July 2018 • Issue #487

AMSTATNEWS

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

Bureau of Labor Statistics' WENDY MARTINEZ ELECTED ASA PRESIDENT

RICHARD DE VEAUX ELECTED ASA VICE PRESIDENT

ALSO:

Universities, Industry Collaborate to Benefit All

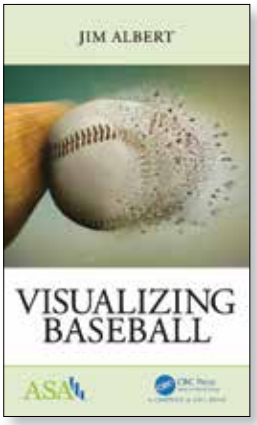
The EU General Data Protection Regulation Is Affecting—Maybe—Your Work

SPECIAL OFFER
FOR ALL ASA MEMBERS

Save 20% on Books from the ASA-CRC Series on Statistical Reasoning in Science and Society with code **PMA18**, and Review our Latest Journal issues.

With a growing recognition of the importance of statistical reasoning across many different aspects of everyday life and in our data-rich world, the American Statistical Society and CRC Press have partnered to develop the **ASA-CRC Series on Statistical Reasoning in Science and Society**. This exciting book series features:

- Concepts presented while assuming minimal background in Mathematics and Statistics.
- A broad audience including professionals across many fields, the general public and courses in high schools and colleges.
- Topics include Statistics in wide-ranging aspects of professional and everyday life, including the media, science, health, society, politics, law, education, sports, finance, climate, and national security.

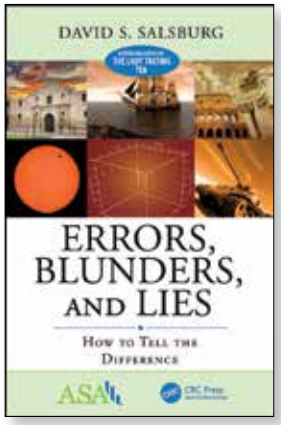


VISUALIZING BASEBALL

Jim Albert, Bowling Green State University, Ohio, USA

A collection of graphs will be used to explore the game of baseball. Graphical displays are used to show how measures of batting and pitching performance have changed over time, to explore the career trajectories of players, to understand the importance of the pitch count, and to see the patterns of speed, movement, and location of different types of pitches.

August 2017 • 142 pp • Pb: 9781498782753: ~~$29.95~~ $23.96
www.crcpress.com/9781498782753



ERRORS, BLUNDERS, AND LIES

How to Tell the Difference

David S. Salsburg, Emeritus, Yale University, New Haven, CT, USA

In this follow-up to the author's bestselling classic, "The Lady Tasting Tea", David Salsburg takes a fresh and insightful look at the history of statistical development by examining errors, blunders and outright lies in many different models taken from a variety of fields.

April 2017 • 154 pp • Pb: 9781498795784: ~~$29.95~~ $23.96
www.crcpress.com/9781498795784

JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION
Vol 112, 2017

THE AMERICAN STATISTICIAN
Vol 72, 2018

STATISTICS AND PUBLIC POLICY
Vol 5, 2018

Taylor & Francis Group
an **informa** business

ASA

Held in partnership with the American Statistical Association, the Joint Statistics Meeting will convene this year in
Vancouver, Canada
July 28th – August 2nd

Attending JSM18?

Visit us at booths 337, 436 and 438 to receive your complimentary **JSM18 FreeBook** and more!

AMSTATNEWS

JULY 2018 • ISSUE #487

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

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

American Statistical Association
732 North Washington Street
Alexandria, VA 22314–1943 USA
(703) 684–1221
ASA GENERAL: *asainfo@amstat.org*
ADDRESS CHANGES: *addresschange@amstat.org*
AMSTAT EDITORIAL: *amstat@amstat.org*
ADVERTISING: *advertise@amstat.org*
WEBSITE: *http://magazine.amstat.org*

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

features

columns

History, Soccer, and Shape Analysis Featured in June Issue

The June 2018 issue of *Significance* explores 175 years of history at Rothamsted Research, an agricultural research station whose employees—including Ronald Fisher—helped sow the seeds of modern statistics.

We also mark the 70th anniversary of the death of Scottish biologist D'Arcy Thompson, whose century-old ideas for studying shape and form have inspired generations of researchers, including those working in the field of statistical shape analysis.

With the FIFA World Cup looming, a trio of sports analysts describe the evolution of soccer analytics. And, in our In Brief section, statisticians and data scientists reflect on the lessons of the Facebook-Cambridge Analytica scandal.

Also in this issue:

- Putin's Peaks: Russian Election Data Revisited
- Brexit Britain, Two Years On
- About 'Her Emails'—Analysing Hillary Clinton's Private Server
- Statistics in Pursuit of Social Justice

Access the digital version of *Significance* by logging in at *www.amstat.org* or download and read the magazine on the go with our iOS and Android apps (*https://bit.ly/2LWzhB1*).

Significance is online at *www.significancemagazine.com.*

departments

DENVER, COLORADO
JSM2019
JULY 27–AUGUST 1

member news

Follow us on Twitter
www.twitter.com/AmstatNews

Join the ASA Community
http://community.amstat.org

Like us on Facebook
www.facebook.com/AmstatNews

Follow us on Instagram
www.instagram.com/AmstatNews

JSM, Here We Come!

ASA President's Invited Address

Monday, July 30 • 4:00 p.m. –5:50 p.m.

Laura Evans, *The New York Times*

Photo by Jon Gardiner/UNC-Chapel Hill

Lisa LaVange

It is July, and that means JSM is just around the corner. As a schoolkid, I could hardly wait for fall to arrive, so I could return to school and see my friends after a long summer of fun and (probably too much) sun. As an adult, that same anticipation hits me around the end of June/early July, when I start thinking about seeing friends and colleagues, sharing new experiences, and learning about the hot new statistical topics—all at JSM.

My first JSM experience was in 1978. I will never forget the San Diego venue with perfect 72-degree weather, a zoo larger than any I could imagine, and the biggest bunch of statisticians I'd ever seen! Since that time, 39 more JSMs have occurred, and I've missed only four.

Growing up, my daughters equated JSM with our summer vacation. As long as the home baseball team was in town, it was a pretty sure thing my family would accompany me. And more than once, one daughter had to sit through a working lunch or technical session while the other went off sight-seeing with Dad. Memorable family moments include seeing not one, but two, baseball parks in Chicago (JSM 1986); watching extra innings with my good friend and huge Red Sox fan, Maura Stokes, only to see the Sox lose to the Angels in Anaheim (JSM 1990); visiting the *Make Way for Ducklings* statues commemorating one of my girls' favorite childhood stories in Boston Commons (JSM 1994); touring the MLK memorial in Atlanta (JSM 2001); visiting the emotionally moving site of Ground Zero in NYC (JSM 2002); and seeing both the Hockey Hall of Fame and Canadian production of "Hairspray" in Toronto (JSM 2004).

My family attended the Tuesday night lecture in Toronto, where I had the unbelievable honor of being elected ASA Fellow. The president's address that night was given by Brad Efron, and my younger daughter—then in high school—took notes on his Bayes statistics talk to impress her AP Statistics teacher later that fall.

Those of you still reading might now be tempted to utter, "Get a life." But, in my defense, I just truly love attending JSM. There is something so fulfilling about reconnecting with colleagues from every job you ever had, no matter what branch of statistics or what sector you've worked in. I started my career in complex sample surveys and migrated to clinical trials. At what other annual meeting can you mingle with statisticians from both fields under one roof?

Turning this affinity for JSM into action, I served on the program committee three times: once as a section representative (Dallas in 110-degree weather, 1998); once as a general methodology co-chair (a much cooler San Francisco, 2003); and once as overall program chair (with record-setting attendance in Seattle, 2006). Program committee participation is a great opportunity to affect the scientific program, and watching the inner workings of the ASA staff as they assemble another successful JSM is a sight to behold!

Now that I've gotten you ready to start packing for Vancouver, what's on tap this year? The program committee, led by Christian Leger, has assembled a terrific line-up of speakers and interesting topics. Included are introductory overview lectures (IOLs) on deep learning (Sunday, 2:00 p.m.); teaching statistics (Sunday, 4:00 p.m.); leading data science

#LeadWithStatistics

(Monday, 8:30 a.m.); multivariate data modeling with copulas (Monday, 10:30 a.m.); reproducibility, efficient workflows, and rich environments (Tuesday, 8:30 a.m.); and the statistical and data revolution in the social sciences (Wednesday, 8:30 a.m.). IOLs were introduced relatively late in the history of JSM and have proven to be one of the most popular session types, offering high-level, timely overviews for busy statisticians with little time for a deep dive.

As president-elect, one of the first items on the agenda is to start thinking about the president's invited speaker. Recent years have seen such notables as Sir David Cox, Alan Krueger, Stephen Stigler, and Christine H. Fox. Then, 2013 President Marie Davidian set a new bar with Nate Silver (JSM Montréal), drawing the largest crowd ever at the Monday afternoon session. I'll never forget one of the questions from the audience after the talk: "Can I get a job at FiveThirtyEight.com?"

Journalists were featured speakers in the past two years, both addressing the difficult task of making statistics understandable to the general public through various media outlets, with Joe Palca from NPR in 2016 and Jo Craven McGinty from *The Wall Street Journal* in 2017.

My goal this year was to invite someone who could speak from a position of importance as a leader in a data-intensive work environment. I found just such a person in Laura Evans, senior vice president of data and insights at *The New York Times Company*. In this role, Laura oversees data science, analytics, and data operations across the organization. Prior to joining the *Times*, she served as vice president of audience development and data science at the Scripps Networks Interactive and held leadership positions at both *The Washington Post* and Dow Jones. She has a PhD in political science with a concentration in quantitative methods from The George Washington University.

Laura is eloquent, engaging, and extremely knowledgeable about the challenges inherent in trying to identify the truth surrounded by a lot of noisy data. She embodies what it means to be a strong leader in a fast-paced work environment. Her career story is relevant both to my presidential initiative of building the ASA Leadership Institute and to this year's JSM theme, #LeadWithStatistics. Having her speak this year from the journalism world, but with more of a business and data science perspective than a writer or reporter, will be a nice follow-on to the president's invited addresses of the past two years. Her ability to speak to workforce development and the challenges of hiring and retaining statisticians and scientists in today's marketplace should be right on target. I believe Laura's address will resonate with attendees at JSM and ASA members at large. I am looking forward to hosting her in Vancouver.

I have great expectations for the incredible gathering of statisticians about to commence and remain in awe of the amount of work it takes for ASA staff, the program committee, and an army of volunteers to pull off this monumental event each year. My *Amstat News* columns to date have carried a leadership thread through them, but so far, I've only focused on statisticians in leadership roles. JSM is the place where the leadership of ASA Associate Executive Director and Director of Operations Steve Porzio, ASA Director of Meetings Kathleen Wert, and the ASA meetings staff is brought to bear. I, for one, can't wait to see what they have in store for us in 2018. JSM, here we come!

I will close with a shout-out to last month's column about the Count on Stats initiative. Thanks to Ron Wasserstein and Steve Pierson's diligence, the ASA was successful in publishing a letter to the editor of *The Washington Post* on June 7 concerning the early and inappropriate disclosure of employment statistics through a White House tweet. If I could have penned a story to illustrate what can go wrong when official federal statistics—and the statisticians who generate them—are not given their proper respect, it would not be as relevant as this real-life occurrence. Thanks to Ron and Steve for making sure the ASA is seen as being on the right side of the issues, all the time.

Sincerely,

Lisa LaVange

STATS FROM THE ROAD

The New Tax Bill, the ASA, and the Rise of Donor-Advised Funds

Amanda Malloy, ASA Director of Development

Malloy

After the new tax bill was signed into law, I began getting more questions about donor-advised funds and how the law might affect donations to the ASA. The short answer is we don't know. It may take years before we get a clear picture of how the tax bill will affect philanthropy in this country.

The major item in the new tax bill that has some charities concerned is the increase in standard deduction to $24,000. Donations to charities are still tax deductible, but the new, higher standard deduction will drastically decrease the number of people who itemize their taxes. People who were only giving to charities so they could itemize their taxes will no longer need to do so if they take the standard deduction.

This has people considering other options for giving, such as donor-advised funds (DAFs). In a DAF, you can bundle gifts of two or more years into a single tax year and then request distributions to your charities of choice on an annual basis. This allows you, as the donor, to itemize deductions for that tax year, while still providing an annual revenue stream for your favorite charities. Fidelity Charitable, Schwab Charitable, and Vanguard Charitable are among the largest organizations that manage DAFs.

The good news for charities is most people do not give because they get a charitable deduction (according to the Lilly Family School of Philanthropy, October 2016), but a tax deduction may affect when, where, and how much they donate. Many of you donate to the ASA because you believe strongly in the organization and what, together, we accomplish for statistics education, our fellow statisticians, and society in general. If there is a way to give to the ASA and still get a tax benefit, though, that's even better!

The popularity of DAFs has steadily increased. Last year, with the new tax law looming, there was a huge spike in the number of new DAFs. According to a February 1, 2018, *Wall Street Journal* article by Richard Rubin, Fidelity Charitable reported bringing in twice its goal for numbers of new DAF accounts at 22,000, and Vanguard reported doubling its last year's total accounts. It is not certain if the new tax law (which provides an estimated $1,600 after-tax increase in income for the average household), the strong economy, or a combination of both is the reason behind the large increase.

Bottom line is donor-advised funds are a good option to consider and much more in reach than you might think, especially as they continue to become more popular.

As always, I'm happy to hear from you if you have questions or comments. I can be reached at *amanda@amstat.org*. Thank you for your support of the ASA! ■

NIST Sponsors Data Science Competition

The National Institute of Standards and Technology is sponsoring a data science competition with a prize purse of $190,000 called The Unlinkable DataChallenge: Advancing Methods in Differential Privacy.

The goal of this series of competitions is to propose a new or improved mechanism to enable the protection of personally identifiable information while maintaining the usefulness of data sets to be used by researchers for positive purposes and outcomes.

For more information and to enter, visit *https://bit.ly/2LRrhkt.* ■

Strategic Approach Recommended for Optimum JSM Experience

As new members of the ASA's Committee on Applied Statisticians, Devi Chelluri and Emiliana Patlan are working to represent and promote those starting, growing, and refining their career in applied statistics.

Devi Chelluri works as a statistician II at NORC at the University of Chicago doing applied statistics in health care research. Devi earned an MS in biostatistics from the University of Michigan.

Emiliana Patlan has worked in applied statistics and data science in both the financial services and technology industries. She currently works as a lead decision science analyst at USAA after earning an MS in predictive analytics from Northwestern University.

As a JSM veteran (Chelluri) and a newbie (Patlan), we are united in thinking applied and professional skills sessions at this year's conference have something for everyone. You do not have to be an "applied statistician" to benefit from these types of sessions, and we are excited to share our tips and tricks for infusing your JSM experience with some of these valuable sessions. If it is your first time attending JSM, we recommend going to the First-Time Attendee Orientation and Reception Sunday afternoon.

With more than 6,500 people attending and more than 600 sessions in a week, fitting in sessions and topics that interest you can be daunting. Thankfully, there are several resources at your disposal when trying to winnow the list. Before even arriving at JSM, we recommend searching through the online program. With this year's theme, #LeadWithStatistics, it's no surprise there are several sessions about communicating statistical topics to nonstatisticians and increasing statistical literacy.

Keep in mind while searching the program that there are a few symbols that will help you navigate. For example, an "*" shows the session is for an applied topic and an "!" shows the session is related to this year's theme.

In addition to the sessions, AM and PM roundtable discussions—which allow you to have a more focused discussion—are available for an added fee. If you would like to further your skill set, continuing education sessions (for an added fee) can be included to develop either technical or professional skills.

We also recommend a strategic approach to planning your conference experience. Pace and balance are key to a successful JSM. Resist the urge to attend a session during every timeslot. Allow time to process new information, connect with others in your field, and take advantage of the social events and career opportunities.

It can also be helpful to broaden and balance the sessions you attend. While you may be drawn to sessions in line with your expertise, a session outside your field may present you with a novel approach to an existing problem you have been struggling with. If your studies and career have largely stayed within a single discipline, check out a contributed speed session like "Sports to Fire: Fascinating Applications of Statistics." Or you may have a roadblock that isn't related to statistical theory or methods. Maybe you are having issues with collaborators, clients, or advisers. Consider balancing theoretical and technical sessions with a session like "Communication and Technical Skills in Statistical Consulting and Collaboration" or "Graphics in Statistical Practice: Saying It with Pictures in the Classroom, Boardroom, or the Consulting Cube." Also, the Opening Mixer Sunday night and the Dance Party Tuesday offer an excellent chance to meet other attendees for the first time or catch up with friends made at last year's JSM.

Last, JSM provides a wonderful opportunity to see how you can contribute by volunteering with sections, chapters, initiatives, or committees. Learn more about these opportunities by attending their meetings. For example, to learn more about CAS and CCD (Committee on Career Development), attend the friends of CAS/CCD mixer July 31 from 2–3 p.m.

We hope these tips and tricks help as you navigate JSM, whether it's your first time or you're 15th!

Top Applied Events Recommended by CAS Members

DATE	DAY	LOCATION	TIME	TOPIC
7/29	Sunday	CC-West 203	2:00 p.m.	Powerful and Practical Skills for Statistical Professionals: Selected Presentations from CSP
7/29	Sunday	CC-West 213	4:00 p.m.	Skills to Leverage and Gaps to Fill to Thrive in Data Science
7/31	Tuesday	CC-West 203	10:30 a.m.	Graphics in Statistical Practice: Saying It with Pictures in the Classroom, Boardroom, or the Consulting Cube
7/29	Sunday	CC-West 210	2:00 p.m.	The World of Data Analysis Professionals
7/31	Tuesday	CC-West 211	2:00 p.m.	Effectively Explaining Statistical Concepts to Researchers from Other Fields
7/30	Monday	CC-East 9	8:30 a.m.	Communication and Technical Skills in Statistical Consulting and Collaboration
8/1	Wednesday	CC-West 301	8:30 a.m.	Getting Shots Inside the Box-Cox: Transformational Soccer Analytics
8/1	Wednesday	CC-West 109	10:30 a.m.	Leadership at All Levels
7/31	Tuesday	CC-West 215/216	10:30 a.m.	Statistical Leadership: Insights from Experiences of Prominent Leaders
7/31	Tuesday	CC-West 209	10:30 a.m.	Sports to Fire: Fascinating Applications of Statistics
7/31	Tuesday	CC-West 301	2:00 p.m.	A Life Cycle View of Statistics
7/30	Monday	CC-West 109	10:30 a.m.	Competing Effectively: Hosting, Designing, and Participating in Kaggle-Style Competitions
7/30	Monday	CC-West Ballroom A	8:30 a.m.	Leading Data Science: Talent, Strategy, and Impact
7/31	Tuesday	F-Burrard Suite	2:00 p.m.	Committees on Applied Statisticians and Career Development Social Mixer
7/31	Tuesday	CC-West Ballroom D	12:30 p.m.	Roundtable: How to Teach Essential Collaboration Skills

Note: The time and venues could change, so double-check the online program at *ww2.amstat.org/meetings/jsm/2018/onlineprogram/index.cfm.*

JSM2018
Vancouver, British Columbia, Canada

Bureau of Labor Statistics' WENDY MARTINEZ ELECTED ASA PRESIDENT

Wendy Martinez
Photo by
Barbi Barnum from
Studio B Photography

Richard De Veaux
Photo by
Eric Sampson

The membership has voted, and it elected Wendy Martinez, director of the Mathematical Statistics Research Center at the Bureau of Labor Statistics, as the 115th president of the American Statistical Association. Before she takes office as president on January 1, 2020, she will serve as president-elect, beginning January 1, 2019.

Members also elected **Richard De Veaux**, professor of statistics at Williams College, as vice president. De Veaux's term also begins January 1, 2019.

Additionally, the ASA membership elected the following:

- **Anamaria Kazanis** of ASKSTATS Consulting as the Council of Chapters Governing Board Representative to the ASA Board
- **Mark Glickman** of Harvard University as the Council of Sections Governing Board Representative to the ASA Board
- **Mary Kwasny** of Northwestern University as chair-elect of the Council of Chapters Governing Board
- **Ofer Harel** of the University of Connecticut as chair-elect of the Council of Sections Governing Board

BOARD OF DIRECTORS

President-Elect 2019
Wendy Martinez

ASA Vice President 2019–2021
Richard De Veaux

Council of Chapters Representative to the ASA Board of Directors
Anamaria Kazanis

Council of Sections Representative to the ASA Board of Directors
Mark Glickman

COUNCIL OF SECTIONS GOVERNING BOARD

Chair-Elect
Ofer Harel

Vice Chair
Alyson Wilson

COUNCIL OF CHAPTERS GOVERNING BOARD

Chair-Elect
Mary Kwasny

Vice Chair District 4, Region 2
Jo Wick

Vice Chair District 3, Region 2
Ruth Cassidy

SECTION ON BAYESIAN STATISTICAL SCIENCE

Chair-Elect 2019
Marina Vannucci

Program Chair-Elect 2019
Surya Tokdar

Secretary/Treasurer 2019–2020
Yanxun Yu

Council of Sections Representative 2019–2021
Ying Yuan

BIOMETRICS SECTION

Chair-Elect 2019
Sherri Rose

Secretary/Treasurer
Elizabeth Ogburn

Council of Sections Representative 2019–2021
Page Moore

BIOPHARMACEUTICAL SECTION

Chair-Elect 2019
Bruce Binkowitz

Program Chair-Elect 2019
Stephine Keeton

Publications Officer 2019–2021
Yongming Qu

Council of Sections Representative 2019–2021
Veronica Powell

BUSINESS AND ECONOMIC STATISTICS SECTION

Chair-Elect 2019
Adriana Kugler

Program Chair-Elect 2019
Mariana Saenz-Ayala

Secretary/Treasurer 2019–2020
Maggie Jones

SECTION ON STATISTICAL COMPUTING

Chair-Elect 2019
John Castelloe

Program Chair-Elect 2019
Kary Myers

Council of Sections Representative 2019–2021
Lucy D'Agostino McGowan

SECTION ON STATISTICAL CONSULTING

Chair-Elect 2019
Manisha Desai

Publications Officer 2019–2020
Joseph Rigdon

Executive Committee-at-Large 2019–2021
Robyn Ball

Council of Sections Representative 2019–2021
Dean Johnson

SECTION ON STATISTICAL EDUCATION

Chair-Elect 2019
Michael Posner

Secretary/Treasurer 2019–2021
Jennifer Broatch

Executive Committee-at-Large 2019–2021
Jessica Chapman

Executive Committee-at-Large 2019–2021
Beverly Wood

SECTION ON STATISTICS AND THE ENVIRONMENT

Chair-Elect 2019
Amanda Hering

Program Chair-Elect 2019
Ephraim Hanks

Treasurer 2019
Henry Scharf

SECTION ON STATISTICS IN EPIDEMIOLOGY

Chair-Elect 2019
Jing Cheng

Program Chair-Elect 2019
Alisa Stephens-Shields

Secretary/Treasurer 2019–2021
Nicole Bohme Carnegie

SECTION ON GOVERNMENT STATISTICS

Chair-Elect 2019
Katherine Thompson

Program Chair-Elect 2019
Michael Yang

Publications Officer 2019–2020
Jenny Guarino

Secretary/Treasurer 2019–2020
Tara Murphy

Council of Sections Representative 2019–2021
Jennifer Parker

SECTION ON STATISTICAL GRAPHICS
Chair-Elect 2019
Isabella Ghement

Program Chair-Elect 2019
Shailaja Surywanshi

Secretary/Treasurer 2019–2020
Stefano Castruccio

Council of Sections Representative 2019–2021
Ritwik Mitra

HEALTH POLICY STATISTICS SECTION
Chair-Elect 2019
Laura Hatfield

SECTION ON STATISTICS IN MARKETING
Chair-Elect 2019
Lan Luo

Program Chair-Elect 2019
Daniel McCarthy

Secretary/Publications Officer 2019–2020
Seshadri Tirunillai

SECTION ON PHYSICAL AND ENGINEERING SCIENCES
Chair-Elect 2019
Robert Gramacy

Program Chair-Elect 2019
Mary Frances Dorn

Council of Sections Representative 2019–2021
Kimberly Kaufeld

SECTION ON QUALITY AND PRODUCTIVITY
Chair-Elect 2019
Chris Gotwalt

Program Chair-Elect 2019
Terri Henderson

SECTION ON RISK ANALYSIS
Chair-Elect 2019
Elena Rantou

Program Chair-Elect 2019
Qian Li

SOCIAL STATISTICS SECTION
Chair-Elect 2019
Eileen O'Brien

Program Chair-Elect 2019
Antje Kirchner

Publications Officer 2019–2020
Liana Fox

Council of Sections Representative 2019–2021
John Finamore

SECTION ON STATISTICS IN SPORTS
Chair-Elect 2019
Phil Yates

Program Chair-Elect 2019
Sarah Morris

SURVEY RESEARCH METHODS SECTION
Chair-Elect 2019
Morgan Earp

Program Chair-Elect 2019
Yang Chang

Treasurer 2019–2020
Darcy Steeg Morris

Publications Officer 2019–2020
Steven Pedlow

Council of Sections Representative 2019–2021
Julia Soulakova

Education Officer 2019–2020
James Wagner

SECTION ON TEACHING OF STATISTICS IN THE HEALTH SCIENCES
Chair-Elect 2019
Laila Poisson

Council of Sections Representative 2019–2021
Jose-Miguel Yamal

SECTION ON NONPARAMETRIC STATISTICS
Chair-Elect 2019
Runze Li

Program Chair-Elect 2019
Yanyuan Ma

Treasurer 2019
Jelena Bradic

Council of Sections Representative 2019–2021
Aurore Delaigle

STATISTICS IN DEFENSE AND NATIONAL SECURITY
Chair-Elect 2019
Douglas Ray

Program Chair-Elect 2019
Karl Pazdernik

Publications Officer 2019–2020
Kelly Townsend

Council of Sections Representative 2019–2021
Joe Warfield

SECTION FOR STATISTICAL PROGRAMMERS AND ANALYSTS
Chair-Elect 2019
Vipin Arora

Program Chair-Elect 2019
Navneet Hakhu

Council of Sections Representative 2019–2021
Ben Joseph Barnard

SECTION ON STATISTICAL LEARNING AND DATA SCIENCE
Chair-Elect 2019
Helen Zhang

Program Chair-Elect 2019
Adam Rothman

Council of Sections Representative 2019–2021
Xiao Wang

SECTION ON STATISTICS IN IMAGING
Chair-Elect 2019
Anuj Srivastava

Imaging Program Chair-Elect 2019
Linglong Kong

MENTAL HEALTH STATISTICS SECTION
Chair-Elect 2019
Wes Thompson

Program Chair-Elect 2019
Knashawn Morales

Council of Sections Representative 2019–2021
Christine Mauro

SECTION ON MEDICAL DEVICES AND DIAGNOSTICS
Chair-Elect 2019
Matyin Ho

Program Chair-Elect 2019
Tyson Rogers

SECTION ON STATISTICS IN GENOMICS AND GENETICS
Chair-Elect 2019
Saonli Basu

Program Chair-Elect 2019
Qionshi Lu

Universities, Industry Collaborate to Benefit All

Members of the ASA Committee on Funded Research (CFR), whose charge includes facilitating communication and interaction between the statistical community and funding organizations, sought to learn about how university departments engage industry in research collaborations. They found many departments willing to share their experiences by answering the following questions. CRF members hope this information furthers industry collaborations by the statistical community.

Please describe your department's industry and/or government engagements/collaborations.

We have a set of agreements with various companies that provide support and professional experience for some of our more advanced graduate students. In brief, we sign a contract with the company to provide statistical support for 20 hours per week (the typical research assistant load) for one or more semesters. The contract is signed by the company and university and is processed through our grants and contracts office. The company pays the university, and the funds are used to support a graduate assistantship for the student (tuition and stipend at our usual rate) for the prescribed length of time.

With this setup, the student is an employee of the university, rather than the company—an arrangement especially helpful for some international students. For the most part, department faculty are not directly involved. The work done by the student is generally what we would call "consulting" or "applied research" and most often not related to their dissertation research. The experience is comparable to that of many industrial summer internships, but may last more than one term and is such that the student can do the work from campus.

How did the engagement/collaborations come about? How are the collaborations sustained in a way that is mutually beneficial to students, the university, industry, and the community at-large?

These agreements are usually initiated by the companies, with communication to our department asking about opportunities to work with our students. Beyond financial support, the benefit to the student is primarily in the form of professional experience. Although the immediate benefit to the company is the work done by the student, there is often an interest in getting an "early look" at a potential employee, much as with many summer internship programs.

What arrangements about the collaborations might be helpful to share?

The arrangements are formalized through a contract between the company and university. I (as department chair) handle setting these up and, along with the associate chair, identify students who are good candidates. In some cases, the company also participates by interviewing students we identify as candidates. Before it is finalized, a contract must be approved by the university grants and contracts office; invoicing and fund transfer is handled by our central administration. There is usually little direct faculty oversight of the students (and so they must be relatively mature and independent), but as the university contact for these arrangements, I receive feedback from the companies about the students' performance. In most cases, the students involved in these arrangements participate with a company for multiple semesters.

What benefits for the department have you seen come out of these collaborations?

For the department, these arrangements supplement our state-funded teaching assistantships and grant-funded research assistantships, giving us a bit more flexibility in how we arrange support for our students.

IOWA STATE UNIVERSITY

Max Morris is professor and chair of the department of statistics at Iowa State University and a statistical consultant affiliated with Los Alamos National Laboratory.

SOUTHERN METHODIST UNIVERSITY

Lynne Stokes is chair of the department of statistical science at Southern Methodist University. Work on problems for the US Census Bureau, National Center for Education Statistics, National Oceanic and Atmospheric Administration, US Energy Information Administration, and other federal agencies has been some of the most interesting of her career.

Please describe your department's industry and/or government engagements/collaborations.

We have several types of engagements with business/government that pay our graduate students. Besides the usual grants, we currently have the following two activities:

- Local business (management consulting) provides stipend/overhead for a PhD student (just completed second year of this) in exchange for his time. This is in lieu of a teaching or research assistantship in the department. This has been mutually beneficial, as company has extended full-time offer to student on graduation. Student has accepted. We have had similar arrangements with hospital systems in the past.
- We have a long-term consultancy with a federal agency. The funding goes through our department's statistical consulting center. Three students have received funding (stipends, summer funding) for work on various projects as needed. Some projects are short term (a few weeks) and some are long term (several years).

Other kinds of relationships:

We have relationships in the area with companies who come to our department to interview students for summer internships. We facilitate the interviewing process by setting up appointments and giving them space. This is for grad students at both the master's and PhD levels.

We provide a forum for local companies to discuss their company's projects (i.e., give a work-related seminar). This is for our master's students. This is mostly to facilitate their recruiting of our students, but also provides these students with information about what statistical methods are used in the workplace.

Local companies provided people (a lot of them the same as mentioned in the previous paragraphs) to serve as judges at the DataFest contest we held this year.

We provide free consulting services to companies/nonprofits willing to be clients for our graduate students in their required consulting class.

How did the engagement/collaborations come about? How are the collaborations sustained in a way that is mutually beneficial to students, the university, industry, and community at-large?

Some are cold calls that companies make to our department looking for help either on consulting problems or for recruiting.

The federal agency relationship resulted from a National Academies panel I served on. I met people at the agency who were trying to implement changes. This relationship has now been ongoing for more than 10 years.

A fair number of these relationships were from local companies hiring our students and having them work out well. They are interested in a pipeline to students. Then, over time, our students continue the recruitment cycle.

Some of the relationships are from the local ASA chapter meetings. We hold them on our campus, and so we get to know industry people who come to the meetings.

What arrangements about the collaborations might be helpful to share?

The consulting center is a good vehicle for supporting nondomestic students in the summer. The immigration laws allow people holding student visas to work on campus, but it is more difficult for them to get authorization to work off campus. If a company is willing to give up "control" and let the student be supervised by us and work on our campus, this allows them access to scarce talent.

What benefits for the department have you seen come out of these collaborations?

We have had a variety of benefits, including the following:

- We have been able to place our master's students well locally, which helps us in recruitment.
- We have been able to have more PhD students (larger number of stipends) and provide more of them support in the summer on a part-time (flexible) basis, so

they can work on dissertations and still earn enough to survive.

- We have generated research topics. Two current dissertation topics are from the federal agency consultancy.
- We have not yet hired adjuncts from our industry contacts, but we have discussed this with our industry friends, and will use them if we find ourselves short-handed.
- We have had the opportunity to train our students in consulting.

What benefits for the broader community have you seen come out of these collaborations?

Companies have been very happy with our students as employees. We are now working with two local companies to facilitate their employees' participation in our master's program. To do this, we are moving some of our courses to the evening, allowing them to receive credit in some courses (e.g., consulting) from their work experience. This is providing a better workforce for the companies and good (tuition-paying) students for us.

As mentioned above, we do provide free consulting to companies willing to work with our students. This has been especially useful for nonprofits without funds to hire statistical help.

What are the challenges or barriers to such collaborations? What have you learned since your department began these collaborations to deal with these challenges?

Challenges are locating people within the industry to partner with. Then, even after you have a working relationship with someone in a company, they may move on and you lose your contact.

We have not found an effective way to locate people in industry with whom to partner. We rely on them finding us. Because we are in a large metropolitan area, this has worked for us, but I can see it would take a lot more resources than a faculty member/chair would have to cultivate relationships if you were in a smaller area.

Most problems we get from local companies do not rise to the level of research problems for PhD students. They are still beneficial to train students in consulting. However, occasionally, there is a reluctance on the part of the company to pay the full cost of consultation, thinking the problem is helping supply our PhD students with dissertation problems. This has led to some awkward conversations and wasted time in scoping potential problems.

VIRGINIA TECH

Jennifer H. Van Mullekom is the director of the Statistical Applications and Innovations Group (SAIG) at Virginia Tech. She has collaborated on both sides of the fence as an industrial statistician for more than 18 years and now as an associate professor of practice.

Anne Ryan Driscoll is an assistant collegiate professor at Virginia Tech. Her research interests include statistical process monitoring, design of experiments, and statistics education. She has also collaborated on projects for the Department of Defense and NASA.

Please describe your department's industry and/or government engagements/collaborations.

The Virginia Tech Department of Statistics collaboration projects span grants from various government agencies, partners in the Virginia Tech Corporate Research Center, department of statistics corporate partners, and private companies that contact the department independently of our other programs.

We currently have a large number of collaborations not related to large federal granting agencies such as the National Institutes of Health or National Science Foundation. Our longstanding Corporate Partners Program creates an opportunity to exchange ideas between corporate statistics leadership and our department. Corporate Partners creates a forum to receive input on our program, place our students in internships and permanent positions, and facilitate collaboration.

We now have a new way to collaborate on short-term and long-term projects through the Statistical Applications and Innovations Group (SAIG),

which recently became an external service center. SAIG can provide quotes for design, analysis, and reporting, which also may lead to research collaborations.

How did the engagement/collaborations come about? How are the collaborations sustained in a way that is mutually beneficial to students, the university, industry, and the community at-large?

Collaborations originate in a variety of ways. Many of our government and industry collaborations have come through alumni employed at various agencies. They often encounter research questions in their daily work that are "important, but not urgent." Their organizations lack the personnel to devote to these projects, so they turn to the university for both expertise and cost-effective flexible staffing to devote to the projects.

Other collaborations result from master agreements negotiated at either the university or college level. When these projects are presented at conferences, we often create interest from other partners. And, of course, networking at national conferences through the American Statistical Association and other professional societies such as the American Society for Quality also lead to these relationships.

The relationships are sustained by a successful track record of meeting deliverables. Our faculty purposely seek opportunities that align with their research interests and the interests of their students. They also scope opportunities properly and negotiate appropriate compensation for supervision and the students' funding.

The "important, but not urgent" distinction is also made so we set expectations appropriately. Students have course and degree requirements, so they are not capable of dropping everything to devote all their time to solving a highly time-sensitive problem. Regular program reviews and communications are essential to keeping the program on track.

Another, often overlooked, avenue for research is that of a research associate or research professor. These are degreed staff members and faculty within the university who can be devoted full time to a more urgent problem.

The Corporate Partners Program is another way our department fosters collaborations with outside entities. This program was established 19 years ago with the goal of solidifying the informal ties with industry and government built over many years. Most of the partnerships originate because of ties to alumni who are employed at various companies.

Currently, our department benefits from partnerships with five companies. These partnerships are sustained by providing value to both the department and the company. Benefits to the company include an annual symposium and advisory board meeting to learn about initiatives at the department and university, opportunities to recruit students for internships and full-time employment, and easy access to faculty to foster joint research projects. The department benefits from feedback from the partners about refining our curriculum to tune our program to the rapidly changing needs of users of statistics, funding for graduate student scholarships and awards, research projects for faculty and students, and also employment opportunities for students.

What arrangements about the collaborations might be helpful to share?

Our Office of Sponsored Programs and the Virginia Tech Business Engagement Center provide excellent support in working through the logistics of relationships with outside entities. Existing relationships and agreements between VT industry affiliates and Corporate Research Center partners facilitate development of specific collaborations.

A relationship can be initiated by any faculty member. With respect to business relationships, the faculty member then completes a request for appropriate legal agreements on behalf of the university. Once the appropriate documents have been negotiated and signed, the relationship progresses through the appropriate channels in the university depending on its nature. Smaller projects may be handled at the departmental level, while others are handled at the college level.

Collaborations have varied time frames. For example, a short-term analysis collaboration with SAIG could be initiated by me and last a few weeks to a few years. Many of our long-term research relationships with professors and research groups within the department have lasted five years or more.

What benefits for the department have you seen come out of these collaborations?

The publications resulting from our collaborations are quite numerous, including ones in journals such as *Journal of Quality Technology* and *Quality Engineering*. A collaboration between Yili Hong and DuPont resulted in multiple publications and a SPES [Section on Physical and Engineering Sciences] award from the American Statistical Association, whereas one between Geoff Vining and NASA resulted in a NASA Engineering Safety Council Engineering Excellence Award. Those collaborations have also led to student dissertation topics with members of the sponsoring organization serving on the student's committee.

Anne Driscoll also works on the latter collaboration with NASA. Both Vining and Driscoll collaborate with the Department of Defense. An organically evolving collaboration between Baker Hughes, a GE Company, under Robert Gramacy has led to a line of research on computer model calibration of a seal used in oil and gas extraction that is the topic of a student's dissertation. William (Bill) Woodall has worked with many external collaborators over the years, most recently with the Food and Drug Administration to provide input on their Quality Metrics Program. Additionally, Jane Evia-Robertson has collaborated on K–12 STEM education studies to provide analysis resulting in *Science Communication* publications for the National Academy for the Advancement of Science.

We have given short courses and webinars for our corporate partners and are continuing to evolve that relationship. We also look forward to forging new collaborations with external companies through SAIG.

What benefits for the broader community have you seen come out of these collaborations?

Our collaborations have certainly established strategic national government and industry partnerships, but our department also focuses on serving the local community. Christian Lucero is working through SAIG with Virginia Cooperative Extension to develop an analysis tool for a multicenter Centers for Disease Control and Prevention–sponsored diabetes management and prevention program. Our work has also resulted in grant applications for the local school systems, analytics supporting the building of a new dormitory for the Virginia Tech Corp of Cadets, and analytics to support policy and staffing in county governments.

What are the challenges or barriers to such collaborations? What have you learned since your department began these collaborations that help with these challenges?

Two of the barriers to collaborations with universities include the speed of establishing the legal relationships and data security. Both these problems typically have pre-existing solutions at most large research universities, but it often takes perseverance to execute these aspects of the projects properly. All parties involved must be familiar with the legal process and who to contact to initiate and sign agreements. A basic understanding of intellectual property is also important.

Some of our statistics/data science relationships are more consulting in nature, whereas others may involve proprietary algorithm or software development. The boundaries of these relationships and IP [intellectual property] ownership must be established up front. Statisticians and data scientists also need to be able to educate their lawyers regarding the differences of applications versus IP-containing projects. Members of our profession also need to be aware when a project crosses the line into IP development and how to protect their contribution.

Government and corporations have varying IT [information technology] security requirements. Personal health information creates its own unique challenges. Academicians are not typically "raised in this environment." There is typically much more freedom in sharing information in academia. There is a learning curve associated with both partner requirements and on-campus resources for creating a secure IT environment. Due diligence on this front ahead of time can pay off in expedited project start-up.

Any other comments?

Professional development courses and leadership training provided by the American Statistical Association are crucial to the development of collaborations. An understanding of vision, mission, project management, emotional intelligence, and execution are essential to building and sustaining collaborations.

ARIZONA STATE UNIVERSITY

Jennifer Broatch, an assistant professor and BS program lead at Arizona State University's West Campus, assists junior faculty.

Michelle Mancenido works to establish and coordinate industry collaborations and projects for BS statistics majors.

Please describe your department's industry and/or government engagements/ collaborations.

Our primary involvement with industry is a semester-long senior capstone project.

We have three industry partners for this: a health care provider, a professional sports organization, and a global manufacturing company.

The capstone sites present the student team with a sufficiently diverse range of statistical applications to choose from. Students are mentored by faculty from statistics and applied mathematics, but they are ultimately responsible for scoping their projects, collecting data, coordinating with sponsors, formulating statistical models, coding, and—most importantly—presenting the results of their study to their sponsors. Mentors (one per team) are only expected to provide students with advice and help overcome stumbling blocks in the course of the project.

How did the engagement/collaborations come about? How are the collaborations sustained in a way that is mutually beneficial to students, the university, industry, and the community at-large?

The collaborations are based on faculty network connections. The arrangement is mutually beneficial. For ASU, students are able to work and deal with real-world data that can sometimes be massive and dirty. For the sponsors, the students come in with skills that help them solve business problems they do not have the manpower or resources to tackle. It has also provided a pipeline for qualified job applicants.

The business problem tackled by the student team is selected in collaboration with our industry partners. Students are not simply handed data to analyze. They are active participants in the selection of the research project.

What arrangements about the collaborations might be helpful to share?

Each project is a semester-long contract. The contract is in the form of a project charter, which includes opportunity or problem statements, objectives, scope and limitations, and expected deliverables. The students develop these charters as part of their project management training. The students are also responsible and accountable for ensuring the delivery of quality output and meeting sponsor requirements such as deadlines.

What benefits for the department have you seen come out of these collaborations?

Our partnerships have directly led to jobs and internships within the industry partner. We also use an industry partner as an adjunct faculty to ensure the most current job skills. The capstone offers experience for junior faculty in business problems and the application of statistics (similar to a consulting center).

What benefits for the broader community have you seen come out of these collaborations?

In addition to the capstone, we partner with a local nonprofit conservation society. They have a great need for quality analysis, and—in turn—our students can get experience and help the local community at the same time.

What are the challenges or barriers to such collaborations? What have you learned since your department began these collaborations to deal with these challenges?

Always team dynamics. The students have a very tight timeline (four months), so they are pressured to deliver, which boils over when the dynamics are shaky to begin with. Hence, we add a team-building and leadership component to the course.

Another is the scoping of the project. For most of the project sites, it is a part-time job, so the students sometimes find themselves overwhelmed with meetings, onsite data collection, etc. The faculty mentors are instrumental in ensuring the deliverables and project timeline are feasible.

Company logistics and human resources are another hurdle. For example, our health care partner requires at least two months to get a student started in their system (HIPPA training, vaccinations, etc.)

Finally, we have developed an excellent relationship with our sponsors; as long as the students keep delivering high-quality output, they are willing to accommodate the students year-in and year-out.

Any other comments?

I know these projects can often be a lot of work, but they have been overwhelmingly rewarding for our students. ■

The EU General Data Protection Regulation Is Affecting—Maybe—Your Work

ASA Privacy and Confidentiality Committee

The European Union's (EU) recently adopted General Data Protection Regulation (GDPR) marks a major transition in data privacy protections in the European Union. And it may affect approaches to data access and confidentiality protections more broadly, including in US research and other statistical activities. (*www.eugdpr.org)*

After four years of preparation and debate, the GDPR was approved and adopted by the EU Parliament in April 2016 and went into effect May 25, 2018. Many detailed daily practices remain to be worked out, including extraterritorial enforcement, but one thing is certain: The GDPR means more bureaucracy for all involved.

The GDPR replaces the Data Protection Directive. (A regulation—as is the GDPR—is a binding legislative act. It must be applied in its entirety across the EU, while a directive is a legislative act that sets out a goal all EU countries must achieve. However, it is up to the individual countries to decide how.) Unlike the current EU privacy directive, an EU regulation does not require any enabling legislation by member nations. It is designed to harmonize data privacy laws across Europe, protect and empower all EU residents' data privacy, and reshape the way organizations across the region approach data privacy. The regulation applies to EU members and nation states that are not EU members but are members of the EU economic area.

In this increasingly data-driven world where privacy cannot be completely guaranteed, the GDPR seeks to protect EU residents' privacy and against breaches and misuses of "personal data." Personal data is defined in a broad context as any information relating to an identified or identifiable natural person (data subject). An identifiable natural person is one who can be identified—directly or indirectly—in particular by reference to an identifier such as a name; identification number; location data; online identifier; or one or more factors specific to the physical, physiological, genetic, mental, economic, cultural, or social identity of that natural person.

Some personal data is categorized as special data, which is essentially sensitive personal data covering religious or philosophical beliefs, health, racial or ethnic origin, trade union membership, political beliefs, sex life or sexual orientation, genetic data, and biometric data (including photos when used for the purpose of uniquely identifying a natural person) of individuals. The collection and use of special data is subject to greater restrictions than other types of personal data.

Pseudonymization is the processing of personal data in such a way that the data can no longer be attributed to a specific data subject without the use of additional information. This is the central feature of data protection by design. The GDPR looks favorably upon data controllers that keep "additional information" separate. To explain further, direct identifiers (name, Social Security number, or contact information) should be kept in a separate file from indirect identifiers, which can reveal identities if combined with additional data points. Personal data that has been pseudonymized (e.g., key-coded or as described above) falls short of being anonymized and therefore can fall within the scope of the GDPR, depending on how difficult it is to attribute the pseudonymized data to a particular individual.

The GDPR has important extraterritorial applications. It applies to personal information on EU residents even when they are outside the EU. It applies not only to personal data controllers and processors located in the EU, but also to those located outside the EU if their activities involve personal information on EU residents.

Coverage is triggered if the activities relate to offering goods or services to EU residents, irrespective of whether payment is required (e.g., over the internet), and monitoring behavior that takes place in the EU. When personal information on non-EU residents (e.g., for US residents) is transferred to an EU data controller or processor, that data becomes subject to the GDPR (Article 3).

Of course, breaking privacy is always a serious activity. Under GDPR, breaking privacy is now costly. Organizations—processors and controllers—in breach of GDPR can be fined up to 4%

MORE ONLINE
For information about the Committee on Privacy and Confidentiality, visit *http://community.amstat.org/cpc/home.*

Helpful Resources

General Data Protection Regulation (GDPR) Guidance Note for the Research Sector: Appropriate Use of Different Legal Bases Under the GDPR: *https://bit.ly/2sYlZN8.*

What You Need to Know About the EU-US Privacy Shield and the GDPR: *https://bit.ly/2t74Z6s*.

ICO (2018) Guide to the General Data Protection Regulation (GDPR). Information Commissioner's Office.

ICO (2017) Preparing for the General Data Protection Regulation (GDPR): 12 Steps to Take Now. Information Commissioner's Office. *https://bit.ly/2deJ72T*.

Insights Association (2017) GDPR: FAQs on the EU General Data Protection Regulation. *https://bit.ly/2t8ddLO.*

Maldoff, G. (2016) Top 10 Operational Impacts of the GDPR: Part 8 – Pseudonymization. The Privacy Advisor. *https://bit.ly/2Kbbj4w*.

of the annual global turnover or 20 million euros (whichever is greater). This is the maximum fine that can be imposed for the most serious infringements (e.g., not having sufficient customer consent to process data or violating the core of Privacy by Design concepts).

Main Topics

Main topics in the GDPR include the following:

- In the GDPR, conditions for consent have been strengthened. Requests for consent must be given in an intelligible and easily accessible form, with the purpose for data processing attached to that consent, using clear and plain language. It must be as easy to withdraw consent as it is to give it.
- Under the GDPR, breach notification will become mandatory in all member states where a data breach is likely to "result in a risk for the rights and freedoms of individuals."

GDPR has increased data transparency and empowers data subjects. It gives data subjects the right to obtain from the data controller confirmation of whether personal data concerning them is being processed, and if so, where and for what purpose. The controller shall provide a copy of the personal data, free of charge.

The right to be forgotten entitles the data subject to have the data controller erase his/her personal data, cease further dissemination of the data, and potentially have third parties halt processing of the data. The conditions for erasure, as outlined in Article 17, include the data no longer being relevant to original purposes for processing or a data subjects' withdrawing consent.

Privacy by design is also included in the GDPR. Privacy by design calls for the inclusion of data protection from the onset of the designing of systems, rather than an addition. More specifically, "*The controller shall … implement appropriate technical and organisational measures … in an effective way … in order to meet the requirements of this Regulation and protect the rights of data subjects*." Article 23.

GDPR and Research

Research occupies a privileged position in the GDPR. By harmonizing privacy legislation across the EU member states and carving out exemptions for scientific, historical, statistical, and health research, the GDPR seeks to reconcile the often-competing values of privacy and innovation (see *https://bit.ly/2l9xg8S*).

The research regime set out in Article 89 expressly allows across the EU the following:

- Broad consents for scientific research where consent cannot be secured for all specific purposes at the outset of data collection
- Further use of personal data for scientific or statistical research as a secondary compatible purpose
- The right of the data subject to object to processing of personal data (unless necessary in public interest)
- Restriction of the right of a data subject to exercise their "right to erasure" if it is likely to significantly impair processing for scientific research purposes
- Relaxation of the storage limitation principle granting the ability to store personal data for longer periods
- Isolated transfers of personal data to third countries taking into account legitimate expectations of society for an increase in knowledge

Additionally, information obligations in scientific research do not apply if they would involve a disproportionate effort. Consideration of this takes into account the number of data subjects and age of the data and appropriate safeguards must be adopted. Furthermore, there is "no right to be forgotten" if it is likely to significantly impair processing

for scientific research purposes. Use of the Article 89 research regime is subject to the following conditions:

- Appropriate safeguards to protect the right and freedoms of the data subject
- Adequate technical and security measures entrenching the principle of data minimization and using pseudonymized data as default
- Compliance with recognized ethical safeguards

The grounds that researchers can use to process personal data are the following:

- Consent of the data subject/research participant for the research purpose(s).
- Legitimate interests of the data controller (or a third party). In determining what these legitimate interests are, you need to ensure you balance the interests of the controller with any prejudice to the rights and freedoms or the interests of the data subject. In assessing whether the data controller has a legitimate interest, you need to take into account the reasonable expectations of the data subject. Public authorities cannot base processing on this ground.
- Performance of a public interest task or exercise of official authority.

GDPR and EU-US Privacy Shield

Under both the GDPR and the earlier directive, the EU doesn't allow the transfer of data on EU residents outside the EU unless the country is deemed to have adequate data privacy laws. Unfortunately, the EU has deemed that the United States does not currently have adequate data privacy laws, but organizations can navigate this by adhering to the EU-US Privacy Shield.

The EU-US Privacy Shield is a program in which participating US companies are considered to have adequate data protection and can therefore facilitate the transfer of EU data. The EU-US Privacy Shield's predecessor, the Safe Harbour Framework, was overhauled because the EU did not consider this agreement strict enough on data protection for their citizens. The GDPR protects the data of all EU residents, regardless of whether they currently live in the EU.

Being certified under the EU-US Privacy Shield can give your company a jump-start on fulfilling the GDPR's standards and provide legal clarity and direction on the EU's data protection laws, but it will not guarantee total GDPR compliance. It is also important to note that the EU-US Privacy Shield will be revisited every year and could change, so it is important to have an assigned employee/person to stay current with all the updates. ■

THE AMERICAN STATISTICIAN HIGHLIGHTS

May Issue Has Something for Everyone

Daniel Jeske, Editor, *The American Statistician*

The May 2018 issue of *The American Statistician* features 13 articles that span a range of methodology and application areas. There is something for everyone.

The General section begins with an article about identifiability and estimation issues that arise when parametric families are extended with extra parameters for increased flexibility. A second article investigates the effect of standardization on multicollinearity measures, and a third article discusses the construction of joint distributions from marginal distributions in such a way that constraints on the random variables are satisfied.

The lineup for Teacher's Corner includes an experience report on a curriculum design for a professional master's program of statistical practice. A second paper investigates incomplete data inference methods for "shaved dice." A third paper proposes a graphical display of type-2 errors when testing for a normal distribution, and the final paper in this section develops and compares methodologies when using regression analysis to detect aging trends.

You will find two Short Technical Notes. The first develops a fast algorithm for computing the expected value of sample central moments, and the second offers alternative proofs that a Laplace distribution can be represented as a Gaussian mixture.

There are also two papers in the Statistical Practice Section. The first is a discussion about Cochran's rule-of-thumb on the adequacy of the chi-square test for independence in a contingency table, and the second is an investigation of the effect population skew can have on sample size formulas.

Finally, there are two papers contributing to the Interdisciplinary and Statistical Computing and Graphics sections of the journal. The first studies high-school dropout rate and proposes correspondence analysis as a way to obtain additional insight. The second paper advocates for the use of symbolic computing tools and uses a context in which the efficient score test is of interest.

To read these articles or submit your work to *The American Statistician*, visit *www.tandfonline.com/toc/utas20/current*. ■

PASTIMES

What Does Samanthi Konarasinghe Like to Do When She Is Not Being a Statistician?

Left: Konarasinghe is made up before a theater performance.

Below: Konarasinghe's painting, "My Dream"

Konarasinghe

Who are you, and what is your statistics position?

I am Samanthi Konarasinghe, statistician and director of the Institute of Mathematics and Management in Sri Lanka. I am a senior lecturer in mathematics, statistics, and financial management at universities and tertiary education institutions.

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

When I am being a statistician or not, I am an artist. I am an actress, painter, violinist, and writer. I have produced several stage plays and won the best actress award, as well. I have conducted a solo art exhibition, named "My Dream." I am a nature lover. I walk miles and miles of roads full of trees and flowers. I enjoy feeding and talking to animals. I love parties and dancing.

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

As everyone says, I was born an artist. From my small days, I was equally interested in arts and mathematics. For me, painting, singing, dancing … are not hobbies; they are part of my life. My scientific and artistic lives are intertwined. ■

STATS4GOOD

Planning for Data for Good at JSM

With JSM just around the corner, it's a good time to think about how to include Data for Good in your JSM activities. JSM is a huge event and can seem overwhelming. However, with a bit of planning, the Joint Statistical Meetings can be tamed and enjoyed.

It's important to resist the temptation to overbook, dashing from one presentation to the next. JSM is about so much more than the papers! One strategy is to find the "big rocks"—a small number of activities most important to you—put them in your schedule, and then plan around them.

Every person can make sure Data for Good is one of those big rocks. Be sure to include time for meeting, networking, and just enjoying the event. As Student t often plays a role in my own D4G work, I always pay proper homage to William Gossett by raising a glass of a certain Irish stout.

When selecting papers, note how important it is to attend in person. For example, I don't know why anyone would want to attend mine, which is about keeping your skill set up to date by doing Data for Good projects, because the content is just as good in print (but the rest of the invited session is great). Make a list of the papers you can read later and the big rocks to see in person.

Networking is a huge part of conferences! Plan time for this. If there is a person you want to meet, attend a paper they are presenting (if there is one) and don't book the following time slot.

Highlighted D4G Papers

An invited session, Data Science for Social Good, will be presented Thursday, August 2, from 10:30 a.m. to 12:20 p.m. DataKind founder Jake Porway will speak about designing for impact, followed by Darren Banks from RTI, who will touch on arrest-related deaths, and Erika Salomon from The University of Chicago, who will discuss interventions for people at risk of incarceration. The papers—and especially the discussion time at the end of the session—will be an important D4G highlight for JSM 2018.

Projects by Statistics without Borders (SWB) and their partners are featured in several presentations. An invited session August 1 from 8:30 a.m. to 10:20 a.m. will highlight recent SWB projects, including work related to the European migrant crisis and winter shelter for survivors of the 2015 Gorka earthquake.

Keep in mind that many of the most valuable presentations will be those on methodology that normally don't say D4G on the label. Margaret Levenstein's paper, "Transparency, Reproducibility, and Replicability in Work with Social and Economic Data" is one good example. Presentations about working with public data sources, such as those mentioned in the May Stats4Good column, and those focusing on collaboration and communication with nonstatisticians will be especially helpful.

Not Attending JSM?

Not going to JSM, but interested in doing more with Data for Good? The presentations and other resources are not for attendees only. As JSM is a nexus of all things statistical, searching the speakers, talks, and posters is valuable for anyone, but perhaps most of all for those unable to attend. Most of the research for this month's column came from the JSM online program (see *ww2.amstat.org/meetings/jsm/2018/onlineprogram/index.cfm*), which is a tremendously valuable resource. Each person will want to look for subjects and speakers that interest them most. If you can't be there in person, you can still mine the presentations, look for opportunities, and make connections for your next project.

Bringing Data for Good Home

There are so many great opportunities at JSM, and everyone can make Data for Good one of them. Be sure to take some time to talk with presenters. Think about possibilities for your next D4G project and get connected with the people involved. When you are ready to leave, be sure to bring JSM—and Data for Good—home with you! ■

With a PhD in statistical astrophysics, **David Corliss** works in analytics architecture at Ford Motor Company while continuing astrophysics research on the side. He serves on the steering committee for the Conference on Statistical Practice and is president-elect of the Detroit Chapter. He is the founder of Peace-Work, a volunteer cooperative of statisticians and data scientists providing analytic support for charitable groups and applying statistical methods to issue-driven advocacy in poverty, education, and social justice.

STAT*tr@k*

Data Analyst vs. Data Scientist: Industry Perspectives

Mikhail Popov got his start with R and statistics at California State University, Fullerton, where he did undergraduate research in the application of statistics to neuroscience. He continued working with brain data as part of the master's of statistical practice program at Carnegie Mellon University, followed by his employment at the Neuropsychology Research Program with the University of Pittsburgh Medical Center. These days, Popov is a data analyist for the Wikimedia Foundation, where his work focuses on supporting teams that improve the Wikipedia reading experience. He loves brewing coffee, cooking, baking, hiking, and sharing his knowledge with others.

Both "data analyst" (DA) and "data scientist" (DS) are titles that vary greatly between industries, and even among individual organizations within industries. As the roles behind titles change over time, it is natural for some teams to ask themselves the following questions: Should we have distinct roles or just stick to one? How would we differentiate the roles in a way that fulfills our organization's needs and is generally consistent with similar organizations? Do we want to consider a DS to be equivalent to a senior DA, the only difference being the title? Answering these questions not only establishes clear responsibilities and expectations, but enables hiring managers and recruiters to communicate clearly with potential applicants in the future (e.g., in job postings).

Search the internet for "data scientist vs data analyst" and you will find plenty of people who don't know what the difference is (nor if there even is one anymore), and you will find plenty of people who think they know the definitions and differences. You will find an abundance of opinions, but very little consistency!

When I asked my followers on social media what they personally think the differences are, not everyone shared the same opinion, but some interesting camps of thought emerged. This is my effort to summarize the many replies I received, so here are certain important points, recurring themes, and somewhat overlapping camps of thought:

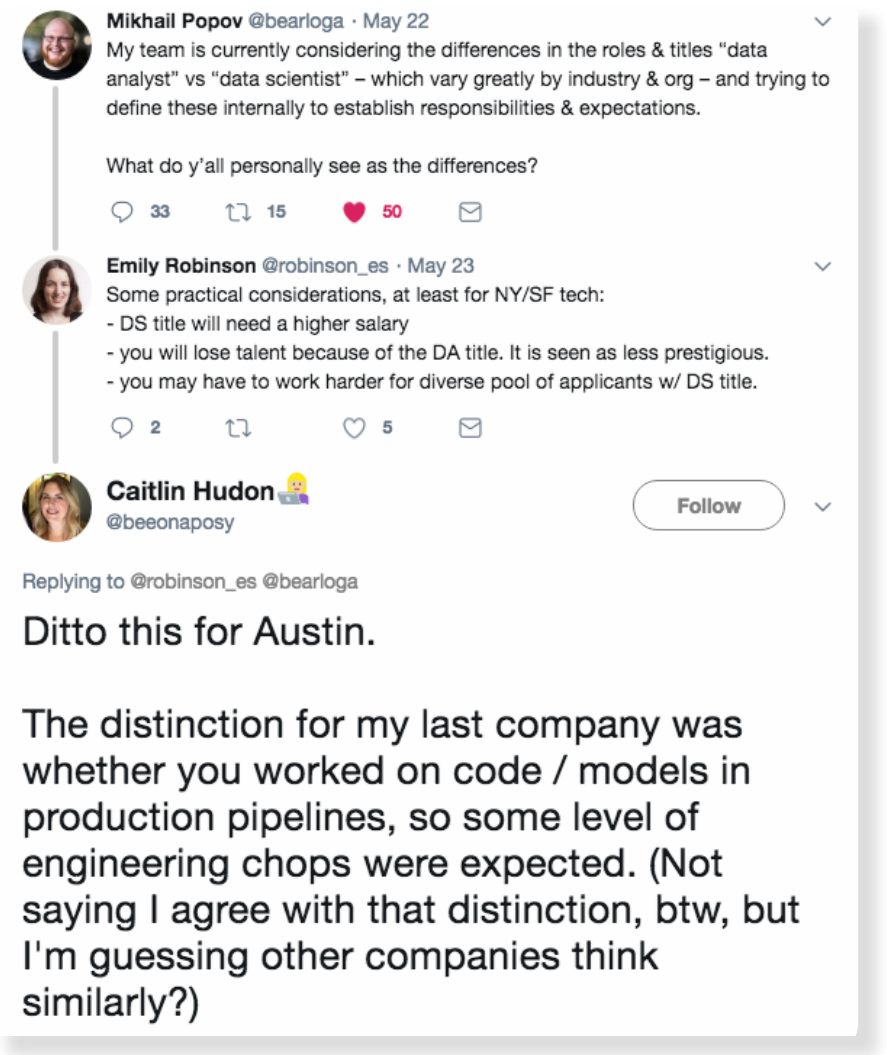
- Single/Primary Distinction: DS is a DA who can code
    - In summary, the kind of questions a DA can answer and the kind of tasks a DA can work on are a subset of a DS's because GUI [graphical user interface] tools limit what can be done, but a DS—by knowing programming—can answer way more kinds of questions and work on way more kinds of tasks.
    - Leads to reproducibility, scalability (see *https://bit.ly/2sX6fdo*)
    - See *bit.ly/2J76fRi*
- Single/Primary Distinction: Statistical and machine learning (ML) modeling
    - Whether you worked on code / models in production pipelines (see *https://bit.ly/2sW1fpg* and *https://bit.ly/2MuhkL8*)
    - Not all DS work requires ML, but ML is required to be a data scientist (see *https://bit.ly/2LNDmHo*)
- No DAs, just two types of DSs: "Type A" (Analysis) vs "Type B" (Building) (see *https://bit.ly/1Ush8Yu*)
- Emily Robinson brought up that "data scientist" is now also used as an umbrella term and specialties are specified in the title as needed (see *https://bit.ly/2lb7gde*)
    - e.g., Data Scientist, Algorithms; Data Scientist, Analytics; Data Scientist, Inference (see *https://bit.ly/2MrBntq*)
- Some big tech companies like Facebook, Spotify, and some departments within Apple are moving away from having DAs to just having DSs (see *https://bit.ly/2JT0aZ2*)
    - Lyft has posted a thorough explanation of their reasoning (see *https://lft.to/2HRYeLc*)
- Practical considerations for New York/San Francisco/Austin tech scene:
    - DS title will need a higher salary.
    - You will lose talent because of the DA title. It is seen as less prestigious.
    - You may have to work harder for diverse pool of applicants w/DS title.
    - That latter comes from one company I know who's had a harder time getting female applicants for DS positions vs DA (see *https://bit.ly/2sVe03c*)
- Lucas Meyer voiced support for a classic (refer to Drew Conway's diagram at *https://bit.ly/1fDSjpe)*

- A co-worker shared that his organization identified three data scientist personas/profiles at one of his previous employments:
    - **DS, Operations** provides data and insights for resourcing decisions through ad-hoc analyses, dashboards, defining KPIs, and A/B testing.
        - This is the role of a **Data Scientist in Product,** who creates reports and dashboards for management and executives.
    - **DS, Product** delivers data science *as* product (not to be confused with data scientists *in* product). These folks build predictive models, AIs, matchmaking systems.
        - In some organizations, this might be an **ML Engineer** or an **AI Engineer** or just a **Data Scientist**? - MP
    - **DS, Research** experiments and innovates. Not everything they work on ends up in production or utilized, but they are free to be creative and take chances.
        - In some organizations, this might be the **Research Scientist**? - MP

Thinking of it this way, you might envision a scenario/pipeline wherein a research DS prototypes a new recommender system (RS) algorithm, then an operations DS helps determine (through A/B testing and qualitative user research together with a design/UX researcher) whether it's worth the costs to produce (perhaps with the input of a business/financial analyst), and then a product DS scales the RS (possibly in collaboration with a data engineer) and deploys it to production. - MP

Closing Thoughts

I hope for some this is an eye-opening moment and they now realize there's no single distinction everyone agrees on. All are coming into it with their own backgrounds, experiences, thought processes, and ideas. None of these is wrong! If you're in a hiring position, please remember to be specific when writing a job description. You can't just write "data analyst" or "data scientist" at the top and expect everyone else to share your assumptions; it's a recipe for misunderstanding and failure.



Posing the question on Twitter, Mikhail Popov discovered interesting camps of thought about the difference in the roles and titles "data analyst" vs. "data scientist."

I would also like to point out that this is not representative of how data professionals perceive these roles globally. All responses were from English-literate people, most (if not all) from people living and working in the United States. And many are people who follow me on Twitter. I know for a fact there are so many more data professionals (data engineers have opinions on this, too!) who aren't in any of those groups. These are professionals who have their own perceptions, who operate in different cultures and under different expectations across the world. Someone out there is probably writing a similar post within their own community. ■

Editor's Note: A version of this article originally appeared on Popov's blog in May. See *https://bit.ly/2HPmsG4*.

STATISTICIAN'S VIEW

The Commutative Property Is Neither Necessary nor Sufficient: It's Time to Consider Implementing Distance PhD Programs

Seth T. Lirette is an assistant professor in the department of data science at the University of Mississippi Medical Center. He supports biomedical research across the entire university, while focusing on radiological and aging research. He is also president of the private analytics and statistical consulting firm Blackshear & Lirette. He holds an MS in statistics from Mississippi State University and a PhD in biostatistics from the University of Alabama at Birmingham.

With the data revolution firmly upon us, it has never been more imperative to have highly skilled data practitioners building models and conducting analyses. Many of those doing data science–type work have no formal training, and this often results in questionable analyses.

One potential way to rectify this situation is to provide easier access to those people who wish to pursue advanced training in analytics-related disciplines, but—for various reasons—are unwilling to take residential status at or commute to campus. While there is a litany of master's degrees offered completely online, I am unaware of any programs for distance PhDs in statistics, biostatistics, data science, or any other analytics field. I propose it is time we loosen the reigns on the seemingly ubiquitous residential requirement for admission to PhD programs.

Disproving the sufficiency of commuting to a campus for obtaining a PhD is trivial, as we know lots of people who drive onto campuses for 4+ years and never receive doctorates. Disproving the necessity of commutation (or residentiality) is a bit more challenging. Although anecdotal, my personal experience gives a good counterexample. This essay seeks to document my experience in a distance (although officially residential) PhD program, explaining the positives and negatives alongside what worked and what needs to be improved upon.

Background

I began my stint at the University of Mississippi Medical Center (UMMC) as an unpaid intern during the summer between the two years of my master's degree. During this internship, I was offered a full-time biostatistician position once I completed my MS degree. I accepted this position in May 2012. Then, in the spring of 2013, I was approached by who would eventually be the head of my department with an interesting proposition. He had explained that everyone was impressed with my work, and that he and the other faculty members would eventually like me to join the faculty. At the risk of sounding obvious, I would need a PhD for this to take place.

UMMC had no program related to statistics or biostatistics (we now have PhD and master's programs in biostatistics and data science). Therefore, I needed to take the degree from somewhere afar. But I had no desire to uproot my family, nor did the department want to relinquish me. This is where the interesting proposition enters: UMMC had worked out an unofficial agreement with the department of biostatistics at the University of Alabama at Birmingham (UAB) in which I could take my PhD from UAB, but stay employed full time at UMMC. I would complete every degree requirement necessary (complete 60 hours of coursework, pass comprehensive exams, complete 24 research credit hours with a dissertation, and other requirements). The only difference between me and my student-peers would be that they were full-time graduate students living in Birmingham, Alabama, and I was a full-time biostatistician living in Jackson, Mississippi.

My Experience

From my anecdotal evidence, it seems to be somewhat common for a student to complete his or her dissertation while not living in the same locale as his or her adviser. However, I could not find a documented instance of a person doing an entire statistics PhD from a distance. So, this was going to be an exercise in faith and completely an (N=1) experiment. There were some growing pains, but for the most part, things went rather smoothly.

It was first agreed upon that I should show up for classes, at least initially. So, for the entirety of the fall semester of 2013, I made the four-hour one-way commute from Jackson to Birmingham to attend my Tuesday/Thursday classes in person and made the trek back, twice per week. This was obviously less than ideal, but everyone involved

wanted to make sure I would not be falling behind on my coursework. In retrospect, this was unnecessary, as we will later see.

During the second semester, spring of 2014, I spoke with my professors, and we agreed that, given my success in the first semester, I could cut the commute back to once per week. At the end of the first year, I had logged many, many miles on I-20.

From that point on, and since my grades were exemplary, I would make it standard practice to meet face-to-face on the first day of class and then only be physically present if needed (i.e., to take an exam or to present a formal presentation).

Every professor I encountered was more than willing to be helpful in any way. Any questions I had about assignments or methods were answered over telephone calls or email exchange. I never felt as though I did not have adequate access to my instructors.

One caveat to this does need mentioning. Because this was not an official distance program, most of the classes consisted only of traditional face-to-face lectures. I took two official online classes (Writing for Research and Introduction to Epidemiology), but other than these, there was not an official platform for disseminating lectures other than face-to-face. As a result, I sometimes felt like I was not "getting my money's worth" from some classes. I cannot fault them for this, as it was not an official distance program, but I love hearing people lecture on subjects they know intricately, and this is one thing I wish I had more of. That being said, by the time of my last course (Advanced Clinical Trials), we had a very nice virtual classroom where I was able to fully participate from four hours away via webcam. If a school chooses to fully implement a distance program, this would be vitally necessary.

Another downside to the distance model is that many people meet lifelong friends in graduate school, as I did during my master's degree. Not living in the same city or seeing them often obviously limited the amount of interaction I had with my classmates. I knew a few through email and casual conversations, but I would have liked the chance to get to know them better.

I, however, was able to take solace in the fact that working full time provides a much better salary than that typically received through assistantship and fellowship stipends. And if I am being completely honest, my family of five needed a full-time salary more than I needed new friends.

I hope I have made the argument that implementing a distance PhD should now be a viable option for most departments.

One of the biggest advantages of working full time while pursuing the degree is that I was constantly exposed to real-world issues of data analysis. It is no secret that the curated data sets provided in classroom settings are usually nothing like data in the wild. The latter is what I was exposed to on a daily basis and would only serve to sharpen my skills. Also, with almost every new technique I learned in the classroom, I could envision somewhere at UMMC to apply it. These two worlds synergized very well. In fact, the topic of my dissertation directly resulted from one of my collaborations with the department of radiology at UMMC.

By the time it came to write my dissertation, everyone knew about my situation and I had assembled a wonderful committee willing to provide me with anything I needed to succeed.

Given my entrance into the program in August of 2013, we were initially aiming for a graduation date of May 2018. In fact, I earned my degree in August of 2017. This was, in no small part, due to both the helpfulness of the entire department of biostatistics at UAB and the generosity of what would become the department of data science at UMMC.

While I realize this option is not for everyone seeking a PhD, I hope I have made the argument that implementing a distance PhD should now be a viable option for most departments. Adding more highly trained statisticians, biostatisticians, and data scientists to the academic, governmental, social, industrial, and technological workforce can only improve some of the issues we currently face. With more educational options, we can go a step further in adding more well-qualified practitioners of the data sciences, and we can hopefully make progress into taming what sometimes currently looks like a Wild West of analytics. ■

Session Proposals Sought for JSM 2019

Denver Convention Center. Photo/Getty images

Rich Levine, JSM 2019 Program Chair

Levine

You read that right. JSM 2019 program planning has begun. This call always takes me aback. Here we each are in the throes of preparing for JSM 2018 Vancouver—organizing our alumni gatherings, salivating over the slam-packed conference program, locating the best eateries, stressing because we should have planned the pre-conference trip to Banff earlier—and then some highly organized, energetic, new program chair springs 2019 on us.

I know the dog days of summer are busy, but don't let this opportunity pass you by. 2019 ASA President Karen Kafadar has set the JSM 2019 theme as "Statistics: Making an Impact." Take a morning to organize your thoughts on one of the five session types highlighted below. The proposal process is easy—the deadline is September 6. Aim to make an impact in Denver!

Invited Paper and Panel Sessions

The classic invited session format consists of a session of talks, and perhaps commentary, by two to six speakers and discussants or a panel of three to six expert discussants. We are seeking sessions that address a hot topic of broad audience interest by a slate of engaging speakers/panelists. In fact, the most stimulating invited sessions present diverse viewpoints and strategies on a common topic, with speakers coming from different institutions and taking different approaches toward similar problems.

To organize a session, first set a theme and contact potential participants. Once these are determined, the proposal consists of the session title, a brief description/rationale, the list of participants, and tentative titles for the talks (these may be modified later). Proposals are submitted through the JSM

online system, which opens July 18. The deadline for submission is September 6 at 11:59 p.m. ET.

As part of the submission process, you will select up to three sponsors (partner society, ASA section, etc.) in rank order for your proposed session. Once you submit a proposal through the online system, campaign for a sponsor! Most of the 209 invited sessions are allocated to partner societies and ASA sections. Furthermore, the ASA sections will select up to two proposals to enter into a competition for the remaining slots in the invited session program. You may find the contact for your desired sponsor on the program committee roster, which you can find on the JSM website when it goes up at the end of this month. Enlisting a proposal champion at the program committee table is a desired strategy. *You must submit your proposal through the online system before contacting a program committee member sponsor representative.* Given a meeting of this size and the number of balls the program committee juggles, the online submission ensures your proposal does not fall through the cracks.

As you are probably gathering, given the annual growth of JSM, the competition for an invited session slot is now fierce. Take the time to identify a fresh and important topic and provide an inspiring session description. You may also revise your proposal following a discussion with the program committee sponsor representative until the September 6 deadline. The goal is to make your proposal appealing to other committee members in the event it enters the selection competition. Finally, make sure your session participants follow the strict rules (see *ww2.amstat.org/meetings/jsm/2018/guidelines.cfm]* for participation).

Decisions about the invited program will be made by the end of September. Due to the limited number of sessions and increasing attendance, many strong invited session proposals will not be selected. Do not lose hope—you may submit your proposal later as a topic-contributed session.

Memorial Sessions

We will slot five memorial sessions at JSM 2019. Proposals must be submitted through the online invited session system, choosing "memorial session" as the sponsor. To maximize the odds of being selected for inclusion in the invited program, I recommend submitting memorial sessions by September 6 to enter the competition for an invited session. If the session is not selected by a partner organization or ASA section, the session proposal will be entered into the competition for one of the five memorial session slots. That said, I encourage you to contact me (*rlevine@sdsu.edu*) if you are planning to submit a memorial session. Final decisions will be made in the fall.

DENVER, COLORADO
JSM2019
JULY 27–AUGUST 1

Invited Poster Sessions

We will continue the new tradition of an invited poster session of up to 30 electronic posters during the Opening Mixer. This session is an excellent opportunity for presenters to interact one-on-one with JSM attendees. Email your ideas to the JSM 2019 poster chair at *jsm2019posterchair@gmail.com.*

Introductory Overview Lectures

We are shooting for four Introductory Overview Lectures (IOLs) addressing state-of-the-art, important statistical topics of broad interest to JSM attendees. An IOL may be presented by an individual or a team. That said, I am looking for engaging, experienced lecturers with a facility for imparting potentially subtle ideas and deep concepts to a large audience. Do note that IOL speakers may also present an invited or contributed paper, panel, or poster at JSM. Contact me (*rlevine@sdsu.edu*) with suggestions for topics and/or speakers.

Statistics: Making an Impact

On behalf of all program committee members, I thank you in advance for helping JSM 2019 make an impact worthy of the majestic Rocky Mountains that will greet us each day in Denver July 27 to August 1, 2019! ■

Dipak Dey with his 2018 Don Owen Award

The 2018 Don Owen Award, conferred by the San Antonio Chapter, was presented to **Dipak Dey** April 13 during the 38th annual Conference of Texas Statisticians, which was held at the University of the Incarnate Word in San Antonio, Texas. Dey was nominated by Bani Mallick, university distinguished professor of statistics at Texas A&M University.

Dey is a board of trustees distinguished professor in the department of statistics at the University of Connecticut, Storrs. He earned his doctoral degree in statistics from Purdue University in 1980 and taught at the University of Kentucky and Texas Tech University before joining the University of Connecticut in 1985.

Dey is the author or co-author of more than 260 refereed papers—a good portion of them in premier statistics journals. Also, a good number of his publications deal with substantial statistical applications in bioinformatics, genomics, and optics. Dey has written a textbook and been the co-editor of nine edited books. Along with these publications, Dey has made broad and significant contributions in decision theory, Bayesian inference, survival analysis, and multivariate methods.

Dey has received numerous awards, including being elected as fellow of the American Association for the Advancement of Science, American Statistical Association, Institute of Mathematical Statistics, International Society for Bayesian Analysis, Connecticut Academy of Arts and Sciences, and the International Statistical Institute. He has supervised about 35 PhD students and made numerous contributions to the university and statistical profession.

The San Antonio Chapter is proud to honor Dipak Dey for his excellence in research, statistical consultation, and service to the statistical community.

The Don Owen Award is presented annually by the ASA San Antonio Chapter and sponsored by the Taylor & Francis Group. ■

Pfeffermann

Bosworth

Barry Bosworth—senior fellow in the economics studies program and Robert V. Roosa Chair in International Economics at the Brookings Institution—and **Danny Pfeffermann**—director of Israel's Central Bureau of Statistics and professor of statistics at the Hebrew University of Jerusalem and University of Southampton, UK—have been selected to receive the 2018 Julius Shiskin Memorial Award for Economic Statistics. The award recognizes unusually original and important contributions to the development of economic statistics or in the use of statistics in interpreting the economy.

Bosworth is recognized for conducting research using key federal government statistical programs to study topics such as capital formation, saving, and productivity growth and for advising the statistical agencies to improve these programs.

Pfeffermann is recognized for collaborating with statistical agencies around the world to improve several major programs, such as time series small area estimation, estimation of mean square error of seasonally adjusted and trend estimators, and modeling of complex survey data, accounting for informative sampling and nonresponse.

Bosworth and Pfeffermann become the 46th and 47th recipients of the award. They will be honored at events hosted by the three sponsors of the award: The Washington Statistical Society, National Association for Business Economics, and Business and Economics Section of the American Statistical Association. ■

ASA's Director of Strategic Initiatives and Outreach Donna LaLonde and ASA's Director of Science Policy Steve Pierson speak to Jeff Weld, a science educator serving as senior policy adviser in STEM education for the White House Office of Science and Technology Policy.

Members of the ASA executive staff—Donna LaLonde, Ron Wasserstein, and Steve Pierson—met Jeff Weld, a science educator serving as senior policy adviser in STEM education for the White House Office of Science and Technology Policy. Weld and his team are producing a new five-year STEM education strategy plan, the last one having been issued in 2013. The ASA made the case for the inclusion of statistical thinking for all K–20 students and discussed the need for professional development of K–20 introduction to statistics instructors and the demand for more statistical skills in both science and workforce training, especially in the data science era.

The National Academy of Sciences has elected **Trevor Hastie**—professor of statistics and John A. Overdeck Professor of Mathematical Sciences and Biomedical Sciences at Stanford University—as a new member and **Simon Tavaré**—former director of the Cancer Research UK Cambridge Institute at the University of Cambridge—as a foreign associate. Both honors are in recognition of their distinguished and continuing achievements in original research.

Hastie, who is originally from South Africa, joined the Stanford faculty in 1994, where he had earned his PhD, after spending eight years at the statistics and data analysis research group at Bell Labs in New Jersey. His main research interests have been in applied statistics, with current interests focusing on statistical modeling and prediction. He has published more than 200 articles and five books, the most recent being *Computer Age Statistical Inference* (with Bradley Efron). Hastie's work in modeling tools also provided the foundation for much of the statistical modeling in R.

Tavaré earned his PhD in probability and statistics from the University of Sheffield in the UK and has taught widely in the US, holding positions at the University of Colorado, University of Utah, and University of Southern California. Since 2003, he has held several positions at the University of Cambridge, where he is professor of cancer research (bioinformatics) and senior group leader at Cancer Research UK Cambridge Research Institute. He has done pioneering research in computational biology, and his Cambridge group focuses on statistical methods for the analysis of next-generation sequencing data, evolutionary approaches to cancer, and methods for the analysis of genomics data.

Both Hastie and Tavaré are fellows of the American Statistical Association.

View a full list of new members and foreign associates at *www.nasonline.org/news-and-multimedia/news/May-1-2018-NAS-Election.html.* ■

Victoria Kennerley

Submitted by Dudley Poston, Wray Jackson Smith Award Selection Committee Chair

Members of the Wray Jackson Smith Award Selection Committee recently chose **Victoria Kennerley,** a fourth-year student at the University of Florida, as the 2018 scholarship winner.

Awarded jointly with the ASA's Social Statistics Section, this scholarship supports work toward a career in government statistics. The scholarship encourages promising young statisticians to consider a future in government statistics by providing up to $1,000 for use in exploring a number of opportunities.

Kennerley, who graduated in May with a Bachelor of Science in mathematics and a Bachelor of Science in statistics, will spend her summer as an intern at the National Cancer Institute in the biostatistics branch of the department of cancer epidemiology and genetics. From there, she will begin graduate school at Emory University to pursue a Master of Science in public health in biostatistics. After completing her graduate education, she hopes to pursue a career in government statistics with a focus on health.

Kennerley's career interest in government statistics began during her internship at the National Cancer Institute during the summer of 2017. Her research focused on analyzing incidence trends and relative risk rates of colon and rectum cancers at the county level among 612 US counties in two age groups. She conducted age-period-cohort analyses to assess geographic heterogeneity.

Her responsibilities included determining the best method for modeling the data, finding a model of best fit for each cancer and age group combination by fitting several models with varying fixed and random effects in R, and then visually mapping and assessing the geographic patterns for each cancer in the selected models. She then conducted follow-up analyses to determine how population covariates explained the geographic heterogeneity of relative risk and incidence trend patterns.

Kennerley created a poster summarizing the results of her project, which she presented at both the main campus of the National Institutes of Health and the National Cancer Institute. These results are now being developed into a paper for publication.

The Wray Jackson Smith Scholarship was created to honor the memory of a founding member of the Government Statistics Section and a longtime contributor to federal statistics. Smith's federal career spanned four decades and included positions in the Office of Economic Opportunity, Office of the Assistant Secretary for Planning and Evaluation, and the Energy Information Administration. After retiring from the federal government in 1983, he continued to play a role in federal statistics from the private sector.

For more information about the scholarship, visit *https://bit.ly/2ek0zUy.*. ■

How Can We Help?

We want to help you share your own news with colleagues and showcase your latest successes.

It is important to us that everyone knows about your research, recent awards, and promotions!

If you have any news you would like to share, email *megan@amstat.org.*

Obituaries

Lawrence D. Brown

Lawrence D. Brown died February 21, 2018, at the age of 77.

Larry was born December 16, 1940, in Los Angeles, California. His parents moved to Alexandria, Virginia, during World War II, then returned to California. His father, Louis Brown, was a successful tax lawyer and later a professor of law at the University of Southern California, where he worked tirelessly on behalf of client services and conflict prevention, for which he coined the phrase preventive law.

Larry's mother, Hermione Kopp Brown, studied law in Virginia and then Los Angeles and became one of the leading women lawyers in Los Angeles in the field of entertainment law, with emphasis on estate planning.

Larry inherited their dedication to service, their mental acuity and resourcefulness, and their selfless good spirits. He graduated from Beverly Hills High School in 1957 and from the California Institute of Technology in 1961. He earned his PhD in mathematics from Cornell University three years later. Initially hired at the University of California, Berkeley, Larry then taught in the mathematics department at Cornell University from 1966–1972 and 1978–94 and in the statistics department at Rutgers University from 1972–1978; he moved to the Wharton School at the University of Pennsylvania in 1994 and taught his last course there as the Miers Busch Professor of Statistics in the fall of 2017.

One of the leading statisticians of his generation, Larry was the recipient of many honors, including devoted service as a member of the National Academy of Sciences, election to the American Academy of Arts and Sciences, the presidency of the Institute of Mathematical Statistics, and an honorary doctorate from Purdue University.

To read more about Larry, visit the blog post by Francis Diebold at *https://bit.ly/2tds2N0.*

Joan Georgette Staniswalis

Joan Georgette Staniswalis, professor emerita at The University of Texas at El Paso (UTEP) and fellow of the American Statistical Association, died peacefully April 13, 2018. Her husband, David Finston, and sister, Stella Toibin, were at her side. Other family members and friends were nearby.

Staniswalis was born at Fort Lewis, Washington, to John G. Staniswalis (US Army) and Ida M. Staniswalis July 25, 1957. During her father's frequent overseas postings, Joan, her mother, and her sister resided in Panama City, Panama. Joan was deeply rooted in both Panamanian and US culture. Her fluency in the customs and languages of two lands—combined with her exceptional intelligence, spiritual sensitivity, and generosity—made her a beloved mentor to legions of students, colleagues, and co-parishioners.

Staniswalis was educated at California State University, Fullerton (BS, mathematics) and University of California, San Diego (MS and PhD, mathematics). She had a distinguished and varied career as a statistician, making significant contributions to theory and biomedical applications, the latter a product of her experience on the faculty of The Medical College of Virginia. She came to UTEP in 1990, where she soon rose to the rank of full professor. Her experience at UTEP led to an interest in environmental applications such as the health effects of air pollution and the use of ecological inference to study ethnic disparities in health outcomes.

At UTEP, Staniswalis served as director of the NIH-funded Border Biomedical Research Center and director of the Statistical Consulting Laboratory. Her many accomplishments were recognized by the statistical community with her election to fellow of the American Statistical Association: "For important contributions to nonparametric regression and its application to biomedical research; for collaborative research accomplishments and administrative leadership in consulting; for mentoring of students and junior researchers."

Even after her 2016 retirement, Joan continued her mentoring activities, graduating her final PhD student in December 2017 and embarking on an ambitious mathematics tutoring project to enhance opportunities for re-entry into society by inmates at the Doña Ana County Detention Center.

The practice of mercy, through works both corporal and spiritual, was instinctual to Joan. She had high standards, none higher than those to which she held herself, and her corrective advice, while always sincere, could be wilting. Remembered best, however, is her smile—which, in its warmth and nurturing power—eclipsed the tropical Panamanian sun.

A fund in Joan's name has been established at UTEP to assist statistics graduate students with travel to conferences, an activity so important to Joan that she would rent a university van to drive students as far away as San Diego.

Excitement, Sleeplessness, Relief:

ASA Members Express How It Feels to Win NSF Graduate Research Fellowship

"I was super elated," says **Brian Kwan**, upon hearing he had been awarded a National Science Foundation Graduate Research Fellowship—so much so that he couldn't sleep that night. Receiving the fellowship—one of 16 awarded to statistics students out of 2,000 recipients—was the culmination of years of anticipation, during which he resisted the temptation to rush an application while an undergraduate and, instead, deepened his knowledge of statistics by working on projects with faculty members at the University of California, Irvine, University of Pittsburgh, and his current home, University of California, San Diego.

Quoting the line from John Tukey that "The best thing about being a statistician is you get to play in everyone's backyard," Kwan says collaborating with different investigators gave him a chance to learn about the statistical literature in each scientific field and to reason which statistical methods could apply best to the statistical analysis needed. Working with Loki Natarajaran on research to develop novel statistical approaches to predicting future kidney function decline among type 2 diabetics deepened Kwan's interest in prediction modeling and gave him the confidence, he says, to apply for the fellowship.

Maria Jahja heard from a friend she had been selected, and after checking the email, she immediately texted her parents. "It was all typos because I was so excited," she says. "I know so many great students who applied in my field, I didn't think I really had a chance." As an undergraduate research assistant in the lab of Eric Laber at North Carolina State University, Jahja began building artificial intelligence agents for video games. "I would code fun games, then implement learning algorithms for sequential decision-making under uncertainty." This led to her research proposal on using statistically rigorous uncertainty measures to inform decision-making, which she will pursue at Carnegie Mellon University.

"Computers are astonishingly efficient at solving formal problems," she says, "but building an intelligent system for uncertain situations is much more difficult. Human intuition and reasoning are hard for a machine to reproduce, especially in complex environments where even a human expert might be unsure what the best choice is. It might even be that there is no 'optimal' choice, as it depends on individual preference. But if we could make some hybrid data-driven system capturing the strength of both—an expert and algorithm-driven decision-making system—I think that has immense value for society."

Derek Hansen came to his research proposal, in part, through working at the Federal Reserve Board as a research assistant, where he used state-space techniques to estimate models in economic and financial applications and wrote lots of code in R and Julia to tackle the technical problems encountered (he will present the results of this research at JSM in a presentation titled "Randomized Missing Data Approach to Robust Filtering with Applications to Economics and Finance"). His NSF proposal will look at whether similar techniques can be used to improve model selection.

"To be honest, I wasn't expecting at all to win the NSF fellowship," says Hansen. "In fact, I found out because a fellow research assistant at the Federal Reserve saw my name on the website and congratulated me. I was absorbed in [a] Bayesian particle filtering project, so I hadn't even checked my non-work email in a few days." Hansen says the news was both a pleasant surprise and reassuring. "It's a little scary working on a research proposal and sending it off to be evaluated—I also am relieved that experts in the field of statistics don't think my ideas are completely crazy." Hansen will begin a PhD program in statistics at the University of Michigan this fall.

The NSF fellowships provide financial support for three years across a five-year period. For details, visit *www.nsfgrfp.org*. ■

Section on Statistical Education to Host FREE Birds of a Feather Discussions

Have you been thinking about teaching a new data science course? What about incorporating a simulation-based curriculum into your classroom? New this year at JSM, the ASA Section on Statistical Education will host free Birds of a Feather–themed discussions in Vancouver.

In addition to data science and simulation-based curricula, themes range from integrating experiments into the classroom and what to do after the first course to training graduate students and teaching diverse student populations. Leaders in statistics education—including Beth Chance, Nathan Tintle, and three of the "Lock 5"—will moderate discussions. Come share your experiences and learn from your fellow statistics educators.

Birds of a Feather attendees will meet at the Statistical Education Section table on the level two of the convention center Monday–Wednesday at 12:30 p.m. and 4:00 p.m. From there, discussion groups will move to a nearby location. For the lunch-time discussions, participants are encouraged to bring their own lunch.

Birds of a Feather Themes and Moderators

Monday, July 30

- 12:30 p.m.: "Preparing Graduate Students as Instructors," Ulrike Genschel, Iowa State University
- 4:00 p.m.: "Integrating Experiments into Undergraduate Statistics Classes," Sudipta Roy, University of St. Francis
- 4:00 p.m.: "Teaching Statistics at a Small Liberal Arts College," Jeff Witmer, Oberlin College

Tuesday, July 31

- 12:30 p.m: "Teaching Statistics to Diverse Student Populations," Brianna Heggeseth, Macalester College
- 12:30 p.m.: "What Next? What Do We Do with Students After Their First Course?," Nathan Tintle, Dordt College, and Beth Chance, Cal Poly
- 4:00 p.m.: "ASA Section on Statistical Education Mentoring Program," Matt Hayat, Georgia State University; KB Boomer, Bucknell University; and Jennifer Green, Montana State University

Wednesday, August 1

- 12:30 p.m.: "Lessons Learned from Teaching Intro to Data Science," Paul Roback, St. Olaf College
- 4:00 p.m.: "Sharing Experiences with Teaching Simulation-Based Inference," Kari Lock Morgan, Penn State University; Robin Lock, St. Lawrence University; and Patti Lock, St. Lawrence University

Visit *http://bit.ly/bofjsm2018* to read theme descriptions and sign up. ■

awards and deadlines

Best Nonclinical Biostatistics Papers Invited for Competition

The ASA Biopharmaceutical Section Nonclinical Biostatistics Working Group—dedicated to promoting the application and understanding of the nonclinical biostatistics discipline in biopharmaceutical industry—is inviting submissions for the 2019 Best Nonclinical Biostatistics Paper Award.

The paper must address a relevant topic in nonclinical biostatistics. This would include topics covered by the 2016 Lanju Zhang book, *Nonclinical Biostatistics for Pharmaceutical and Biotechnology Industries*. Topics such as biomarker discovery and predictive modeling, which do not directly concern trial design (phases I-IV), are also welcome.

All eligible papers must have been published (or accepted for publication) in English in refereed journals between January 1, 2012, and March 1, 2019. Send an electronic copy of your paper to *zhangji@medimmune.com* by March 15, 2019. Include contact information (e.g., email addresses) for all co-authors.

An award plaque will be presented to the winning author (or co-authors) at the 2019 Nonclinical Biostatistics Conference at Rutgers University.

For details, visit *http://community.amstat.org/biop/workinggroups/ncbwg/awards.*

Alabama Chapter Hosts Miniconference in Mississippi

The Alabama Chapter hosted a miniconference April 6 at Mississippi State University. Approximately 40 current and prospective chapter members attended from Alabama and Mississippi who were affiliated with Mississippi State University, Jackson State University, the University of Mississippi, and the University of Alabama at Birmingham.

Chapter officers (from left) Hailin Sang, Jon Woody, Jeff Syzchowski, and Bob Oster with ASA Past President Barry Nussbaum

Student award winners (from left): Justin Leach, Mojtaba Khanzadeh, Ralph Vital, and Zavia Epps

The keynote speaker was Barry Nussbaum, ASA past president. The title of his talk was "The Only Thing We Have to Fear Are the Data Themselves … And That Is Not a Very Big Fear." The purpose of the presentation was to demonstrate what to do—and what not to do—in terms of the ability of statisticians to succinctly explain results so decision-makers may correctly integrate analyses into their actions. The role of examining the opportunities and pitfalls of big data was a major focus of the presentation. Nussbaum delivered his talk with a mix of seriousness and humor, and his talk was well received by those in attendance.

Student presenters and their topics included the following:

- Justin Leach of the University of Alabama at Birmingham, "Penalized Smoothing Splines in Adolescent Growth Studies"
- Ralph Vital of Mississippi State University, "Goodness-of-fit Test for the Hazard Rate"
- Mojtaba Khanzadeh of Mississippi State University, "In-Situ Monitoring of Melt Pool Images for Porosity Prediction in Directed Energy Deposition Processes"
- Zavia Epps of Jackson State University, "Monte Carlo Methodology Using Bootstrapping to Investigate Weight in Motion Data on Bridge Load Rating Factor"

The chapter also held a business meeting that covered the newly written Alabama Chapter constitution and bylaws, chapter activities, a possible name change for the chapter to recognize that members are from both Alabama and Mississippi, and JSM activities.

In addition, the chapter held elections for its officers. Jon Woody of Mississippi State University was elected president and Bob Oster of the University of Alabama at Birmingham was re-elected treasurer. Hailin Sang of the University of Mississippi continues his term as secretary. Former President Jeff Szychowski will assume the role of chapter representative. A new vice president will be selected later. Elections for vice president and secretary will be held in 2019. ■

GMU Students Win Best Data Visualization

Ilhan M. Izmirli, GMU Student Chapter Faculty Adviser

From left: Brooke Gipson, Alyssa McDonald, Evan Cypher, and Megan Maloney

This past April, the George Mason University (GMU) Student Chapter experienced two significant successes.

The first occurred when the GMU Student Chapter competed at DataFest DC 2018, hosted by Summit Consulting April 20–22, with 11 other area universities. Two teams participated:

Stat of the Art

Brooke Gipson
Evan Cypher
Megan Maloney
Alyssa McDonald
Mariya Prokhorenko

The Patriots

Ray Koser
Anushka Prativadhi
Abhinav Kimar
Jesse Scearce

George Mason's presentation, "How Can Indeed Better Connect US Health Care Employers with Nurses?"won first place for Best Data Visualization.

The second success took place during Data Challenge DC the weekend of April 28. The GMU Student Chapter, led by Glen Hui, was instrumental in organizing the meeting. More than 30 students participated, six of which were from GMU. One of GMU's graduate statistics students was on the team that won for best data visualization. ■

Gabe Farkas (right) chats with two students during the speed mentoring program.

NC Chapter Has Speed Mentoring Success

MORE ONLINE
More information about the mentoring program can be found at *https://bit.ly/2yffWc4.*

The North Carolina Chapter hosted a speed mentoring event in April in which students and young professionals had the opportunity to meet with established career professionals in a small-group setting. Mentors and mentees discussed networking, goal setting, and career development with targeted questions and activities.

Mentors included Abie Ekangaki of UCB, Kirsten Foley of the Environmental Protection Agency, Gabe Farkas of the San Antonio Spurs, Breda Munoz of RTI, and Rishi Chakraborty of DCRI.

Mentees found the format efficient and liked that there were opportunities to talk to or hear from everyone while going more in-depth with the mentor they were assigned to.

The chapter's next mentoring event will be a full-day workshop on November 30. Mentees will have the opportunity to attend the chapter's fall dinner that evening to mingle with the larger North Carolina Chapter community and have a small group meeting with ASA President Lisa LaVange. For more information, visit *https://bit.ly/2LVOLVHg.* ■

Breda Munoz and Rishi Chakraborty answer students' questions during the speed mentoring program.

sectionnews

Physical and Engineering Sciences

Byran Smucker, SPES Chair-Elect, and Yili Hong, SPES JSM 2018 Program Chair

The events formerly known as the SPES/Q&P and Risk/SDNS mixers are morphing into one four-section joint mixer. This year, it will be the SPES/Q&P/Risk/Defense mixer at the 2018 Joint Statistical Meetings in Vancouver. We hope to see you Tuesday, July 31, in the Fairmont Waterfront Ballroom A from 6:30 p.m. to 8:30 p.m.

In the past, generous 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! Donated gifts have been both statistics and nonstatistics related.

We appreciate the generosity of our donors and hope you will consider adding to the excitement of the evening by donating door prizes this year. Of course, we will acknowledge all donors at the mixer.

The meetings are fast approaching, but there is still time to donate. Just complete the form at *www.surveymonkey.com/r/WD5X8D6* to provide contact information and donation descriptions.

We would prefer you bring the items to the mixer or have them available at your booth for pickup. Also, mark the box of items "For SPES/Q&P/Risk/SDNS" in large letters so it is easily identified.

SPES JSM Contributed Sessions in Vancouver

SPES has the following four contributed sessions in place for the upcoming JSM in Vancouver:

Sunday

Computer Experiments, Statistical Engineering, and Applications in Physical Sciences

Monday

New Development in Reliability Models and Innovative Applications

Tuesday

Machine Learning and Applications in Complex Engineering Systems

Recent Developments in Designs of Experiments and Responses Surface Models

For more information, check out the JSM 2018 Online Program at *ww2.amstat.org/meetings/jsm*. ■

Quality and Productivity

The Quality and Productivity (Q&P) section is sponsoring the following topic-contributed and contributed sessions at the Joint Statistical Meetings this year:

New-Generation Experimental Design and Causal Inference in High-Tech Companies, organized by **Tirthankar Dasgupta,** Rutgers University

Statistical Process Monitoring of High-Volume Data Streams, organized by **Emmanuel Yashchin,** IBM Research

Field to Fork: Leading with Statistics in the Food Industry, organized by **Shankang Qu,** PepsiCo

Modeling, Analysis, and Assessment, chaired by **Douglas Ray,** US Army RDECOM ARDEC

Advances in Statistical Process Control, chaired by **Ronald Fricker,** Virginia Tech

MORE ONLINE
Visit the JSM Online Program at *ww2.amstat.org/jsm* to view the complete 2018 schedule.

Attendees are encouraged to use the online program at *ww2.amstat.org/jsm* to search for Q&P sessions. The Q&P Section also works closely with other ASA sections to co-sponsor sessions. In these situations, you will see Q&P listed as a co-sponsor in the online program, which contains more sessions than are listed above. ■

survey RESEARCH methods section

Government Statistics

Submitted by Gina Walejko, GSS Program Chair

The Government Statistics Section (GSS) organized three invited sessions, including a panel on using multiple data sources for federal statistics; seven topic-contributed sessions, including an update on the US Commission on Evidence-Based Policymaking; three roundtables, including a lunch discussion on combating breaks in time series when using multiple data sources; five contributed sessions; and one poster session. In addition to sponsoring these events, GSS is co-sponsoring eight invited sessions, six topic-contributed sessions, and six speed sessions.

In addition, GSS is co-sponsoring a short course with the Section on Survey Research Methods (SRMS), titled "Applications of Hot Deck Imputation to Survey Data," July 31 with Rebecca Andridge of The Ohio State University and Jenny Thompson of the U.S. Census Bureau as instructors.

Hot deck imputation is commonly used for handling missing data in which each missing value (recipient) is replaced with an observed value from a "similar" unit (donor). This half-day course is designed for survey practitioners who are interested in "seeing the methods in action." Using examples from household and establishment surveys, the instructors will explore each step of hot deck imputation, beginning with different donor selection options through variance estimation methods. The course will cover classical hot deck methods alongside more cutting-edge approaches, including fractional hot deck imputation. The instructors will share their experiences with challenges that arise in the implementation of the hot deck—such as having fewer donors than recipients—and discuss various methods for overcoming these challenges.

More information about sessions, roundtables, and courses can be found at *ww2.amstat.org/meetings/jsm/2018/program.cfm*. As a reminder, roundtable and course space is limited, so sign up soon. ■

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

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

›› Indicates events posted since the previous issue

2018

July

16–20—33rd International Workshop on Statistical Modelling, Bristol, United Kingdom
For more information, visit *www.statmod.org/society.htm* or contact Simon Wood, School of Mathematics, Bristol, International BA2 6BS, UK; *simon.wood@bath.edu*.

16–20—CBMS Conference on Elastic Functional and Shape Data Analysis, Columbus, Ohio
For details, visit *stat.osu.edu/cbms-efsda* or contact Sebastian Kurtek, Department of Statistics, Ohio State, Columbus, OH 43210; (614) 292-0463; *kurtek.1@osu.edu*.

16–21—The 28th Annual Conference of the International Environmetrics Society (TIES 2018), Guanajuato, Mexico
For more information, visit *ties2018.eventos.cimat.mx* or contact L. Leticia Ramirez-Ramirez, Jalisco SN Col Valenciana, Guanajuato, International 36023, Mexico; *ties2018@cimat.mx*.

»**23–27—ECMTB 2018 - Lisbon, Portugal**
For more information, visit *www.ecmtb2018.org* or contact Paula Patrício, Caparica, International 2829-516, Portugal; *pcpr@fct.unl.pt*.

»**23–27—Introduction in Genome-Wide Data Analysis, Amsterdam, The Netherlands**
For details, visit *www.tinbergen.nl/tinbergen-institute-summer-school/genome-wide-data-analysis* or contact Judith van Kronenburg, Gustav Mahlerplein 117, Amsterdam, International 1082 MS, The Netherlands; +31(0)10 40 88919; *summerschool@tinbergen.nl*.

»**26–28—20th IMS New Researchers Conference, Burnaby, British Columbia**
NEW RESEARCHERS
For details, visit *groups.imstat.org/newresearchers/conferences/nrc.html* or contact Liangliang Wang, Room SC K10550, Simon Fraser University, 8888 University Drive, Burnaby, BC V5A1S6, Canada; 7787823577; *imsnrc2018@gmail.com*.

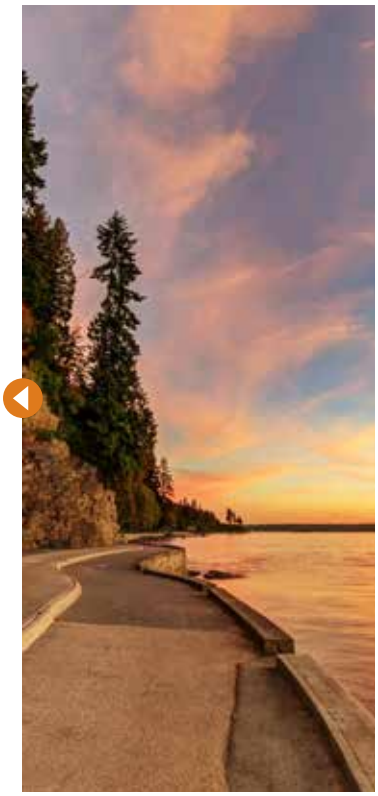
***28–8/2—2018 Joint Statistical Meetings, Vancouver, Canada**
For more information, visit *ww2.amstat.org/meetings/jsm/2018/index.cfm* or contact ASA Meetings, 732 N. Washington St., Alexandria, VA 22314; (703) 684-1221; *meetings@amstat.org*.

August

26–30—ISCB ASC 2018, Melbourne, Australia
For details, visit *iscbasc2018.com* or contact Arinex Pty Ltd, 91-97 Islington St., Collingwood, International 3066, Australia; *iscbasc2018@arinex.com.au*.

September

»**3–6—Royal Statistical Society 2018 International Conference, Cardiff, Wales**
For more information, visit *www.rss.org.uk/conference2018* or contact Paul Gentry, 12 Errol St., London, International EC1Y 8LX, United Kingdom; *conference@rss.org.uk*.



Seawall and rock wall at sunset, Stanley Park, Vancouver, British Columbia, Canada

Australian national parliament house in Canberra. Photo/Getty Images

6–7—Actuarial Risk Modelling and Extreme Values Workshop, Canberra, Australia
For details, visit *www.rsfas.anu.edu.au/rsfas-research/workshop-series* or contact Ross Maller, The Australian National University Research School of Finance, Actuarial Studies, and Statistics, CBE Building 26C, Kingsley Street, Canberra ACT 0200, Canberra, International 0200, Australia; 61261253650; *ross.maller@anu.edu.au*.

8–10—The Third 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-3.html* or contact Todd Kuffner, Campus Box 1146, 1 Brookings Drive, St. Louis, MO 63131; *kuffner@wustl.edu*.

»***12–14—2018 ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop, Washington, DC**
For more information, visit *ww2.amstat.org/meetings/biopharmworkshop/2018* or contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; (703) 684-1221, *meetings@amstat.org*.

»***22—StatFest 2018, Amherst, Massachusetts**
For more information, visit *nhorton.people.amherst.edu/statfest* or contact Nicholas Horton, 341 Prospect St., Northampton, MA 01060; (413) *230-9908; nhorton@amherst.edu*.

»**26—IDEAS Dissemination Workshop, Basel, Switzerland**
For more information, visit ***w**ww.ideas-itn.eu/dissemination-workshop* or contact Pamela Forster, B33a, Department of Maths & Statistics, Lancaster University, Lancaster, International LA1 4YF, UK; *p.forster@lancaster.ac.uk*.

October

»***3–5—Fall Technical Conference, West Palm Beach, Florida**
For details, visit *www.falltechnicalconference.org* or contact Maria Weese, 800 E. High St., Room 3095, Oxford, OH 45056; (513) 529-0591; *weeseml@miamioh.edu*.

»**3–7—International Statistics Days Conference, Bodrum, Turkey**
For more information, visit *www.igs2018.mu.edu.tr* or contact Atilla Göktas, Mugla Üniversitesi Fen Fakültesi Istatistik Bölümü, Borum/Mugla, n/a 48000, Turkey; +905423777290; *gatilla@mu.edu.tr.*

»***6–8—AISC 2018 - International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, North Carolina**
For details, visit *www.uncg.edu/mat/aisc/2018* or contact Sat Gupta, Department of Mathematics and Statistics, Greensboro, NC 27412; *sngupta@uncg.edu.*

»**22–25—Rome Course: Tackling Complexity in Medicine and Public Health Using Large Databases, Rome**
For details, visit *www.sinai-ite.com/international* or contact Wil Lieberman-Cribbin, 1 Gustave L Levy Place, New York, NY 10029; (212) 659-9576; *sinai.ite.info@gmail.com.*

Park Guell, Barcelona, Spain. Photo/Getty Images

25–27—Big Data Meets Survey Science (BigSurv18), Barcelona, Spain
For details, visit *www.bigsurv18.org* or contact Antje Kirchner, 3040 E. Cornwallis Road, Research Triangle Park, NC; (919) 316-3328; *info@bigsurv18.org.*

A statue of General George Washington rises over the tulips on a spring day in Boston Publik Garden. Photo/Getty Images

November

»**1–2—2018 Conference of the Program in Quantitative Genomics, Boston, Massachusetts**
For details, visit *www.hsph.harvard.edu/2018-pqg-conference* or contact Amanda King, 655 Huntington Ave., Boston, MA 02115; (617) 432-1056; *amking@hsph.harvard.edu.*

December

***3–7—74th Annual Deming Conference on Applied Statistics, Atlantic City, New Jersey**
For more information, visit *www.demingconference.com* or contact Walter Young, 16 Harrow Circle, Wayne, PA 19087; (415) 819-8884; *demingchair@gmail.com.*

HELP US RECRUIT THE NEXT GENERATION OF STATISTICIANS

The field of statistics is growing fast. Jobs are plentiful, opportunities are exciting, and salaries are high. So what's keeping more kids from entering the field?

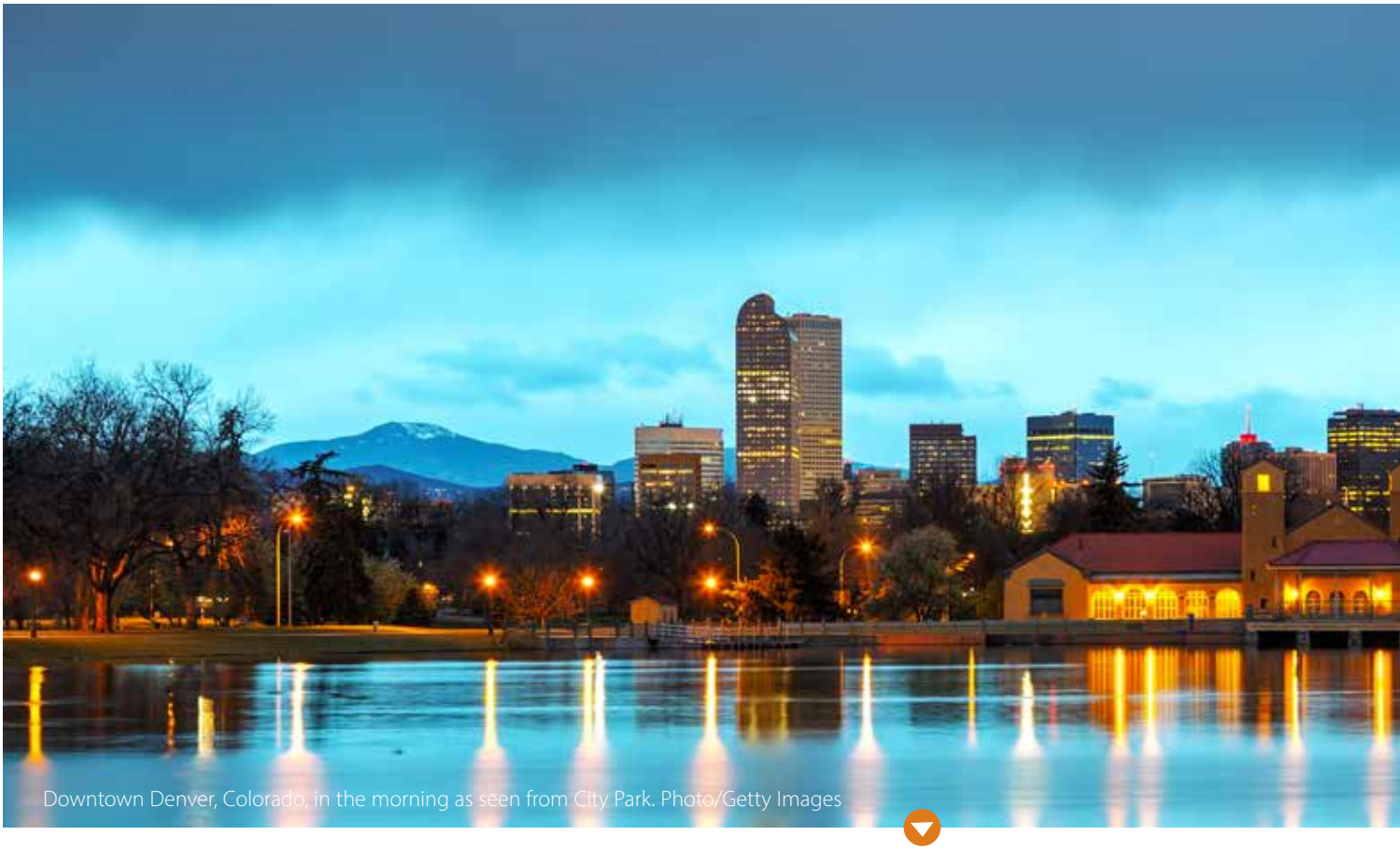
Many just don't know about statistics. But the ASA is working to change that, and here's how you can help:

- Send your students to ***www.ThisIsStatistics.org*** and use its resources in your classroom. It's all about the profession of statistics.
- Download a handout for your students about careers in statistics at ***www.ThisIsStatistics.org/educators***.

If you're on social media, connect with us at ***www.Facebook.com/ThisIsStats*** and ***www.Twitter.com/ThisIsStats***. Encourage your students to connect with us, as well.

Site features:

- Videos of young statisticians passionate about their work
- A myth-busting quiz about statistics
- Photos of cool careers in statistics, like a NASA biostatistician and a wildlife statistician
- Colorful graphics displaying salary and job growth data
- A blog about jobs in statistics and data science
- An interactive map of places that employ statisticians in the U.S.



Downtown Denver, Colorado, in the morning as seen from City Park. Photo/Getty Images

»**27–30—The Tenth International Triennial Calcutta Symposium on Probability and Statistics, Kolkata, India**
For more information, visit *www.calcuttastatisticalassociation.org/sympAnnounce.php* or contact Arindam Sengupta, Kolkata, International 700035, India; *caltri10@gmail.com*.

Dakshineswar Kali Temple located in Kolkata, India. Photo/Getty Images

2019

March

»**18–22—German Joint Statistical Meeting DAGStat2019, Munich, Germany**
For more information, visit *www.dagstat2019.de* or contact Michael Lebacher, Ludwigstr. 33, Munich, International 80539, Germany; +49 89 2180 2226; *michael.lebacher@stat.uni-muenchen.de*

June

»**18–21—The 7th International Workshop in Sequential Methodologies, Binghamton, New York**
For details, visit *sites.google.com/view/iwsm2019* or contact Aleksey Polunchenko, 4400 Vestal Parkway East, Binghamton, NY 13902; (607) 777-6906; *iwsm2019@gmail.com*.

July

***27–8/1—2019 Joint Statistical Meetings, Denver, Colorado**
For details, contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; (703) 684-1221; *meetings@amstat.org*.

2020

January

»***6–8—2020 International Conference on Health Policy Statistics (ICHPS), San Diego, California**
For more information, contact ASA Meetings, 732 North Washington St., Alexandria, VA 22314; (703) 684-1221; *meetings@amstat.org*. ■

NEW ORLEANS, LOUISIANA • FEBRUARY 14–16, 2019

CONFERENCE ON STATISTICAL PRACTICE

Innovations and Best Practices for the Applied Statistician

SAVE THE DATE!

Courses, tutorials, and concurrent and poster sessions are aimed at helping applied statisticians solve real-world problems.

"The intended audience includes those statisticians, data analysts, researchers, and scientists who engage in statistical analysis, design, and consulting..."

PARTICIPATE

Poster Abstract Submission
July 12 – August 30, 2018

Speaker Registration Deadline
November 15, 2018

ATTEND

Early Registration
September 28, 2018 – January 10, 2019

Regular Registration
January 11 – February 16, 2019

Housing Closes
January 12, 2019, 5:00 p.m. ET

Learn more at *ww2.amstat.org/csp*.

Professional Opportunity listings may not exceed 65 words, plus equal opportunity information. The deadline for their receipt is the 20th of the month two months prior to when the ad is to be published (e.g., May 20 for the July issue). Ads will be published in the next available issue following receipt. Listings are shown alphabetically by state, followed by international listings. Vacancy listings may include the institutional name and address or be identified by number, as desired.

Professional Opportunities vacancies also will be published on the ASA's website (*www.amstat.org*). Vacancy listings will appear on the website for the entire calendar month. Ads may not be placed for publication in the magazine only; all ads will be published both electronically and in print.
Rates: $320 for nonprofit organizations (with proof of nonprofit status), $475 for all others. Member discounts are not given. For display and online advertising rates, go to *www.amstat.org/ads.*

Listings will be invoiced following publication. All payments should be made to the American Statistical Association. All material should be sent to *Amstat News*, 732 North Washington Street, Alexandria, VA 22314-1943; fax (703) 684-2036; email *advertise@amstat.org*.

Employers are expected to acknowledge all responses resulting from publication of their ads. Personnel advertising is accepted with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual orientation.

Also, look for job ads on the ASA website at *www.amstat.org/jobweb.*

Connecticut

■ Join Boehringer Ingelheim's team as a Sr. Principal Methodology Statistician in Ridgefield, CT. The Sr. Principal Methodology Statistician acts as an international specialist in applied statistical methodology to foster methodological innovation in Boehringer Ingelheim (BI) Clinical Statistics and develop innovative, efficient statistical methods for ready-to-use application in BI studies and projects. Use the following link to submit your resume for this opportunity: *https://tas-boehringer.taleo.net/careersection/global+template+career+section+28external29/jobdetail.ftl?job=183564&tz=GMT-04%3A00.* EOE.

District of Columbia

■ National Institute of Statistical Sciences invites applications for two research associates or postdoctoral fellows. Research associates work at the interface of theory and application as part of NISS collaborations, often with federal agencies. PhD required in statistical, computational or quantitative science. Preferred areas: statistical computation, modeling and data analysis, quantitative methodology, survey methodology, psychometrics. *www.niss.org/careers/niss-statistical-research-associate.* Citizenship not required. NISS is an Equal Opportunity Employer.

Florida

■ The Health Informatics Institute at the University of South Florida invites applications for an open-rank research faculty position in biostatistics. The institute is NIH-funded as a statistics and data coordinating center for several large clinical research networks (*www.hii.usf.edu*). Preferred areas of interest include longitudinal data analysis, clinical trials, and big data analytics. Apply to position 5219 at *Careers@USF.edu*.University benefits package, EOE.

Nevada

■ The University of Nevada, Las Vegas invites applications for mathematical sciences, assistant professor in residence, college of sciences [R0109477]. The primary role for the assistant professor faculty in residence (FIR) is to teach four large sections of math/stat courses, including courses such as Math 120, 124, 126, 127, 128, 132, and Stat 152, each fall and spring semester. Please visit *www.unlv.edu/jobs* for details. EEO/AA/Vet/Disability Employer. ■

RTI INTERNATIONAL

RTI International invites applications for its Senior Survey Statistician position. In this role, you will work in a variety of fields, in the domains of public and global health, education and workforce, social science research, sample surveys, and the environment. You will have the opportunity to utilize your skills in survey sampling, experimental design, and complex data analysis. We take our mission "to improve the human condition" seriously and seek staff who resonate with it.

Qualifications: PhD in Statistics, Biostatistics, or Mathematics with at least 10 years of nonacademic related experience and 5 years of experience with survey statistics. See *www.rti.org/careers* (search "survey statistician") for the complete position description and application information.

We are proud to be an EEO/AA employer M/F/D/V.

Westat | An Employee-Owned Research Corporation®

EOE

Statistical Career Opportunities with Westat

Westat is an employee-owned corporation headquartered in Rockville, Maryland. We provide statistical consulting and survey research to the agencies of the U.S. Government and to a broad range of business and institutional clients. With a strong technical and managerial staff and a long record of quality research, Westat is a leader in the statistical services field.

We are currently recruiting for the following position:

Survey Sampling Statistician

This position requires a master's degree or Ph.D. in statistics with coursework in survey sampling or a master's or Ph.D. in survey sampling. Candidates with a master's must have at least 8 years of experience in sample survey design, selection, or weighting and a Ph.D. with 6 years' experience. Although not required to do programming, candidates would benefit from knowing SAS and other statistical software packages. Qualified candidates must have excellent written and oral communication skills, strong organizational skills, and the ability to handle multiple tasks simultaneously.

Westat is an Equal Opportunity Employer and does not discriminate on the basis of race, creed, color, religion, sex, age, national origin, veteran status, disability, marital status, sexual orientation, citizen status, genetic information, gender identity, or any other protected status under applicable law. To apply, go to **www.westat.com/careers**.

www.westat.com

AMSTATNEWS

ADVERTISING DIRECTORY

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

professional opportunities

software

SOCIAL CHATTER

What our followers are saying online

FOLLOW US

community.amstat.org

www.facebook.com/AmstatNews

@AmstatNews

www.instagram.com/AmstatNews

This month, we'll ask: What is one thing a statistician cannot live without? Tag @AmstatNews with your answer.

Luke Benz • @recspecs730
Hey @ThisisStats/@AmstatNews thanks for the sweet swag! Your Statskeball tournament was a blast!

Luke Benz, from Yale University, participated in the Statksetball Tournament and shared photos of the prizes he won. To read more about the contest and the winners, visit *thisisstatistics.org*.

We asked our followers: What would you tell your 13-year-old self about #statistics?

Ben Power Never be satisfied with a statistic quoted without context, and expect your own statistics work to generate questions more often than answers.

If you have questions you'd like to see our followers answer on social media, send them our way! Tag @AmstatNews or email *megan@amstat.org* with your suggestions.

Women in Statistics and Data Science

is ...

Welcoming

Inspiring

Empowering

Motivating

Eye Opening

Awesome

... you.

REGISTRATION OPEN!

Early Registration Closes **September 6**

Hotel Reservations Close **September 25**

Students and mid-career and experienced professionals all will be represented!

conference
Cincinnati, Ohio
October 18-20, 2018

Learn more and become involved at ***ww2.amstat.org/wsds***.

Great software in the right hands can change the world.

Cree's engineers are innovating better, more efficient LED solutions for a brighter future. With analytics, brilliant things happen.

Read about Cree's success, and find out how JMP can help you change your world:

www.great.jmp

jmp®

Statistical Discovery.™ From SAS.