section's program chair. But proposals that are not chosen for the guaranteed slot then go into an open competition in which the JSM Program Committee decides which ones will be chosen for the limited number of invited sessions.

The open competition is very much a crapshoot. The Program Committee does not just weigh the merits of a proposal, but also seeks balance across fields, diversity, and crowd appeal.



David Banks



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# EVERYONE COUNTS

## Data for the Public Good

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### Memorial Sessions

There are five open slots for memorial sessions at JSM 2020. One strategy to maximize your chance of obtaining an invited memorial session is to first submit your proposal as a regular invited session. You may pick “memorial session” as the sponsor. But also pick sections as sponsors. If one of the sections picks up your proposal as one of its guaranteed sessions, then you are done. If not, your proposal might still be selected in the open competition for invited sessions. If that fails, your proposal will automatically compete for one of the five designated invited memorial session slots.

### Invited Poster Sessions

The Opening Mixer at JSM 2020 will have up to 30 invited electronic posters on display. Please send your idea (or the poster itself) to the JSM 2020 Poster Chair.

### Introductory Overview Lectures

We want to have four Introductory Overview Lectures (IOLs). These should address hot and significant statistical topics that will interest a broad swath of JSM attendees. The one or two speakers in an IOL should be engaging and capable of communicating complexity clearly. Note that IOL speakers may violate the one-talk rule; they may also present in an invited, topic-contributed, or contributed session. Please email the program chair with suggestions for topics and speakers.

### Dates and Details

Invited session proposals may be submitted through the JSM online system ([ww2.amstat.org/meetings/jsm/2020/submissions.cfm](http://ww2.amstat.org/meetings/jsm/2020/submissions.cfm)) between July 17 and September 6 at 11:59 p.m. ET. Decisions about the invited program will be made by the end of September.

I have been going to JSM for 35 years. It is my favorite meeting, with some of my favorite people. I hope all of you will help me make 2020 the best JSM we have ever had. ■

## Mentoring Award Honoree Rewarded for Impact

Philip Scinto

There are many fine, important, and prestigious honors awarded by the ASA each year. One of my favorites is one that rewards the impact (Note: “Making an Impact” is the theme of JSM 2019) a member has on the lives of other statisticians: the ASA Mentoring Award. This is the fourth year the award has been given, and it has extra special meaning to me because the winner happens to be my mentor, Steven Schwager.



Steven Schwager

We may not think of mentors as famous, champions, or people of significant importance. However, to those of us who are mentored, being a mentor means being a hero. You don't have to be a CEO, president, director, fellow, professor, manager, or board member to be a great mentor. But you do need to care more about others than you do yourself. You need to take the time to learn about others, instead of promot-

ing yourself to them. You need to have the patience to co-evolve with a person over time. You need to be a leader and set great examples. A great mentor has a tremendous impact on the lives of many, with the added benefit of inspiring mentees to counsel and mentor others.

Steve had an impact on me from the day I set foot on the Cornell campus in 1982 (yes, I am old). Steve was not my de-facto mentor because he was my adviser. He was (and still is) my mentor and a mentor to many others, because that is his passion. Whether as a professor, adviser, faculty adviser for student-run clubs, a consultant in industry, or friend, Steve always enthusiastically takes time and care to listen and discuss career, statistics, and life. Steve's influence knows no bounds. Whatever corner of the globe you originate from or your field of interest, Steve will take the time to learn about you and be there for you.

I am proud of the ASA for sponsoring the Mentoring Award and recognizing Steve. While being a mentor does not mean fame, fortune, and prosperity, it does mean making our profession, our community, and our world a better place. If you are in a situation that cannot or does not offer access to this culture, the ASA and ASA sections and chapters offer several opportunities to be involved in a mentoring program as either a mentor, mentee, or both. I highly recommend taking the time to enhance your life/career and make a lasting impact on the life/career of others through mentoring.

Steve will be recognized with the mentoring award at the ASA President's Address and Awards ceremony Tuesday night at the Joint Statistical Meetings in Denver.

Nominations for next year's mentoring award are due March 1, 2020. More information can be found at [www.amstat.org/ASA/Your-Career/Awards/ASA-Mentoring-Award.aspx](http://www.amstat.org/ASA/Your-Career/Awards/ASA-Mentoring-Award.aspx).



Subha Chakraborti

For the past 35 years, University of Alabama professor of statistics and Morrow Faculty Excellence Fellow **Subha Chakraborti** has traveled the world researching and developing new theories and methods in statistics and its applications. Chakraborti's contributions to the field have earned him many prestigious awards, recognitions, and elite organization invitations. Now, they have earned him one more: the Burnum Distinguished Faculty Award.

The Burnum Distinguished Faculty Award is one of the university's highest honors for a faculty member and is awarded to one recipient annually to recognize and promote excellence in research, scholarship, and teaching.

Chakraborti's focus has been on statistical application in nonparametric statistics, where decisions are made without referring to a distribution, such as the bell curve. He has played a key role in developing the niche area of nonparametric statistical quality control—developing methods of making things better by improving the monitoring of processes.

He has coauthored a book on the topic, *Nonparametric Statistical Inference*, that's gone through five editions, and he just published another book, *Nonparametric Statistical Process Control*, that he coauthored with one of his former doctoral students from South Africa—a country Chakraborti visited as a Fulbright Fellow in 2004.

Though citing how his research has been specifically used to affect practical application is

## Obituary

### Arlin M. Feyerherm



Arlin M. Feyerherm passed away January 7, 2019, at St. Francis Hospital in West Point, Nebraska.

Arlin was born May 21, 1925, in West Point to Fred and Ida Feyerherm. He spent his childhood on the family farm east of West Point as the youngest of seven children and attended St. Paul Lutheran School through 8th grade. He graduated from West Point High School in 1943. Upon graduation, he spent six months in the Navy V12 program at Doane College. He was selected for an accelerated NROTC program at the University of Minnesota and graduated in 1946 as an ensign in the Navy with a degree in naval science and tactics. After the war ended, he earned his master's degree in mathematics at Iowa University. He taught mathematics for two years at Northwest Missouri State College while completing his PhD in mathematics with a minor in statistics from Iowa State University in 1952 and taught classes there for a year.

Arlin and Junavae Henry, a fellow West Point High School graduate, reconnected on New Year's Eve of 1950 and were married on August 25, 1951, while Arlin was still a doctoral student. In the fall of 1953, they moved to Manhattan, Kansas, for Arlin to teach in the department of mathematics at Kansas State University (KSU). Carol, Joan, and Roger were born over the next seven years.

In 1959, Arlin was one of five faculty members who formed the department of statistics at KSU. This provided him the opportunity to consult with other disciplines, particularly with faculty in the college of agriculture and to publish in applied journals. Much of his later research was related to weather and wheat yields as he worked with NOAA and NASA satellite data.

Arlin and Junavae were active members of St. Luke Lutheran Church in Manhattan. He served for many years as the Sunday school superintendent and as an elder on the church council. His work, family, and church were his primary pursuits.

Arlin retired in 1993 after 40 years of teaching. The retirement years included travel and time to enjoy grandchildren or to play a round of golf. In 1999, his son, Roger, built Arlin and Junavae a home in his neighborhood in Lenexa, Kansas. Junavae preceded Arlin in death in July of 2008 after an extended illness. From that time on, Arlin helped in the Feyerherm Construction office and worked on his statistical model involving wheat yields of new breeds of wheat using data from 10 universities in the Great Plains. Each spring and fall until 2018, he would produce a report on the new breeds for the wheat breeders. In addition, he was faithful to working out daily, a practice he credited for his health and longevity.

In May 2016, Arlin moved back to West Point, Nebraska, to be near his daughter Joan, who is a physician assistant.

difficult due to the proprietary nature of the information, the field of quality control methods has changed the face of many industries in the past 75 years, from manufacturing to surveillance to disease monitoring.

"There's a difference between my line of work and someone, say, in engineering, who might build something and show it saying, 'Look, here's what I've done,'" Chakraborti said. "Our work is methodological, using mathematics, more theory, computers, that one could use to improve processes. But clearly, in small measures over time, we get to see a return on how our work has helped."

"There are industries that are using some of this work to make their processes more efficient, and that's one way how we get to see how this research is used," Chakraborti continued. "The Six Sigma, for example, uses statistical quality control technology to reduce variation. If you can reduce variation, you can make a better product."

The Burnum recipient must have demonstrated superior scholarly or artistic achievements and a profound dedication to the art of teaching, all of which bring distinctive credit to the academic community in general and to The University of Alabama in particular, according to the Burnum website.

"The selection committee was impressed that he is a fellow of the American Statistical Association, which is an honor awarded to less than 1% of the association's thousands of members," Carvalho said. "The committee was also impressed by his international recognition and the global partnerships that his work has brought to The University of Alabama. That's really what made him stand out amongst all of the nominees."

Read more about Chakraborti and the award on The University of Alabama's website at <http://bit.ly/2Fq1Dm4>. ■



F. DuBois Bowman

**F. DuBois Bowman**, dean of the University of Michigan School of Public Health, presented the 14th annual Donna J. Brogan Lecture in Biostatistics April 15 to a large audience at the Rollins School of Public Health at Emory University.

Bowman began his academic career as an assistant professor of biostatistics at Emory in 2000, was promoted through the ranks to full professor, and then moved to Columbia University in 2013 to chair the biostatistics department. In 2018, he moved to Ann Arbor to assume his current position.

Bowman's talk was titled "Precision Discovery of Neuroimaging Biomarkers for Parkinson's Disease." He summarized the natural progression of this complex neurodegenerative disorder, emphasizing the presumed delay between disease incidence and the observable onset of hallmark motor symptoms. His research focuses on using newly developed statistical methods to analyze noninvasive neuroimaging data to identify biomarkers that will detect PD much earlier than is possible today.

Bowman concluded his presentation by expressing his gratitude to Donna Brogan for her activities over many years in advancing careers for women in statistics. He included in his slides the following quote from an invited talk Brogan gave at a recent Women in Statistics and Data Science Conference: "I hope that some of my personal and group efforts to combat sex discrimination in employment, education, and civic life have contributed in some small way to the larger and ongoing goal of equal rights and opportunities for girls and women in this country." ■

## Statistics Education Project Wins Grand Prize in NSF Competition



From left: Karen Marrongelle of the National Science Foundation, Lee Zia of the National Science Foundation, Dennis Pearl of The Pennsylvania State University, Lawrence Lesser of The University of Texas at El Paso, Robert Carey of The Pennsylvania State University, and Anne Kinney of the National Science Foundation Photo by Christopher Coox/NSF

**P**roject SMILES, a statistics education research team, received a \$3,000 grand prize in the National Science Foundation's (NSF) inaugural We Are Mathematics Video Competition during a ceremony at the NSF in May.

Project SMILES is a \$321,000 three-institution NSF EAGER (DUE) grant to develop and assess interactive songs for learning introductory statistics. Principal investigators for the grant are Dennis Pearl of Penn State, Lawrence Lesser of The University of Texas at El Paso, and John Weber of Perimeter College at Georgia State.

Soliciting three-minute videos about NSF-funded projects in the mathematical sciences, the We Are Mathematics Video Competition aimed to bring content to life in a way that can help break down barriers for those who may not understand what it means to conduct research in the mathematical sciences.

Professionals from all major mathematical sciences organizations conducted two rounds of judging for the competition. They were looking for creativity, clarity/accuracy of mathematical concepts/ideas, communication of mathematics in an accessible/exciting way, and artistic/technical quality. Winning videos were screened this May at the biennial National Math Festival, organized by the Mathematical Sciences Research Institute in cooperation with the Institute for Advanced Study and the National Museum of Mathematics and attended by some 20,000 people.

Project SMILES (Student-Made Interactive Learning with Educational Songs) created (and launched in May 2018) an online collection of 28 high-quality songs designed to span learning objectives of introductory statistics. The songs are interactive in that the interface solicits and provides feedback on student contributions. It then plays back the song with student input integrated with a synthetic voice and highlighted in scrolling lyrics. Pilot studies showed songs helped reduce anxiety and increase engagement with material. They were also found to be relevant to learning. Randomized experiment data were collected at two- and four-year institutions to further assess the effectiveness of the intervention. ■

### MORE ONLINE

The project video and songs are at [www.CAUSEweb.org/smls](http://www.CAUSEweb.org/smls).

# Alabama-Mississippi Chapter Hosts Mini-Conference in Mississippi



From left: Torumoy Ghoshal, University of Mississippi; Rachel Haggard, University of Mississippi; Anastasia Hartzes, University of Alabama at Birmingham; Zhixin Wang, University of Alabama at Birmingham; Boyi Guo, University of Alabama at Birmingham

The Alabama-Mississippi chapter hosted a mini-conference April 5 at The University of Mississippi (Ole Miss). Nearly 70 current and prospective chapter members attended from The University of Mississippi, Mississippi State University, The University of Alabama at Birmingham, The University of Memphis, and University of Central Arkansas.

The keynote speaker was **Robert Serfling**, who is an ASA Fellow, IMS Fellow, and former NSF program officer. The title of his talk was “Depth, Outlyingness, Quantile and Rank Functions in Multivariate and Other Data Settings.”

Student presenters and their topics included the following:

- **Aleksandr Beknazaryan** of The University of Mississippi, “On Mutual Information Estimation for Mixed-Pair Random Variable”
- **Torumoy Ghoshal** of The University of Mississippi,

“Improving Performance of Convolutional Neural Networks via Feature Embedding”

- **Boyi Guo** of The University of Alabama at Birmingham, “Estimating Optimal Treatment Regimes Using Multivariate Random Forests”
- **Rachel Haggard** of The University of Mississippi, “Challenges of Data Visualization: Exploring Effective Ways of Mapping Margins of Errors”
- **Anastasia Hartzes** of The University of Alabama at Birmingham, “Comparing Lumped and Unlumped Markov Chains: Investigations into Goodness of Fit”
- **Zhixin Wang** of The University of Alabama at Birmingham, “Consideration of Batch Effects in Phase II Cancer Clinical Trial”

The chapter also held a business meeting. Topics of discussion included a recap of recent Alabama-Mississippi Chapter activities, a report on the ASA Council of Chapters meeting, criteria for the ASA chapter awards, and a chapter treasurer’s report. In addition, the chapter accepted nominations for the vacant vice president position and reelected Hailin Sang of The University of Mississippi as secretary.

Continuing officers include President Jon Woody (Mississippi State University), Treasurer Bob Oster (The University of Alabama at Birmingham), and Council of Chapters Representative Jeff Szychowski (The University of Alabama at Birmingham). Elections for president and treasurer will be held in 2020.

Finally, it was announced that the chapter name has been changed to the “Alabama-Mississippi Chapter.” ■

# sectionnews

## Biometrics

The following JSM 2019 papers are cosponsored by the Biometrics Section:

### Topic-Contributed

- *Integrated Principal Components Analysis* – Tiffany M. Tang, University of California at Berkeley, and Genevera Allen, Rice University
- *Are Clusterings of Multiple Data Views Independent?* – Lucy Gao, University of Washington; Daniela Witten, University of Washington; and Jacob Bien, University of Southern California
- *High-Dimensional Log-Error-in-Variable Regression with Applications to Microbial Compositional Data Analysis* – Pixu Shi, University of Wisconsin-Madison; Yuchen Zhou, University of Wisconsin-Madison; and Anru Zhang, University of Wisconsin-Madison
- *A Spatial Bayesian Modeling Approach for Cortical Surface fMRI Data Analysis* – Amanda Mejia, IU; Yu Yue, The City University of New York; David Bolin, University of Gothenburg; Finn Lindgren, University of Edinburgh; Martin Lindquist, The Johns Hopkins University
- *Tailored Optimal Post-Treatment Surveillance for Cancer Recurrence* – Rui Chen, University of Wisconsin-Madison
- *Propensity Score Weighting for Causal Inference with Multiple Treatments* – Fan Li, Duke University
- *Triplet Matching for Estimating Causal Effects with Three Treatment Arms and Extensions* – Giovanni Nattino, The Ohio State University; Bo Lu, The Ohio State University; Junxin Shi, The Research Institute of Nationwide Children's Hospital; Stanley Lemeshow, The Ohio State University; and Henry Xiang, The Research Institute of Nationwide Children's Hospital
- *Causal Isotonic Regression* – Ted Westling, University of Massachusetts-Amherst; Marco Carone, University of Washington; and Peter Gilbert, Fred Hutchinson Cancer Research Center

- *Stage-Wise Synthesis of Randomized Trials for Optimizing Dynamic Treatment Regimes* – Yuan Chen, Columbia University Mailman School of Public Health; Yuanjia Wang, Columbia University; and Donglin Zeng, UNC Chapel Hill

### Invited

- *Statistical Inference for High-Dimensional Models via Recursive Online-Score Estimation* – Runze Li, Penn State University
- *Dimension Reduction for High-Dimensional Censored Data* – Shanshan Ding, University of Delaware; Wei Qian, University of Delaware; Lan Wang, University of Minnesota
- *Network Response Regression for Modeling Population of Networks with Covariates* – Emma Jingfei Zhang, University of Miami; Will Wei Sun, University of Miami; Lexin Li, University of California at Berkeley
- *A Decision Theoretic Approach to Preemptive Genotyping* – Jonathan Schildcrout, Vanderbilt University Medical Center
- *Data-Enriched Regression via Generalized Linear Models* – Ying Qing Chen, Fred Hutchinson Cancer Research Center; Sayan Dasgupta, Fred Hutchinson Cancer Research Center; Cheng Zheng, University of Wisconsin-Milwaukee; and Yuxiang Xie, University of Washington
- *Integrative Analysis of Multivariate Temporal Biomarkers in Electronic Health Records* – Donglin Zeng, UNC Chapel Hill
- *Learning Treatment Strategies from Randomized Trials Supplemented by Information in Electronic Health Records* – Yuanjia Wang, Columbia University
- *Risk Assessment with Imprecise EHR Data* – Tianxi Cai, Harvard University
- *Penalized Empirical Likelihood for the Sparse Cox Model* – Dongliang Wang, SUNY Upstate Medical University; Tong Tong Wu, University of Rochester; and Yichuan Zhao, Georgia State University

## North Carolina Chapter

The North Carolina Chapter continued its professional webinar series with a machine learning webinar by Funda Gunes, a principle machine learning developer at SAS. More than 100 attendees logged on to learn about fundamental concepts of machine learning algorithms.

Because this webinar was such a success, the North Carolina Chapter is scheduling “Introduction to Machine Learning: Part II” with Gunes for later this summer. The series will continue with webinars from Aric LaBarr (North Carolina State University) and Cynthia Rudin (Duke University) in the fall.

The recording of Gunes’ webinar is available on NC ASA’s YouTube Channel at <https://youtu.be/UcVI7JEs5eQ>.

- *A Copula Model Approach for Regression Analysis of Informatively Interval-Censored Failure Time Data* – (Tony) Jianguo Sun, University of Missouri
- *Validating Risk Prediction Models with Sub-Samples of Cohorts* – Ruth Pfeiffer, National Cancer Institute; Mitchell Henry Gail, National Cancer Institute; and Yei Eun Shin, National Cancer Institute
- *Cure Rate Frailty Models for Clustered Current Status Data with Informative Cluster Size* – Kejun He, Renmin University; Wei Ma, Renmin University; Tong Wang, Texas A&M University; Dipankar Bandyopadhyay, Virginia Commonwealth University; and Samiran Sinha, Texas A&M University
- *Goodness-of-Fit Tests for the Linear Transformation Models with Interval-Censored Data* – Soutrik Mandal, National Cancer Institute; Suojin Wang, Texas A&M University; and Samiran Sinha, Texas A&M University
- *Shannon Information Collapse for Phylogenetic Experimental Design* – Jeffrey Peter Townsend, Yale University
- *Inferring Tumor Phylogenies Using Single-Cell Sequencing Data* – Jing Peng, The Ohio State University; Laura Kubatko, The Ohio State University; and Yuan Gao, The Ohio State University
- *Neutrality Test on Evolutionary Tree Topologies: Where Statistics, Physics, and Geometric Analysis Meet* – Dan D. Erdmann-Pham, University of California, Berkeley; Yun S. Song, University of California, Berkeley; and Jonathan Terhorst, University of Michigan
- *Individualistic Effects in Randomized Trials Under Contagion* – Olga Morozova, Yale School of Public Health; Daniel Eck, Yale School of Public Health; and Forrest W. Crawford, Yale School of Public Health
- *Matching Methods for Networked Causal Inference* – Alexander Volfovsky, Duke University
- *Causal Inference with Misspecified Exposure Mappings* – Fredrik Sävje, Yale University
- *Auto-G-Computation of Causal Effects on a Network* – Eric Tchetgen Tchetgen, University of Pennsylvania ■

## Risk Analysis

To become more involved with the Section on Risk Analysis and learn about the activities of our section, attend the section business meeting Tuesday, July 30, at 5:00 p.m. in Agate B at the Hilton. After the business meeting (at 6:00 p.m.), we will have a joint mixer with the Physical and Engineering Sciences and Quality and Productivity sections in Centennial Ballroom H, also at the Hilton (food and a cash bar will be provided). In addition to the meeting and mixer, the Risk Analysis Section is the main sponsor for the following sessions:

### Invited

- Multivariate Extremes: Theory and Applications
- Climate Networks and Extremes

### Topic-Contributed

- Statistical Interactions: Making an Impact in Health Science
- Bayesian Statistical Methods for High-Throughput Toxicity Testing and Risk Assessment

### Contributed

- Risk Applications for Disease, Toxicology, and Biomarker Modeling
- Predicting and Evaluating Risk Models Within Distributions and Across Time

### Contributed Posters

- Space-Time Modeling of Tropical Cyclone Genesis Using a Semiparametric Generalized Linear Model



- High-Dimensional GARCH Model with L1 Regularization
- Two-Stage Predictive Models for Assessing Misrepresentation Risk on Self-Reported Tobacco Status in Health Insurance Ratemaking

### P.M. Roundtable

- The Statistical Footprints in the Path from Real-World Data to Evidence

Visit the online program at [ww2.amstat.org/meetings/jsm/2019/onlineprogram](http://ww2.amstat.org/meetings/jsm/2019/onlineprogram) for updated meeting locations and times. ■

## Survey Research Methods

Plan to attend the SRMS Business Meeting and Mixer Wednesday, July 31, from 6 p.m. to 8 p.m. in Centennial Ballroom A at the Hyatt Regency Denver to learn about the section and find out the latest SRMS news, including our newest award winners. There will be refreshments (cash bar and free appetizers), as well as opportunities for socializing and networking.

### JSM 2020 Invited Sessions

JSM 2019 is almost here. However, it is not too early to organize your potential JSM 2020 invited session; proposals are due early in September. Invited sessions include invited papers (two to six presenters and/or discussants) and panels (three to six panelists providing commentary about a topic).

An invited session proposal includes a session title, general description of the session, list of participants, and tentative talk titles. If you are interested in organizing an invited session, select a session topic and solicit potential speakers. Once you have a sufficient number of committed speakers, you can submit your proposal at [ww2.amstat.org/meetings/jsm/2020/submissions.cfm](http://ww2.amstat.org/meetings/jsm/2020/submissions.cfm) from mid-July until early September. ■

## Physical and Engineering Sciences/ Quality and Productivity/ Risk Analysis

Byran Smucker, SPES Chair

The Physical and Engineering Sciences, Quality and Productivity, and Risk Analysis sections' mixer at the 2019 Joint Statistical Meetings in Denver will be Tuesday, July 30, in the Hyatt Regency Centennial Ballroom H from 6:00 p.m. to 8:30 p.m.

In the past, organizations and individuals have donated items such as books, software, CDs, DVDs, T-shirts, hats, ties, overalls (yes, overalls), pens, bags, water bottles, golf balls, blankets, coffee mugs, thumb drives, and the coveted Doughboy as door prizes. Donated gifts have been both statistics and nonstatistics related.

The meetings are fast approaching, but there is still time to donate. Complete the form at <https://forms.gle/Q4GEiyt5uuWMa4YF9> to provide contact information and a donation description. Instructions for getting donations to the mixer are provided on the form. ■

## Three ASA Sections to Sponsor Data Challenge Expo 2019

“It is such a wonderful opportunity for our students to engage with relevant data and meaningful problems. Additionally, the students who attended JSM last year for the competition had a wonderful time and learned a great deal about the wonderful, comprehensive world of statistics.”

- Jordan Radu, Assistant Professor of Statistics, University of Virginia

The ASA Computing, Government, and Graphics sections are sponsoring the Data Challenge Expo 2019 at JSM in Denver. The data set for the challenge was the New York City Housing and Vacancy Survey, which contestants used with the option to combine other data sources in their analysis.

- Sixteen Data Challenge contestants will present their results in five-minute oral speed presentations on Sunday, July 28, at 2:00 p.m. ([ww2.amstat.org/meetings/jsm/2019/onlineprogram/ActivityDetails.cfm?SessionID=218689](http://ww2.amstat.org/meetings/jsm/2019/onlineprogram/ActivityDetails.cfm?SessionID=218689)).
- Attendees and judges will then have a chance to chat one-on-one with the contestants during the e-poster session at 4:00 p.m. ([ww2.amstat.org/meetings/jsm/2019/onlineprogram/ActivityDetails.cfm?SessionID=218756](http://ww2.amstat.org/meetings/jsm/2019/onlineprogram/ActivityDetails.cfm?SessionID=218756)).
- Winners will be recognized at the Government Statistics Section Business Meeting and Mixer Tuesday, July 30, at 5:30 p.m. ([ww2.amstat.org/meetings/jsm/2019/onlineprogram/ActivityDetails.cfm?SessionID=218895](http://ww2.amstat.org/meetings/jsm/2019/onlineprogram/ActivityDetails.cfm?SessionID=218895)).

For more information about the data used for the challenge, visit [www1.nyc.gov/site/hpd/about/nychvs.page](http://www1.nyc.gov/site/hpd/about/nychvs.page).



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#### **ATTEND**

**Early Registration**

September 30, 2019 – January 9, 2020

**Regular Registration**

January 10 – February 22, 2020

**Housing Closes**

January 27, 2020

#### **PARTICIPATE**

**Poster Abstract Submission**

July 16, 2019 – August 29, 2019

**LEARN MORE AT [WW2.AMSTAT.ORG/CSP](http://WW2.AMSTAT.ORG/CSP).**

## 2019

## July

**17–20—International Symposium on Computational and Methodological Statistics and Biostatistics, Pretoria, South Africa**

For details, visit [www.up.ac.za/symstat2019](http://www.up.ac.za/symstat2019) or contact Johan Ferreira, IT Building 6-17, Pretoria, International 0002, South Africa; +27124202362; [symstat@up.ac.za](mailto:symstat@up.ac.za).

**22–26—Introduction in Genome-Wide Data Analysis, Amsterdam, The Netherlands**

For more information, visit [www.tinbergen.nl/introduction-in-genome-wide-data-analysis](http://www.tinbergen.nl/introduction-in-genome-wide-data-analysis) or contact Christina Mansson, Gustav Mahlerplein 117, Amsterdam, International 1082 MS, The Netherlands; +31(0)10 40 88919; [summerschool@tinbergen.nl](mailto:summerschool@tinbergen.nl).

**22–26—European Meeting of Statisticians (EMS 2019), Palermo, Italy**

For more information, visit [www.ems2019.palermo.it](http://www.ems2019.palermo.it) or contact Angelo Mineo, Viale delle Scienze, Ed. 13, Palermo, International 90128, Italy; [ems-2019@unipa.it](mailto:ems-2019@unipa.it).

**24—2nd World Congress on Advances on Addiction Science and Medicine, Rome, Italy**

For details, visit [addiction.cme-society.com](http://addiction.cme-society.com) or contact Nivetha M, 40 Bloomsbury Way, London, International WC1A 2SE, United Kingdom; 14084292646; [addictionscience@pulsusmeetings.net](mailto:addictionscience@pulsusmeetings.net).

**\*27–8/1—2019 Joint Statistical Meetings, Denver, Colorado**

For details, visit [www2.amstat.org/meetings/jsm/2019](http://www2.amstat.org/meetings/jsm/2019) or contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; (703) 684-1221; [meetings@amstat.org](mailto:meetings@amstat.org).

**\*28–31—2019 JSM Diversity Workshop and Mentoring Program, Denver, Colorado**

For more information, visit [community.amstat.org/cmis/events/dwmp/dwmp2019](http://community.amstat.org/cmis/events/dwmp/dwmp2019) or contact Dionne Swift, 411 Harpwood Dr., Franklin, OH 45005; (513) 622-3061, [swift.dp@pg.com](mailto:swift.dp@pg.com).

**28–8/11—Summer Seminar in Philosophy of Statistics, Blacksburg, Virginia**

For more information, visit [summerseminarphilstat.com](http://summerseminarphilstat.com) or contact Jean Miller, Philosophy Department, 229 Major Williams Hall (0126), Virginia Tech, Blacksburg, VA 24061; (540) 998-1123; [jemille6@vt.edu](mailto:jemille6@vt.edu).

**29–30—Global Summit on Clinical Nursing and Women Health, Singapore**

For details, visit [larixconferences.com/nursing](http://larixconferences.com/nursing) or contact Eunice Lim, 10 Anson Road, International Plaza, #22-02, Singapore 079903, Singapore, International 09393, Singapore; +6531592112; [globalnursingsummit2019@gmail.com](mailto:globalnursingsummit2019@gmail.com).

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

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

» Indicates events posted since the previous issue

## August

**1–3—ISSAT International Conference on Data Science and Intelligent Systems (DSIS 2019), Las Vegas, Nevada**

For more information, visit [www.issatconferences.org/dsis2019.html](http://www.issatconferences.org/dsis2019.html) or contact Michelle Pham, P.O. Box 281, Edison, NJ 08818; (732) 491-5870; [michelle@issatconferences.org](mailto:michelle@issatconferences.org).

**17–19—The Fourth Workshop on Higher-Order Asymptotics and Post-Selection Inference (WHOA-PSI), St. Louis, Missouri**

For more information, visit [www.math.wustl.edu/~kuffner/WHOA-PSI-4.html](http://www.math.wustl.edu/~kuffner/WHOA-PSI-4.html) or contact Todd Kuffner, 1 Brookings Drive, St. Louis, MO 63130; [kuffner@wustl.edu](mailto:kuffner@wustl.edu).

**19–23—NSF-CBMS Regional Research Conference: Fitting Smooth Functions to Data, Austin, Texas**

For details, contact Arie Israel, 3925 W. Braker Lane, Suite 3.340, Austin, TX 78759-5316; (512) 471-6424; [arie@math.utexas.edu](mailto:arie@math.utexas.edu).

**22–23—13th World Biomarkers and Clinical Research Conference, Vienna, Austria**

For details, visit [biomarkers.euroscicon.com](http://biomarkers.euroscicon.com) or contact Harrison Parker, 40 Bloomsbury Way, Lower Ground Floor, Vienna, Austria; +432033182512; [biomarkers@sciconmeetings.com](mailto:biomarkers@sciconmeetings.com).



## September

**20–21—European Dental Summit and Dental Marketing, London, United Kingdom**

For more information, visit [www.lexisconferences.com/dentalsummit](http://www.lexisconferences.com/dentalsummit) or contact Riya Sen, London UK, London, International 75062, UK; 7401034497; [Dentalsummit2019@gmail.com](mailto:Dentalsummit2019@gmail.com).

**\*23–25—2019 ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop, Washington, DC**

For more information, visit [www2.amstat.org/meetings/biop/2019](http://www2.amstat.org/meetings/biop/2019) or contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; (703) 684-1221; [meetings@amstat.org](mailto:meetings@amstat.org).



**»\*25–27—63rd Annual ASA/ASQ Fall Technical Conference, Gaithersburg, Maryland**

For more information, visit [www.falltechnicalconference.org](http://www.falltechnicalconference.org) or contact Adam Pintar, 100 Bureau Dr., Gaithersburg, MD 20899; (301) 975-4554, [adam.pintar@nist.gov](mailto:adam.pintar@nist.gov).

**\*26–27—63rd Annual ASA/  
ASQ Fall Technical Conference,  
Gaithersburg, Maryland**

For details, visit [www.falltechnicalconference.org](http://www.falltechnicalconference.org) or contact Adam Pintar, 100 Bureau Drive, Gaithersburg, MD 20899; [adam.pintar@nist.gov](mailto:adam.pintar@nist.gov).

## October

**10–12—The 3rd International  
Conference on Statistical  
Distributions and Applications  
(ICOSDA 2019), Grand Rapids,  
Michigan**

For more information, visit [people.cst.cmich.edu/lee1c/icosda2019](http://people.cst.cmich.edu/lee1c/icosda2019) or contact Felix Famoye, Department of Mathematics, Mt. Pleasant, MI 48859; (989) 774-5497; [felix.famoye@cmich.edu](mailto:felix.famoye@cmich.edu).

**18–20—5th International  
Researchers, Statisticians, and  
Young Statisticians Congress,  
Kusadasi, Turkey**

For details, visit [www.irsysc2019.com](http://www.irsysc2019.com) or contact Onur Köksoy, Department of Statistics, Izmir, International 35140, Turkey; +905442927794; [onur.koksoy@ege.edu.tr](mailto:onur.koksoy@ege.edu.tr).

**»25–26—2019 Lloyd Roeling UL  
Lafayette Statistics Conference,  
Lafayette, Louisiana**

For details, visit [math.louisiana.edu/node/181](http://math.louisiana.edu/node/181) or contact James Berry, UL Lafayette Math Dept., P.O. Box 43568, Lafayette, LA 70504; (337) 482-5294; [cberry@louisiana.edu](mailto:cberry@louisiana.edu).

**»26–29—Biostatistics Congress,  
Antalya, Turkey**

For more information, visit [en.biyoistatistikongresi.org](http://en.biyoistatistikongresi.org) or contact Atilla Elhan, Ankara Universitesi Tip Fakultesi Sihhiye, Ankara, International 06100, Turkey; [elhan@medicine.ankara.edu.tr](mailto:elhan@medicine.ankara.edu.tr).



## November

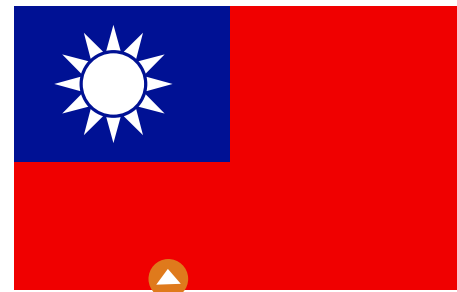
**4–5—3rd International  
Conference on Mental Health,  
Chicago, Illinois**

For details, visit <https://mental-healthconference.euroscicon.com> or contact Lisa Turner, 9599 Skokie Blvd., Skokie, IL 60077; (203) 318-2512; [mentalhealthmeet2019@gmail.com](mailto:mentalhealthmeet2019@gmail.com).

## December

**\*2–6—75th Annual Deming  
Conference on Applied Statistics,  
Atlantic City, New Jersey**

For details, visit [demingconference.org](http://demingconference.org) or contact Din Chen, 325 Pittsboro St., Chapel Hill, NC 27599; (919) 843-2434; [dinchen@email.unc.edu](mailto:dinchen@email.unc.edu).



**12–15—11th International  
Conference on Multiple  
Comparison Procedures, Taipei,  
Taiwan**

For more information, visit [www.mcp-conference.org](http://www.mcp-conference.org) or contact Jason Hsu, 1 Health Plaza, East Hanover, NJ 07936; [mcp2019@mcp-conference.org](mailto:mcp2019@mcp-conference.org).

**26–30—International Indian  
Statistical Association 2019  
Conference, Mumbai, India**

For more information, visit [iisa2019.iisaconference.org](http://iisa2019.iisaconference.org) or contact Veera Baladandayuthapani, University of Michigan, Ann Arbor, MI 48109; (734) 764-5702; [IISA2019@intindstat.org](mailto:IISA2019@intindstat.org).

**27–29—2nd International  
Conference on Applied Statistics  
(ICAS) 2019, Dhaka, Bangladesh**

For details, visit [www.isrt.ac.bd/icas2019](http://www.isrt.ac.bd/icas2019) or contact Shafiqur Rahaman, Institute of Statistical Research and Training, Dhaka, International 1000, Bangladesh; [shafiq@isrt.ac.bd](mailto:shafiq@isrt.ac.bd).



San Diego,  
California

2020

January

**\*6–8—2020 International Conference on Health Policy Statistics (ICHPS), San Diego, California**

For more information, visit [www2.amstat.org/meetings/ichps/2020](http://www2.amstat.org/meetings/ichps/2020) or contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; (703) 684-1221; [meetings@amstat.org](mailto:meetings@amstat.org).

June

**21–23—The Fifth Workshop on Higher-Order Asymptotics and Post-Selection Inference (WHOA-PSI), St. Louis, Missouri**

For details, visit [www.math.wustl.edu/~kuffner/events.html](http://www.math.wustl.edu/~kuffner/events.html) or contact Todd Kuffner, 1 Brookings Drive, Campus Box 1146, Saint Louis, MO 63130; [kuffner@wustl.edu](mailto:kuffner@wustl.edu).

**24–27—5th International Workshop on Functional and Operatorial Statistics (IWFOs 2020), Brno, Czech Republic**

For details, visit [iwfos2020.sci.muni.cz](http://iwfos2020.sci.muni.cz) or contact David Kraus, Kotlářská 2, Brno, International 611 37, Czech Republic; [david.kraus@mail.muni.cz](mailto:david.kraus@mail.muni.cz).

**25–27—Open Problems in Parametric Likelihood-Based Inference, St. Louis, Missouri**

For details, visit [www.math.wustl.edu/~kuffner/events.html](http://www.math.wustl.edu/~kuffner/events.html) or contact Todd Kuffner, 1 Brookings Drive, Campus Box 1146, Saint Louis, MO 63130; [kuffner@wustl.edu](mailto:kuffner@wustl.edu).

July

**5–10—International Biometric Conference (IBC), Seoul, South Korea**

For information, visit [www.biometricsociety.org/2018/07/ibc-2020-seoul-preview](http://www.biometricsociety.org/2018/07/ibc-2020-seoul-preview) or contact Kristina Wolford, 1120 20th St. NW, Suite 750, Washington, DC 20036; [conference@biometricsociety.org](mailto:conference@biometricsociety.org).

**6–10—International Conference on Robust Statistics (ICORS 2020), Vienna, Austria**

For details, contact Peter Filzmoser, Wiedner Hauptstr. 8-10, Vienna, International 1040, Austria; 43-1-58801-10560; [P.Filzmoser@tuwien.ac.at](mailto:P.Filzmoser@tuwien.ac.at).

August

**\*1–6—2020 Joint Statistical Meetings, Philadelphia, Pennsylvania**

For more information, contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; [meetings@amstat.org](mailto:meetings@amstat.org). ■

# Women in Statistics and Data Science

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*Although #WSDS2018 was my first WSDS conference, the genuineness & camaraderie... to say the least...was simply mindblowing. I am so thankful for the conference's existence and I will attend every chance I get!"*

- Lakisha Armstrong, President, ASA Maryland Chapter



**Formal sessions and informal networking opportunities will empower and challenge women statisticians and data scientists to:**



Share knowledge



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Grow influence

---

## REGISTER

**Early Registration Closes**

August 15, 2019

**Hotel Reservations Close**

September 9, 2019

Learn more and get involved in WSDS 2019 at [ww2.amstat.org/wds](http://ww2.amstat.org/wds).

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](http://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.

These listings and additional information about the 65-word ads can be found at [ww2.amstat.org/ads](http://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>.

### Maryland

■ Applications are invited for a full-time non-tenure-track position as a Lecturer in statistics or mathematics beginning Fall 2019 at Loyola University Maryland. PhD in statistics or mathematics is preferred. Teaching responsibilities include eight classes per year. To apply, please go to [www.Click2Apply.net/h73yfwbcnndf79m9](http://www.Click2Apply.net/h73yfwbcnndf79m9). Loyola University Maryland is an EOE.

### Pennsylvania

■ The Wharton Department of Statistics, University of Pennsylvania, seeks a Postdoctoral Researcher to be supervised by professor Eric Tchetgen Tchetgen. The position is for one year, beginning as early as July 2019, with a possible extension to three years. A PhD in statistics, biostatistics, epidemiology, or a related field is required. Please visit our website to apply: <https://statistics.wharton.upenn.edu/recruiting/eric-tchetgen-tchetgen-postdoc-position>. Please direct any questions to [ett@wharton.upenn.edu](mailto:ett@wharton.upenn.edu). The University of Pennsylvania is an EOE. Minorities / Women / Individuals with disabilities / Protected Veterans are encouraged to apply. ■



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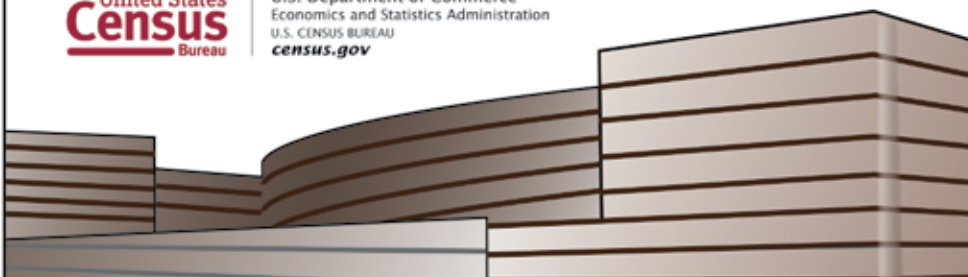
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[www.youtube.com/watch?v=-9BzWBufH1s](http://www.youtube.com/watch?v=-9BzWBufH1s)

**Bonny McClain** • @datamongerbonny  
I prefer Eye of the Tiger...could be all of these  
Kaplan Meier curves [www.youtube.com/watch?v=btPJPfnesV4&feature=youtu.be](http://www.youtube.com/watch?v=btPJPfnesV4&feature=youtu.be)

**Frank Harrell** • @f2harrell  
Wes Montgomery: Four on Six: [www.youtube.com/watch?v=zxTD1XQTcyk](http://www.youtube.com/watch?v=zxTD1XQTcyk)

**Sara Quesen** • @squesen  
They Might Be Giants—*Put It to the Test*

**Gregory R. Hancock** • @GregoryRHancock  
Clearly something by Chance the Rapper

**Kaspar Rufibach** • @numbersman77  
Powerslave by @IronMaiden

**Bill Panak** • @PanakBill

Folks, as with many questions of a statistical basis, there is only one correct answer, from a nice Little Rock and roll band from Shepherd's Bush — The Who do FORTUNE TELLER [www.youtube.com/watch?v=FTQGi-2rMLO&app=desktop](http://www.youtube.com/watch?v=FTQGi-2rMLO&app=desktop)

**Richard Le Blanc** • @RHRLeBlanc  
Sting The shape of my heart

He deals the cards to find the answer  
The sacred geometry of chance  
The hidden law of a probable outcome  
The numbers lead a dance

**Peter Klaran** • @peterklaren  
When times are mysterious serious numbers will speak to us always. Says Paul Simon.

**Jon Labahn, Jr.** • @contingency1\_1  
"Alpha Beta Gaga" by Air <http://bit.ly/2We3znu> (Inspired not only by Bell frequency array, but Huxley's *\_Brave New World\_*.)

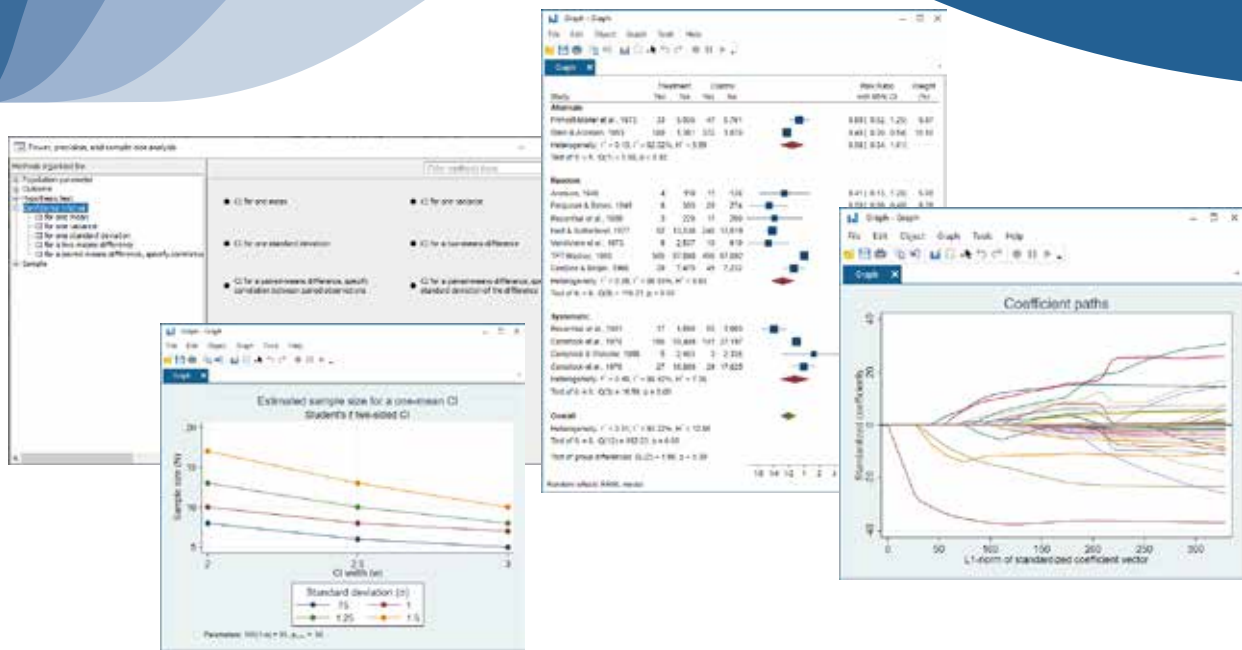
This month we'll ask:

What favorite city have you visited for a conference, and why is it your favorite?

Tag @AmstatNews with your answer.



# Announcing STATA® 16



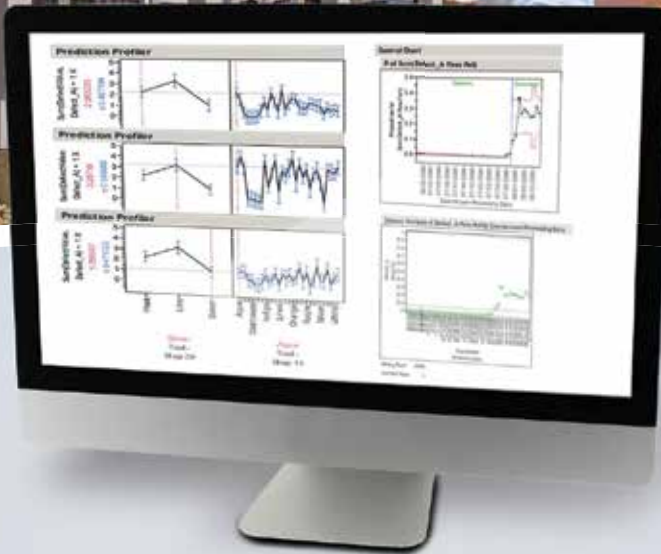
## New in Stata 16

- ▶ Meta-analysis
- ▶ Lasso-based machine learning
- ▶ Python integration
- ▶ Bayesian predictions
- ▶ Multiple chains in Bayesian estimation
- ▶ Truly reproducible reporting
- ▶ Multiple-group IRT
- ▶ Sample-size analysis for inference with confidence intervals
- ▶ Multiple-dose pharmacokinetic modeling
- ▶ Import data from SAS and SPSS
- ▶ Random-effects models with any combination of MNAR outcomes, nonrandom treatment assignment, and unobserved confounding
- ▶ Numerical integration
- ▶ Linear programming
- ▶ Nonparametric series regression

[stata.com/amstat-stata16](https://www.stata.com/amstat-stata16)

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Ed Hutchins, Cree Product Engineering Manager



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