

March 2021 • Issue #525

AMSTATNEWS

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



Celebrating
WOMEN
IN STATISTICS
AND DATA SCIENCE
— WOMEN'S HISTORY MONTH —

ALSO:

Meet the ASA Board of
Directors Candidates
for 2022

Celebrating 50 Years of
the Caucus for Women
in Statistics



Statistics, Data, and the Stories They Tell

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Key Dates for Participants

March 16 – April 14, 2021
General Abstract Submission

February 3 – April 15, 2021
Late-Breaking Session Proposal Submission

July 1, 2021
Draft Manuscript Deadline

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May 3, 2021
Registration and Housing Open
(11:00 a.m. ET)

June 1, 2021
Early Registration Deadline

June 30, 2021
Regular Registration Deadline

July 1, 2021
Housing Deadline

August 7–12, 2021

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

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New Federal Data Policies and the Impact of Data for Good

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

- 36 **STATtr@k**
COVID-19 Job Search Tips for Early-Career Data Scientists, Analytics Pros

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



PRACTICAL SIGNIFICANCE

AMERICAN STATISTICAL ASSOCIATION

Practical Significance | Episode 2: How to Become a JEDI!

In a mindful and reflective response to the Black Lives Matter movement, the ASA committed itself to driving cultural change. It formed the ASA Anti-Racism Task Force to better align the association's leadership, organizational structure, policies, practices, membership, and outreach efforts and to provide guidance on how the responsible use of statistics can advance racial justice by becoming more anti-racist. With an eye to the future, the association also created an outreach group to address justice, equity, diversity, and inclusion (JEDI).

Hosts Donna LaLonde and Ron Wasserstein welcome to the podcast those leading the charge for the Anti-Racism Task Force: co-chairs Adrian Coles and David A. Marker. These leaders share their perspectives, what they hope to accomplish, and the challenges that lie ahead. Additionally, they each recommend important reads on this complex issue.

Also featured are JEDI Outreach Group (JEDI OG) Chair Kim Sellers and Past Chair Julia Sharp. Kim and Julia discuss the scope and mission of the JEDI OG and its commitment to identifying and overcoming systemic racism and hindering biases in statistics and data science. They also emphasize the need for member involvement to move the mission forward. Listen in on how to become a JEDI and get involved (bit.ly/2ZtCPmV)!

Download the podcast from the *Amstat News* website at bit.ly/PracticalSig2 and listen today!

ATTENTION

2020 Bachelor's and Master's Graduates!

Please fill out the ASA survey coming in March and help fellow students and graduates understand the job market.

Past survey summaries:

Bachelor's: bit.ly/37D1BWi

Master's: bit.ly/3bqIp0b

member news

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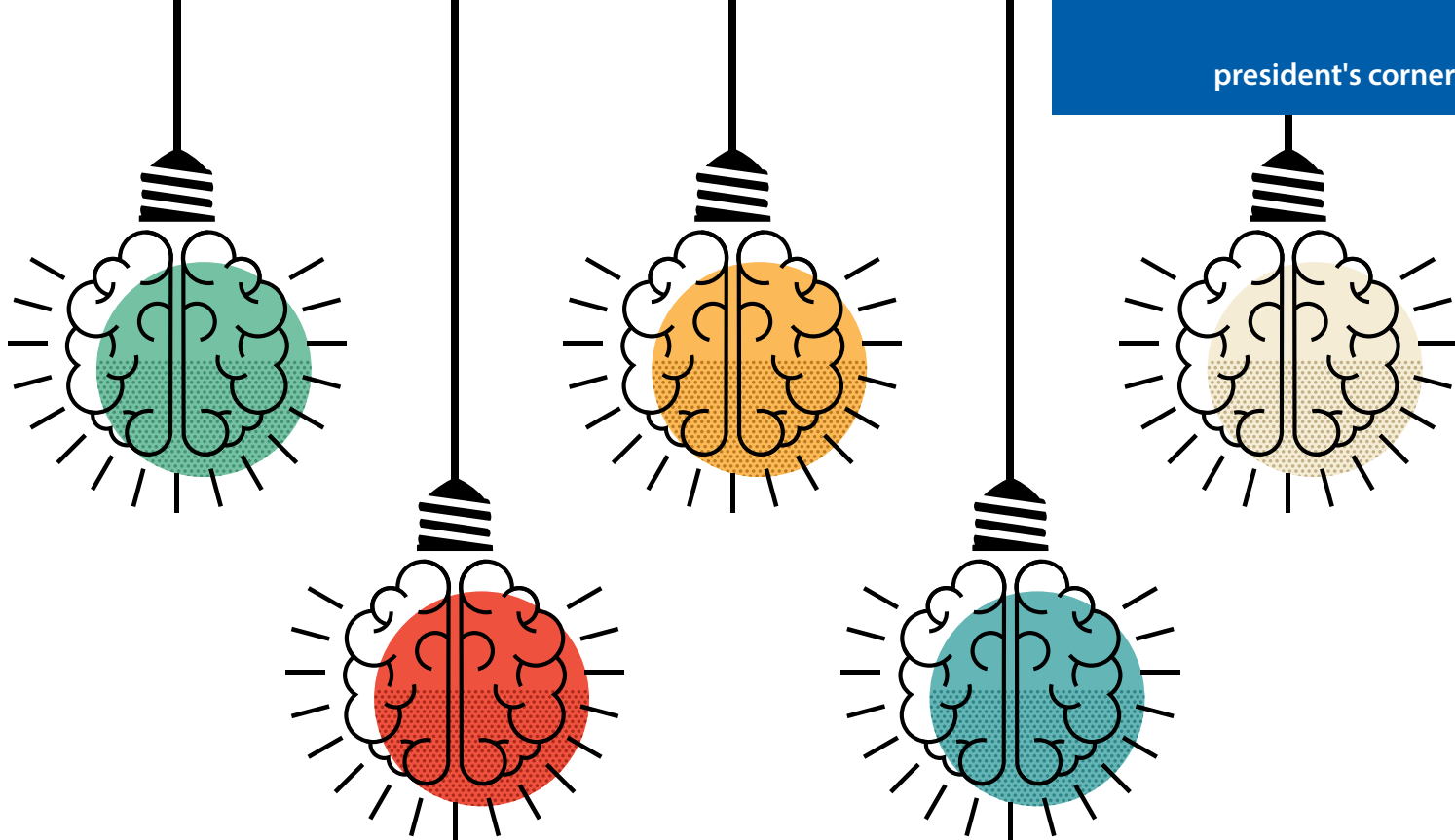
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Stretching Your Creativity—Yoga for the Mind; Yoda for the Heart

Greetings, fellow statisticians! I write to you from Austin in the midst of the Texas weather/utilities disaster. I consider myself lucky for not having lost power, even though water service has been out in my neighborhood for days. Fortunately, there is plenty of snow to harvest—at least for the next 24 hours—and we have a modest supply of drinking water stored.

I've kept in touch with my statistician friends in Texas and, like most Texans, many are suffering from this catastrophe. Thank you to all who have checked on my situation through this challenging period. We will survive. Please send good thoughts and wishes to us all. The restoration of utilities is one thing, but recovering from the trauma caused by power or water issues for days and potentially weeks is quite another. As I said in my last President's Corner, these are the times we must dip into our personal resilience reservoirs, and we should remember to help others to fill theirs.

Now, how about a story that might help you become a better statistician? It's about "thinking differently."

A few years back, I challenged myself to something completely bonkers. I wanted to challenge my creativity, so I sought to intermingle ideas that had nothing to do with statistics, research methods, or

generating inferences at first glance. More generally, you should know I like to intertwine disparate ideas and concepts just for the fun of it and to see if the combinations can be used as the genesis of new insight. In this instance, I seek to connect the dots between a fishing trip, a SXSW festival, the movie *Star Wars*, and, of course, our beloved field of statistics.

I was on a fishing trip about a decade ago that required a two-hour drive along Florida's Emerald Coast. I tuned in to an NPR program that focused on the life of Steve Jobs, a fascinating tale of creativity and dreams that unfolded with each mile I traveled. Jobs was a visionary who aspired to create technology that was not just of highly technical utility, but visually beautiful, ergonomically functional, and ubiquitous in culture and society globally. His vision germinated at a time when computers were visually a metallic mess and hard to learn and navigate.

For Jobs, a superior technological product was necessary but not sufficient. In addition to user-friendly and visually appealing attributes, the product's performance and utility had to capture the hearts and minds of consumers. The latter is why huge media events preceded new product releases. (Recall the controversial 1984 Superbowl sledgehammer commercial and the buzz it created.)



Rob Santos

Interestingly, Jobs really wasn't as much of a technical computer geek as he was a brilliant designer, visionary, and marketer.

Reflecting on that warm afternoon winter drive, it occurred to me that even our own statistical community could benefit from cool ideas that transcend conventional thinking. So, I asked myself, "How can we stoke the idea factory within ourselves as statisticians, as well as within the ASA and our broader statistical community?" There is at least a modicum of visionary dreamer inside everyone! And that leads me to offer you some thoughts catalyzing creativity.

I've often contemplated how visionaries go about developing their wild and crazy ideas. I posit that it sometimes results from cross-fertilization by being exposed to other disciplines. Guess what? We statisticians often "play in other disciplines' backyards." That puts us in a propitious position to leverage our own creativity in how we approach and contribute to statistical problems of the day.

My area of expertise is survey research. I recall the market research world routinely conducted focus groups in the 1980s, long before the survey research world developed a theoretical framework to incorporate them into the process of survey question development. Turns out a method long used by one industry had a useful application in another. We just had to think about the methodology differently to realize that.

More generally, creative ideas can emerge from everyday experiences such as child care (children can ask the most provocative questions), but also from activities such as hobbies, 'play time,' or other personal entertainment. For instance, as many of you already know, I am a longtime member of the photo crew for the SXSW Festival, which occurs annually in Austin, Texas. I photo-shoot the SXSW Music Festival and SXSW EDU; it affords a great opportunity to legitimately snoop around the plethora of events, including panel sessions of highly successful entrepreneurs, singer-songwriters, gaming creators, and entertainment production executives; keynote speeches by visionaries such as Astro Teller of Google X and Bill Gates; and hands-on testing of the latest advances in electronic technologies. It also features intellectually challenging and fun events such as hackathons.

Yes, it's absolutely fun, but it also provides great fodder for what 'can be' in our own statistical disciplines. The exposure to all those novel approaches has always sparked ideas about how our community might better leverage statistics and new technology to conduct research and gain insights in ways that are different from classical quantitative statistical methods on which we routinely rely.

Returning to a focus on creativity, keep in mind that creative ideas can emerge anywhere and at any time if we can only keep ourselves receptive to them. Try it sometime. Join me in removing your blinders to the world around you. For instance, there are so many aspects of the survey research industry that deserve creative solutions—the increasing difficulty of conducting probability sample surveys, the proliferation of data collected from nonprobability methods, the utility of big data to gain insights. And this represents only a select few of the issues facing survey research, a small subset of our larger, diverse statistical community. In the survey world, some of these problems seemed intractable a few years ago—for instance, how to draw statistical inference from nonprobability surveys. Yet through creative application of statistical theory, new frameworks have been developed that explore how statistical inferences can be drawn.

One way to think about developing creative solutions to seemingly intractable problems is to consider the infamous exchange between Luke Skywalker and Yoda in *Star Wars*: "[Luke:] I can't believe it. [Yoda:] That is why you fail." Failure need not be an option when your statistical toolbox includes creative thinking.

Finally, if, like me, you believe in the power of creativity to help make yourself a more effective statistician, then please note it is precisely an openness to new ideas and perspectives that lies at the core of making the statistics community and our society more diverse, inclusive, and equitable. Being creative and being open to and valuing different perspectives, cultures, and people represent two sides of the same coin. So, let's allow ourselves the space and time to brainstorm our own creative solutions to the problems facing our statistical community and society. Sweet dreams, everyone!



ASA Members Give Despite Trying Times

Amanda Malloy, ASA Director of Development

We all know what 2020 was like. It affected each of us in different ways. Many of us became proficient at video calls and even learned cool new tricks like using virtual backgrounds and studio features. (Did you know you can add virtual lipstick or a mustache to yourself during a Zoom call?) We learned to socialize while being socially distant, do our jobs remotely—either isolated or vying for space with other members of the household—and how to “smile with our eyes” since the rest of our faces were covered.



Malloy

Despite all the difficulty and adjustments, ASA members came together to raise nearly \$224,000 in support of ASA programs. Thank you to each of the 932 individuals who donated. Every. Dollar. Matters.

It has perhaps never been more important to:

- Provide resources and training to K–12 teachers so they can show their students how fun and important statistics is in daily life.
- Advocate for our federal statistical agencies, the statistics profession, and statisticians and data scientists around the world. We must make sure our government is making decisions based on sound data.
- Provide workshops and other resources to the media to help them learn how to report on stories that include data and statistics.
- Cultivate the next generation of leaders in statistics and data science through scholarships, professional development, and mentoring opportunities.

Your donations go a long way in making these initiatives possible. ■

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Tracy Mohr	Harrison T. Reeder	Robert E. Smith	James S. Weber
Marta Eugenia Moisa	Perla Reyes	Stephanie A. Smullen	Peter H. Westfall
Geert Molenberghs	James Rippee	Gerardo Soto-Campos	Michael O'Kane Whelan
Doug Morris	Linda Mary Ritchie	Thomas C. Spavins	James P. Whipple
Nobuhle Mpofu	Edwin L. Robison	Susan E. Spruill	Linda C. Whitehand
Yi Mu	Russell H. Roegner	William J. Stager	Rebecca Wong
Chen Mu	Dale S. Rogers	Nancy Stambler	Wayne Woo
Jinjian Mu	Michael Rollins	John Staudenmayer	Bin Xing
Terrence E. Murphy	Sheila Rosenberg	Marco Steenbergen	Robert Peter Yerex
Charles B. Nam	Alan Roshwalb	W. Robert Stephenson	Lisa H. Ying
Damian Ndiwago	Atul N. Roy	Susan LeRoy Stewart	Marian Y. Y. Yong
Ronald Charles Neath	Stephen Ruberg	John M. Stickler	Duo Yu
Cherie A. Ochsenfeld	Estelle Russek-Cohen	Thomas Stuckey	Yuxin Zhang
Walt Offen	Mary Margaret Ryan	Guoqin Su	Hongmei Zhang
Thomas H. Oliphant	Karen Sabharwal	Gary R. Sullivan	Yichi Zhang
Steve Olson	Leah E. Sahely	Michael Sullivan III	Yanhong Zhou
James O'Malley	Alan J. Salzberg	David A. Swanson	Yuxin Zhu
Yusuke Ono	Jayashree Sampath	Ruth Ellen Swanton	Jin Zhu ■
Edgar A. Ortiz	William Ellery Samuels	Dionne Swift	
Ian Thomas Parke	Susan M. Sanchez	Edward J. Tabone Jr.	

2022 ASA Board of Directors CANDIDATES

BOARD OF DIRECTORS PRESIDENT-ELECT 2022



David Williamson

US Centers for Disease Control and Prevention

It's still "Communication, communication, communication!"

In 2016, I wrote, "It's communication, communication, communication!" into my candidacy statement for ASA vice president because each of the ASA's priorities and the statistics profession's challenges/opportunities can be addressed more effectively with enhanced communication. This was reinforced the last five years as I served three years as ASA vice president and on the Board of Directors, was liaison for 20+ ASA committees, served as chair of the Membership and Professional Issues and Visibility councils, and as I continue to direct the ASA's Statistical Impact Task Force. These experiences, plus my scientific leadership of complex studies at CDC, position me well to

direct the scientific and administrative roles of ASA president.

Though circumstances may shift priorities, the following ones demand our most attention:

- **Enhance the value of ASA membership.** Growing up in the south and seeing segregated water fountains as a youngster ingrained in me a commitment to equality and justice for all, and I commend and commit to the ASA's Anti-Racism Task Force and the Justice, Equity, Diversity, and Inclusion (JEDI) Outreach Group to ensure all ASA members are treated respectfully/fairly and have opportunities to contribute to and lead the ASA. We need to strive to increase the number of minorities and students in the ASA and incorporate
- **Increase statistical impact.** Let's continue our commitment to the Leadership Institute to give our members the tools they need to be successful and to the Impact Initiative to raise awareness of the positive impacts the field has already contributed to and in areas where the promise for impact is present.
- **Be proactive in data modernization efforts.** We must continue to engage at the highest levels on big data/data modernization to best leverage data access, use, and analysis in, for example, responses to emergencies such as COVID-19.

them into vibrant roles, hear what all our members want/need, and be responsive.

The ASA announces the candidates for the 2021 election. Voting begins March 30 and goes until May 1. Make sure to look for your ballots in your email inbox.

BOARD OF DIRECTORS PRESIDENT-ELECT 2022

Dionne Price

US Food and Drug Administration



The year 2020 will not be forgotten. We grappled with a pandemic, social injustices, and natural disasters. Our expertise equipped us to address these problems, and our humanity caused us to reflect on our inclusiveness. I felt pride about our contributions, and I was encouraged by our commitment to diversity, equity, and inclusion (DEI). It is with this pride that I am excited to be a candidate for ASA president. I believe a continued focus on awareness, advocacy, and adaptability are imperative. Please visit www.dionneforasapresident.net.

Awareness: While an undergraduate, an internship exposed me to the impact of statisticians and set me on the path to becoming a statistician.

Although much time has passed, there remains a need to increase awareness of our profession. Moreover, many are not members of the ASA. There is a need to highlight and broaden the value of membership such that we continue to grow and have influence across diverse areas, and we must ensure our collective awareness and engagement around DEI.

Advocacy: Throughout 2020, data was paramount to critical decisions. As such, we must continue to ensure that statistics are properly used to answer questions of interest. This will require communication, education, and advocacy for sound statistical science. We must critically evaluate how to best lead, engage, and collaborate to guarantee that statistical

principles are applied to drive discovery and inform decisions.

Adaptability: In drug development, adaptive designs allow for modifications to clinical trials. Like these designs, we need to continue to evaluate where we need to make modifications to keep pace with contemporary questions and movements. We must also continue to play an active role in science policy to ensure our value is not diminished.

Awareness, advocacy, and adaptability are essential to our future. The privilege of leading the ASA in partnership with all members would be an honor.

BOARD OF DIRECTORS VICE PRESIDENT 2022–2024



Nick Horton

Amherst College

If elected, I would focus my efforts on aspects of visibility of the profession, diversifying the profession, and extending our ongoing research and education efforts.

As the world's largest community of statisticians, the American Statistical Association plays a key role in the development, application, and dissemination of statistical methods and practice. At a time when data are increasingly used to make decisions, this is a wonderful time to be a statistician. But there are a number of internal and external challenges and opportunities that we face as a profession. As vice president, I would work to promote the practice and profession of statistics in the following ways:

1. Help ensure that statistics is at the core of data science

2. Build on efforts to ensure that the profession is diverse and inclusive and to foster the success of those that have been historically underrepresented and underappreciated
3. Work to make statistical careers more attractive and increase the visibility of the discipline in areas of science, government, and business that rely on data
4. Prepare statisticians for success by continuing to transform statistics and data science education at the secondary and university levels

I work as an applied biostatistician on a variety of biomedical and behavioral research projects. These experiences have demonstrated the

power of statistics to ensure that science is on a solid foundation. Through my prior work on the ASA Undergraduate Guidelines Group and several data science education initiatives of the National Academies, I see the explosive growth of interest and enrollments in statistics and data science. There are critical aspects of statistical thinking and practice that are needed for effective data science. The expansion of our programs provides an opportunity for us to help ensure that statisticians are not left behind while other fields define the field.

BOARD OF DIRECTORS VICE PRESIDENT 2022–2024

David Banks

Duke University



Back in December, Ron Wasserstein, the ASA director, sent all the candidates for the ASA Board his assessment of the strengths and challenges our association faces. Many are longstanding: Our membership is flat at a time when we should be expanding; we are struggling to define ourselves in the context of data science and machine learning; the business model for journal publication is changing under our feet. Those who know me know I have informed ideas about all of these topics.

One issue was new, and I want to use this very public forum

to address it. Partly in response to the murder of George Floyd, but also for many other good reasons, the ASA has launched an anti-racism task force, JEDI Outreach, where JEDI stands for Justice, Equity, Diversity, and Inclusion. I am proud to be part of an organization that takes this issue on. And I am proud to see that two of the candidates on this year's slate for the ASA Board are African American. We need that.

But I am also disappointed that none of this year's candidates is of Chinese descent. Our field is filled with eminently qualified Chinese statisticians who have made huge contributions to our

profession over many, many decades. But there has never been an ASA president with that heritage, and too few board members. I think this lack is an embarrassing oversight.

This is supposed to be a candidate statement. So, if elected, I shall advocate for the nomination of well-qualified Chinese statisticians to leadership roles in the ASA. And to avoid the unseemly taint of identity politics, I hope the ASA Committee on Nominations will have the wisdom to select two people of Chinese descent to run against each other for the office of ASA president. It is long overdue.

2021 BOARD ELECTIONS

BOARD OF DIRECTORS COUNCIL OF SECTIONS REPRESENTATIVE 2022–2024



Michelle Shardell

University of Maryland School of Medicine

As many of us continue to work at home, the ASA has expanded its service to our professional community. As a scientist, educator, and active member in ASA sections and the Statistical Partnerships Among Academe, Industry, and Government (SPAIG) Committee, I am poised to contribute to this service as an ASA Board of Directors Council of Sections Governing Board representative. It is an honor to be considered for this role.

This past year, the ASA responded to the challenges of COVID-19 and the 2020 Census, which exemplify the need for statistical rigor and provide opportunities to enhance the visibility and future of our profession. K–6 Statistics and

Data Science is a key initiative. As a Biometrics Section Outreach Award recipient, I also aim to promote our profession among students at 2- and 4-year colleges.

Interest in statistics and data science has increased, but ASA and section membership have not. To find out why, we must engage statistics and data science professionals who are not ASA or section members. As part of SPAIG, I have promoted ASA sections' value by highlighting section collaborations. I also aim to identify the needs of professionals who have yet to find a home in the ASA.

The ASA community is strengthened by diversity. To realize this strength, we must remove bias as a barrier to participation. ASA efforts to prevent

sexual harassment, assault, and racism and [create] groups that promote justice, equity, diversity, and inclusion are key agents to this end. Meeting this goal also requires that we listen to professionals who are part of underrepresented groups, but not yet ASA members.

We must identify how the ASA can be a welcoming professional home for all statisticians and data scientists. The long-term goal is a strong community that serves society via statistical best practices. Thank you for considering me for the privilege of serving on the ASA Board of Directors. I am enthusiastic to contribute toward community and collaboration both within and beyond the ASA.

BOARD OF DIRECTORS COUNCIL OF SECTIONS REPRESENTATIVE 2022–2024

Mulugeta Gebregziabher

Medical University of South Carolina



I am honored to be nominated for the Council of Sections Governing Board representative to the ASA Board of Directors. I am excited by the opportunity to contribute to the betterment of the ASA and its sections.

Through my leadership and service experience in academia, ASA sections, and ASA chapters, I am familiar with the opportunities and challenges the ASA faces in its endeavors to contribute to the growth and recognition of the science of statistics in education, practice, and research. The ASA brings together statisticians and students from across the world and provides a voice to advocate collectively on matters of fundamental importance to society. If

elected, I will bring global/local perspectives that contribute to the diversity of views needed to be impactful in today's world.

In recent years, the ASA has boldly and impactfully taken an anti-racism stand in addition to the many activities of advocacy on issues that directly impact humanity. These issues are closer to the hearts of all ASA members and hence I pledge to contribute to increasing the ASA's impact in this area. The professional development programs, including mentoring for junior and underrepresented minorities, are something that I would like to advocate [for] and see grow. I am personally grateful for the positive impact the ASA has had on my career through my participation in

those programs and hence, if elected, I would like to help in their growth.

I joined the ASA in 2004 and have benefited from membership via its career building trainings, world-class conferences, and, more importantly, the people that I meet through all the networking opportunities that the ASA provides. I have served the ASA community in different capacities, which provided me with understanding of the ASA and its operations. As a faculty [member] who is originally from Africa and with interests in both local and global research and education, I will serve the ASA community by bringing a unique perspective.

It's my honor to ask you to vote for me!

2021 BOARD ELECTIONS

BOARD OF DIRECTORS COUNCIL OF CHAPTERS REPRESENTATIVE (REGION 2) 2022–2024



Kendra Schmid

University of Nebraska Medical Center

It is an honor to be nominated to serve as the Board of Directors Council of Chapters representative for Region 2. I am excited about the chance to further contribute to the American Statistical Association and statistics community in the role. Over the last 10 years, I have served at both the local and national levels, for both chapters and sections, most recently as secretary for the Council of Chapters Governing Board. Through these service roles and my ASA membership in general, I have seen the great opportunities and possibilities that exist because of our chapters and sections and am constantly

awed by the amazing work done by the staff and an organization that relies so heavily on its membership and volunteers.

If elected, I will work with other board members to support the ASA mission and vision and implement elements of the strategic plan. The recent months have brought us all many challenges, but with adversity comes incredible opportunity, and this situation is no different. Facing a global pandemic has encouraged us all to think outside the box in all aspects of our lives. Professional organizations are not immune to the effects of the pandemic, and I will use my position on the board of directors to help think

creatively of solutions and ideas to address both current issues and issues arising from the pandemic.

Over the years, I have benefited a great deal through my ASA membership and am enthusiastic about doing my part to keep a strong and vital organization for the future of the profession. I am grateful to be a member and for all of the rewarding professional and personal experiences afforded to me through my membership. I am fully committed to the mission and strategic plan of the ASA and look forward to the possibility of a new way to contribute.



Ananda Jayawardhana

Pittsburg State University

I am honored to be a candidate for the ASA Board of Directors representing the Council of Chapters (COC). I have been active in our local chapter, bearing all the elected positions and then in the COC as the secretary and chair. This service of about 15 years has given me a good perspective of the needs of the chapters from the ASA and vice versa.

If elected, I will fully support the mission of the ASA, and I will focus on a few goals close to my heart:

1. Enhance the diversity of the organization
2. Improve the continued education opportunities
3. Increase membership
4. Increase the visibility of the profession

5. Improve the statistics education in K–12
6. Promote chapter or district-based activities
7. Promote chapters to record their chapter history

Over the years, lack of communication between chapters and the COCGB has been a hindrance to the progress of chapters. I will focus on finding ways to better alignment of chapters and the COCGB, motivating chapter representatives, and promoting more resources and services to the chapters from the COCGB.

I have served as the university representative to the Kansas Board of Regents conference on diversity for 15 years. I know the value of diversity in an organization, and I will work hard to

diversify the ASA. I was one of the COC members who rejuvenated the travelling course after being inactive for several years. Since then, the travelling course has done a tremendous job of helping statisticians for their professional development. More and more statisticians are unable to attend national meetings, and I will promote the ASA to have more decentralized activities. I am active with Mu Sigma Rho Statistics Honorary Society, and the ASA provides a one-year free student membership to new inductees. Through such activities, I would like to bring students to full membership of the ASA. I will also promote Mu Sigma Rho inductees to join student chapters of the ASA. I have participated in Capitol Hill visits.

ASA 2021 ELECTIONS – CANDIDATE LIST

BAYESIAN STATISTICAL SCIENCE

Chair-Elect 2022

David van Dyk, Imperial College London
Vanja Dukic, University of Colorado at Boulder

Program Chair-Elect 2022

David Matteson, Cornell University
Huiyan Sang, Texas A&M University

Publications Officer 2022–2023

Brenda Betancourt, University of Florida
Tony Pourmohamad, Genentech

Council of Sections Representative 2022–2024

Anindya Bhadra, Purdue University
Amy Shi, SAS Institute

BIOMETRICS

Chair-Elect 2022

Sharina Person, University of Massachusetts Medical School

Dipankar Bandyopadhyay, Virginia Commonwealth University

BIOPHARMACEUTICAL

Chair-Elect 2022

Rakhi Kilaru, Pharmaceutical Product Development
Brian A. Millen, Eli Lilly and Company

Program Chair-Elect 2022

Elena Polverejan, Janssen Pharmaceuticals, Inc.
Yun Wang, US Food and Drug Administration

Publications Officer 2022–2023

Hiya Banerjee, Novartis Pharmaceuticals
Jonathan Moscovi, IQVIA

Council of Sections Representative 2022–2024

Tony Pourmohamad, Genentech
Janelle Charles, Pharmaceutical Product Development

BUSINESS AND ECONOMIC STATISTICS

Chair-Elect 2022

Tucker McElroy, US Census Bureau
Bart Hobijn, Arizona State University

Program Chair-Elect 2022

Xiaofeng Shao, University of Illinois at Urbana-Champaign
Omid Ardakani, Georgia Southern University

STATISTICAL COMPUTING

Chair-Elect 2022

Eric Laber, North Carolina State University
Mine Cetinkaya-Rundel, University of Edinburgh

Program Chair-Elect 2022

Ritwak Mitra, AT&T Labs Research
Kun Chen, University of Connecticut

Secretary/Treasurer 2022–2023

Dave Kessler, SAS Institute, Inc.
Stephen Elston, Quantia Analytics, LLC

Council of Sections Representative 2022–2024

Mamunur Rashid, DePaul University
Hua Zhou, UCLA

STATISTICAL CONSULTING

Chair-Elect 2022

Robyn Ball, The Jackson Laboratory
Chris Barker, Statistical Planning and Analysis Services, Inc.

Shing Lee, Columbia University

Secretary/Treasurer 2022–2023

Daniel Zhao, OU Health Sciences Center
Terrie Vasilopoulos, University of Florida College of Medicine

Council of Sections Representative 2022–2024

Jimmy Efrid, Cooperative Studies Program Epidemiology Center (VA)
Rhonda Rosychuk, University of Alberta

Executive Committee at Large 2022–2024

Xiaoming Sheng, University of Utah
Charlotte Bolch, Midwestern University

STATISTICS AND DATA SCIENCE EDUCATION

Chair-Elect 2022

Anna Bargagliotti, Loyola Marymount University
Nathan Tittle, Dordt College

Secretary/Treasurer 2022–2024

Jessica Reno, University of New Mexico
Jennifer Broatch, Arizona State University

Executive Committee at Large 2022–2024 (two positions)

Jennifer Ward, Clark College
Adam Loy, Carleton College
Nick Seewald, University of Michigan
Fotios Kokkotos, Merrimack College
Charlotte Bolch, Midwestern University

STATISTICS IN DEFENSE AND NATIONAL SECURITY

Chair-Elect 2022

Joseph Warfield, Johns Hopkins University Applied Physics Lab
Nick Clark, United States Military Academy

Program Chair-Elect 2022

Matt Avery, Institute for Defense Analyses
Jane Pinelis, DoD Joint Artificial Intelligence Center

Secretary/Treasurer 2022–2023

Kelly Avery, Institute for Defense Analyses
Victoria Sieck, US Air Force

Council of Sections Representative 2022–2024

Rebecca Medlin, Institute for Defense Analyses
Eric Chicken, Florida State University

STATISTICS AND THE ENVIRONMENT

Chair-Elect 2022

Bo Li, University of Illinois
Andrew Finley, Michigan State University

Program Chair-Elect 2021

Ali Arab, Georgetown University
Eric Gilleland, National Center for Atmospheric Research

Treasurer 2022 (Rotates to Secretary in 2023)

Lyndsay Shand, Sandia National Laboratories
Staci Hepler, Wake Forest University

Publications Chair-Elect 2022 (Rotates to Publications Chair for 2-Year Term in 2023)

Trevor Hefley, Kansas State University
Whitney Huang, Clemson University

STATISTICS IN EPIDEMIOLOGY

Chair-Elect 2022

Nandita Mitra, University of Pennsylvania
Jimmy Efrid, Department of Veterans Affairs
Tyler J. VanderWeele, Harvard University

Program Chair-Elect 2022

Michelle Shardell, University of Maryland Baltimore County
Qing Pan, The George Washington University

Secretary/Treasurer 2022–2024

Jenna Krall, George Mason University
Mike Baiocchi, Stanford University

Publications Officer 2022–2023

Yunyun Jiang, The George Washington University
Peng Ding, University of California, Berkeley

STATISTICS IN GENOMICS AND GENETICS

Chair-Elect 2022

Veera Baladandayuthapani, University of Michigan
Nancy Zhang, University of Pennsylvania

Program Chair-Elect 2022

Kimberly Siegmund, University of Southern California
Hao Wu, Emory University

GOVERNMENT STATISTICS

Chair-Elect 2022

Minsun Riddles, Westat
Claire McKay Bowen, Urban Institute

Program Chair-Elect 2022

Lisa Mirel, US Centers for Disease Control and Prevention
Doug Williams, Bureau of Labor Statistics

STATISTICAL GRAPHICS

Chair-Elect 2022

Lucy D'Agostino McGowan, Wake Forest University
Susan Vanderplas, University of Nebraska-Lincoln

Program Chair-Elect 2022

Allison Presmanes-Hill, RStudio
Earo Wang, University of Auckland

Publications Officer 2022–2023

Kiegan Rice, St. Olaf College
Natalia Da Silva, Iowa State University

Council of Sections Representative 2022–2024

Xiaoyue Cheng, University of Nebraska at Omaha
Stefano Castruccio, University of Notre Dame

HEALTH POLICY STATISTICS

Chair-Elect 2022

Wei Shen, Eli Lilly and Company
Lisa Lix, University of Manitoba

STATISTICS IN IMAGING

Chair-Elect 2022

Ying Guo, Emory University
Jaroslaw Harezlak, Indiana University
Ian Dryden, University of Nottingham

2021 BOARD ELECTIONS

ASA 2021 ELECTIONS – CANDIDATE LIST

Program Chair-Elect 2022

Sebastian A. Kurtek, *The Ohio State University*
Benjamin Risk, *Emory University*

STATISTICAL LEARNING AND DATA SCIENCE

Chair-Elect 2022

Giles Hooker, *Cornell University*
Kellie Archer, *The Ohio State University*

Program Chair-Elect 2022

Cheryl Brooks, *AT&T Labs*
Irina Gaynanova, *Texas A&M University*

Council of Sections Representative 2022–2024

Nusrat Rabbee, *Alladapt, Inc.*
Dhuly Chowdhury, *RTI International*

LIFETIME DATA SCIENCE

Chair-Elect 2022

Ingrid Van Keilegom, *KU Leuven*
Grace Yi, *University of West Ontario*

Program Chair-Elect 2022

Ying Ding, *University of Pittsburgh*
Pamela Shaw, *University of Pennsylvania*

Secretary 2022–2024

Tanya Garcia, *The University of North Carolina at Chapel Hill*
Sharon Xie, *University of Pennsylvania*

Council of Sections Representative 2022–2024

Rui Wang, *Harvard University*
Ronghui Xu, *University of California, San Diego*

STATISTICS IN MARKETING

Chair-Elect 2022

Hui Lin, *Google*
Dan McCarthy, *Emory University*

Program Chair-Elect 2022

Kingshuk Roy Choudhury, *Amazon*
Elaine Zanutto, *Naxion Research and Consulting*

Treasurer 2022–2023

Duke Chowdhury, *University of California, Irvine*
Adraine Upshaw, *Merkle*

MEDICAL DEVICES AND DIAGNOSTICS

Chair-Elect 2022

Terri Johnson, *Edwards Lifesciences*
Tracy Bergemann, *Medtronic, Plc.*

Program Chair-Elect 2022

Dandan Xu, *US Food and Drug Administration*
Bipasa Biswas, *US Food and Drug Administration*

MENTAL HEALTH STATISTICS

Chair-Elect 2022

Knashawn Morales, *University of Pennsylvania*
Susan Shortreed, *Kaiser Permanente Washington Health Research Institute*

Program Chair-Elect 2022

Christine Mauro, *Columbia University*
Donna Coffman, *Temple University*

Council of Sections Representative 2022–2024

Samiran Ghosh, *Wayne State University*
Samprit Banerjee, *Cornell University*

NONPARAMETRIC

Chair-Elect 2022

Chunming Zhang, *University of Wisconsin-Madison*
Zongming Ma, *University of Pennsylvania*

Program Chair-Elect 2022

Long Nguyen, *University of Michigan*
Wenceslao Gonzalez Manteiga, *University of Santiago de Compostela*

Treasurer 2022 (Rotates to Secretary in 2023)

Rui Song, *North Carolina State University*
Bodhi Sen, *Columbia University*

PHYSICAL AND ENGINEERING SCIENCES

Chair-Elect 2022

Ying Hung, *Rutgers University*
Nathaniel Stevens, *University of Waterloo*

Program Chair-Elect 2022

Tony Pourmohamad, *Genentech*
Arman Sabbaghi, *Purdue University*

Secretary/Treasurer 2022–2023

Alex Konomi, *University of Cincinnati*
Emily Casleton, *Los Alamos National Laboratory*

Council of Sections Representative 2022–2024

Erin Leatherman, *Kenyon College*
Xiao Liu, *University of Arkansas*

STATISTICAL PROGRAMMERS AND ANALYSTS

Chair-Elect 2022

Anna Auguste, *Cigna*
Vipin K. Arora, *Eli Lilly and Company*

Program Chair-Elect 2022

Maryanne Miller, *Eli Lilly and Company*
Ben Barnard, *Wells Fargo*

Secretary 2022–2023

Manyan Huang, *Indiana University*
Luis Mestre, *Indiana University*

Treasurer 2022–2023

Jonathan Lisic, *Cigna*
Zeqing Lu, *Eli Lilly and Company*

Publications Officer 2022–2023

Pushpal Mukhopadhyay, *SAS Institute, Inc.*
Jessica Chen, *Eli Lilly and Company*

Council of Sections Representative 2022–2024

Bill Coar, *Axio, a Cytel Company*
Michael Anderson, *University of Oklahoma*

QUALITY AND PRODUCTIVITY

Chair-Elect 2022

Kim Kaufeld, *Los Alamos National Laboratory*
Sarah Burke, *The Perduco Group*

Program Chair-Elect 2022

Caleb King, *JMP*
Anne Driscoll, *Virginia Polytechnic Institute and State University*

RISK ANALYSIS

Chair-Elect 2022

Helen Li, *Bristol Myers Squibb*
Hongmei Zhang, *University of Memphis*

Program Chair-Elect 2022

Albert Lee, *Virginia Commonwealth University*
Yichuan Zhao, *Georgia State University*

Secretary/Treasurer 2022–2023

Yue Jiang, *Duke University*
Susan Simmons, *North Carolina State University*

Publications Officer 2022–2023

Soyoung Jeon, *New Mexico State University*
Mike Pennell, *The Ohio State University*

SOCIAL STATISTICS

Chair-Elect 2022

Stephanie Eckman, *RTI International*
Jeffrey Gonzalez, *USDA*
Carla B. Medalia, *US Census Bureau*

Program Chair-Elect 2022

Megan Price, *Human Rights Data Analysis Group*
Michele Ver Ploeg, *The George Washington University*

Secretary/Treasurer 2022–2023

Adam Safir, *Bureau of Labor Statistics*
Elizabeth Tipton, *Northwestern University*

Council of Sections Representative 2022–2024

George Carter, *US Department of Housing and Urban Development*
Sharon Stern, *US Census Bureau*

STATISTICS IN SPORTS

Chair-Elect 2022

Andrew Swift, *University of Nebraska at Omaha*
Dale Zimmerman, *University of Iowa*

Program Chair-Elect 2022

Guanyu Hu, *University of Missouri – Columbia*
Michael Schuckers, *St. Lawrence University*

SURVEY RESEARCH METHODS

Chair-Elect 2022

Brady West, *University of Michigan*
Dylan Small, *University of Pennsylvania*

Program Chair-Elect 2022

Pushpal Mukhopadhyay, *SAS Institute, Inc.*
Andreea Ercolescu, *Westat*

Secretary 2022–2023

Julie Gershunskaya, *Bureau of Labor Statistics*
Qixuan Chen, *Columbia University*

Council of Sections Representative 2022–2024

Kristen Olson, *University of Nebraska at Lincoln*
Scott Holan, *University of Missouri*

TEACHING OF STATISTICS IN THE HEALTH SCIENCES

Chair-Elect 2022

Maria Ciarleglio, *Yale School of Public Health*
Heather Hoffman, *The George Washington University*

Council of Sections Representative 2022–2024

Amy Nowacki, *Cleveland Clinic*
Terrie Vasilopoulos, *University of Florida* ■

Bayesian Methods Widespread in February Issue of *TAS*

Joshua M. Tebbs, *TAS* Editor

The February 2021 issue of *The American Statistician (TAS)* is available online and features 13 articles and one letter to the editor. One of the benefits of ASA membership is free access to the online issues of *TAS*.

The General section has six articles. The first uses a known result in time series to revisit the common practice of estimating posterior expectations from MCMC samples. The second implements Bayes factors to test ordering constraints among multinomial parameters. The third presents an analysis of how players in Contestant's Row should bid on the game show *The Price Is Right*. The fourth examines empirical likelihood ratio hypothesis tests for positive quadrant dependence between two random variables. The fifth proposes a framework to perform hypothesis testing in the presence of adversaries. Finally, the sixth article describes a Bayesian approach to make inference on the correlation coefficient under divergence-based priors.

The Statistical Computing and Graphics section has two articles. The first article discusses sampling strategies for fast updating of Gaussian Markov random fields. The authors describe how one can sample from target distributions more efficiently when compared to existing methods. Their approach is illustrated by using data sets in imaging analysis and election voting. The second describes an R Shiny app to plan a Bayesian two-stage, "drop-the-losers" design in clinical trials. The authors describe this design and then illustrate the app by using data from a weight-loss randomized trial.

There are three articles in the Statistical Practice section. The first presents an "assumption lean" framework for regression analysis and analyzes criminal offense data using a Poisson generalized linear model. The second deals with time-dependent bias that arises in survival analysis and presents a mortality study of politicians in Germany, the UK, and the USA. The third article also presents a Poisson regression analysis, but to model the response time to structure fires while incorporating spatial information.

The Teacher's Corner section has one article that presents a probabilistic approach to find higher-order moments of the binomial distribution. In

doing so, the author describes new ways to calculate finite sums of integers raised to common exponents.

Finally, the Short Technical Note section has one article. This article revisits the p -value discussion but from a Bayesian point of view in the context of performing meta-analyses.

The February issue concludes with a Letter to the Editor, which clarifies certain claims made in a hypothesis testing article published last year.

For more information about the current issue of *The American Statistician*, visit www.tandfonline.com/tochutas20/current. ■



Articles Wanted for *Significance* Writing Competition

In partnership with the Young Statisticians Section of the Royal Statistical Society, *Significance* is hosting the Statistical Excellence Award for Early-Career Writing competition.

The international award celebrates career-young statisticians, data scientists, and researchers who can show and communicate statistics to non-experts.

To enter, submit your best statistical writing in the form of a magazine article (1,500 to 2,500 words) on any subject. Articles will be reviewed by a panel of judges, and the winning entry will be published in *Significance* later this year.

To get an idea of what the judges are looking for, read the previous winners' articles at bit.ly/3qZzyro.

The deadline to submit articles is May 31.

For detailed submission instructions, go to bit.ly/3ppkH8i.

Proposed Procedures to Determine Whether ASA Makes Public Statement on Policy-Related Issues | *Call for Comments*

Larry Hedges, Chair, and Avi Feller, Vice Chair, ASA Scientific and Public Affairs Committee

The ASA is the premier professional association that speaks for the field of statistics and professional statisticians. Consequently, the ASA is often asked to comment about proposed policies, support policy positions, and provide amicus (friend of the court) briefs.

We are mindful that the ASA has limited resources to respond to such requests, but also that we have a duty to provide the public with the benefit of our particular scientific knowledge. We also know the choice of issues on which we speak (and on which we remain silent) may be interpreted as meaningful.

Therefore, we believe there should be a transparent process for making the decision about the policy issues on which the ASA has been asked to take a public position. We publish our proposed process here with a call to ASA members to provide their comments to ensure the process is transparent, open, and objective.

The process would cover the ASA board statements, amicus briefs, and other such positions that go beyond the scope of ASA spokesperson, as stipulated in the ASA bylaws: “The President and the Executive Director are the official spokespersons of the Association.”* This process also assumes Article XI of the ASA bylaws holds:

Article XI. RESOLUTIONS

1. Partisan Issues. The name of the Association must not be used in connection with support for partisan issues or for candidates for public office. Resolutions by the Board of Directors on nonpartisan issues require approval by two-thirds of the voting members of the Board who are not required to

recuse themselves due their government employment or a conflict of interest. When there is concern as to whether an issue is partisan, a majority vote of the voting members of the Board is required to declare it non-partisan.

2. Referenda. Upon petition of at least 100 individual members of the Association, any resolution of the Board of Directors, as specified in Article XI, Section 1, will be subject to a referendum by the membership. The resolution will be published in a news bulletin as early as possible. A ballot will be sent to the individual members within 30 days after the publication date of the news bulletin. The will of the membership, as expressed by a majority of those voting, governs.

3. Commitment. Resolutions and recommendations of councils, chapters, sections, or committees of the Association will be so phrased as not to commit the Association or its membership

The board’s questions from 2017 (bit.ly/3d5dvf9) on when the ASA should make a public position, as supplemented below, should be used in evaluating whether the ASA should respond to requests to take a position:

1. Is the ASA particularly well positioned to respond to the issue?
2. Does the issue have impact on the statistics profession or on the ASA itself?
3. Does this issue have impact on the quality or integrity of science, including statistics, or on the ability to inform public policy?

4. Is there an opportunity to educate about statistics or is there a statistical perspective on this issue that we should speak to?
5. In our judgment, would our members expect us to be involved in the issue?
6. Does the issue involve an unambiguous violation of accepted norms of practice in statistical science or the ethical principles of the profession?
7. Does the issue relate to possible infringement on scientific freedom or human/civil rights?

The ASA should not wade into discussions more appropriate for expert witnesses, engaging only when—in the judgment of the board—there is general agreement among statisticians with the position stated in the brief.

We propose the following procedure:

- Those wishing to ask the ASA to take a position will make a formal request to the ASA, as outlined below. That request and any additional materials will be considered first by the ASA staff, then by the ASA section(s) or committee(s) with the relevant expertise or interest, and—if warranted and not already included—the Scientific and Public Affairs Advisory Committee.
- The consulted section(s) and committee(s) will make a recommendation to the ASA Board as to (a) whether the ASA should provide the requested support and (b) whether the consulted section(s) or committee(s) will draft documents in collaboration with the ASA staff or an independent committee of ASA members or others who might be a more appropriate drafting entity.

- The entity determined in (b) will then submit the draft document to the ASA Board for approval (or not).
- To facilitate review, the request must include a one-page summary that includes the following:
 - A brief, clear statement of the issue to which the ASA is requested to respond, along with the time sensitivity, if any, of the request.
 - Short explanations of how the proposed statement satisfies the criteria listed above.
 - Relevant information about those making the recommendation.
- The request should be sent to the ASA executive director with the director of science policy copied. A request could also be sent to a member of the ASA Board of Directors.

The board also initiates the issuance of the ASA positions discussed here, sometimes at the recommendation of ASA staff. The board's process generally remains the same, using the supplemented 2017 questions as their guide for whether to proceed and following the ASA bylaws.

Any comments should be sent to ASA Director of Science Policy Steve Pierson at pierson@amstat.org by March 31.

**“When the President is unable to serve as a spokesperson, this role can be delegated to the President-Elect.” Further, the bylaws presume that no other individuals should claim to have authority to speak on behalf of the ASA unless so delegated. ■*

ASA Signs on as Host of JMM 2022

Special Session, Workshop Proposals Being Accepted

Scott Hershberger, JMM Communications and Outreach Content Specialist

The ASA will join other societies and associations as a partner with the American Mathematical Society (AMS) to hold Joint Mathematics Meetings (JMM) 2022, the largest annual mathematics gathering in the world. Scheduled to take place January 5–8, 2022, in Seattle, Washington, JMM will feature an expanded classification system for sessions and talks in addition to existing MSC classifications to cultivate a broader range of presentations on mathematics research, pedagogy, and inclusion.

ASA members can now register for the conference at the member rate and are invited to submit a proposal for one of the following two categories:

- A special session is a collection of talks (typically 5–10 hours in total) devoted to a single area of mathematics or a single topic. Each talk starts on the hour or half hour, lasting about 20 or 45 minutes plus time for a discussion and break. (www.ams.org/meetings/pc-call-for-proposals-spec-sess-jmm2022.pdf)
- Panels, workshops, and other events typically last 60–90 minutes, although professional development workshops can run for 2–6 hours. Proposals on topics such as creating an inclusive atmosphere in the mathematical sciences community, teaching and learning, professional development and

professional concerns, recreational mathematics, and wider issues are encouraged. Also welcome are events that connect communities, such as interdisciplinary workshops or collaborations between mathematical sciences researchers and mathematics education researchers. (*bit.ly/3jHk4W0*)

Proposals must be submitted via the portal at bit.ly/37onWqz by April 7.

The JMM program is organized from the bottom up—sessions and talks occur because individuals and small groups of mathematicians take the initiative to organize them. The committee looks forward to receiving your proposals and working together to make JMM 2022 a welcoming and fulfilling experience for everyone.

No decisions will be made about proposals until after the submission deadline has passed. Organizers of proposals will be notified whether their proposal has been accepted by May 25. Visit www.ams.org/news?news_id=6558 for more information.

AMS is the sole manager of the conference's logistics, so questions should be directed to the AMS meetings department at meet@ams.org.

For questions about the ASA partnership, contact ASA Director of Strategic Initiatives and Outreach Donna LaLonde at donnal@amstat.org. ■

MY ASA STORY

Kelly Zou

RESEARCHER

This is a new series featuring ASA members who share their ASA stories. Our mission is to collect authentic and meaningful accounts of member experiences. If you have a story you would like to share, email the ASA's marketing and communications coordinator, Kim Gilliam, at kim@amstat.org.

I joined the American Statistical Association when I was still a graduate student working on my doctoral degree in statistics. The ASA was welcoming to new and junior members. My doctoral and postdoctoral work focused on receiver operating characteristic analysis, discriminant analysis, and predictive modeling. The ASA opened doors to many more fascinating quantitative methodologies and applications, not to mention those leading experts in the field as mentors, as well as junior researchers as mentees.

The ASA offers three ways to get involved: committees; sections; and chapters. There are several reasons why I enjoy volunteering, including paying it forward, sharing cutting-edge statistics, and building leadership skills.

I first volunteered as a member and vice chair of the Committee on Applied Statisticians. I also have had various roles within the ASA, including chair of the Statistical Partnerships Among Academe, Industry, and Government Committee; secretary and chair of the Health Policy Statistics Section; co-chair of the International Conference on Health Policy Statistics; and chair-elect of the Text Analysis Interest Group.

Moreover, I have been on the editorial board of *Significance*, jointly published by the Royal Statistical Society and ASA. Finally, I have always signed up as a JSM mentor.

Impact, Influence, Leadership

A proud and memorable moment was when I was elected as an ASA Fellow among a group of talented members during JSM 2012 in San Diego,



Kelly H. Zou, PStat, is head of Medical Analytics and Real World Evidence at Viatrix.

California. The theme of the conference was “Statistics: Growing to Serve a Data-Dependent Society,” which has become increasingly reflective of the abundance of big data and real-world data. How statisticians and data scientists can gain valuable insights to make data-driven decisions also became ever more important.

Recently, I participated in offering some advice to our members of the Biopharmaceutical Section on becoming fellows. I wrote that, as a working statistician in the health care industry, the experience of the ASA Fellow nomination has made me realize the importance of several elements, including impact, influence, and leadership.

I feel fortunate to be part of such distinguished fellows, especially since, under ASA bylaws, the Committee on Fellows can elect up to one-third of one percent of the total association membership as fellows each year. Thus, this experience with the 2012 class of fellows was meaningful and rewarding. Many of us in that crowd are helping organizations in all sectors to make informed decisions and, in my case, pursuing cures for patients.

Editor's Note: The views expressed here are those of Kelly H. Zou and do not necessarily represent those of her employer. ■

ASA, COPAFS, Partners Urge Bolstering of Federal Statistical Agencies

Constance Citro, Emerson Elliott, John Gawalt, Felice Levine, Jeri Mulrow, Paul Schroeder, Katherine Wallman, and Steve Pierson

Federal statistics have undergirded our democracy, society, and economy since the nation's founding. Even as their importance has increased over the centuries—especially recently with the focus on evidence-based policymaking—the agencies producing the data have been neglected, lost important autonomy and statutory protections, and been pushed deeper into the federal bureaucracy. Several agencies have experienced threats to the integrity of key data sets (e.g., the 2020 census) and to their ability to carry out their basic functions (e.g., the abrupt relocation of USDA's Economic Research Service [ERS] and subsequent loss of staff).

All this has been occurring with 21st-century opportunities and challenges needing urgent attention. An existential threat to high-quality government statistics is declining survey response rates at a time of growing demand for more timely and local data. Offsetting the threats are the promising opportunities possible through incorporation of data from administrative records and non-federal sources, as well as newly available and powerful processing tools for data linkages.

The American Statistical Association, Council of Professional Associations on Federal Statistics (COPAFS), and other supporters of federal statistics are recommending specific actions to address immediate issues of data integrity and the decades-long challenges that have undercut the ability of the principal statistical agencies to carry out their missions to the fullest. The goal is to ensure reliable, objective, and timely government statistics for public and policy use in the service of a strong economy, society, and democratic polity. The supporting organizations' documents cover the federal statistical system as a whole and 10 of the principal federal statistical agencies. Box 1 provides a link to the documents; Table 1 highlights priority recommendations for the 10 agencies.

System-Wide Recommendations

For the statistical system as a whole, the ASA, COPAFS, and supporting organizations focused on challenges and opportunities that are common across agencies. They recommend the administration and Congress prioritize opportunities to build

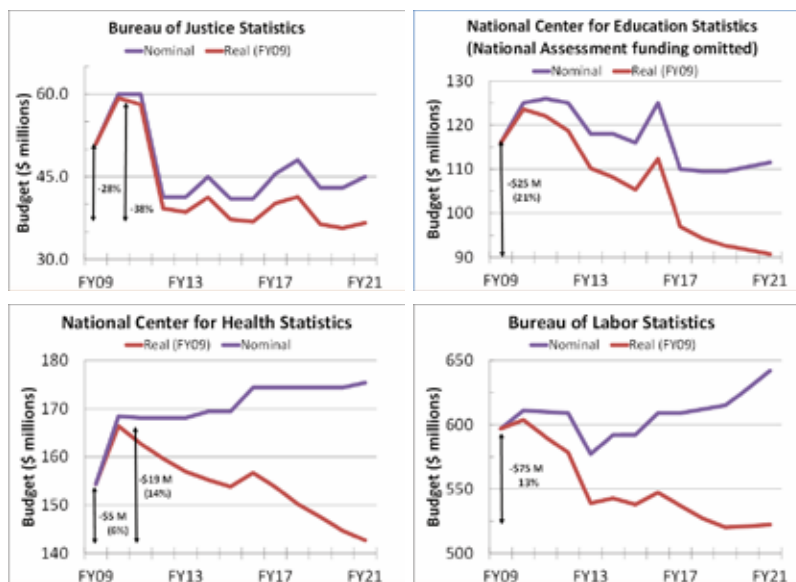


Figure 1: Budgets in nominal and real dollars

Box 1—Supporting Organizations' Documents

The documents are linked at bit.ly/3rJpF1a and include the following:

- Principal Statistical Agencies, system-wide priorities
- Bureau of Economic Analysis
- Bureau of Justice Statistics
- Bureau of Labor Statistics
- Bureau of Transportation Statistics
- Economic Research Service
- National Agricultural Statistics Service
- National Center for Education Statistics
- National Center for Health Statistics
- National Center for Science and Engineering Statistics
- US Census Bureau

Table 1: Priority Recommendations for the 10 Agencies

Agency	Priority Recommendations
Bureau of Economic Analysis (BEA)	<p>BEA needs support to—</p> <ul style="list-style-type: none"> • Improve the accuracy and reliability of its data • Develop new and expanded products to measure a dynamic economy in coordination with other economic statistical agencies • Improve customer understanding and modernize access to and use of BEA's products • Strive for operational excellence to meet mission-critical goals in a cost-effective and efficient manner • Coordinate its work with other economic statistics agencies
Bureau of Justice Statistics (BJS)	<p>BJS needs a strong leadership structure to—</p> <ul style="list-style-type: none"> • Modernize and strengthen its data collections and publish data and reports in a timely manner • Produce new products that are timelier and more specific to communities (e.g., victimization rates at the local levels) • Build partnerships to achieve these needs and relationships with stakeholders • Rationalize its budget structure
Bureau of Labor Statistics (BLS)	<p>BLS needs support to—</p> <ul style="list-style-type: none"> • Increase the frequency of data release from the Consumer Expenditure Survey (CES) to twice annually • Increase resources for the Job Openings and Labor Turnover Survey (JOLTS) • Access state unemployment insurance (UI) wage records and UI claims data • Fund a new cohort for the National Longitudinal Surveys of Youth (NLSY)
Bureau of Transportation Statistics (BTS)	<p>BTS needs—</p> <ul style="list-style-type: none"> • Urgent attention to its short- and long-term budget shortfalls • Reinstatement of its Advisory Council on Transportation Statistics • Measures to strengthen its independence from political and other undue external influence
Economic Research Service (ERS)	<p>ERS needs—</p> <ul style="list-style-type: none"> • Support and flexibility to rebuild its staff, especially for senior leadership • Affirmation and commitment from the department for its <ul style="list-style-type: none"> • Independence and objectivity within the Research, Education, and Economics mission area • Role as one of 13 principal federal statistical agencies, thereby adhering to standards promulgated by the chief statistician of the United States • Further consideration of its optimal configuration between two locations
National Agricultural Statistics Service (NASS)	<p>NASS needs support to—</p> <ul style="list-style-type: none"> • Improve the accuracy and reliability of its data while also reducing respondent burden • Develop new and expanded products • Transition from traditional survey data collection to in-depth integration of survey data with alternative sources and methods • Modernize its IT infrastructure • Strengthen protections within USDA to ensure objective and reliable data
National Center for Education Statistics (NCES)	<p>NCES needs—</p> <ul style="list-style-type: none"> • More technical staff • Enhanced resources • Independence from political and other undue external influence • Authority to retain its management responsibilities for both assessment (including the “Nation’s Report Card”) and its other statistical activities
National Center for Health Statistics (NCHS)	<p>NCHS needs to—</p> <ul style="list-style-type: none"> • Create a platform for using electronic health records (EHR) to facilitate processing, analysis, and access to timely and detailed morbidity data • Combine the assets of its National Health Interview Survey and National Health and Nutrition Examination Survey to address response bias and growing requests for more detailed data • Improve vital statistics data quality and timeliness by funding states to develop new and upgraded electronic registration systems and by upgrading internal NCHS systems to support real-time reporting and data dissemination • Explore use of innovative techniques to better protect data confidentiality and expand access to linked files • Redesign its website to improve data access, usability, and visualizations • Upgrade its computing technology and capacity
National Center for Science and Engineering Statistics (NCSES)	<p>NCSES needs strong NSF leadership support and enhanced staffing and budget resources to—</p> <ul style="list-style-type: none"> • Expand its data portfolio on the science and technology enterprise • Develop innovative services to link, analyze, and disseminate data as the foundation for rigorous research to generate insights that can improve American society (e.g., design and implement a secure research data center) • Collaborate broadly with national and international scientific communities to support innovation and create knowledge to improve the future • Give attention to its budget and budget structure
US Census Bureau	<p>The Census Bureau needs—</p> <ul style="list-style-type: none"> • Additional time to produce apportionment and redistricting data and data products from the 2020 Census • Additional protections to conduct its mission free from undue political interference • Nomination of a director with a demonstrated ability to manage large organizations; experience in the collection, analysis, and use of statistical data; and a commitment to ensuring the accuracy and reliability of census data

Table 2: Enacted Budgets of the 13 Principal Federal Statistical Agencies in FY09 Dollars (Adjusted Using the GDP Deflator)

	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	% Change from FY09
Agencies (budgets in FY09 \$ Millions)*														
Bureau of Economic Analysis	87	91.9	90.2	87.6	83.8	87.5	87.4	94.4	91.6	85.3	85.5	89.6	91	4.6%
Bureau of Justice Statistics	51	59.3	58.1	39.2	38.6	41.3	37.2	36.8	40.1	41.3	36.4	35.7	36.6	-28.2%
Bureau of Labor Statistics	597	604	590.6	578.6	538.9	542.9	537.7	547.3	537.2	527.1	520.4	521	522.2	-12.5%
Bureau of Transportation Statistics	27	26.7	26.1	23.9	24.3	23.8	23.6	23.4	22.9	22.4	22	21.6	21.1	-21.7%
US Census Bureau	4169	7141.8	1115.4	895.3	785.9	866.3	988	1231.1	1285.1	2423.9	3233.9	6270.5	897.7	N/A
Energy Information Administration	111	109.7	93	99.8	92.9	107.3	106.2	109.6	107.6	107.7	105.8	105.2	103.1	-7.1%
Economic Research Service	80	81.1	79.2	73.8	66.7	71.6	70.6	69.8	69.8	68.1	66.9	64	63.3	-20.9%
National Agricultural Statistics Service	152	160.1	151.4	150.7	155	147.8	148.2	143.1	142.9	157.2	139.9	142	142.1	-6.5%
National Center for Education Statistics	246	244.2	239.2	234.7	211	215.4	210.8	234.5	228	222.7	220.4	218.6	224.9	-8.6%
National Center for Health Statistics	125	137.4	134.3	131.8	129.5	128.3	127.1	130.3	127.9	124.9	122.7	120.3	118.8	-5.0%
Nat'l Center for Science & Engineering Statistics, NSF	39	40.5	40.7	41.1	38.8	43.2	52.9	52.4	52.7	53.7	54.2	53.9		
Office of Research, Evaluation, & Statistics, SSA	27	27.7	28.1	27.6	25.7	24.7	26.3	23.3	21.2	23.3	28.1	28	28.3	4.7%
Statistics of Income Division, IRS	42	42.6	37.9	36.8	32.6	34	33.4	34	30.3	29	30.4	29.8	30.4	-27.6%

Adjustments have been made for several agencies that have experienced budget restructuring to make the levels comparable for the years represented. Because amounts shown for the US Census Bureau include the decennial census, it is not appropriate to calculate the percentage change from 2009 to 2021. See the Google spreadsheet at bit.ly/3797MRx for notes.

back and enhance the nation’s data infrastructure by doing the following:

- *Enhancing autonomy to ensure reliable, objective data:* The 2020 Census and ERS-relocation controversies—as well as concerns raised about COVID-19 data (bit.ly/3iZjybd)—exposed weaknesses in ensuring objective and reliable government statistics. Several of the supporting organizations’ priorities documents recommend a bolstering of federal statistical agency autonomy—including for publications, budget, hiring, and IT infrastructure. The Bureau of Justice Statistics (BJS) and National Center for Education Statistics (NCES) documents urge a restoration of Senate confirmation of their presidentially appointed heads (removed

in 2012). Senate confirmation provides an important check on the technical qualifications and integrity of the nominee and affords Congress a route to ensure the agency head’s accountability. It may also provide the confirmed head additional authority to defend the integrity of the agency’s products and thereby elevate the role of statistics in evidence-based policymaking.

- *Giving greater emphasis to “real-time” data:* Federal statistical agencies have traditionally emphasized the production of annual series, such as household income and poverty statistics or crime victimization rates. The key economic indicators designated by the US

Office of Management and Budget (OMB) are published more frequently—examples are the quarterly Bureau of Economic Analysis (BEA) gross domestic product (GDP) releases and the monthly Bureau of Labor Statistics (BLS) price index and jobs reports. The COVID-19 pandemic has demonstrated the urgent need for even more series to be produced quickly and made available as frequently as possible. Agencies have responded with agility and resolve, illustrating what can be achieved with more resources. In collaboration with five other federal statistical agencies, the Census Bureau launched the Household Pulse Survey, providing insightful weekly data starting in May about how Americans are faring during the COVID-19 pandemic. One of the collaborating agencies, the National Center for Health Statistics (NCHS), also began publishing near real-time data on deaths due to the pandemic. In addition, the Bureau of Transportation Statistics (BTS) started providing daily and weekly statistics that serve as an early indicator of how the pandemic affects transportation demand and services. Agencies should be provided the support and resources to further the publishing of more real-time data.

- *Linking data to deepen insights on social conditions:* Federal statistical agencies are working to enhance the relevance of their data by cross-linking them with data from other agencies, work supported and encouraged by the Foundations for Evidence-Based Policymaking Act. But many opportunities have yet to be addressed. For example, the BJS—with greater investment—could link criminal justice data with education, health, transportation, and economic data to study the drivers of criminal activity and how they can be better mitigated. Similarly, BTS could work with local communities to better understand how people in the community use the transportation network to access employment, health care, education, fresh groceries, and other essential services and needs, which, in turn, could inform investment decisions for the betterment and strengthening of their communities.

To act on these priorities, the administration and Congress should address the following factors that inhibit the ability of the agencies to serve the information needs of the nation:

- *Restore lost purchasing power:* Because of budget constraints, many statistical agencies are struggling to continue established programs, let alone respond to new data needs or take advantage of methodological and technological advances that would improve their data and reduce costs and respondent burden. As seen in Table 2, all but three of 12 federal statistical agencies have lost purchasing power since FY09, while four of the agencies lost more than 12 percent in purchasing power (see Figure 1).
- *Address staff shortages:* For at least three agencies, staff size constraints keep them from seizing opportunity, working at full capacity, or fulfilling their potential. The National Center for Science and Engineering Statistics (NCSES) has a budget-to-staff ratio of \$1.15 million per FTE, a ratio more than three times the median of the 12 principal federal statistical agencies. For the NCSES, the ratio is \$2.56, or more than 7.5 times the median (see Table 3). These high ratios mean that in-house staff cannot fully monitor the work of contractors, let alone develop important new initiatives. BTS also faces a serious shortage of FTE staff, hampering its efforts to maintain internal capacity, keep pace with statistical advancements, and innovate to leverage big data.
- *Strengthen capacity for system-wide coordination:* Recognizing the strengths and weaknesses of the United States' decentralized statistical system, the supporting organizations recommend enhancing system-wide coordination and collaboration, including elevating the position of the chief statistician of the United States within OMB, providing the chief statistician more staff, and asking agencies to coordinate and integrate statistical programs across agencies.

How You Can Help

We encourage members of the ASA and other stakeholders to express their concerns about the federal statistical system as a whole, as well as specific agencies (including agencies for which documents do not yet

Table 3: Budget to Staff Ratio for 12 Principal Federal Statistical Agencies

	Budget \$M					Staff Size					FY16–17		FY19–20	
	FY16	FY17	FY18	FY19	FY20	FY16	FY17	FY18	FY19	FY20	Ratio of Budget (\$M) to Staff	Ratio normalized to ratio median	Ratio of Budget (\$M) to Staff	Ratio normalized to ratio median
Agencies (budgets in FY09 \$ Millions)*														
Bureau of Economic Analysis	105.1	103.8	99.0	101.0	108.0	499	488	480	489	501	0.21	0.62	0.21	0.60
Bureau of Justice Statistics	41.0	45.5	48.0	43.0	43.0	57	56	55	55	49	0.77	2.24	0.83	2.34
Bureau of Labor Statistics	609.0	609.0	612.0	615.0	628.0	2,036	2,035	1,865	1,989	1,989	0.30	0.88	0.31	0.89
Bureau of Transportation Statistics	26.0	26.0	26.0	26.0	26.0	66	68	52	55	60	0.39	1.14	0.45	1.28
Energy Information Administration	122.0	122.0	125.0	125.0	126.8	326	341	317	368	357	0.37	1.07	0.35	0.98
Economic Research Service	85.4	86.8	86.8	86.8	84.8	346	348	312	321	158	0.25	0.73	0.36	1.02
National Agricultural Statistics Service	168.4	171.2	191.7	174.5	180.3	1,038	1,037	1,033	1,033	1,033	0.16	0.48	0.17	0.49
National Center for Education Statistics	261.0	258.5	258.5	260.5	263.5	93	95	100	100	105	2.76	8.09	2.56	7.25
National Center for Health Statistics	160.4	160.4	160.4	160.4	160.4	508	503	443	484	470	0.32	0.93	0.34	0.95
Nat'l Center for Science & Engineering Statistics, NSF	58.3	59.7	62.4	64.0	65.0	50	52	56	56	56	1.16	3.39	1.15	3.27
Office of Research, Evaluation, & Statistics, SSA	25.9	24.0	27.0	35.4	36.0	67	64	63	79	79	0.38	1.12	0.45	1.28
Statistics of Income Division, IRS	37.8	34.3	33.7	35.9	35.9	117	140	136	135	139	0.28	0.82	0.26	0.74

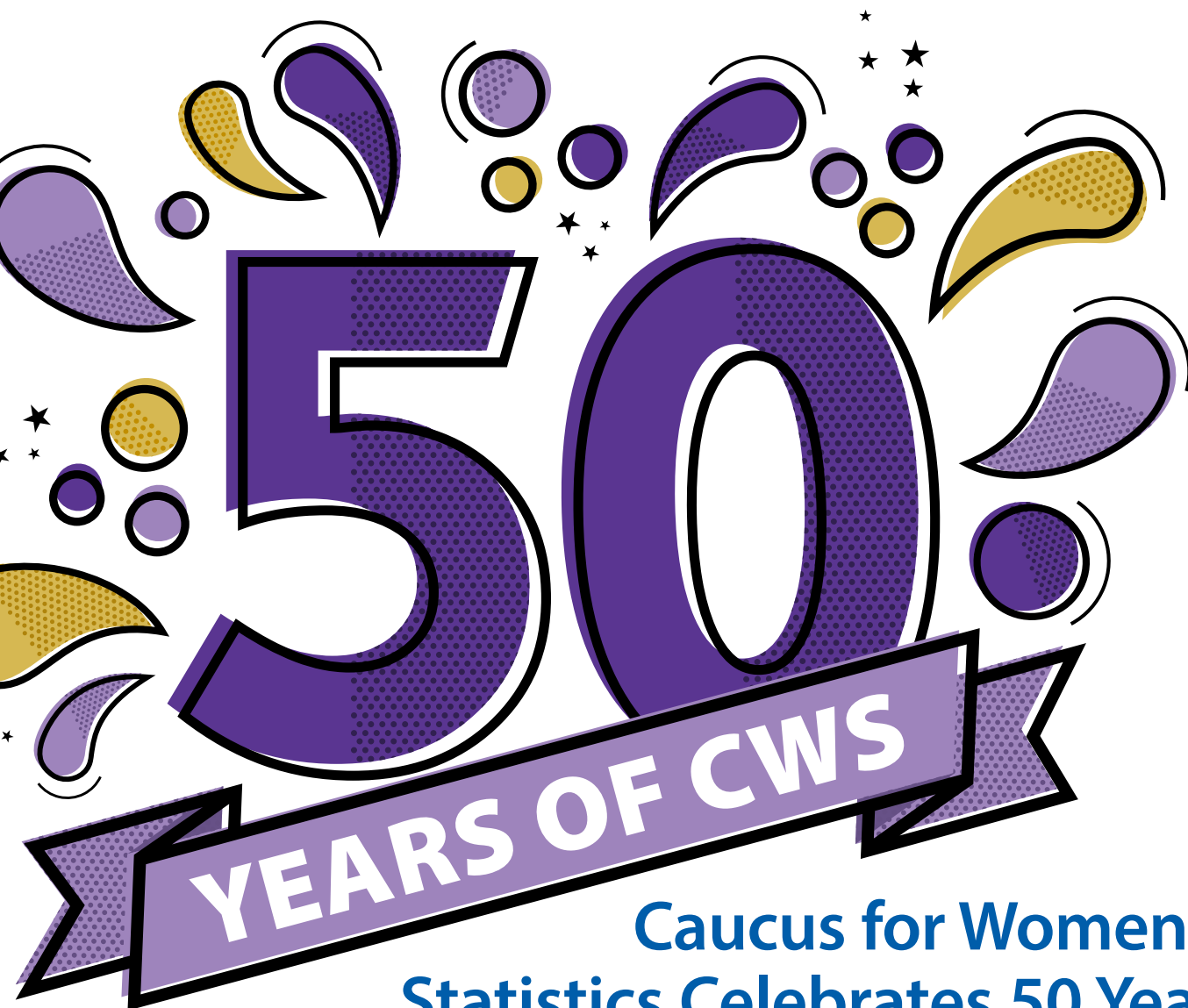
See also bit.ly/3aVeADC. Table excludes the Census Bureau because of the high variability in its budget due to the decennial census.

exist), to their representatives in Congress, the ASA, COPAFS, supporting organizations, and other organizations to which they belong.

The time is ripe for action that could make a real difference in the quality, timeliness, and relevance of the nation's statistical output about employment, economic growth, poverty, educational achievement, health and well-being, crime victimization, agricultural production, transportation, and the scientific enterprise.

Action to bolster the federal statistical enterprise can also go far to bolster the trust of all parties in the integrity of the data. Federal statistics are the backbone of the nation's data infrastructure—they need and deserve our active attention and support.

Editor's Note: This article is adapted from a January 27 ASA press release, bit.ly/3770FJo, which includes quotes from several leaders of the federal statistical community. ■



Caucus for Women in Statistics Celebrates 50 Years

This year marks the 50th anniversary of the creation of the Caucus for Women in Statistics (CWS), an international professional statistical society formed in 1971 for the education, employment, and advancement of women in statistics.

In the 50 years since the caucus was founded, it has formed close ties with other professional societies, including the ASA, Institute of Mathematical Statistics, Statistical Society of Canada, International Statistical Institute, International Biometric Society, International Chinese Statistical Association, International Indian Statistical Association, Korean International Statistical Society, and Western North American Region of the International Biometric Society. CWS has also built a network of more than

300 students and professional statisticians in addition to co-founding the Women in Statistics and Data Science Conference (WSDS) and sponsoring many of its sessions.

Wendy Lou, 2020 CWS president, created the CWS Societal Impact Award to recognize the impact statisticians have on society at large. Current CWS president, Tomi Mori, plans to make 2021 special by engaging with past CWS presidents and members, connecting them with current and future members, and passing on CWS history to the next generation.

Through this growing network of statisticians across academia, industry, and government, the caucus has made strides in the past 50 years in advancing the careers of women statisticians through



50th Anniversary Planning Committee

Tomi Mori (chair)
Nairanjana (Jan) Dasgupta
Rochelle Fu
Brittany Green
Jessica Kohlschmidt
Donna LaLonde
Nicole Lazar
Wendy Lou
Natasha Sahr
Brisa Sanchez
Hongying Sun
Li Tang


To help with the anniversary celebration, send an email to volunteer@cwstat.org.

advocacy, providing resources and learning opportunities, increasing professional participation and visibility, and promoting and assessing research that affects women statisticians.

To mark the 50th anniversary of CWS, a variety of celebratory events have been planned, including a virtual conference, invited sessions at the Joint Statistical Meetings (JSM) and WSDS, a special CWS event at JSM, a CWS giving day, an electronic time capsule predicting what the statistics field will look like in 50 years, essay and poster competitions for K–12 students, and a series of events to gather the community and celebrate each other.

The Madam Presidents Happy Hour takes place over Zoom on the fourth Thursday of each month from 3–4 p.m. ET. It is open to all and allows those who participate to get to know past CWS presidents and connect with others. Also, the CWS Past Presidents Interview Series is on YouTube (bit.ly/CWS_YouTube). Currently, interviews are available with Ji-Hyun Lee (2017 president) and Stephanie Shipp (1992 president), both interviewed by ASA Director of Strategic Initiatives and Outreach Donna LaLonde.





Celebrating WOMEN IN STATISTICS AND DATA SCIENCE

— WOMEN'S HISTORY MONTH —

In honor of **Women's History Month**, we are once again celebrating ASA women who work in statistics and data science. These accomplished women were chosen because they inspired and influenced other women in their field. Read their biographies and find out why they chose statistics as a profession, who influenced them, and what they have accomplished.

SCARLETT BELLAMY grew up on her grandparent's tobacco farm, learning how to drive a tractor when she was just five years old. This experience shaped her work ethic. Moreover, when her grandmother was diagnosed with breast cancer, Bellamy promised she would become a doctor so she could "fix" her. Ultimately, Bellamy earned her PhD in biostatistics from Harvard and although it wasn't the type of doctor who could fix her grandmother, she did fulfill her promise. Today, Bellamy is a professor of biostatistics and associate dean for diversity, inclusion, and faculty development at Drexel University.



ANI ELOYAN's favorite subject in school while growing up in Armenia was mathematics. It wasn't until graduate school, however, that she pursued statistics and learned to model health data. While she focused on the methodology of matrix decompositions for her PhD thesis, she had the opportunity to learn about neuroscience and applying statistics when analyzing brain imaging data during a postdoctoral fellowship. Her career and life have given her some great first moments—seeing the pride on her grandfather's face when she finished her PhD, watching her first PhD student defend her dissertation, and hearing her toddler say a complete sentence.

Always drawn to science in one form or another, **SANDY GRIFFITH** started college as a biochemistry major, but her clumsy nature lent itself better to handling data instead of beakers and chemicals. Throughout her career, she has gravitated toward applied medical research with the potential to affect the lives of patients. In her current role at Flatiron Health, Griffith works with real-world data derived from electronic health records in oncology. Her proudest moments have involved communicating complex statistical concepts to nonstatistical audiences in an approachable way by weaving in personal stories that carry emotional resonance.

SIMINA BOCA grew up in Bucharest, Romania, and participated in many math contests as a kid. Her best result was fourth place nationally in the ninth grade, but she was pretty sure she didn't want to focus on pure math as a career. When she attended a genetics class her senior year in high school in the United States, she discovered biostatistics and majored in math at the University of Illinois. Along the way, she realized she enjoyed working with data and thinking about data. From a professional perspective, her proudest moment was convincing collaborators to rerun an experiment because the initial one had pronounced batch effects that could not be fixed at the analysis stage.



CHRISTY CHUANG-STEIN grew up in an isolated city on the east coast of Taiwan. Both her parents were high-school teachers, and she remembers doing math lessons with her mother while other kids played outside. Yes, she resented the extra lessons at the time, but those lessons served her well and she ended up majoring in math in college. In the 90s, Chuang-Stein represented Pfizer (then Pharmacia) in presenting their HIV trial data at an FDA Antiviral Drugs Advisory Committee meeting to review statistical evidence for using viral load as a surrogate for clinical outcome in assessing HIV treatments. It is hard for her to describe the sense of exhilaration when her team's endeavors lead to profound improvement in people's lives.



NANDINI KANNAN was born in Bhopal, India, and completed her schooling in Mumbai and New Delhi. She enjoyed solving math puzzles as a child, inheriting her love of mathematics from her father, a mathematician. After completing a master's degree at the University of Madras, Kannan joined the University of Pittsburgh to work with C. R. Rao. She is proud of her work at the National Science Foundation developing interdisciplinary research and training programs in data science and is passionate about the critical role science and technology play in this global interconnected society. Kannan is committed to developing and supporting initiatives that address diversity and equity in the STEM workforce.



JESSICA K. KOHLSCHMIDT grew up in Houston, Texas, with five siblings. A first-generation college student, she had a passion for math from a young age. She has taught full and part time at colleges since 1999 and is currently is a PhD biostatistician at the Clara D. Bloomfield Center for Leukemia Outcomes Research at The Ohio State University Comprehensive Cancer Center. She is also a longtime officer of the Caucus for Women in Statistics (CWS), serving for 10 years as secretary and, in 2018, becoming the first executive director.

LUCY D'AGOSTINO MCGOWAN spent the beginning of her childhood in Boston, Massachusetts, and the rest in Winston-Salem, North Carolina, where she lives today as a biostatistician, teacher, science communicator, podcaster, partner, mom, programmer, Disney enthusiast, and BB-8 builder. She fell in love with the statistics field after doing a Summer Institute in Biostatistics at Boston University. D'Agostino McGowan is also an avid statistical communicator. Her efforts in statistical communication span from op-eds about the current COVID-19 pandemic; a podcast in partnership with the *American Journal of Epidemiology*, *Casual Inference*; and outreach via social media. Her research focuses on causal inference, human-data interaction, and statistical communication. She is currently the chair of the ASA Committee on Women in Statistics and co-leads an effort with past-chair Stephanie Hicks to build community and engagement. Follow their Twitter feed at @WomeninStat.



At a young age, **ELIZABETH OGBURN**'s plan was to stay in school forever. In college, she studied philosophy and math and tried everything from epidemiology to data analysis, but nothing stuck. She wasn't sure what she wanted to do until she attended a talk about causal inference and knew that was the perfect fit. Now, as a Johns Hopkins faculty member, she loves being part of the broader causal inference community, with its connections to social science, computer science, theoretical and applied statistics, and, of course, public health.



SHAWN SIMPSON loved math and computers as a kid and thought soldering extra chips into her PlayStation was cool, so she resolved to major in electrical engineering in college. It wasn't until she was analyzing LIDAR data that it became clear how powerful statistics was as a field and she decided to earn her PhD in statistics. Currently, as principal data scientist on the AI Labs team at BlackRock in New York City, she leads a group that builds tools for traders powered by statistics and machine learning. Her advice to young statisticians? Don't do this alone; reach out to others for support and feedback.



SUZANNE THORNTON's interest in statistics blossomed when she took her first course in college. While attending JSM, she discovered a program covering interesting research and topics that she, as a queer woman, had never felt welcome to discuss with her predominantly straight, male instructors. Now a professor of statistics at Swarthmore, she works on ways statistics education can be modernized and brought to a wider population and ultimately increase the diversity of the field.

ANNIE QU was trained as a computational mathematician and had not analyzed data until she was introduced to statistics in graduate school. Suddenly, all the numbers and programming were meaningful and there were interesting stories behind them. This was just the beginning of her journey in data science research. Since then, she has worked on tensor learning for optical breast cancer imaging data, network data, deep learning, active learning, crowdsourcing, and personalized medicine. Doing something new and cutting-edge has always been exciting for her and keeps her motivated.



DOOTI ROY spent her weekends as a child in Kolkata working on puzzles and combinatorics and reading storybooks. She was introduced to statistics when she was 16 and enjoyed it so much that she earned a graduate fellowship to pursue her PhD in the US. Today, she works as a methodologist at Boehringer Ingelheim, Inc., where her days are spent learning, researching, and implementing statistical methods to make clinical trials more efficient. Even though her job is challenging, she learns constantly and solves meaningful and complex problems to help patients in need. Recently, she has been mentoring younger statisticians and actively volunteers her time on several ASA committees, including the Antiracism Task Force.



Read their full bios online at [magazine.amstat.org](https://www.amstat.org/magazine).



MARINA VANNUCCI was recognized early in her career with the Italian Statistical Society's prize for "Best Doctoral Thesis in Statistics." The prize gave her confidence in her abilities as a researcher and launched her professional career in academia. Now, as a professor, she savors advising students and watching them grow into independent researchers. Service is another aspect of her professional career she enjoys and she never shies away from challenging roles. She is particularly proud of her work as editor-in-chief of *Bayesian Analysis* and editor of the *Journal of the American Statistical Association*, Theory & Methods section.



CLARICE R. WEINBERG was always good with numbers and earned both her bachelor's and master's degrees in mathematics. However, she didn't know what to do with her math degrees so she looked into statistics and eventually earned her PhD in biomathematics from the University of Washington. Now at the National Institute of Environmental Health Sciences, she is active in breast cancer research and works with biostatistics graduate students to develop stochastic search methods to identify sets of gene variants and sets of exposures that synergistically influence risk.

STATS4GOOD

New Federal Data Policies and the Impact of Data for Good



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

With the transition to a new administration in Washington, this is a good time to review how new policies and practices are expected to affect our work in Data for Good. Without taking any political positions, a description of how the scientific landscape is changing would be useful for all of us.

The media has given much attention to the pandemic response. The coordinated COVID-19 response will include improvements to pandemic data collection and access to support evidence-based policymaking. The plan to reestablish in-person education at schools also includes a program to collect data needed to inform these decisions. This follows a 2020 recommendation from the Data Foundation, a federal not-for-profit corporation working across the federal landscape to make data more accessible and usable. Of course, school decisions are made locally; we are reminded of one state governor in March 2020 who pleaded with local schools to close even as he acknowledged his state's constitution did not give him the authority to order it. The data initiative inside the post-pandemic back-to-school plan will support studies by state and local D4G researchers to empower data-driven decisions.

The new administration has also announced an initiative for “advancing racial equity and support for underserved communities.” In a major step forward for Data for Good, the new administration is setting up the Social Equity Data Working Group. This group will advise on best practices, identify where improvement is needed, and recommend actions to address shortcomings. It will work across organizations and agencies to foster a comprehensive and synoptic understanding of racial inequity and ways to address it.

The working group will be co-chaired by the chief statistician of the United States and the US chief technology officer. (As of February 1, both of these offices are vacant. Nancy Potok, the most recent chief statistician, is assisting the new administration's transition team.) Once established, it is



hoped this much-needed organization will also serve as a template for other forms of inequity such as gender and disability.

While not included in the scope of this working group, at least as yet, action has been undertaken to prohibit discrimination on the basis of gender identity or sexual orientation. The ASA's Anti-Racism Task Force and the Justice, Equity, Diversity, and Inclusion Outreach Group are active in these areas and can help people and projects in data for social good.

With a strong foundation in data and analytic best practices, the resources and recommendations developed by the Social Equity Data Working Group will support practitioners in all areas of advocacy for social equity. Further, a number of other actions outlined by the new administration as it charts its course both need D4G support to accomplish and will create new resources for us to use.

New initiatives are underway to address the COVID-19 pandemic, fight climate change, develop ethical standards in the sciences, and expand funding for basic science serving the greater good.



The Consortium of Social Science Associations, of which the ASA is a member, provides a wealth of information and other resources to support policy advocacy in the social sciences. Their *Washington Update* (www.thewashingtonupdate.com) is a great source of information about what is happening and how to get involved.

While these plans will guide federal agencies in the US, their impact is much broader. By establishing policies closer to international standards, global cooperation is strengthened. All these initiatives collectively reflect a strong desire to fully use science and consult with leading experts to support data-driven decision-making. In our vastly interconnected world—and in a new normal of virtual conferences, networking, and sharing new data and methods—opportunities for international collaboration has never been greater.

One group of people deserve special recognition at this time. The United States civil service in the sciences has faced significant challenges in recent years. Yet, they persisted, carrying on their vital—often life-saving—work with courage and vigor. So

many of the Data for Good opportunities we see today have been made possible by their quiet, faithful service to the sciences and our country. In an era when the possibility of university tenure becomes distant for many, scientific civil service is an option to consider to create a career using science for the greater good.

Getting Involved

There is still one more opportunity to submit an abstract for JSM. Contributed abstract submissions are open from March 16 to April 14. Contributed abstracts can be for a paper, poster, or speed session. Open for all statistical topics, contributed sessions make a great opportunity for you to share your work in Data for Good. Submitters will want to keep in mind the theme of this year's conference: *Statistics, Data, and the Stories They Tell*. You can get all the details from the submissions section of the JSM website at ww2.amstat.org/meetings/jsm/2021/submissions.cfm. ■

STATtr@k

COVID-19 Job Search Tips for Early-Career Data Scientists, Analytics Pros



Katie Ferguson is a specialist in quantitative marketing. She helped launch Burtch Works' mid- and junior-level analytics practice and has been working with analytics professionals for 13 years.

The past year has been a difficult time for many as a result of the ongoing COVID-19 pandemic. Although we've seen that data science and analytics professionals are still in demand, the job market has been challenging for many early-career professionals looking to get their start during this "new normal."

Academic programs, internships, career plans, and interview schedules have all been disrupted (bit.ly/2Of2ntr). Many of these events may be out of your control, but following are some tips for those who want to proactively manage their early career and job search during this uncertain time.



1. Keep your existing skills fresh and look for new marketable skills.

While keeping your skills fresh is always advisable, it is especially prudent now. If you have time while job searching or finishing your coursework/internship, review potential job opportunities and see if there are any skills/tools you should be adding to your toolkit. There are tons of online data science and analytics resources (such as Coursera) to help you get exposure to different tools or refresh your knowledge.

Python and SQL experience continues to be in high demand,

and even if you haven't had experience with these tools in a professional setting (yet), having a fresh foundation can be helpful when you're in the market for a job.

2. Update your résumé.

Keeping your résumé updated is something I strongly encourage data scientists and analytics professionals to do, even if they're not looking for a job. First, it's much easier to describe your projects and experience shortly after you've worked on them. Additionally, you never know when the right opportunity might present itself, and if your résumé is ready or at least fairly current, you'll be better prepared.

If you don't have professional work experience yet, make sure to highlight past analytics projects, such as market mix or predictive modeling projects. This is especially helpful if you're able to highlight tools or techniques you've employed that are requirements in the job you're applying for.

3. Practice video interviewing skills.

It's never a bad idea to practice interviewing skills with friends, especially your fellow colleagues in data science and analytics, and get comfortable with video interviewing. There are unique challenges to consider when getting

ready for a video interview (bit.ly/39YQnNr). With everything moving to Zoom for the foreseeable future, don't wait until your interview is scheduled to make sure you're adequately prepared.

4. Look for data science and analytics virtual networking or meetup groups.

As we know, lots of groups are having virtual events and conferences, where you can meet other data scientists and analytics professionals for networking or to expand your knowledge. You can check out local analytics meetup groups, your local chapter of the American Statistical Association, or INFORMS to see if they're having virtual events.

5. Practice your quantitative skills with a Kaggle competition.

Need to practice using your new skills and tools? Do a Kaggle competition. Kaggle is an online platform that hosts data science competitions, and I've consistently recommended it as a great way to keep your skills sharp. Any way you can gain practice time is going to be beneficial.

6. Stay up to date on analytics industry news.

Industry research is something I always recommend as part of interview preparation. It's now even more prudent to be aware of what is happening in data science and analytics, regardless of whether you're interviewing. Also, stay well-versed in related

topics to see how they affect analytics (bit.ly/3jrIMK7), especially if you're looking for a job.

7. Reconnect with your recruiter, or find one to help you.

It's always smart to keep in touch with recruiters so they are apprised of your situation. Let them know what you're working on and what's going to be best for you in the future. Since data science and analytics is such a specialized field, I'd recommend

finding a recruiter who focuses on this area.

If you're looking for more job search resources, check out the *COVID-19 Job Search Guide for Data Scientists and Analytics Professionals* (bit.ly/3cLWwyc), which gathers resources such as LinkedIn profiles, résumés, company research, interview preparation, and salary negotiation in one place. ■



CALLING ALL GRAPHIC ARTISTS!

Do you have a secret artistic side that wants to be released? The Justice, Equity, Diversity, and Inclusion (JEDI) Outreach Group is now a reality, and we need your help! Make your mark by creating an emblem that properly reflects JEDI and its mission to strengthen our community by making it more just, equitable, diverse, and inclusive. The selected image will serve as the group's official logo.

Submit your graphic (gif, png, jpeg), along with a brief explanation of its imagery and any associated symbolism, to info@datascijedi.org by May 4. Judges will select first-, second-, and third-place images, and prizes will be awarded for the winning emblems. Email info@datascijedi.org with any questions or inquiries. Help us by sharing your creativity!

Leroy P. Steele Prizes

The American Mathematical Society invites you to celebrate excellence in mathematics scholarship by nominating a colleague for the 2022 Leroy P. Steele prizes. Nominations run through March 31.

A total of three prizes will be awarded, one in each of the following categories:

- *Lifetime Achievement:* Awarded for the cumulative influence of the total mathematical work of the recipient, high-level of research over a period of time, particular influence on the development of a field, and influence on mathematics through PhD students. The amount of this prize is \$10,000.
- *Mathematical Exposition:* Awarded for a book or substantial survey or expository research paper. The amount of this prize is \$5,000.
- *Seminal Contribution to Research in Applied Mathematics:* Awarded for a paper, whether recent or not, which has proved to be of fundamental or lasting importance in its field or a model of important research. The amount of this prize is \$5,000.

Learn more about the nomination process for each prize, read about past recipients, and submit a nomination via the AMS website at bit.ly/LeroyPSteele. The winners will be announced in January 2022.

Established in 1970 in honor of George David Birkhoff,

William Fogg Osgood, and William Caspar Graustein, the Steele prizes are endowed under the terms of a bequest from Leroy P. Steele. The AMS Council formalized the three prize categories in 1993.

If you have any questions about the nomination process or award, contact the AMS Secretary at secretary@ams.org. ■

Jerome Sacks Award

Nominations are being sought for the 2021 National Institute of Statistical Sciences' (NISS) Jerome Sacks Award for Outstanding Cross-Disciplinary Research. The prize recognizes sustained, high-quality, cross-disciplinary research involving the statistical sciences.

A prize of \$1,000 will be presented during the NISS reception at the Joint Statistical Meetings in Seattle, Washington, in August.

Procedure

To nominate an individual, submit as one PDF document the following information to sacksaward@niss.org by April 30:

- Nomination letter (maximum two pages)
- Supporting letters from two individuals (other than nominator)
- Nominee's CV

Questions about the award or the nomination process can be sent to sacksaward@niss.org. To submit a nomination online, visit the NISS website at bit.ly/2FbLaT5. ■

Obituary

Michael Ross Chernick

Michael Ross Chernick died unexpectedly on January 1, 2021. He was 73 years old and the beloved husband of Deborah Ann (Lewandowski) Chernick. The couple shared 32 years of marriage.

Born in Havre de Grace, Maryland, Michael was the son of the late Jack and Norma (Wiener) Chernick and the brother-in-law of the late Frank Weisz.

Michael earned his PhD from Stanford in operations research and held an advanced degree in statistics. A longtime member of the American Statistical Association, he was an ASA Fellow and president of the Southern California Chapter. He published many articles in professional journals and mathematical books. In addition to the ASA, Michael was a member of the Eastern North American Region of the International Biometric Society, Institute of Mathematical Statistics, Bernoulli Society, and Royal Statistical Society. He received the prestigious Jacob Wolfowitz Award for the Outstanding Theoretical Advances Paper of the Year in 1983.

Michael was a lifelong sports fan—especially of the New York Yankees—and enjoyed teaching, mentoring, and doing puzzles, particularly Sudoku. He also liked playing chess with his sons.

View Michael's obituary and read more about his family and life at bit.ly/2NwunQW.

SFASA Celebrates Holiday Season with Positive Outlook

Ling Shen, Ron Yu, and Jing Huang

The year 2020 was dominated by an extraordinary effort to combat a deadly virus and survive a lockdown lifestyle. Biotech giants raced to develop COVID-19 diagnostic tests and treatments. Scientists used statistical methodologies to analyze the emerging data and understand COVID-19 transmission and incidence, which drove government policies.

The San Francisco Bay Area Chapter (SFASA) hosted a three-hour virtual celebration December 4, 2020: A Positive Outlook During the COVID Era: How Statistics Could Contribute to a Better 2021. More than 70 SFASA members attended.

Opening Remarks

Tao He, SFASA president, welcomed all attendees and highlighted the chapter's activities and achievements in 2020.

On behalf of the ASA, Executive Director Ron Wasserstein acknowledged SFASA won the most generous chapter award during ASA Giving Day 2020. He then summarized a few ASA initiatives during the pandemic. To begin with, the ASA Board of Directors formed a COVID-19 task force to respond to emerging issues. They sent letters to government officials and issued public statements about new US Department of Health and Human Services (HHS) guidance for hospital reporting and the role of data experts within the government during public health



SFASA holds a virtual holiday celebration over Zoom in December 2020.

emergencies. In addition, the ASA created online communities and organized town halls and lectures to improve the quality of statistics education at all levels.

Keynote Presentations

Two invited keynote speakers shared their impactful COVID-19 projects to exemplify the role of statistics and data science in supporting evidence-based strategies to address the pandemic.

Xihong Lin, professor of biostatistics and statistics at Harvard University, and her colleagues were among the first to publish important findings using the Wuhan COVID-19 data. She presented results from her *JAMA* and *Nature* publications on COVID-19 transmission, health outcome, and intervention using the Wuhan data. First, she showed that COVID-19 has two features: high transmissibility and high convertness. Before any

intervention, the basic R_t value (effective reproductive numbers) was as high as 3.54 in Wuhan before the city lockdown on January 23, 2020. Approximately 87% of cases were unascertained, many of which were likely to be asymptomatic or mildly symptomatic. Using the Wuhan data and the spring data in the US, Lin and her collaborators identified important risk factors and symptoms for COVID-19 infections, including older age, people of color, health care workers, loss of smell and taste, and being exposed in households and communities.

Next, Lin emphasized the importance of multi-pronged public health interventions to combat the pandemic. Data in many countries indicated social distancing alone can reduce R_t to linger around 1. But to bend the curve by further reducing R_t , additional control measures are needed, including



SFASA's panel discussion focused on COVID-19 and pandemic-related perspectives.

mask wearing, widespread testing, contact tracing, supported isolation and quarantine, and vaccination. After enforcing social distancing, universal screening, centralized isolation, and quarantine in Wuhan, Rt was reduced to 0.27 by March 8 and there were zero confirmed cases on March 18. The city was reopened on April 8.

Lin's group also developed a useful visualization tool, Rt Map (metrics.covid19-analysis.org), that can be used for visualizing real-time country-level, US state-level, and county-level Rt values to monitor the spread of the virus at different resolutions.

Finally, Lin urged the audience to remain vigilant by keeping the control measures and cautioned of resurgence if preventive measures are lifted immaturely.

Manisha Desai, professor of medicine and biomedical data science at Stanford University, took part in four critical COVID-19 initiatives. First, she served as co-PI to evaluate the impact of

a cheap saliva-based self-administered test kit (SnapDx). In the absence of vaccines, a simple home-based test kit is important in managing pandemics, provided the test is feasible with favorable sensitivity and specificity.

Next, to support Bay Area public health departments and guide policies, Desai and University of California, San Francisco (UCSF) co-lead Adam Olshen led their team to develop predictive models to project near-term hospital capacity. Using a parametric bootstrap approach, they simulated the distribution for the worst day of COVID-19 to estimate the probability of being in a safe or more cautionary zone.

In another UCSF/Stanford collaboration, Desai worked with Bay Area counties to estimate the prevalence and incidence of COVID-19 in the Bay Area. To accurately reflect the Bay Area, a stratified random sampling scheme was developed based on two strata—county and risk level—to mitigate the selection bias, where risk is estimated using machine learning approaches. It has been important to work with community-based organizations to engage potential participants and mitigate nonresponse bias once the sample has been selected.

Last, Desai and her colleagues at Stanford University's School of Medicine launched the COVID-19 Outpatient Pragmatic Platform Study (COPPS). Under COPPS, treatment arms can be added or dropped throughout the study period, allowing viral or clinical endpoints (as defined in the sub-protocol) to be adaptive, flexible, and effective at

evaluating multiple potentially efficacious agents in the shared control group. COPPS can accelerate clinical development for COVID-19 treatment without sacrificing scientific rigor of the study.

Panel Discussion

Five panelists provided advice and commentary in response to COVID-19. They offered their perspectives on the pandemic and how scientists could help. In addition, several panelists gave tips and shared personal stories to help the audience cope with this unprecedented situation.

Moderators:

- Cristina Tortora, *San Jose State University*
- Ling Shen, *Vir Biotechnologies*

Panelists:

- Manisha Desai, *Stanford University*
- Steven Goodman, *Stanford University*
- Xihong Lin, *Harvard University*
- Thomas Snyder, *Adaptive Biotechnologies*
- David Zhang, *MyoKardia*

Closing Remarks

Ron Yu, SFASA past president, concluded the event by thanking all the speakers, panelists, event organizers, and participants and wishing everyone a happy holiday season. ■

Text Analysis Interest Group Recaps First Full Year

The ASA's Text Analysis Interest Group (TAIG) has had a productive first full year. TAIG brings together individuals and groups who have an active interest in text analysis, text mining, natural language processing, and related areas of research at their intersection with statistics. It works to increase awareness of statistical community in tools and methods of text analysis, promote text analysis as an integral part of modern statistics education, and involve statisticians in research in text analysis.

The group was formed in 2019. In 2020, it had a full slate of officers: Stas Kolenikov (founder and 2020 chair, 2021 past chair), Kelly Zou (2020 chair-elect, 2021 chair), Carol Haney (2020/2021 secretary-treasurer), Jordan Rodu (2020 program chair-elect, 2021 program chair), Tommy Jones (webmaster), and Qiuyi Wu (student representative). The officers met eight times throughout 2020.

At JSM 2020, held virtually, the group had a full program, co-sponsoring a total of 22 sessions. The three sessions devoted entirely to text analysis were the following:

- “Statistics of Social Media” invited session with presentations by Emilio Zagheni and Juha Alho and discussion by Frauke Kreuter
- “Big Data, Technology Platform and Digital Innovation with Measurable Impact” topic-contributed panel organized by Kelly Zou with panelists Siddhartha Dalal, Mike Henderson, Joe Imperato, Stas Kolenikov,

Lourenco Miranda, Mike Porath, and May Yamada-Lifton

- “Natural Language Processing Applications in Defense and National Security” topic-contributed session with presentations by Svitlana Volkova, Richard Field, Lauren Phillips, and Kelly Townsend and discussion by David Marchette

The group also held a virtual presentation competition in two categories—student and professional—with the interest group officers serving as judges. The professional category award winner was Enshuo Hsu and team from The University of Texas Medical Branch for their presentation, “Combination of Optical Character Recognition and Natural Language Processing to Identify Patients with Sleep Apnea in EHR Data.” The student category award winner was Qiuyi Wu of the University of Rochester for her presentation, “Naive Dictionary on Musical Corpora: From Knowledge Representation to Pattern Recognition.” Each award was accompanied by a \$500 check to the presenting author.

TAIG also held a business meeting and social hour on Zoom on the last day of JSM. The officers talked about official business of the group, and then everyone chatted about the prospects of the group and interesting developments in the text analysis field.

Preparations are underway for JSM 2021. An invited session, titled “Words and Insights via Text Analysis,” was accepted. It is organized by Kelly Zou, with Mike Baiocchi, Mike Henderson,



Tommy Jones, and Tian Zheng presenting. A topic-contributed session, “Statistical Approaches in Text Analysis,” is being organized by Jordan Rodu, with Qiuyi Wu, Michael Crotty, Daniel Fortin, and Jordan Rodu presenting. Also planned is a short course on text analysis by Karl Pazdernik.

In the fall of 2020, TAIG held elections for two offices: chair and program chair. David Banks was elected as 2021 chair-elect (2022 chair), and Brandon Sepulvado was elected as the 2021 program chair-elect (2022 program chair).

The group is exploring the possibility of collaborating with other ASA sections, such as the Section on Statistical Computing and Section on Statistical Learning and Data Science, as well as with external organizations. Also, the group has an agreement with Data Science DC for the JSM 2020 presentation award winners to give their talks at their fora.

In 2021, the group plans to offer a webinar to help other statisticians familiarize themselves with text analysis as a research area. For more information about the group or to join, visit community.amstat.org/taig. ■

40TH anniversary

CELEBRATING THE EARLY YEARS (1966–1990)

BIOP

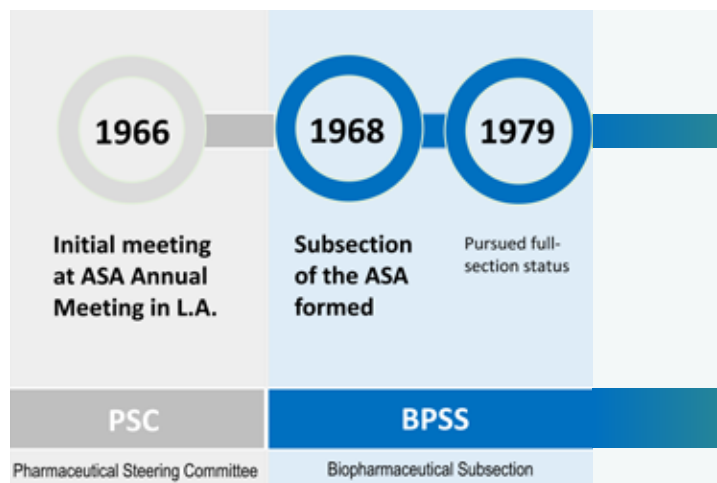
Richard C. Zink, Lexitas Pharma Services, and Meijing Wu, AbbVie

Over its long history, the Biopharmaceutical (BIOP) Section has fostered community and created a shared sense of purpose among statisticians in the medical product industry. The year 2021 marks the 40th anniversary of BIOP. It is a time to reflect on how the section has grown from its humble roots, a time to celebrate the activities and accomplishments of the section as it seeks to support its members, and a time to envision how the section will continue to lead the way to address the challenges of medical product development in the 21st century.

In the mid-to-late 1950s, thalidomide was shown to be well-tolerated, effective as a sedative, and effective as an anti-nausea medication for pregnant women suffering from morning sickness. Despite claims that thalidomide was a nontoxic medication, with no side effects, and completely safe for pregnant women, the drug became associated with instances of peripheral neuropathy and its ability to cause birth defects, according to John Frisbee in his 1990 article, “Thalidomide,” published in the *Encyclopedia of Women’s Health*. The thalidomide disaster in other countries led to the 1962 Kefauver-Harris amendments of the 1938 Food, Drug, and Cosmetic Act in the United States. Notable authorities granted to the US Food and Drug Administration (FDA) by this act include the following:

- The requirement that manufacturers prove effectiveness of drugs prior to marketing and disclose safety issues after marketing
- The requirement that evidence be generated by adequate and well-controlled clinical studies
- The mandate to review medications approved between 1938–1962

These new requirements necessitated the hiring of a large number of statisticians, the development of statistical departments within pharmaceutical companies, and the training of statisticians about topics in the health care field. These statisticians found themselves in need of a professional venue to develop and share methodology and promote the field, according to Robert L. Davis, S. Michael Free, Stephen



W. Gulyas, Martha S. Hearron, Stacy R. Lindborg, Robert O’Neill, and Charles B. Sampson in “The History of the Biopharmaceutical Section of the American Statistical Association (ASA) 1966–1988,” published in *Biopharmaceutical Report* in 2005.

A formal group was initially discussed in 1966 at the ASA Annual Meeting in Los Angeles. Spencer M. Free, in “Some History for the Biopharmaceutical Section,” published in *The American Statistician* in 1990, recalled the individuals present identified five professional organizations that could serve as a home for the new group. Over time, the choices narrowed to the ASA and Drug Information Association (DIA). Eventually, the Pharmaceutical Steering Committee (PSC) petitioned to join as the Pharmaceutical Subsection of the Biometrics Section of the ASA in 1968. The name was quickly changed to the Biopharmaceutical Subsection (BPSS) to help distinguish the group from the Pharmaceutical Manufacturers Association.

BPSS was successful, and it quickly grew from 100 statisticians in 1966 to approximately 1,500 in 1979. Not surprisingly, the need for full section status was raised by the mid-1970s, and it involved many of the same culprits we see today in the birth of new sections: an active and large group, an ever-increasing scope of topics, the need for greater influence, the realization that there were potential fellows in BPSS who were not receiving proper consideration, and the

increased frustration over space and visibility at conferences and meetings.

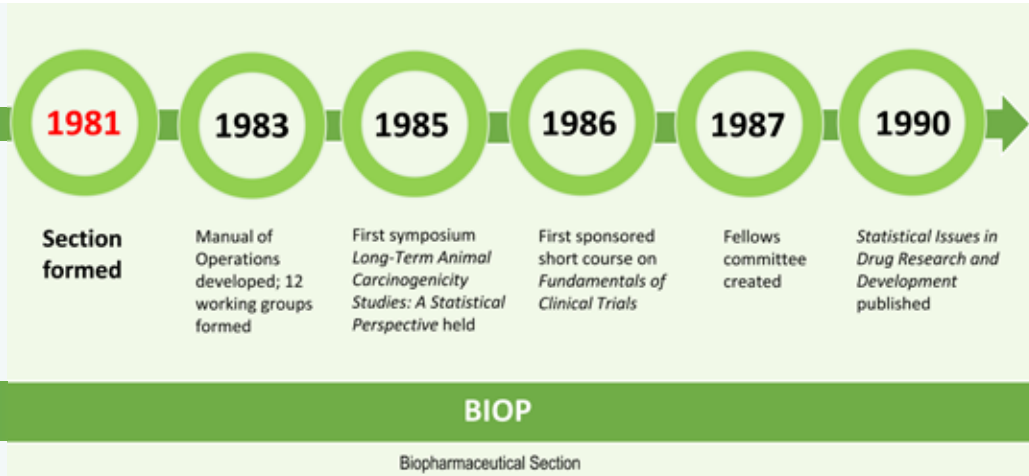
The year-long effort of petitioning the membership of BPSS, the Biometrics Section (generally opposed to the split), and the larger ASA began in 1979. Both sides presented their arguments at the February 1, 1980, board of directors meeting and a subsequent vote was in favor of the new section. A letter dated February 8 from ASA Executive Director Fred Leone to the current chair, past chair, and chair-elect of the Biometrics

edited by Karl E. Peace. The section has a formalized process for forming scientific working groups today.

BIOP held its first symposium in 1985, titled, “Long-Term Animal Carcinogenicity Studies: A Statistical Perspective.” The section would eventually go on to sponsor the annual Regulatory-Industry Statistics Workshop (RISW) and biennial Nonclinical Biostatistics Conference (NCB).

The year 1986 saw the first BIOP-sponsored short course, “Fundamentals in Clinical Trials.”

MORE ONLINE
A list of past chairs from initial committee through the first 10 years of the section can be found at *magazine.amstat.org*.



Section stated the question of full section status would be added to the national ballot in May of 1980.

The new Biopharmaceutical Section would come into existence on January 1, 1980, if 500 ASA members agreed to join. The Biopharmaceutical Section became the eighth section after Biometrics (1938), Statistics and Data Science Education (1948), Business and Economic Statistics (1950), Social Statistics (1953), Physical and Engineering Sciences (1954), Statistical Computing (1972), and Survey Research Methods (1978).

Two notable events occurred early in the first decade (1981–1990). The first edition of *Statistics in the Pharmaceutical Industry*, edited by C. Ralph Buncher and Jia-Yeong Tsay, was published in 1981. Second, a reorganization occurred at FDA to form the Center for Drugs and Biologics. Both events would go a long way toward clarifying the role of the professional statistician in the medical product industry and strengthening the relationships between industry and regulatory statisticians, according to Davis et al.

The first decade also saw the beginnings of many of the activities and policies still around today. For example, the *Manual of Operations*, which details the roles and responsibilities for section officers and committees was developed in 1983; it continues to be updated annually. Further, a series of 12 working groups were formed on various topics specific to the medical product industry. Their work would eventually be published as *Statistical Issues in Drug Research and Development*,

BIOP-sponsored short courses are a regular feature at the Joint Statistical Meetings (JSM), RISW, and NCB today.

In 1987, a fellows committee was created to help support BIOP members interested in achieving this distinction; this committee exists today and recently published an article in *Amstat News* (bit.ly/2Nd7su8).

BIOP celebrated the ASA’s sesquicentennial (150th anniversary) in 1989 and continues to celebrate important ASA milestones today (see bit.ly/3ju8Hkq).

These earlier years were foundational in starting BIOP on a path to offering many of the services and activities members now enjoy.

There are numerous activities in the works for 2021. Panel discussions among past chairs are planned for both JSM in Seattle, Washington, and RISW in Rockville, Maryland. The mixer during the open business meeting at JSM and the mixer at RISW will feature food, fun, and reminiscing. *The Biopharmaceutical Report* (bit.ly/BIOPRep) will feature four quarterly articles highlighting the activities and successes of BIOP over 10-year increments. Finally, be on the lookout for activities and podcasts broadcast through ASA Connect throughout the year. While we are planning for in-person activities, we will adapt as needed due to any lingering safety concerns surrounding COVID-19.

To learn about more recent section history, visit the History page on the BIOP website at bit.ly/3rzEYJF. ■

sectionnews

Survey Research Methods

The Survey Research Methods Section (SRMS) is seeking webinar topics. If you have an idea for a webinar you would like to see offered or one you would like to give, submit it to SRMS Education Officer Daniell Toth at Toth.Daniell@bls.gov. Informal proposals are welcome.

SRMS provides free access to the *JSM Proceedings* for the entire history of the Survey Research Methods Section (1978–2019), as well as the *JSM Proceedings* from the Social Statistics Section (from which our section separated in 1978) from 1958–1977 and all five International Conference on Establishment Surveys (ICES) meetings (1993–2016). Some of these years are prior to the electronic proceedings available through the ASA (2009–today); the section scanned all earlier papers as a service to survey researchers. The 2020 *JSM Proceedings* will be added soon. To access the proceedings page, click on “Proceedings” on the top of the section’s new homepage (bit.ly/3tBAD4k) or proceed directly to bit.ly/39WHdAZ.

SRMS has an active discussion board within the ASA Community pages at community.amstat.org/home. Members receive these posts in their electronic mailboxes, so they are a good way to reach your community. Exploring the rest of the ASA Community pages can also be rewarding.

SRMS is also on Twitter with the handle [@srmsasa](https://twitter.com/srmsasa) (twitter.com/srmsasa). The section now has more than 600 followers. Look for a mid-week tweet 2–3 times per month with upcoming news and events. Follow us and send us your news to share with the SRMS membership and survey researchers everywhere. ■

Statistics in Epidemiology

The Section on Statistics in Epidemiology (SIE) grants annual young investigator awards to new researchers for the best papers in statistics in epidemiology presented at JSM.

Among the Young Investigator Award winners, the Breslow Award further recognizes the top paper.

SIE presents the 2021 Young Investigator Award to the following individuals:

- **Runzhe Wan**, North Carolina State University (Breslow Award Winner)
- **Eric Cohn**, Harvard University
- **Wei Hao**, University of Michigan
- **Raphael Morsomme**, Duke University
- **Lili Wu**, North Carolina State University

An awards ceremony will be held at this year’s JSM in Seattle. The location and time of the ceremony will be announced on the section’s website (community.amstat.org/siel/home) and in the JSM program. ■

Teaching of Statistics in the Health Sciences

The Teaching of Statistics in the Health Sciences Section is accepting nominations for the following three major awards in 2021:

- The **Distinguished Achievement Award** recognizes a section member who has provided outstanding long-term service to TSHS and the ASA. (bit.ly/2NApIgS)
- The **Outstanding Teaching Award** recognizes an outstanding statistics educator and mentor in the health sciences. (bit.ly/3psAEe2)
- The **Young Investigator Award** recognizes a promising “young investigator” for their promise as a statistics educator or in conducting statistics education research in the health sciences. A young investigator is defined as (i) a current graduate student OR (ii) a recent graduate who received their terminal degree no more than

seven years ago and who is in a position with rank below associate professor and does not hold tenure (or equivalent classification). (bit.ly/37mDQBG)

The first two of these awards carry a \$250 cash prize, while the third carries a \$500 cash prize.

The deadline for nominations is May 15. Any inquiries and all award nominations should be submitted to tshs.asa@gmail.com.

Information will also be posted on the section blog at tshsblog.wixsite.com/main. ■

Biometrics

This year’s David P. Byar Early Career Award goes to **Aaron Hudson** from the University of Washington Department of Biostatistics for the paper, “Honest Uncertainty Quantification for Infinite-Dimensional Risk Minimizers via the Restricted Gradient Test.”

Paper award winners for JSM 2021 are the following:

- **Hunyoung Cho** from The University of North Carolina for the paper, “Multi-Stage Optimal Dynamic Treatment Regimes for Survival Outcomes with Dependent Censoring”
- **Chan Park** from the University of Wisconsin-Madison for the paper, “Analysis of Cluster Randomized Trials of Infectious Diseases: Effect Heterogeneity, Noncompliance, and Spillover Effects”
- **Kalins Banerjee** from The Pennsylvania State University for the paper, “An Adaptive and Powerful Multivariate Test for Microbiome Association Analysis via Feature Selection”
- **Arielle Marks-Anglin** from the University of Pennsylvania for the paper, “Surrogate-Assisted Sampling for Cost-Efficient Validation of Electronic Health Record Outcomes” ■

Kentucky

■ The University of Kentucky Markey Cancer Center seeks candidates for a tenure-track faculty position at the level of Assistant Professor with strong background in bioinformatics, such as statistical and computational methods for single cell sequencing, immuno-oncology, circular RNA profiling, microbiome, metabolomics and 'omics integration. For a detailed position description and to apply, please visit the search site <https://ukjobs.uky.edu/postings/307521>. EOE

New York

■ Syracuse University invites applications for the position of Assistant Professor of Sport Management/ Analytics with focus on Machine Learning, Python, and R. (Tenure eligible). Qualifications: An earned doctorate in data science, analytics, statistics, mathematics, economics, finance or a related discipline. Responsibilities: Primary duties include, but are not limited to, undergraduate and potential graduate instruction in the Sport Analytics degree programs. Please apply to www.sujobopps.com Job#075036. AA/EOE.

Pennsylvania

■ The Wharton Department of Statistics at the University of Pennsylvania seeks to hire full-time or part-time lecturers for the 2021–2022 academic year. Excellence in teaching is the primary criteria for the position. Applicants must have outstanding communication skills, along with a degree from an accredited institution; a PhD is preferred. Please visit our website to apply: <https://statistics.wharton.upenn.edu/recruiting/lecturerpositions>. Any questions may be sent to stat.lecturer.hire@wharton.upenn.edu. EOE ■

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.

These listings and additional information about the 65-word ads can be found at ww2.amstat.org/ads.

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

Also, look for job ads on the ASA website at <https://jobs.amstat.org/jobseekers>.


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Williams College

The Williams College Department of Mathematics and Statistics invites applications for a **one-year visiting position in statistics**, to begin fall 2021. Candidates should have earned a Ph.D. in statistics, bio-statistics, or a related field by summer, 2021, or be currently in a program to complete the Ph.D. by 2022. We will consider candidates with any area of statistical expertise.

Visiting Assistant Professors are asked to teach four courses per year on our 12-week semester schedule, advise several undergraduate student colloquia (our capstone experience for seniors), and make small contributions to service activities in the department. This set of professional duties provides a window into the experience of being a statistician in a liberal-arts setting.

Our department offers a vibrant undergraduate program with majors in mathematics (including an applied mathematics emphasis) and in statistics. For more information, see <https://math.williams.edu>. The multidisciplinary environment is a rich and collegial setting for student education and faculty research. Williams College provides the opportunity to apply for student research assistant support, a standard, annual allocation of funds to support travel and research, and a shared computer cluster for parallel computation. Visiting Assistant Professors are also eligible to participate in the college's comprehensive First Three professional development program (<https://faculty-networks.williams.edu/networking-opportunities>).

Approximately one hour from the Albany, NY airport, Williams College is located in Williamstown, a thriving destination proximate to three major art museums and access to theater, music, and dance festivals, community supported agriculture farms, a highly-rated public school system, and many other resources.

In accord with the institution's values, our department's faculty embody diversity in many key ways, and we value diversity while continually striving for greater inclusivity. We encourage applications from members of underrepresented groups with respect to gender, race and ethnicity, religion, sexual orientation, disability status, socioeconomic background, and other axes of diversity.

Applications should be submitted via Interfolio at <https://apply.interfolio.com/82160>

Your application should include the following components.

- 1) Please provide a cover letter. This letter might describe your interest in Williams and in the liberal arts, and provide a brief summary of your professional experience and future goals. We ask you to address how your teaching, scholarship, mentorship and/or community service might support Williams's commitment to diversity and inclusion.
- 2) Please provide a current curriculum vitae.
- 3) Please provide a teaching statement that addresses your teaching philosophy, experience, and other reflections or relevant information you would like to share.
- 4) Please have at least three recommenders submit letters of recommendation. If possible, at least one of these letters should comment on your experience as a teaching assistant or on any other instructional capacities in which you have served.

If you have questions about this position, contact search committee chair Richard De Veaux (rdeveaux@williams.edu). Review of applications will begin on or after January 15, 2021 and will continue until the positions are filled. All offers of employment are contingent upon completion of a background check. Further information is available at <https://faculty.williams.edu/prospective-faculty/background-check-policy>.

Williams College is a coeducational liberal arts institution located in the Berkshire Hills of western Massachusetts. The college has built its reputation on outstanding teaching and scholarship and on the academic excellence of its approximately 2,000 students. Please visit the Williams College website (<http://www.williams.edu>). Beyond meeting fully its legal obligations for non-discrimination, Williams College is committed to building a diverse and inclusive community where members from all backgrounds can live, learn, and thrive.

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professional opportunities

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software

JMP Software from SAS	cover 4
SAS Institute	cover 3

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Statisticians, what would you most like to learn that has nothing to do with statistics?

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NEXT MONTH:

Tell us! Statisticians,
what is your theme
song for today?



Philip Hastings • @farharbor_phil

Setting aside the idea that the fabric of the universe is probabilistic: how to tango.

Matt Hayat • @matthew_hayat

I watch my cats relax every day and want to learn how to chill to such an extreme.

Jasmine A. Mack • @Jasamack

I really enjoy learning about astronomy, space is cool.

Scarlett Bellamy • @ScarlettBellamy

Carpentry/furniture making!

Holly Hartman • @holly7holly

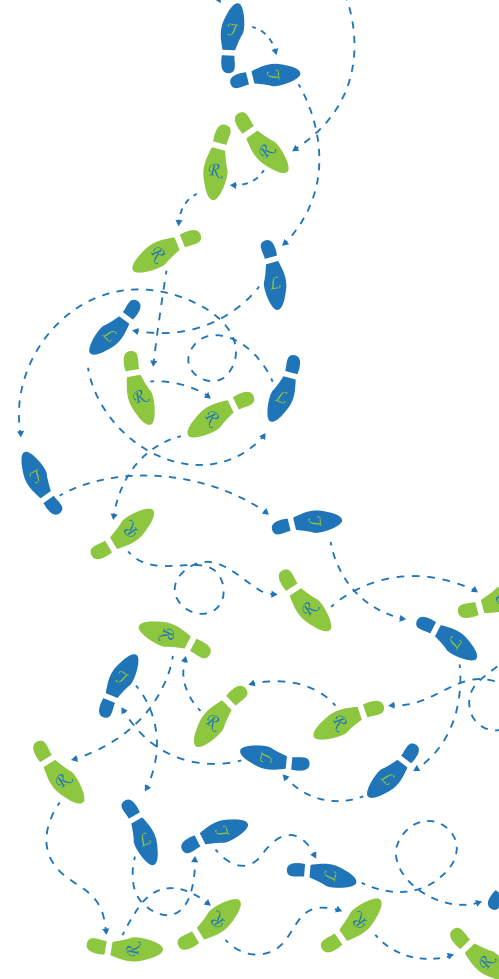
I'd love to learn languages. Chinese and Spanish especially.

Rob Santos • @_Rob_Santos

ok I think that is a trick question! I can't think of learning anything that could not involve or be enhanced by statistics! Rob's axiom: $(X + \text{Statistics}) > X$, where $X = \text{anything}$

Andrew Ekstrom • @AndrewEkstrom2

Learn to play my 10 string guitar and 7 string bass with the skill and creativity of the folks in Opeth, Meshuggah, Devin Townsend, Led Zeppelin, Cream, Dream Theater, etc.



Tricia Carlin Bahnsen

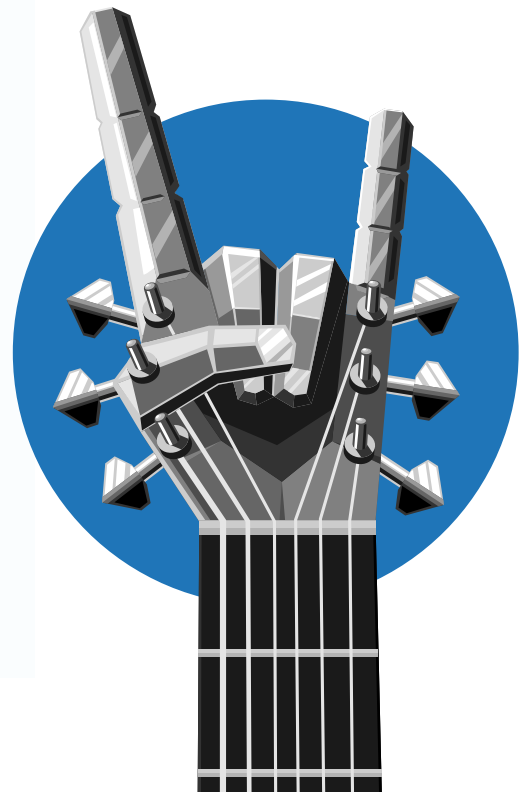
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Nandini Banerjee

Equity and Social Justice

Eric J. Daza

the nature of consciousness





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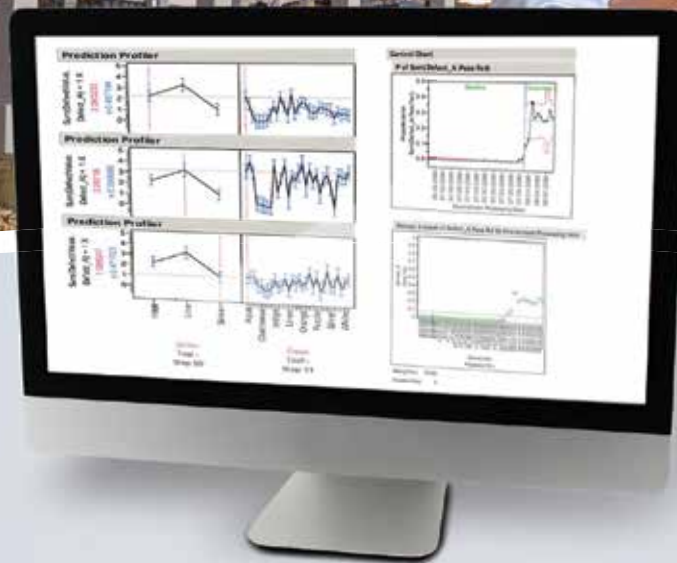
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