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FY23 Budgets, FY24 Budget Request Show STRONG SUPPORT

for Research, Statistical Agencies

ALSO: Harvard Undergrad Awarded ASA/AAAS Mass Media Fellowship

Beyond the Myth of 'Hard to Reach': Considerations for Engaging LGBTQIA+ Communities

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AMSTATNEWS

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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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STAT*tr@k* Following a Student Leader: Getting to Know Lydia Gibson

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.

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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*.



Registration for the ASA Biopharmaceutical Section Regulatory-Industry Statistics

Workshop opens June 15. Each year, the conference lasts three days, with invited sessions co-chaired by statisticians from industry, academia, and the FDA. Short courses on related topics take place the first day of the workshop. Students, don't miss your opportunity to apply for a travel grant. Visit *ww2.amstat.org/meetings/ biop/2023* to learn more and register.

Harvard Data Science Review Celebrates Sir David Cox



The latest issue of the open-access journal *Harvard Data Science*

Review (5.2, Spring 2023) contains a special theme celebrating the life and work of Sir David Cox, "a giant in statistics and in science in general." Edited by Sylvia Richardson and Nanny Wermuth, the special collection of 20 articles consists of personal memories and reflections by Cox's former students and close colleagues. Read the collection at https://hdsr.mitpress.mit.edu/ celebrating-sir-david-cox.

The **ASA Speakers Bureau** is a repository of qualified ASA members who are available to speak to student chapters and K–12 student groups and classes about a variety of statistical topics and career paths.

An ASA goal is to grow the Speakers Bureau, so applications to join are being accepted.

For in-person events, the ASA will reimburse travel and technology set-up costs up to \$500. For reimbursement approval, the event host must evaluate the speaker and the speaker must provide receipts for any expenses incurred.

Visit the ASA website for details: www.amstat.org/asa-speakers-bureau.

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education USPROC Deadline in June USPROC Sees New Round of Winners

Texas Conference Honors Shili Lin



From left: Lakshika Ruberu, Tingfang Wang, Swati Biswas, Shili Lin, Elizabeth Thompson, and Ibrahim Sajal make up four generations of an academic family.

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Statistics and Data Science Hall of Fame

E ach year, many wait with bated breath to learn the names of the Rock and Roll Hall of Fame inductees. The 2023 inductees include the Spinners, Sheryl Crow, George Michael, Willie Nelson, and my high-school classmate Missy Elliott. If you are a music fan, you may have a list of performers you think belong in the Rock and Roll Hall of Fame.

In this month's column, I will share nominees for the Statistics and Data Science Hall of Fame based on recommendations from my colleagues on the ASA Board of Directors. I will take this opportunity to also highlight the work of ASA Board members as they drive discovery and inform decisions.

The work of Vladimir Vapnik, especially the Vapnik-Chervonenkis theory of statistical learning, received many nominations. As artificial intelligence and machine learning have entered the public lexicon, it is important to remember the foundational work that makes these advances possible.

One of the nominators for this contribution is Ruixiao Lu, who serves on the board as treasurer and is vice president and head of biostatistics and statistical programming at Alumis. In addition to her work in outcome research, she is a co-inventor of the patent "Algorithms and Methods for Assessing Late Clinical Endpoints in Prostate Cancer" (WO2018148642A1).

"So far as the laws of mathematics refer to reality, they are not certain. And so far as they are certain, they do not refer to reality." This quote attributed to Albert Einstein appears in a paper by L. Mark Berliner titled "Physical-Statistical Modeling in Geophysics" and serves as a citation for this nomination. The paper describes purely physical models and purely statistical models as the "endpoints of the spectrum of physical-statistical models." The nomination acknowledges the significant impact of embedding the mathematical model of the laws of physics into the statistical model.

The paper's nominator is Kate Calder, who is one of the Council of Sections representatives to the ASA Board. She is also the chair of the department of statistics and data science at The University of Texas at Austin. Her research interests



Dionne Price

"The best thing to do with missing data is to not have any."

are in spatial statistics, Bayesian modeling and computation, and statistical network analysis.

"The best thing to do with missing data is to not have any." This quote attributed to Gertrude Cox begins the Missing Book (https://tmb.njtierney.com), written by Nicholas Tierney and Allison Horst. Methods for handling missing data—missing completely at random, missing at random, and missing not at random—received multiple nominations. On his website (https://sites.google.com/a/umich. edu/rod-little/missing-data), Rod Little provides an overview and highlights relevant research.

Michelle Shardell, who also represents the Council of Sections on the ASA Board, and Jenny Thompson, who is an ASA vice president, nominated this contribution. Shardell is a professor in epidemiology and public health at the University of Maryland School of Medicine. Her interdisciplinary work in biostatistics in aging research includes developing novel statistical methods to handle survival bias and unmeasured confounding in studies of older adults, adapting machine-learning methods in pooled-cohort projects, and treating the use of proxy respondents as a missing-data problem. Thompson is chief of the

statistical methods and sample design staff at the US Census Bureau. Her practical and theoretical experience covers all areas of sample survey design, including sample selection, estimation, variance estimation, analysis, statistical data editing, imputation, and quality control.

I've shared with you in previous columns that I am mission and vision driven. Our ASA vision looks to a world that relies on statistical thinking to inform decisions, so a nomination recognizing the impact of statistical advances on policy must be included in this list. There are many improved methods for causal inference with observational data that are critical for sound policy. The Urban Institute report titled "An Update on the Synthetic Control Method as a Tool to Understand State Policy" (*https://bit.ly/30vvGgq*) provides an example of work in this important area.

This nomination came from ASA President-Elect Bonnie Ghosh-Dastidar, who is head of the statistics group and senior statistician at the RAND Corporation. Her areas of policy are health and social and economic well-being.

My dissertation was about survival analysis. Thus, it may come as no surprise that my nominee is none other than Sir David Cox. His 1972 Journal of the Royal Statistical Society, Series B paper in which he developed the Cox proportional hazards model remains foundational and continues to have a far-reaching impact on medicine, science, and engineering nearly 50 years later. I have witnessed the power of the Cox model to inform decisions in my role as deputy director of the Office of Biostatistics in the Center for Drug Evaluation and Research at the Food and Drug Administration.

The Statistics and Data Science Hall of Fame is dynamic, and this column is only a beginning. I welcome your nominations, as our contributions to science and society are numerous. Our goal is to keep adding to our virtual hall of fame at *https://bit.ly/3BBTtnq*.

Dione Lion

Highlights of the March 31 – April 1, 2023, ASA Board of Directors Meeting

Ron Wasserstein, ASA Executive Director and Board Secretary

n Friday, March 31, ASA President Dionne Price gaveled to order the first 2023 meeting of the ASA Board of Directors. The board met at the ASA office in Alexandria, Virginia, with a few members attending virtually.

The board meeting featured the ASA's first LinkedIn Live event—a conversation with the ASA Board of Directors—Friday afternoon. Other highlights of the board meeting follow.

Actions

- Min-ge Xie, distinguished professor of statistics at Rutgers University, was appointed to a three-year term (2024–2026) as editor of *The American Statistician*.
- The board asked the Committee on Publications to propose a policy on use of generative AI in ASA journals.
- The board approved a fiveyear contract extension for the executive director.
- The board made changes to clarify the ASA Code of Conduct as part of the board's ongoing work to improve diversity, equity, inclusion, belonging, and accessibility (DEIBA).
- Similarly, the board proposed changes to the ASA bylaws. The proposed changes will be published



President Dionne Price gives reports to members of the board during the JSM 2022 Joint Statistical Meetings in Washington, DC.

in *Amstat News* with information about how to comment on them. Action to change the bylaws will take place after review of the comments received.

Reports and Discussions

- Donna LaLonde, ASA associate executive director, provided an overview of ASA DataFest, taking place during late March and throughout April at more than 50 sites. Data for the contest was provided by the American Bar Association.
- Steve Pierson, ASA director of science policy, provided his regular report on the ASA's advocacy efforts. Pierson updated the board on the status of a data science and literacy bill,

science and statistical agency budgets, assessing the health of the federal statistical system, and a variety of other ongoing matters.

- Julia Sharp, chair of the ASA Meetings Task Force, presented a progress report on the task force's work. Recommendations from the task force are expected at the next board meeting.
- Representatives from the College Board outlined changes being considered in the AP Statistics program.
- ASA Past President Kathy Ensor and Council of Sections Representative Kate Calder reported on meetings with National Science Foundation Division of Mathematical

2023 ASA Board of Directors

Dionne Price, President

Bonnie Ghosh-Dastidar, President-Elect

Kathy Ensor, Past President

Matilde Sanchez-Kam, Third-Year Vice President

Nick Horton, Second-Year Vice President

Jenny Thompson, First-Year Vice President

Alexandra Hanlon, Third-Year Council of Chapters Representative

Kendra Schmid, Second-Year Council of Chapters Representative

Melinda Holt, First-Year Council of Chapters Representative

Kate Calder, Third-Year Council of Sections Representative **Michelle Shardell**, Second-Year Council of Sections Representative

Jana Asher, First-Year Council of Sections Representative Ingrid Van Keilegom, International Representative Bin Nan, Publications Representative

Ruixiao Lu, Treasurer

Ron Wasserstein, Executive Director and Board Secretary

Sciences and Computer and Information Science and Engineering staff. The meetings help the ASA and its community maintain connection and communication with these funders.

- ASA Treasurer Ruixiao Lu reported on the ASA's investments, noting that portfolio value dipped at about the market rate of decline. She also updated the board on the activities of the Investments Committee, which meets quarterly to review the portfolio.
- Price reported the progress on her 2023 initiatives to promote the practice and profession of statistics, with foci related to professional development, communication, and education. Activities in all three areas are underway.
- Ensor noted continued progress and follow-up on her 2022 initiatives, including expanding the role of the ASA in data science and AI, developing the Leadership Institute, and highlighting the impact of statistics and statisticians.

- The board heard from its partners in The Nova Collective, who are assisting it in its DEIBA efforts, especially regarding the recommendations of the Antiracism Task Force. A policy document audit and plans for meetings with the ASA community were discussed.
- Lu and fellow ASA Board members Ji-Hyun Lee and Alex Hanlon presented plans for developing collaborations with the American Society of Clinical Oncology and American Association for Cancer Research.
- ASA Vice President Nick Horton and Membership Council Vice Chair Elizabeth Mannshardt presented the annual report of the Membership Council. For each ASA committee within the council, they reviewed the activities from the past year and future plans and brought forward any concerns these entities have. These council reports are a valuable means of keeping the board and committees in contact.
- Melissa Chiu and Brian Harris-Kojetin from the Committee on National Statistics briefed the board on CNSTAT activities and discussed common interests of CNSTAT and the ASA. They suggested further ways the ASA can engage with CNSTAT.

The board will have its next regular meeting August 4–5 in Toronto, Ontario, right before JSM. ■

Harvard Undergrad Awarded ASA/AAAS Mass Media Fellowship

Lucy Tu will spend 10 weeks as a science journalist with *Scientific American* this summer as the ASA's 2023 AAAS Mass Media Fellow. Tu is a junior studying sociology, neuroscience, and the history of science at Harvard University and the first undergraduate to be sponsored by the ASA. She has worked as a freelance health and science writer, with work appearing in *The Guardian*, *New England Journal of Medicine, Smithsonian Magazine*, and *Discover Magazine*.

When a Boston school district eliminated science classes from their K–5 core curriculum, Tu proposed and led a program to showcase physics, biology, and chemistry demonstrations for five schools. In 2019, using her multilingual skills, she also spent two months teaching introductory biology classes to middle-school students in central China's Hubei Province—the epicenter of the original COVID-19 outbreak. In addition to being fluent in Mandarin, she speaks French, Spanish, and Haitian Creole.

Tu returned home to the US as the pandemic was spreading in China and affecting her host family. She said she "stumbled through jargon-laden articles about the then-novel Coronavirus" and observed that absent were "the firsthand stories that were especially precious and pertinent in the face of mass censorship." She wrote:

Science journalism moderates a unique dialogue between science and society, translating convoluted scientific issues to nonspecialists. In this conversation, content and clarity are cherished. But my experiences as a scientist and scared 'nonspecialist' have taught me that emotion-driven narratives can be equally important. As an AAAS Mass Media Fellow, I aim to desterilize science, unfolding scientific complexities while ensuring individual and community narratives are not obscured but rightfully promoted through journalism.

Tu has been a member of the ASA since 2021. Since August 2022, she has also been a teaching fellow in the Harvard statistics department, which entails serving as a teaching assistant for an introductory statistics course with 250 undergraduate students. Upon graduating from Harvard, Tu plans to pursue joint JD and MPH degrees. You can learn more about her by visiting her portfolio at *www.lucytu.com*.



Lucy Tu

Supporting programs like the AAAS Mass Media Fellowship helps the ASA realize its vision of a world that relies on data and statistical thinking to drive discovery and inform decisions. Beginning in 2017, the ASA's sponsorship has allowed the program to expand its efforts to promote statistical capacity in reporting and provide statisticians with more media experience.

Previous fellows include Nick Thieme, Irineo Cabreros, Diana Cai, Jessica Craig, Aparna Nathan, and Jayati Sharma. For more information about the fellowship, visit *https://bit.ly/3ATryPk.* ■

Call for Discussion Papers 2023: Analysis of Citizen Science Data

In the past two decades, citizen science (also called participatory or community-based monitoring) has gained popularity. Motivated by its novelty and the emerging statistical issues it brings forth, the Royal Statistical Society Discussion Paper Meetings Committee, Emerging Applications Section, and Environmental Statistics Section are inviting submissions of discussion papers on the analysis of citizen science data.

Papers selected for publication will be presented at a multi-paper discussion meeting held during the RSS International Conference in Brighton, UK, in September of 2024 and subsequently published in the *Journal of the Royal Statistical Society*. All submitted papers will be refereed, both for their scientific quality and potential to generate discussion.

Authors are invited to send a single-page abstract (400-word maximum) of their proposed paper to Judith Shorten, the RSS journals manager, at *journal@rss.org.uk* by June 30.

Visit the RSS website at *https://bit.ly/3NFO2uX* for submission details.



My ASA Story **Ron Wasserstein,** ASA Executive Director

The ASA presidents inspire me and, through example, teach me about leadership.

y ASA story is a people story. My story began with mentors. I have had dozens, and-at my ripe old age-I am still learning from them. Richard Shermoen, head of the Washburn University Math Department, welcomed me to the university-my undergraduate institution, and, later, my employer for 23 years. The math faculty inspired me. As an undergraduate, Al Riveland invested in me and, along with Gary Schmidt and Larry Blumberg, helped me visualize graduate school as a direction for my life. These people, along with other math department faculty, became my colleagues and friends, giving me encouragement and freedom to grow as a professional and a person.

My dear friend Ann Ukena supported me in countless ways. When I grow up, I want to be like her. Faculty in English, physics, economics, and other departments supported me and broadened my understanding of the world.

I suspect most readers of this column can name people who shaped their professional lives, and, like me, fear that starting a list inevitably means omitting wonderful colleagues. I take this risk because I know those colleagues know I value them.

As an undergraduate in the mid-1970s, I had taken a few courses in statistics. There were few undergraduate programs in statistics, and I had no idea statistics was a field of study. But my mentors encouraged me to visit—and sometimes accompanied me on visits to—various graduate programs.

At Kansas State University, I met Arlin Feverherm, one of the founders of the K-State Department of Statistics. I listened to him tell a story about how researchers used statistics to increase the hardiness and yield of hard red and other varieties of winter wheat. I cared little about wheat and remember little of what he said about it. What stuckwhat I still recall-is the passion he had for explaining the impact of statistics on helping to feed the world. That day I knew I wanted to be a statistician.

Later, I would have the opportunity to work with Jim Hess, Dallas Johnson, and George Milliken, who, among others on the faculty, managed to teach me statistical thinking and theory.

My ASA story began when I started work on my dissertation

with John Boyer. Poor John. By the time I was working in earnest on my research, I had two small children and needed to earn more than a graduate stipend to get by. I often taught extra sections as a K-State graduate teaching assistant and, later, an instructor at Washburn just to snag extra cash, all the while trying to do research and write.

John did not give up on me. He still has not. It was John who guided the beginning of my ASA story, and—more than 40 years later—we remain close friends. He was my favorite person to hang out with at JSM.

John shared his belief that society membership was a professional responsibility, so I joined the ASA. Then, in 1985, he urged me to go to JSM. I did—and I have been to every JSM since.

The next year, as I was finally closing in on the completion of my degree, John said I should start getting involved in the ASA. I had no idea how. He said to look at the JSM program, find an ASA section mixer, and go meet people. That was great advice then and remains true today. I met people in statistical consulting and statistics education, and my work as an ASA volunteer began. Over the next 20 years, during a wonderful career at Washburn University, I became deeply involved in the ASA, serving as president of the Kansas-Western Missouri Chapter, a member of committees, a section officer, chair of the Council of Chapters Governing Board, and a member of the ASA Board of Directors. I expected to work the rest of my career at Washburn and volunteer for the ASA throughout.

In 2007, my ASA story took a surprising and life-changing turn when my predecessor as ASA executive director, Bill Smith, announced his plan to retire. John and former ASA President Bob Mason encouraged me to apply for his job. My wife and I thought hard about this, as a move away from a fantastic job and our family had not been contemplated.

Remarkably, the ASA hired me. Three great mentors—Sallie Keller (who overlapped with me at Kansas State), Mary Ellen Bock, and Bob Rodriguez—welcomed me into this new role in the ASA world. I still look up to those amazing people.

Sixteen years later, my ASA story continues. What a privilege it is to partner with the ASA staff, members of the board of directors, and especially our members—thousands of whom volunteer for chapters, sections and interest groups, outreach groups, committees, publications, and more for the benefit of the association and the profession. Many have become friends. The ASA presidents inspire me and, through example, teach me about leadership.

A special shout-out goes to Donna LaLonde, associate executive director, who has been my collaborator and friend for more than 30 years. We worked together in higher education and now enjoy promoting the practice and profession of statistics.

Yes, my ASA story is a people story. Thank you all for writing it. \blacksquare

Data Analytics Competition a Home Run for Students, Twins Fans



From left: Shae Widmer, Tasha Koehl, Anna Florness, Cameron Nicholson, and Jack O'Connor

inneMUDAC is a large data analytics competition held annually in the upper Midwest. It is a collaboration of the Midwest Undergraduate Data Analytics Competition (MUDAC) and MinneAnalytics, a large nonprofit organization that promotes sharing knowledge and ideas among analytics professionals.

MinneMUDAC coordinates with an industry sponsor each year to provide an analytics problem to be solved. The sponsor this year was the Minnesota Twins, and the event was hosted at their home, Target Field.

Rachel Knox, a junior data science major from Winona State University, said, "I have always enjoyed baseball and have gone to many MN Twins games, so being able to work on a project that was co-sponsored by the Twins was super cool and such an incredible opportunity. When I heard that the project was baseball related, it got me excited to participate in MinneMUDAC."

Chris Malone, one of the co-organizers of this year's competition said, "The MN Twins were wonderful to work with this year. Students were excited to investigate the factors that influence attendance at major league baseball games. Also, you cannot get any better than being able to present your findings to representatives from the MN Twins with home-plate as your backdrop."

MinneMUDAC 2023 included about 50 academic advisers, who advised 225 student participants. About 125 working analytics professionals assisted with judging throughout the day.

Students participated in one of three divisions—novice, undergraduate, and graduate. Malone said, "For the first time, we had a high-school team participate in MinneMUDAC, and this team from Minnetonka High School—took second place in the novice division! I can attest to the fact that the academic advisers were actively trying to recruit these students to attend their college." Participation in MinneMUDAC has continued to grow, and the event now reaches beyond the upper Midwest. Two teams from Boston University and one from Syracuse University flew to the Twin Cities to participate this year. To learn more about the competition, visit *https://minneanalytics.org/minnemudac2023*.

UCLA Researchers Give NSF Funding Advice

To strengthen the connection between the statistical community and National Science Foundation, we continue the series introduced in the May 2023 issue of Amstat News that poses questions to NSF program officers and awardees. If you have questions or comments for the program officers, send them to ASA Director of Science Policy Steve Pierson at pierson@amstat.org.

NSF STATISTICS PROGRAM DIRECTORS

Yulia Gel, Edsel Peña, Yong Zeng, and Jun Zhu collectively responded to the following questions. Zeng, from the University of Missouri-Kansas City, became a permanent program director, and Zhu, from the University of Wisconsin-Madison, became a rotator program director of the Division of Mathematical Sciences in the NSF Directorate for Physical and Mathematical Sciences in 2022. They joined Gel from The University of Texas at Dallas and Peña from the University of South Carolina-Columbia, who are in their second and third years, respectively, as rotator program directors of the statistics program. Zeng served in the Division of Mathematical Sciences from 2015-2018 and 2019-2021.

How do you become an NSF reviewer/panelist?

If you are interested in serving on an NSF statistics panel, send an email to the appropriate program officers in the statistics program and attach your CV or biographical sketch. The statistics program officers keep a database of review volunteers.

Do I need to hold an NSF grant to become a panelist?

You do not need to have an NSF grant to become a panelist. Postdoctoral fellows may also serve on panels. We strive to enhance all aspects of diversity in NSF panels, including diversity of career stages.

NSF AWARDEES

Gang Li, Hua Zhou, and Jin Zhou of the University of California at Los Angeles collaborated to apply for and receive their first funding from the Division of Information and Intelligent Systems in the NSF Directorate for Computer and Information Science and Engineering. Their project focused on linking individual continuous glucose levels and longitudinally measured risk factors to adverse diabetesrelated events.

Gang Li, Hua Zhou, and Jin Zhou have prior experience applying for NSF grants, but this was their first time applying for grants sponsored through the Division of Information and Intelligent Systems.

How will the funding be used?

Our primary collaborator for this grant is Peter Reaven from Phoenix VA Hospital, and our industry partner is Dexcom Inc. The total funding amount is \$1.2 million. Besides principal investigator efforts, computation, and publication costs, the funding will be spent on students and postdocs.

Summarize the goal of what the proposal will accomplish.

Our proposal aims to address the need for scalable methods and software to make use of modern sensor and multi-modal clinical data to link individual continuous glucose levels and longitudinally measured risk factors to adverse diabetes-related events. The proposal aims to develop novel statistical methods, computational algorithms, and userfriendly software that are scalable and adaptable to different data types. The focus is on algorithm development with statistical guarantees to answer scientific and clinical questions. The proposal also emphasizes education and outreach activities to expose a diverse set of students to state-of-the-art data science techniques for smart health.















Jin Zhou

Yulia Gel

Edsel Peña

Yong Zeng

Jun Zhu

Gang Li

Hua Zhou

If an NSF non-DMS entity partially or fully funded the award, can you describe your approach to that entity?

Our grant responds to the NSF request for application "Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH)," sponsored by the Division of Information and Intelligent Systems. We recommend strictly adhering to the guidelines of the call, including incorporating the required evaluation plan and covering all four specific areas with the exact titles requested by Smart and Connected Health.

Our proposal not only emphasizes statistical theory but also showcases the computational aspects of the grant and provides evidence of the practical use of the tools we aim to develop. We clearly state the health care problems our proposal aims to address, and we recognize an interdisciplinary team with strong working relationships is critical for success.

What advice do you have for others applying for NSF funding?

Read the guidelines carefully. Before you start your application, make sure you read the NSF guidelines carefully and understand the requirements and expectations of the program you are applying for.

Be clear and concise. Make sure your proposal is well-organized, easy to follow, and clearly states the significance and potential impact of your research. Use simple language and avoid technical jargon as much as possible.

Highlight broader impacts. The NSF places strong emphasis on the broader impacts of research. Make sure to clearly state the potential broader impacts of your research on society, education, and outreach. Collaborate with colleagues. Consider collaborating with colleagues not only in your field but from other disciplines to strengthen your proposal and demonstrate the broader impact of your research.

Follow up. After submitting your proposal, don't hesitate to follow up with the NSF program officer if you have any questions or concerns. They can provide valuable insights and help you navigate the NSF review process. ■



Writing Workshop to Return to JSM

The National Institute of Statistical Sciences is once again hosting a writing workshop at the Joint Statistical Meetings, which is in Toronto, Canada, this year. The workshop is for junior researchers who want to improve their communication skills.

The event will be hybrid and include virtual lectures and meetings with mentors July 21 and 28 and an optional wrap-up meeting in person on August 6.

Workshop applicants must register by submitting their writing sample using the form at *https://bit.ly/3LQwjye* by June 30. Those whose submissions are accepted will then pay the \$250 registration fee.

Details and submission instructions can be found at https://bit.ly/41g5CJa.

JEDI CORNER Beyond the Myth of 'Hard to Reach': Considerations for Engaging LGBTQIA+ Communities

Yates Coley

The Justice, Equity, Diversity, and Inclusion (JEDI) Outreach Group Corner is a regular component of Amstat News in which statisticians write about and educate our community about JEDI-related matters. If you have an idea or article for the column, email the JEDI Corner manager at jedicorner@datascijedi.org.

Webinar Panel: "Sociocultural and Analytical Considerations for Engaging LGBTQIA+ Communities"



llan H. Meyer



Miles Ott



Nicole Dennis-Benn

MORE ONLINE A recording of this webinar is available to view at *datascijedi*. org/webinars. I is commonly believed that lesbian, gay, bisexual, transgender, queer, intersex, and asexual (LGBTQIA+) populations are "hard to reach" for research participation. Not so, say the three expert presenters for the ASA LGBTQ+ Advocacy Committee's inaugural webinar, "Sociocultural and Analytical Considerations for Engaging LGBTQIA+ Communities."

The cross-disciplinary panel included epidemiologist Ilan H. Meyer, statistician Miles Ott, and writer Nicole Dennis-Benn, who agree research with LGBTQIA+ populations is no more challenging than any other target population. Yet, the myth of being hard to reach persists, discouraging emerging researchers from pursuing work in this area and excusing poor-quality research. Each speaker presented approaches for improving the quality, relevance, and impact of research with LGBTQIA+ populations.

Meyer, distinguished senior scholar for public policy at the UCLA School of Law Williams Institute, described survey designs to advance research with LGBTQIA+ populations. Population-level surveys (e.g., the US Centers for Disease Control and Preventions' Behavioral Risk Factor Surveillance System and the Census Bureau's Pulse studies) are valuable for estimating marginal rates of particular characteristics and identities. Several federal studies now include questions about sexual orientation and gender identity. But even larger population-level surveys rarely have large enough sample sizes to include sufficient LGBTQIA+ people.

Alternatively, investigatorinitiated studies such as Meyer's Generations and TransPop studies (see *www.transpop.org* and *https://bit.ly/3HWRs8O*) extend probability sampling approaches. Researchers for these first used a brief screen to identify LGBTQ+ respondents in the general population and then invited eligible individuals to participate in a comprehensive survey.

Other investigator-initiated studies using nonprobability sampling methods, such as the 2015 US Transgender Survey, have provided data about the LGBTQIA+ community for decades and been a powerful source of information about the experience of LGBTQIA+ people. Such studies may not have a well-defined sampling frame. (There are opportunities for statisticians to contribute to methods development in the design and analysis of these less traditional study designs.) Meyer emphasized there are no bad samples, but sampling approaches should be designed to meet study aims.

Ott, senior data scientist at Tubi, discussed the importance of having LGBTQIA+ research leaders and partners driving evidence creation and policy development. To build toward that goal, Ott's presentation focused on how we can encourage LGBTQIA+ potential statisticians. As an educator, he has incorporated several practices into his teaching to create a supportive environment and demonstrate the meaningful impact students can have as statisticians. His course materials highlight the contributions of statisticians with identities that have been historically under-recognized in statistics curricula, including LGBTQIA+ statisticians. Ott also avoids "othering" and "minoritizing" examples (such as assuming gender is binary) and is intentional about including examples of queer and trans joy, rather than only including negative portrayals of LGBTQIA+ experiences.

Ott and co-authors Alicia Johnson and Mine Dogucu also follow these principles in their textbook, *Bayes Rules!*. Throughout the book, they were thoughtful to cite and highlight the diverse statisticians who contribute to the development and practice of statistics, even encouraging readers to picture themselves as the next generation of Bayesian statisticians. When publishing their book, they also prioritized accessibility—*Bayes Rules!* is available at no cost and is screenreader compatible.

Dennis-Benn, award-winning author of *Patsy* and *Here Comes the Sun*, closed the webinar with a discussion about the powerful role storytelling can play in the practice and study of public health. Her most recent novel, *Patsy*, tells the story of the title character, who emigrated from Brooklyn to Jamaica to escape a motherhood she did not choose and reunite with her childhood girlfriend. It's also a coming-ofage story for her gender nonconforming child, Tru.

Patsy and Tru's journeys bring to life the intersecting dynamics influencing health and health care among LGBTQIA+ folks-Patsy is not only a lesbian but also a Black woman and undocumented immigrant. Each intersecting identity affects her health and well-being. Patsy's story also illustrates the all-too-common challenge of accessing necessary care. In Jamaica, where abortion is illegal, Patsy is forced to give birth against her wishes. As an undocumented immigrant in New York, Patsy struggles to access care for depression in the face of insurance barriers and medical racism.

One notable aspect of the LGBTQIA+ experience highlighted in Patsy is that Patsy doesn't use the labels "lesbian" or "queer" for herself. Similarly, Tru doesn't self-identify as "trans" or "gender nonconforming." Research that relies on these terms may fail to recruit a sample that reflects the diversity of the LGBTQIA+ community. This exemplifies the importance of including a diverse group of LGBTQIA+ community members (including researchers) when planning and conducting a study in this population.

Research Symposium Honors Life of Nozer Singpurwalla

A symposium titled "New Frontiers in Reliability and Risk Analysis: A Tribute to Nozer D. Singpurwalla" will take place at The George Washington University October 13–14. This two-day meeting will commemorate the life and work of Nozer Singpurwalla by bringing together experts from the fields he helped shape.

The symposium will feature the following four plenary speakers who knew Nozer personally and reflect his diverse research interests:

- Jim Berger, Duke University
- Sallie Keller, US Census Bureau
- Way Kuo, City University of Hong Kong
- Jayaram Sethuraman, Florida State University

Former American Statistical Association President Barry Nussbaum—who is also one of Singpurwalla's former doctoral students—will give the keynote address during the symposium banquet.

The meeting will likewise bring together young future researchers and national and international scholars with diverse disciplinary backgrounds to present and discuss current and emerging trends in disciplines such as reliability, risk analysis, Bayesian methods, time series analysis, decision theory, and foundations of statistics. Along with theoretical foundations affecting statistics, computer science, and mathematics, researchers can present applications regarding these topics in business, engineering, environmental studies, finance, and the health sciences.

To learn more about and/or register for the symposium, visit https://statistics.columbian.gwu.edu/ nds2023. Questions and concerns can be emailed to nds.symposium@ gmail.com.

FY23 Budgets, FY24 Budget Request Show STRONG SUPPORT for Research, Statistical Agencies

Steve Pierson, ASA Director of Science Policy

The December deal to fund the US government for the current fiscal year included an increase of 14% for the National Science Foundation and 6% for the National Institutes of Health, along with double-digit percent increases for several statistical agencies. Released in March, the president's requested budget for fiscal year 2024 (FY24) also has favorable increases for the agencies but will face the new Republican majority in the US House of Representatives, where there is a desire to reduce federal government spending to FY22 levels.

Final FY23 Budget

NSF's increase of \$1 billion in FY23 demonstrates strong bipartisan support for its mission and especially its new Directorate for Technology, Innovation, and Partnerships, which expands NSF's work beyond basic research as enacted in the 2022 CHIPS and Science Act. The TIP directorate and many STEM education components of the CHIPS and Science Act present new funding opportunities for members of the statistical community.

The NIH increase of \$3 billion sustains the bipartisan and bicameral commitment to increasing support for biomedical research.

Three federal statistical agencies received double-digit percentage increases: Bureau of Economic Analysis (12%); National Agricultural Statistics Service (11%); and National Center for Science and Engineering Statistics (34%). For BEA, Congress specified \$1.5 million of the \$14 million increase be used for implementing the Outdoor Recreation Jobs and Economic Impact Act of 2016. With the balance, BEA presumably has the latitude to carry out its FY23 initiatives, which includes Evidence Act implementation, developing new data to track American competitiveness in global supply chains, and accelerating improved measures of the US health care sector.

The NASS increase is for its quinquennial Census of Agriculture, commodity surveys, and geospatial program. The NCSES increase is in support of its government-wide evidence-building activities and initiatives, including its implementation of the National Secure Data Service pilot through the expansion of America's DataHub. Congress also encouraged NSF in its report language for the NSF funding bill "to address NCSES staffing to allow the center to build its in-house capacity and expertise to perform its work nimbly, efficiently, and in a costefficient manner."

Except for the marginal increase for the Bureau of Transportation Statistics and 2% cut for Statistics of Income, the other agencies received singledigit percentage increases of at least three percent. The \$7 million for the National Center for Health Statistics is notable for it being the largest increase in more than a dozen years but still leaves the agency having lost 20% in purchasing power since FY10. That percentage is so large in part because of the 4% inflation rate of 2021 over 2020, 7% of 2022 over 2021, and an estimated 5% of 2023 over 2022.

The NCES level is also notable because the \$10 million increase to its statistics line is the largest since 2010 and helps offset its 19% loss in purchasing power since 2010. Referencing the Institute of Education Sciences, the explanatory statement for the Labor, Health and Human Services, Education and **Related Agencies Appropriations** Bill references the 2022 report from the National Academies of Science, Engineering, and Medicine Committee on National Statistics, A Vision and Roadmap for Education Statistics, and especially encourages the Department of Education and IES to provide NCES more professional autonomy:

The Committee is aware IES sought expert assistance in requesting NASEM to "recommend a portfolio of activities and products for NCES, review developments in the acquisition and use of data, consider current and future priorities, and suggest desirable changes," which resulted in the publication of A Vision and Roadmap for Education Statistics. The Committee believes the Secretary, Commissioner and Director of IES should take swift action to support NCES as an independent Federal statistical agency pursuant to recommendations of the NASEM report."

 Table 1—FY20–FY23 Budgets and FY24 Requests for NIH, NSF, AHRQ, and the 13 Principal Federal

 Statistical Agencies

						FY24				
	FY20	FY21	FY22	FY23	% Change from FY22	Request	% Change from FY23			
Research Agency (amounts in millions of dollars)										
NIH	41685	42936	44650	47459	6.3%	51953	9.5%			
NSF	8278	8487	8676	9877	13.8%	11314	14.6%			
AHRQ	338	338	350	374	6.7%	448	19.8%			
NIJ	36	37	30	35	16.7%	63	80.0%			
Statistical Agency (amounts in millions of dollars)										
BEA	108.0	111.9	116.0	130.0	12.1%	154.0	18.5%			
BJS	43.0	45.0	40.0	42.0	5.0%	78.0	85.7%			
BLS	628.0	642.0	659.5	697.5	5.8%	758.4	8.7%			
BTS	26.0	26.0	26.0	26.3	1.0%	26.5	1.0%			
Census	7558.0	1106.6	1354.0	1485.0	9.7%	1606.0	8.1%			
EIA	126.8	126.8	129.1	135.0	4.6%	156.6	16.0%			
ERS	84.8	85.5	87.8	92.6	5.5%	98.5	6.3%			
NASS	180.3	183.9	190.2	211.3	11.1%	241.1	14.1%			
NCES	263.5	276.5	291.5	306.5	5.1%	316.0	3.1%			
-statistics	110.5	111.5	111.5	121.5	9.0%	127.0	4.5%			
NCHS	174.4	175.4	180.4	187.4	3.9%	189.5	1.1%			
NCSES	65.0	66.7	67.7	90.8	34.2%	106.9	17.7%			
ORES	36.0	35.7	39.7	40.9	3.0%	41.0	0.2%			

The amounts here include the percentage increase of the FY23 final over FY22 and the FY24 request over FY23. The NCHS budget was restructured starting in FY21 to account for \$14 million previously routinely received from another account.

Despite the increases for many statistical agencies, most have lost considerable purchasing power, as shown in Figure 1. Four of the 12 agencies shown have kept up with inflation: Bureau of Economic Analysis; National Center for Education Statistics;

National Center for Science and Engineering Statistics; and Social Security Administration's Office of Research, Evaluation, and Statistics. The Bureau of Justice Statistics has lost 20% in purchasing power since 2015, the Bureau of Labor Statistics







Figure 2: The NIJ budget and components, including its congressional appropriated budget and a set-aside based on the Office of Justice Programs programmatic budget and congressional carveouts, all adjusted for inflation to 2012 dollars. Data source: NIJ

has lost 8%, the Economic Research Service has lost 15%, and the Energy Information Administration has lost 10%.

The FY23 budget also marked a major development for federal statistics, namely the inclusion of \$3.9 million for the Office of Immigration Statistics in the Department of Homeland Security to "address an increasing workload and to establish a new Office of Homeland Security Statistics (OHSS) that will operate as an independent statistical unit." The ASA is tracking this development and seeking to ensure the agency has the professional autonomy recommended to facilitate trust in its products.

National Institute of Justice

Under the guidance of the ASA Committee on Forensic Science, the ASA urged Congress in letters written in 2022 and 2023 to increase the budget of the National Institute of Justice, noting, for example, that since "peak funding in FY15 of nearly \$30 million for forensic science research and development, funding fell to \$13 million in FY22."

NIJ receives funding through both a line item in the congressional appropriations process and a congressional 2% research and statistics set-aside, whereby NIJ receives 1% of the programmatic funds provided to the Office of Justice Programs. (The Bureau of Justice Statistics also received 1% through the set-aside). While the set-aside amount climbed to \$26 million in FY23 in addition to the NIJ-appropriated budget of \$35 million, the amount of funds for research, development, and evaluation over which NIJ has discretion to distribute has shrunk 32% since 2018 due to inflation and growth of congressional mandates on NIJ spending.

These NIJ funding dynamics are depicted in Figure 2, in which amounts have been adjusted for inflation to 2012 dollars. The black line is the NIJ-appropriated funding, and the green line is the set-aside funding. The blue line is the total of the appropriated and set-aside funding. The red line is the dollar amount associated with the congressional carve-outs of NIJ's funding, designating specific amounts of support for specific programs (e.g., \$7.5 million in FY23 for research on domestic radicalization.) The orange line subtracts the carve-out funding from the total NIJ research, development, and evaluation funds, yielding NIJ's discretionary research, development, and evaluation budget and illustrating the sharp drop.

While it is common and desired for Congress to express specific research areas they would like funded, it is uncommon for Congress to specify the amount for research agencies. A rationale is that the professional experts of the agency are best positioned to make the difficult decisions of determining how research funding is distributed, employing their expertise and balancing the (sometimes conflicting) desires of Congress, the administration, researchers, and the public. The increase in congressional carveouts impairs NIJ's ability to accomplish its legislated duties.

Some marks have restricted eligibility and dictated the topics of solicitations to favor specific applicants. Other marks directed funding to nonresearch activities (e.g., college-level degree programs). In addition, certain marks directed more funding than was required for specific research activities. In FY22, congressional marks limited the number of solicitations NIJ could release, including the following:

- The intersection of homelessness and the criminal justice system
- Preventing and mitigating the impact of mass shootings
- The impact of prosecutorial discretion on crime
- Victimization experiences of immigrant populations
- White collar crime
- Social science research in forensics

The ASA letter urged Congress to increase the set-aside to a total of 3%—1.5% for NIJ and 1.5% for BJS—and discontinue carve-outs, emphasizing that Congress expressing preferences for research direction is valued and should be continued.

President's FY24 Request

In the president's FY24 budget request, \$4.5 billion (10%) is requested for the National Institutes of Health. Of the increase, \$2.5 billion is to further the budget of the recently established Advanced Research Projects Agency for Health, which was funded for the first time in FY22 at \$1 billion. The administration also seeks a \$500 million increase for the Cancer Moonshot program, funded at \$216 million in FY23. Besides a focus on pandemic preparedness, the other research priorities include nutrition science, the BRAIN initiative, the All of Us program to create large and diverse longitudinal biomedical data sets, and overdose and addiction.

The \$11.3 billion requested for NSF is a 15% increase over its FY23 level. The NSF FY24 documents frame the request around three pillars and four themes. The pillars are the following:

- 1. Strengthening Established NSF, essentially the traditional basic research programs of NSF
- 2. Inspiring Missing Millions, making the science and engineering workforce representative of the US population
- 3. Accelerating Technology and Innovation, supporting the Directorate for Technology, Innovation, and Partnership's mission to advance breakthrough technologies, translate research results to the market and society, and nurture diverse talent by creating opportunities for everyone everywhere

The four themes in the FY24 request that intertwine with the NSF pillars are the following:

- 1. Advance emerging industries for national and economic security
- 2. Build a resilient planet
- 3. Create opportunities everywhere
- 4. Strengthen research infrastructure

The 8% requested increase for the US Census Bureau includes \$160 million for the 2030 Census and \$20 million for an Office of Management and Budget initiative to improve economic statistics, which also has additional funding for the Bureau of

MORE ONLINE

Join the Count on Stats LinkedIn group at www.linkedin.com/ groups/8777968 to network with supporters of the federal statistical agencies, share your observations and perspectives, and receive updates. Economic Analysis. The Census Bureau request also includes \$44 million for Data Ingest and Collection for the Enterprise, a single approach providing "a common information technology platform that is deployed in the secure cloud environment and includes a set of standardized, efficient, and scalable technical solutions for collecting and ingesting the data necessary to produce Census Bureau statistics" for seven common survey data collection and ingest tasks.

The 18% requested increase for the BEA seeks to improve the bureau's coverage of the national economic accounts, better cover the economic activity of the United States with other countries, further illuminate regional economic activity, support development of the National Secure Data Service, and launch the US economicenvironmental accounts.

As part of a White House initiative on equity in criminal justice, the administration seeks to nearly double the budget of the Bureau of Justice Statistics. The funds would be used to stabilize funding for the National Crime Victimization Survey, nearly half of which receives considerable and variable funding each year from other parts of the US Department of Justice. According to the Department of Justice congressional justification for the Office of Justice Programs, the FY24 BJS requested increase also supports "data collection programs for the Death in Custody Reporting Act, maternal health of incarcerated women, arrest and court case outcomes, and cybercrime metrics," as well as implementation of the Evidence Act.

The additional \$30 million requested for the National Agricultural Statistics Service includes \$8 million in support of climate science activities and \$12 million for the Census of Agriculture.

The National Center for Science and Engineering Statistics request would support its leadership roles in support of the Evidence Act, namely the National Secure Data Service and standard application process. The request also asks for funding for four additional employees, which is significant because NCSES is not allowed to use its funding line for hiring employees. Consequently, it has the second highest budget to staff ratio of the 13 principal federal statistical agencies and is heavily reliant on contractors.

To follow FY24 budget developments, visit *https://bit. ly/3A5MLp4* and *https://bit. ly/43KFTe6* and follow @ASA_ SciPol on Twitter. ■



CHANCE Introduces Features, Explores Deming's 14 Points



The highlighted article for this issue is by John Eltinge from the US Census Bureau. Eltinge gave the Deming Lecture, titled "Improving the Quality and Value of Statistical Information: 14 Questions on Management," at the 2018 Joint Statistical Meetings. In his article, he revisits Deming's framework on management and poses questions to show its relevance to modern statistical organizations and data producers.

Also included in this issue is a contribution from Robert Lund, who participated in the 2022 IDEA Forum. Lund and his co-author, Xueheng Shi, discuss changepoint approaches used in climatology. Their article describes innovative methods for detecting them and analyzing relevant data. The authors issue a call to action for statisticians to get involved in addressing problems in climatology.

Robert A. Tumasian III, who later this spring will earn his PhD, explores justice, equity, diversity, and inclusion in his article, "Toward Enhancing Clinical Trial Diversity." Tumasian combines his commitment to JEDI with his professional interest in clinical trials. Like Lund and Shi, he also offers a call for action and provides ways to do so.

In the Book Review section, Christian Robert reviews three books: *Casanova's Lottery* by Stephen Stigler; *Bayes Factors for Forensic Decision Analyses with R* by Silvia Bozza, Franco Taroni, and Alex Biedermann; and *Bayesian Probability for Babies* by Chris Ferrie and Sarah Kaiser.

Howard Wainer also has a book review in his column, Visual Revelations. This is the first in a series of book reviews focusing on a historical figure in data and information visualization. He begins with Florence Nightingale.

For readers interested in education, Amanda Ellis describes how educators can help students connect the material they learn in their coursework with skills they need to be successful in the workforce in the Teaching Statistics in the Health Sciences column.

CHANCE editors Wendy Martinez and Donna LaLonde promised to introduce new columns, and two of them are in this issue. One is the History Chronicles column with coeditors Penny Reynolds and Chaitra Nagaraja, and the second is One Thing About ... by ASA Executive Director Ron Wasserstein. The column editors share their goals for the columns and how readers can contribute.

Finally, Martinez and LaLonde want to provide a way to celebrate colleagues and their impact on the profession by including articles with remembrances from family, friends, and colleagues. The first of these articles appears in this issue with the celebration of Ed Nevius's life. A remembrance of Jerome Sacks will appear in the next issue.

Generative Art Contest

Pixel by Pixel: The Art of CHANCE

Channel your inner artist and create an image that involves some aspect of randomness.

The editors of *CHANCE* magazine are accepting entries of generative art that involves randomness. To enter, provide the image you have created, your code, and any other information (e.g., seed for random generator used) the judges would need to reproduce your image.

Each submission should include a short descriptive essay of the creative process, including which artist served as the inspiration and motivation for the tools used. All submissions must be original art and not created by an Al application.

Judging criteria include the following:

- Level of creativity and originality
- Quality of artistic composition and overall design (color, tone, patterns, shapes, balance)
- Demonstrated computational and artistic skill
- Interpretation of chosen artist's style, based on artwork and essay

*Extra points will be given for writing original code (C++, R, Python, Julia) to generate the artwork.

Awards will be given in the middle- and high-school student, undergraduate student, graduate student, and professional categories.

Submissions are due by August 31 at *https://bit. ly/44HJ72B*. For contest details, visit *https://bitly/42AKiPw*.



Image created by Donna LaLonde using GenerativeR

To suggest article topics, email the editors at *chancemag. editor@gmail.com*. Visit *https://chance.amstat.org* for the latest issue. ■

STAT tr@k Following a Student Leader: Getting to Know Lydia Gibson

Lydia Gibson is a second-year, master's-level graduate student at California State University, East Bay, where she is president and cofounder of their American Statistical Association student chapter. Gibson served as the 2022 co-chair of the ASA JEDI Outreach Group Student and Young Professionals Committee, alongside Robert Tumasian III. In her free time, she enjoys reading, learning about data visualization, attending workshops and other events to deepen her knowledge of the R programming language, and hanging out with her classmates. Here, she answers several questions for us so our readers can get to know her better.

Why statistics?

Although I earned my bachelor's degree in economics, I've always had a love of numbers—calculus being my favorite class by the time I graduated high school. I was introduced to statistics through the science research course I took from 9th to 11th grade and would later take several statistics-related courses throughout my undergraduate studies. Seeing all the interdisciplinary applications for statistics, not only in STEM but even in economics and business, it had always piqued my interest. I entered my current degree program as a career changer, hoping to break into tech, and I figured pursuing an MS statistics degree would be a great first step to get my foot in the door.

What prompted you to co-found the Cal State East Bay ASA Student Chapter?

A couple weeks before my degree program started, I attended the 2021 Joint Statistical Meetings. There, I was able to get a glimpse into the professional world of statistics as I connected with statisticians, biostatisticians, and data scientists from around the world. Seeing how beneficial that experience was for me, I wanted to give those same opportunities to my classmates. In November 2021, with hopes of building a stronger community in our department, six of my colleagues and I began making plans to establish the first ASA student chapter at our school. Our club would become a fully recognized student organization with our school's Student Life and Leadership Program in January 2022.

What Cal State East Bay ASA Student Chapter event or achievement are you most proud of?

It's really hard for me to think of just one achievement, as I've been astonished at how much we were able to accomplish in even our first year alone. At the time of this writing, our student chapter has amassed 100+ members on our club's Discord

columns



In 2022, we hosted four speaker series events, featuring folks from both academia and industry, who spoke to us about their research, ways to become more involved with the larger statistics community, and how to expand our knowledge beyond the classroom. They also provided useful career advice.

Another series of events we've hosted are our Stats Chats, during which we'd have discussions based on episodes of podcasts like the *Harvard Data Science Review, Stats* + *Stories, DataFramed,* and *Build a Career in Data Science.*

If I had to choose just one achievement though, perhaps it'd be helping to bring the first ASA DataFest to our campus.

What skills have you developed by being involved in the ASA?

Prior to co-founding my university's ASA student chapter, I had never been in a leadership role in a school organization, and especially not within a national professional organization. As vice president and now president of my ASA student chapter, I modeled a lot of the organizational structure and processes of my club based on what I'd seen in the ASA JEDI Outreach Group and the Statistical Programmers and Analysts Section. The ASA has also taught me how to better communicate with others, especially in professional environments.

Give us three reasons to be part of the ASA's Student and Young Professionals Committee.

1. Be an agent of change. In collaboration with other JEDI committees, the SYPC is leading the charge in highlighting the inequities in access to conferences for students with marginalized backgrounds. As a member of the SYPC, and JEDI as a whole, you'll receive support to shine light on matters of justice, equity, diversity, and inclusion that affect you and others like you. As they say, "Be the change you want to see."

- 2. Meet like-minded students of similar backgrounds. Joining the SYPC gives folks a chance to meet other early-career folks in statistics who share their same marginalized identities and who they may not have otherwise connected with through their network.
- **3.** Share and receive resources and advice. SYPC members use our Slack workspace to share information about job and internship opportunities, relevant events and webinars, and funding sources. It's also a great place to get advice or feedback with regards to your experiences at work or school.

What are a few takeaways from your experience with the JEDI Outreach Group?

There are lots of folks within the ASA and larger statistics community who are not interested in maintaining the status quo and are willing to work to ensure marginalized groups within the statistics community are seen and heard. It's been very empowering to be a member of the JEDI Outreach Group, and I'm proud to have helped be an agent of change within the ASA. I've learned a lot about myself and my ability to be a leader and advocate for others.

What one or two blogs or books would you recommend?

During the fall, I served as a book club facilitator for the ASA Committee on Women in Statistics and led a group of six as we read *The Data Detective* by Tim Harford. It's a great read for students and established professionals, alike, as the author—a trained economist—discusses his "10 easy rules to make sense of statistics." Although it was the second time I'd read the book, I felt like I learned even more by having the opportunity to discuss it with ASA members who are further along in their careers. They had great insights into the topics the book touched upon. ■ STATS4GOOD

COVIDENTIAL CONTRACTOR ON THE CUSP: Data for Good Research Expands as Pandemic Phase Ends



David Corliss is the AVP Technical Expert in Data Science at General Motors OnStar Insurance. He also serves on the steering committee for the Conference on Statistical Practice and is the founder of Peace-Work.

ver the past year, the COVID-19 emergency has gradually moved from a pandemic to an endemic. The virus took many of us by surprise, but the scientific community's response was overwhelming. Almost overnight, analytic teams sprang up to take on reporting COVID's impact, understanding how it progressed, predicting its direction, and mitigating its effects. With the pandemic phase winding down, now is the time to act on what we have learned from this crisis-the Stats4Good top challenge in biostatistics for 2023.

New science is driving opportunities for Data for Good practitioners to assess the ongoing effects of COVID on their area or research. As the public health emergency for COVID expires, the accompanying changes in public policy and practices make this a critical moment. The National Institutes of Health set up a COVID literature hub at *www.ncbi.nlm.nih.gov/research/ coronavirus* to help researchers find papers relevant to their work.

The D4G community has been active in all areas of COVID research. The constantly evolving nature of the virus has made longitudinal studies especially important. Practitioners have also been involved in capturing science developed during the pandemic and applying it to other areas of research.

An important aspect of COVID as a disease came more clearly into focus later in the pandemic. Long COVID, also known as post-COVID conditions, is defined by the US Centers for Disease Control and Prevention as "a wide range of new, returning, or ongoing health problems that people experience after being infected with the virus that causes COVID-19." Even as acute COVID-19 cases decline, long COVID is becoming a public health crisis.

Official recognition of long COVID as a disability under the Americans with Disabilities Act led to medical and legal guidance from the US Department of Health and Human Services, vet it remains an under-studied problem. Research is needed in prevalence, risk factors, clinical indicators, treatment strategies, longitudinal analysis, and more. This is one area in which D4G researchers are needed the most. and there is an abundance of opportunity to make important, meaningful progress.

More than two years ago, encouraging the D4G

Getting Involved

In opportunities this month, JSM is just around the corner. Take time to check out the program at *https://bit. ly/3LVXlo8*—even if you are not able to attend this year—to find the papers and researchers in your area of interest. Next month, Stats4Good will focus on JSM and highlight some of the outstanding papers, sessions, and events in Data for Good.

Community: Informing Dec

Ontario, Canada • August

June also marks the start of the next round of Science and Technology Fellowships from the American Association for the Advancement of Science. You can learn about the program at www.aaas.org/programs/ science-technology-policy-fellowships.

community to respond to vaccine hesitancy, I wrote about the Tuskegee Syphilis Experiment causing so much distrust of vaccines that the "crime against humanity is still killing people today." Data for Good researchers are now able to measure the entire magnitude of the entire range of COVID effects on economics, education, and society. Especially needed are local studies by people across the country on COVID where they live. Andrew Dumont at the Federal Reserve wrote an outstanding summary of local research that points the way for others. You can read his summary at https://bit. ly/42qqHlp.

Data resources for new COVID research include the CDC's COVID Data Tracker at https://bit.ly/3HUZ1x2. However, much of the pandemic response has happened at the local level. This makes data from county-level health departments the true source of most COVID data. Response at the local level has been highly variable, making metaanalysis of county-level data one of the most important methods of statistical research. In this case, the "random" variables-those that vary from place to placeneed to be a primary focus, so they capture what we can learn from this pandemic to prepare for the next one.

All of us have a role to play in the future of this passing crisis. **#DataForGood.** Because you don't have to wait until you die to donate your brain to science.





ASA BIOPHARMACEUTICAL SECTION REGULATORY-INDUSTRY STATISTICS WORKSHOP

September 27-29, 2023

Featuring three days with invited sessions co-chaired by statisticians from industry, academia, and the FDA.

ww2.amstat.org/meetings/biop/2023



WOMEN IN STATISTICS AND DATA SCIENCE

October 25–27, 2023

Highlighting the achievements and career interests of women in statistics and data science. ww2.amstat.org/wsds



CONFERENCE ON STATISTICAL PRACTICE

February 27-29, 2024

Bringing together statistical practitioners and data scientists engaged in the application of statistics to solve real-world problems.

ww2.amstat.org/csp

www.amstat.org/meetings

USPROC Sees New Round of Winners

USCLAP Introductory Statistics Competition

1st Place: Yijia Sun for "State-Level Abortion Restrictions and Its Association with Abortion Rates and Cross-State Movement in the United States, 2017–2019" Faculty Sponsor: Marcela Alfaro Córdoba

Faculty Sponsor: Marcela Alfaro Córdoba

2nd Place: Drake Gorecki and, Benjamin Zhao for "Examining Feature Rank and Dependency in the Q-Chat-10 ASD Questionnaire" Faculty Sponsor: Tural Sadigov

3rd Place: James Mancini, Matthew Dolan, and Jack O'Sullivan for "Predicting Academic Performance of High-School Students" Faculty Sponsor: Victoria Woodard

Honorable Mention: Aino Boley, Ruben Escobar, Mina Linsenmayer, and Michelle Dong for "Do Black Students Have a Significantly Higher Graduation Rate at HBCUs as Opposed to Other Colleges/Universities?" Faculty Sponsor: James Normington

Honorable Mention: Hoang Nguyen Le, Evan Lee, Will Chen, and Ashley Kim for "Multivariate Logistic Regression for the Prediction of Coronary Heart Disease" Faculty Sponsor: Xizhen Cai

USCLAP Intermediate Statistics Competition

1st Place: Zachary Swayne and Nathan Rethwisch for "Analysis of Vehicular Crashes in Iowa" Faculty Sponsor: Heike Hofmann

2nd Place: Anh Vu, Quang Le, and Duy Nguyen for "Identification of Effective Biomarkers in Predicting the Survival of Patients with Severe Sepsis and Septic Shock" Faculty Sponsor: Ryan Miller

3rd Place: Jinglin Xiong and Maya Gardner for "Predicting Forest Fires in Portugal and Northern Algeria" Faculty Sponsor: Shonda Kuiper

Honorable Mention: Sam Magid, Payton Ahola, Spencer Huang, and Divij Jain for "Is There an Association Between Sleep and Memory?" Faculty Sponsor: Xizhen Cai

USRESP Competition

1st Place: Irene Foster, Sunshine Schneider, Caitlin Timmons, and Katelyn Diaz for "Storm Chasers: Synthesizing New England Weather Data on a Dashboard for Emergency Response Workers" Faculty Sponsor: Albert Kim

2nd Place: Masahiro Nishikawa for "Performance of LDA and QDA on Non-Normally Distributed Predictors" Faculty Sponsor: Amy Wagaman

3rd Place: Che Hoon Jeong for "Investigation of NCAA Basketball's Three-Point Strategy Using Logistic Mixed-Effects Regression Model" Faculty Sponsor: Sarah Supp

Honorable Mention: Nolan Alexander and Izabella Rivera for "Bayesian Data Synthesis for Protecting Sensitive Salary Data Information"

Faculty Sponsor: Monika Hu

View all the winning projects at *https://bit.ly/3pjO5Cr* and *https://bit.ly/3nY22Wl*.

USPROC Deadline in June

The deadline for Undergraduate Statistics Project Competition projects completed in winter/spring 2023 courses and year-long projects is June 23. USPROC encourages students to develop data analysis skills and enhance presentation skills. It is also a way to recognize outstanding work by undergraduate statistics students.

The submission categories are the following:

Undergraduate Statistics Class Project Competition (USCLAP)

This competition is for undergraduate students who are taking a statistics/data science course at the introductory or intermediate level in which a class project is part of the course work (either required or optional). Project submissions are a short report/paper (up to three pages). When submitting, a project needs to be entered with one of the following two levels:

- Introductory Level: A data-focused project that was completed as part of their first course in statistics or data science (with no statistics or data science prerequisite course), with or without a calculus prerequisite.
- Intermediate Level: A data-focused project that was completed as part of a second (or third) course in applied statistics OR as part of a Datafest competition.

For details, visit *https://bit.ly/3HYyyhU*.

Undergraduate Statistics Research Project Competition (USRESP)

This competition is for undergraduate students who conduct research projects related to statistics or data science, either methodological or applied. The types of research projects may include research work from summer Research Experiences for Undergraduates projects, senior-level research projects (part of coursework), or independent research projects (e.g., honors, capstone) not based on a specific course. Project submissions are a paper (up to 20 pages).

For details, visit *https://bit.ly/3O2qUXF*.

Winners will be announced in 2–3 months, and cash prizes will be awarded in all three categories.

For more information, visit *causeweb.org/ usproc* or email a USPROC committee member: Jennifer Ward at *jsward@clark.edu*; Maria Tackett at *maria.tackett@duke.edu*, or Juanjuan Fan at *jjfan@sdsu.edu*. ■

people news



Hubbard

Rebecca Hubbard—pro-

fessor and vice chair for faculty professional development in the department of biostatistics, epidemiology, and informatics at the University of Pennsylvania—is the winner of the 2023 Gertrude M. Cox Award. The award recognizes an early- to mid-career statistician who has made significant contributions to one or more of the areas of applied statistics in which Cox worked.

Hubbard's research addresses real-world data quality issues such as informative observation patterns, missing data, and measurement error. Her work has been applied to studies in the oncology, neurology, and cardiology fields, and she is a fellow of the American Statistical Association and statistical editor for the *New England Journal of Medicine*. She has published more than 150 peer-reviewed papers.

As part of the award, Hubbard will give a presentation at the Washington Statistical Society annual dinner June 21 at RTI International.

The Gertrude M. Cox Award is jointly sponsored by RTI International and the Washington Statistical Society. For more information about the award, visit *https:// washstat.org/awards/#Cox.* ■

Lance A. Waller, professor and former chair in the Emory University Rollins School of Public Health Department of Biostatistics and Bioinformatics, presented the 2023 Donna J. Brogan Lecture in Biostatistics on April 20.

A Fellow of the ASA, Waller's research involves the development of statistical methods for geographic data, including applications in environmental justice, epidemiology, disease surveillance, and disease ecology.



Waller

Waller's talk was titled, "Maps: A Statistical View." In his presentation, he explored how geography influences inference in spatial statistical analyses. Using historical and contemporary examples, Waller illustrated how maps provide a critical context for data visualization and interpretation, ranging from the known ("you are here") to the unknown ("here be dragons").

This lecture honors Donna J. Brogan, a former faculty member of Emory University and chair of the Rollins School of Public Health Department of Biostatistics.

For details about Brogan and the lecture series, visit *https://bit.ly/3LWkTck.* ■

ASA members **D. Anthony Miles** and **Denise**

Cornish were presented with the Best Research Paper Award at the spring 2023 Academy of Business Research Conference in New Orleans. The winning paper, "The Rise of Stress and Technology at the Workplace: An Empirical Study on Predictive Analytics with Technostress at the Workplace," was chosen for its applied research on technostress. ■ Tune In

PRACTICAL SIGNIFICANCE AMERICAN STATISTICAL ASSOCIATION

ODCASA

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Ron Wasserstein

Donna LaLonde

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Texas Conference Honors Shili Lin

Swati Biswas



From left: Lakshika Ruberu, Tingfang Wang, Swati Biswas, Shili Lin, Elizabeth Thompson, and Ibrahim Sajal make up four generations of an academic family.

The department of mathematical sciences at The University of Texas at Dallas hosted a conference, "Advances in Statistical and Computational Methods for Analysis of Biomedical, Genetic, and Omics Data," March 17–19 in honor of The Ohio State University statistics professor Shili Lin for her research, teaching, and mentoring.

Lin is a highly regarded researcher who has received many honors for her scientific contributions. She is a fellow of the ASA and American Association for the Advancement of Science and an elected member of the International Statistical Institute. She has graduated 21 doctoral students and trained 15 postdoctoral students. In addition to being a prolific researcher, she has served the scientific community by helping to pave the path for junior and future scientists/statisticians—especially for women as a president of the Caucus for Women in Statistics.

The conference featured a variety of talks and poster presentations. Plenary talks included the following:

- Elizabeth Thompson, University of Washington, "As Data Density Increases: From Pedigrees to Populations to Pedigrees"
- Hongyu Zhao, Yale University, "Bayesian Nonparametric Methods for Prediction of Complex Traits Using Summary Statistics Across Populations"
- Denise Scholtens, Northwestern University, "Network Models for Multi-Omics Data"

There were 28 invited talks by speakers from academia, industry, and government covering a wide range of topics. The slides for most talks are available on the conference website at *https://sites.google.com/view/ abgod2023/home?authuser=0*. Students, postdocs, and junior researchers presented forty-two posters, which were split into two sessions on two days to allow for one-to-one interactions between the poster presenters and their audience.

This conference brought together a diverse group of close to 120 participants from academia, industry, and government. Participants included many of Lin's students, postdocs, collaborators, and professional friends. Fifty-five doctoral students, postdocs, and junior researchers won travel awards to participate in the conference.

In addition to the scientific aspects of the conference, there were ample opportunities for networking and social interactions during breakfasts, lunches, and coffee breaks each day, as well as during the reception and banquet. The banquet also featured speeches by Lin, Thompson (Lin's PhD adviser), and Swati Biswas (Lin's former PhD student). The master of ceremonies was Charalampos Papachristou (Lin's former PhD student), and a surprise dessert-a peach bun representing longevity in Chinese culture-made an appearance.

For more information about the conference and pictures, visit *https://sites.google.com/view/ abgod2023/home?authuser=0.* ■



SIAM/ASA Journal on UNCERTAINTY QUANTIFICATION

Mathematical, statistical, algorithmic, and application advances in uncertainty quantification and related fields

Editors-in-Chief





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Context-Aware Surrogate Modeling for Balancing Approximation and Sampling Costs in Multifidelity Importance Sampling and Bayesian Inverse Problems

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Obituaries

John Neter

Mike Kutner, Ron Neter, and David Neter



John Neter passed away December 6, 2022, in Chapel Hill, North Carolina, at age 99.

John is survived by his beloved wife of 71 years, Dorothy; his sons, Ron and David; their wives Mona and Ann; his granddaughters, Jordan, Chloe, and Celia; and his great-grandson, Eli.

Born in Mannheim, Germany, John lost his mother, Marie, at age eight. His father, Julius, had the foresight in 1935 to bring John to the United States to flee Nazi persecution. John's memoir, *My Father's Greatest Gift: Freedom*, refers to this fateful decision.

In Buffalo, New York, John was an active member of the Boy Scouts, where he made lifelong friends. He achieved the rank of Eagle Scout and credits scouting for his love of nature.

During World War II, he served in the Army and was stationed in Italy. It was courtesy of the GI Bill that he was able to go to college. He earned his BS from the University of Buffalo, his MBA from the University of Pennsylvania, and his PhD from Columbia University.

John met the love of his life, Dorothy Rachman, on a blind date arranged by his older brother, Erwin, and her younger sister, Rhoda. From that instant, they were inseparable. John's academic career included faculty positions at Syracuse University and the University of Minnesota and was capped off by the C. Herman and Mary Virginia Terry distinguished professorship at the University of Georgia Terry School of Business in Athens, Georgia, from 1975–1989. In 1990, John was granted emeritus status as the C. Herman and Mary Virginia Terry Professor of Management Sciences and Statistics at the University of Georgia.

Throughout his long career, John's research interests have ranged from statistical sampling of accounting populations and response errors in sample surveys to statistical linear models. He is the co-author of *Applied Linear Statistical Models*, *Applied Linear Regression Models*, *Applied Statistics*, several monographs, and numerous journal articles.

John always thought his professional obligations as a university professor went beyond teaching, research, and service within the university to include service to organizations in the profession. Consequently, he was active in both the American Statistical Association and Decision Sciences Institute, the latter a relatively young organization at the time with members primarily from the business administration field. Each organization required three years of its president, one each as president-elect, president, and past president. Fortunately, John's tours of duty were separated in time, with his presidency of the Decision Sciences Institute occurring from 1978-1980 and his presidency of the ASA from 1984-1986.

During his professional career, John was interested in decisionmaking based on good data. His interest was not only in the statistical methods used to aid decision-making, but also in the relevant data needed for making good decisions, hence his strong interest in sample surveys and formally designed statistical experiments. John was delighted to see in recent years the increasing emphasis on data-driven decision-making and the availability of larger, well-designed experimental studies. He was also pleased that the popular media were paying increased attention to the statistics field and the contributions made by statisticians. As in the days when John was active in the field, he noted statisticians (especially biostatisticians) continued to be challenged to work with other disciplines so the full benefits of statistical methodology could be achieved.

John's analytical business skills played a key role during his ASA leadership years. One important issue John faced was acquiring an ASA office building. This was a major effort, involving site acquisition, building plans, fundraising, rental of unneeded space, and financing. The ASA rented office space in downtown Washington for many years, and the organization was quickly outgrowing it. ASA leadership also wanted the office to be located more conveniently for the many members from out of town who attended the numerous meetings held there each year. Management identified a suitable site and building in Alexandria, Virginia, and recommended proceeding with the purchase. John chaired a building acquisition committee, and they examined the feasibility of proceeding. Unfortunately, it was not the right time. However, a few years later, the ASA was able to move forward with their own building at a different site in Alexandria.

A second issue John faced during that time was the need to attract and retain applied statisticians. He considered the ASA's publication policy and annual meeting format to make the ASA more attractive to applied statisticians. Finally, he played a major role in long-range planning, something the ASA had historically not engaged in. John asked Don Marquardt, then president-elect, to undertake the ASA's first long-range planning effort. At that time, the ASA was also concerned with encouraging the teaching of statistics in public schools and promoting greater and better use of statistics and statisticians in the sciences.

John's motivation for textbook writing goes back to the early 1950s, when Bill Wasserman and John were teaching statistics to business students at Syracuse University. None of the available elementary texts included interesting applications from business administration. Therefore, they decided to write their own introductory statistics text for business students that would motivate them to appreciate the usefulness of the statistical methods presented. The result is Fundamental Statistics for Business and Economics, which was published in 1956.

By about 1970, after several editions of the textbook, they decided to prepare a second-level statistics text for business and economics students. In addition to emphasizing applications in business and economics, they also wanted to unify the discussion of analysis of variance, covariance analysis, and regression. In most of the existing second-level texts, these topics were treated as separate subjects, hence students did not understand the common structure underlying these statistical methods. Furthermore, discussion of multiple regression and covariance analysis tended to focus on computational methods. It was apparent to them by 1970 that computers would easily enable statisticians to carry out linear model calculations and an extensive study of hand computation for linear models would not be required. Therefore, their presentation focused on the nature of the linear model and its uses and on diagnostic methods, rather than the hand computations required to invert a matrix.

As they began preparing materials for the second-level text, they realized they could not adequately cover the range of topics intended and include ample illustrations of applications in business and economics without the book becoming much too long. A major reduction in the scope of the secondlevel book was required, which led to linear models becoming the primary focus of the book.

The first edition of Applied Linear Statistical Models appeared in 1974. While preparing a second edition, the publisher, Richard Irwin, decided to also present only the regression material in a separate book that was published as Applied Linear Regression Models in 1983 with the addition of co-author Mike Kutner. The fourth edition of Applied Linear Regression Models was published in 2004, and the fifth edition of Applied Linear Statistical Models was published in 2005. Both McGraw-Hill/ Irwin textbooks are co-authored by Mike Kutner and Chris Nachtsheim, for whom John was a mentor.

Academia.edu reports that 16,718 universities have adopted these textbooks, including the University of Oxford, University of California, Berkeley, MIT, and Harvard University. Furthermore, the fifth edition of *Applied Linear Statistical Models* has been translated into Chinese, and soft cover versions are available outside the US and Canada.

John served in many capacities prior to his election as ASA president. His served in 1958 as president of the Twin Cities Chapter. And in 1962, when the National Statistical Meetings were held in Minneapolis, John chaired the local arrangements committee. In 1965, he was elected an ASA Fellow. In 1966, he headed the program committee for the National Statistical Meetings. He also served on several committees and two terms on the ASA Council. He was elected to the ASA Board of Directors for two terms, from 1974-1980, and he served as editor of The American Statistician from 1976–1980.

In addition to his academic career, John had many passions: photography; hiking; nature; classical music; symphony; opera; theater; art; traveling the world with Dorothy; and fine food. He was also devoted to his family near and far.

In 2006, John and Dorothy relocated to the Cedars of Chapel Hill Retirement Community, where they enjoyed retired life and made many close new friends. John was active, serving on many committees, including finance and longrange planning.

John was admired by all who knew him for his wisdom, kindness, and the many contributions to his community. He will be sorely missed.

John wrote several essays during the last few years of his life, including "On Our Understanding of Magnitudes," which you can read at *https://bit. ly/3LxC6IT.*

Obituaries continued

Ralph Folsom Jr.

Ralph Folsom Jr., former chief scientist at RTI International and ASA Fellow, passed away on December 14, 2022, in Raleigh, North Carolina.

Ralph majored in wildlife biology and minored in mathematics at Texas A&M University. He decided to build on his undergraduate statistics course and earned a master's degree in experimental statistics from Iowa State University in 1966. Ralph started his professional career as a research associate and statistical consultant to the department of biostatistics, demography section, at The University of North Carolina at Chapel Hill (1966–1969), where he designed and analyzed sample surveys. He joined RTI in 1969 as a statistician and became a chief scientist in 1998.

While working at RTI, Ralph earned his PhD in biostatistics from UNC in 1984. He served as task leader, project director, and principal investigator for many complex, highprofile projects, developing new statistical methods along the way. He was a past member of the National Academy of Sciences Panel to Evaluate the Survey of Income and Program Participation, the ASA working group to advise Census Bureau staff on the Survey of Income and Program Participation, the Board of Governors for the Panel Survey of Income Dynamics, and the Committee on National Statistics' Panel on Statistical

Methods for Measuring the Group Quarter Population in the American Community Survey.

Ralph's 47-year career at RTI was filled with innovative advancements in survey data analyses. For example, his early work on developing Taylor series standard errors for balanced effects extended to Taylor series estimation of sampling errors for regression coefficients and became a basis for RTI's SUDAAN software products for the analysis of complex survey and other clustered data. In the mid-1990s, he began developing small-area estimation methodologies to enable the Substance Abuse and Mental Health Services Administration to produce reliable and cost-effective state- and local-level estimates in a timely manner. He developed survey-weighted empirical Bayes small-area estimation methodology for unit-level binary outcomes from complex survey data. Subsequently, he developed a full hierarchical Bayes version of survey-weighted empirical Bayes methodology and called it the survey-weighted hierarchical Bayes methodology. Ralph also collaborated with Babu Shah (developer of SUDAAN) to create a highly efficient, state-of-theart survey-weighted hierarchical Bayes small-area estimation software. His innovative work on small-area estimation played a critical role in the expansion of the National Survey on Drug Use and Health in 1999, from a national design to the currently implemented state-stratified design.

In 2015, RTI awarded Ralph the Margaret Knox Excellence Award, recognizing his statistical innovation coupled with his approachable and collegial style, which made him an invaluable contributor to RTI's scientific reputation.

Ralph was preceded in death by his parents and an infant sister. He is survived by his wife, Margaret, of Raleigh. You can read his full obituary and share condolences at *www.thomasfh. com/obituaries/Ralph-Edward-Folsom-Jr?obId=26760085.*

John Wistar Rogers

John Wistar Rogers, longtime ASA member, passed away March 23, 2023.

Rogers, a statistician who worked at Westat for 35 years, was widely recognized for his work in environmental survey measurement error and developing a methodology for correcting the bias that can result. His work helped the Department of Housing and Urban Development better estimate the extent of lead hazards in housing. His work was also featured in many publications and conference presentations.

Rogers was an avid sailor and member of the Sailing Club of Washington, DC, where he was leader of the training and skipper certification committee. In addition to sailing, Rogers had a passion for woodworking, and, over the years, he designed beautiful pieces for his family and friends.

To read more about Roger's life and work, view his full obituary at *https://bit.ly/3I5j8sd.* ■

Nominations Open for Norwood Award

The University of Alabama at Birmingham Department of Biostatistics is accepting nominations for the Janet L. Norwood Award for Outstanding Achievement by a Woman in the Statistical Sciences.

Eligible women are those who have or will do the following:

- Completed their terminal degree
- Made extraordinary contributions and have an outstanding record of leadership and service to the statistical sciences
- Are willing, if selected, to deliver a lecture at the award ceremony

How to Nominate

Send a full curriculum vitae accompanied by a letter of not more than two pages describing the nature of the candidate's contributions. Contributions may be in development and evaluation of statistical methods, teaching statistics, application of statistics, or any other activity that can arguably be said to have advanced the statistical science field. Self-nominations are acceptable.

Electronic nomination submissions are encouraged and should be sent to *norwoodawd@ uab.edu* by July 14. The winner will be announced by August 4, with the lecture taking place September 22.

For more information about the award, visit *https://bit. ly/3puFSeS.*■

Student Travel Grants Available for Biopharm Workshop

The ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop is offering up to \$500 per student, by reimbursement, to support their participation in the 2023 workshop. During the abstract submission process, students should note they would like their poster considered for the student travel grant. To qualify, a student must meet the following requirements:

- Be a full-time student working toward a master's or PhD degree in statistics, biostatistics, or a related field at a college or university
- Be an author who will present an accepted poster at the 2023 workshop

All recipients of the student travel grants must register for the workshop by the advance registration deadline of August 16.

For more information, visit the workshop website at *ww2*. *amstat.org/meetings/biop/2023/ studenttravelgrant.cfm*. ■

Deadlines and Contact Information for Select ASA National Awards, Special Lectureships, and COPSS Awards

AWARD	DEADLINE	QUESTIONS & NOMINATIONS
Links Lecture Award	July 1	awards@amstat.org
Dorothy Marie Lamb and Annette Lila Ryne Memorial Scholarship	July 15	awards@amstat.org
Health Policy Statistics Section Achievement Awards	September 15	www.asahealthpolicy.org/ for-students
Lester R. Curtin Award	October 15	awards@amstat.org
Deming Lecturer Award	October 15	awards@amstat.org
Lingzi Lu Memorial Award	October 15	awards@amstat.org

Detroit, Ann Arbor Chapters Give Annual High-School Fair Awards

Karry Roberts, ASA Detroit Chapter Secretary



Judges, from top left: Xianggui (Harvey) Qu, Karry Roberts, Jennie Jester, Tuba Suzer-Gurtekin, Frank Murdock, Ruth Cassidy, David Corliss, David Doane, Keshav Pokhrel, Hon Yiu (Henry) So, Bern DeBacker, Min Zhang, Alex Verros, and Jun Hu (Andrew Ekstrom not pictured)

embers of the Detroit and Ann Arbor chapters gave ASA professional awards at the Michigan Science and Engineering Fair March 16. This long-standing annual joint chapter event gives section members a chance to recognize high-school students at the state level of the science fair who incorporated statistical methods into their science projects. This year, the fair was held as a hybrid event, and the section members chose to do their judging online to give them more time to review the 73 projects, though they did miss the in-person interaction with the students and each other.

Judges from the Detroit Chapter included Xianggui (Harvey) Qu, Karry Roberts, David Corliss, David Doane, Keshav Pokhrel, Hon Yiu (Henry) So, Bern DeBacker, Alex Verros, Jun Hu, and Andrew Ekstrom. Jennie Jester, Tuba Suzer-Gurtekin, Frank Murdock, Ruth Cassidy, and Min Zhang were judges from the Ann Arbor Chapter.

The chapters gave one \$200 Award of Excellence, six \$50 merit awards, and 16 certificates of recognition. On the following page are the winners and information about their projects and schools.

ASA Professional Awards – Michigan Science & Engineering Fair

Student	Project Title	School	Grade	Teacher						
AWARD OF EXCELLENCE (\$200)										
Andrew Wagner and Olivia Wagner	Hydrogen & Oxygen Production from a Dry Cell to Start a Sustainable Engine	Nouvel Catholic Central, Saginaw	12	Clare Wagner						
MERIT AWARDS (\$50)										
Lauren Blasé and Faith Aloia	The Effect of Knob Spacing on the Rolling Resistance of a Tire	Macomb Mathematics Science Technology Center, Warren	12	Jamie Hilliard						
Zhongsheng Cheng	Deep Learning–Based Denoising of Super-Resolution Images of Protein Aggregates	Cranbrook Kingswood Upper School, Bloomfield Hills	11	Stephanie Kokoszka						
Devarshi Dalal	Use of Artificial Intelligence for Obtaining Optimal Wrist X-Rays	Troy High School, Troy	11	Rebecca Brewer						
Sanjana Duttagupta	User-Friendly Defective Solar Cell Detection Using Artificial Intelligence	Northville High School, Northville	11	Karin Nelson						
Thomas Ignaczak	Filamentous Fungi and Heavy Metal Resistance	Stoney Creek High School, Rochester Hills	11	David Thomson						
Akshaj Sharma	Turbulent Jet Flow to Induce Entrainment for Atmospheric Rocket Flight	International Academy – East Campus, Troy	11	Jackie Toepel						
	CERTIFICATES OF RECOGNITION									
Deshana Betala, Maia Lintner, and Kennedy Smucker	Effects of Various Plant Extracts on the Viability of Prostate Cancer Cells	Kalamazoo Area Math & Science Center, Kalamazoo	12	Rebecca Joyce						
Charlie Chen	Exoplanet Discovery	Detroit Country Day Upper, Beverly Hills	12	Patricia Hanlan						
Akshar Cowlagi	Refining Radiative Transfer Models of Clouds via Analyses of Deep Networks	Huron High School, Ann Arbor	11	Andrew Collins						
Austin Feng	Pattern of IRG1/Acod1 Expression in the Tumor Microenvironment	Cranbrook Kingswood Upper School, Bloomfield Hills	12	Stephanie Kokoszka						
Diya Gehlaut	Effect of Alcohol on Fetal Brain mTOR System	International Academy – East Campus, Troy	12	Jackie Toepel						
Vikram Goddla	Autonomous Navigation of Medical Microbots with Deep Reinforcement Learning	Detroit Country Day Upper, Beverly Hills	11	Patricia Hanlan						
Ashika Gullapalli and Fayyaz Razi	Survey and DNA Barcoding of Invasive Plant Species in Southwest Michigan	Kalamazoo Area Math & Science Center, Kalamazoo	12	Rebecca Joyce						
Miriam Haddad	Plant Probiotics: A New Paradigm for Plant Growth?	Saginaw Arts & Sciences, Saginaw	10	Matthew Miller						
Michelle Hua	3D Simulation and Optimization Algorithms of Transcranial Focused Ultrasound	Cranbrook Kingswood Upper School, Bloomfield Hills	12	Stephanie Kokoszka						
Connor Kalkanis	Innovative Combination Therapy for Treating Brain Tumors	Detroit Country Day Upper, Beverly Hills	11	Lara McMillan						
Mounika Katta	Vaginal Bacteria Associated with Clinical Outcomes of Bacterial Vaginosis	Northville High School, Northville	11	Karin Nelson						
Shubhan Nagarkar	Maximizing Osteogenesis Through Optimization of Biodegradable Polymer Scaffold	Midland HH Dow High School, Midland	12	Diane White						
Samuel Penn and Holden Rembecki	Don't Let the Plastics Dissolve Away	Macomb Mathematics Science Technology Center, Warren	12	Jamie Hilliard						
Prakash Shekhar and Abdolla Hegazy	Developing an Improved Parallel Gibbs Sampling Algorithm for DNA Motif Finding	Kalamazoo Area Math & Science Center, Kalamazoo	11	Rebecca Joyce						
Fuga Takahashi	Machine Learning Prediction of Binding Affinity for In-Silico Drug Discovery	Novi Senior High School, Novi	11	James Didio						
Max Xiao, Om Joshi, and Manav Khosla	SECRNN: Convolutional Recurrent Network for Spatial Audio Event Recognition	International Academy, Bloomfield Hills	10	Kristy Hessler						



June 29, 2023 Regular Registration Closes

June 30 – August 10, 2023 Late Registration

July 6, 2023 Housing Deadline







August 5-10 2023 JOINT STATISTICAL MEETINGS Toronto, ON, Canada ww2.amstat.org/meetings/jsm/2023



Biopharmaceutical

Sourav Santra

Officers of the ASA Biopharmaceutical Section invite section members to join the 2023 Mentoring Program.

Networking can be challenging, but it is beneficial. Meeting others in the profession can help us quickly learn the ropes, improve our careers, and contribute to the statistical profession. Finding a mentor has its challenges and, keeping that in mind, the Biopharmaceutical Section has created a mentoring program based on the mentoring blueprint created by the Committee on Applied Statisticians.

The goal of the program is to help members enrich their professional experience by sharing their knowledge and experience with someone entering the statistics profession. A constructive mentorship relationship can take many forms and occur at any stage of one's career, with benefits for both the mentor and mentee. More than 150 people have participated in the section's mentoring program since its launch in 2014.

The section provides hands-on resources (*https://bit.* ly/42spLfR) for mentors and mentees to facilitate their interactions. Information related to the mentoring activities and additional resources are available on the Biopharmaceutical Section website at http:// community.amstat.org/biop/ aboutus/sub-committees/mentoring. Are you interested in becoming a mentor to a statistician? Are you a potential mentee? Do you know a statistician who may be looking for a mentorship program? If so, email your contact information to (biopharmmentoring@gmail. com) with "Biopharmaceutical Section Mentoring Program" in the subject line. ■

Quality and Productivity

Ana Del Amo, Gerald J. Hahn Q&P Achievement Award Committee Chair

Members of the Gerald J. Hahn Q&P Achievement Award Committee chose Julia O'Neill of Moderna Therapeutics for the 2023 Gerald J. Hahn Q&P Achievement Award.

O'Neill contributed to speeding up global regulatory agencies' early approval of Moderna's COVID vaccine, SPIKEVAX, for release to the world, thereby saving thousands of lives. Her modeling and analysis of stability data determined SPIKEVAX's commercial shelf life, the most critical quality attribute. Additionally, she was the lead author or co-author of reports to regulators that provided stability summaries, justification of specifications, and responses to questions. She was also the key contributor to successful commercial pre-approval inspections, regular audits, and review meetings with regulatory agencies.

O'Neill has published numerous articles in international statistics, quality, and pharmaceutical journals that improved statistical practice. She has presented keynote talks at engineering, statistics, and quality and productivity-related conferences and will give the Q&P plenary address at the Fall Technical Conference October 4–6 in Raleigh, North Carolina.



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

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

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A.T. Still University (ATSU) is seeking a full-time, exempt biostatistician in its Research Support department on its Mesa, Arizona, or Kirksville, Missouri, campus. The biostatistician will assist the senior biostatistician in consulting with researchers to recommend research designs and statistical analysis plans and perform and interpret complex analyses.

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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*.

New York

The Department of Statistics at Rutgers invites applications for a full-time, non-tenure track Teaching Professor for Fall 2023. The position will be academic year with the possibility of renewal. The successful candidate is required to have a PhD in statistics or related field, or mastr's with extensive teaching experiences Applicants should apply at the following site: *https://jobs.rutgers.edu/ postings/198659.* Applicants are encouraged to submit their applications early.

International

Assistant, Associate and Full Professor Positions in the Department of Statistics and Data Science, National University of Singapore. The Department of Statistics and Data Science at the National University of Singapore invites applications for fulltime open-rank positions in statistics, data science and related areas at tenure track and tenured levels. The National

University of Singapore offers internationally competitive salaries, generous research funding, travel support, relocation assistance and other benefits. The Department of Statistics and Data Science has nearly 40 faculty members and provides a stimulating research environment. Applicants must have demonstrated exceptional research potential. For the Associate and Full Professor positions, they must also have a track record of excellence in teaching and leadership. Please submit a cover letter, curriculum vitae, research and teaching statements, and at least three letters of recommendation either to mathjobs.org or to Ms Muslihah at muslihah@nus.edu. *sg*. We have an ongoing recruitment process and will review applications as they are received. More information about the university and the department can be found at *www*. nus.edu.sg and www.stat.nus.edu.sg.

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Top 10 (Squared) Things You Can Do with Data



As is tradition, *Amstat News* continues its hilarious offering by ASA Executive Director Ron Wasserstein, who delivers a special Top 10—one that aired during a recent edition of *Practical Significance*. "As statisticians, we like to do things with data. As I was thinking about this the other day, I realized there are a LOT of things that can be done with data," says Ron. *Practical Significance* strives to help our listeners navigate the statistical world, and we didn't want to skimp. So, this top 10 list is, if you count carefully, the "Top Ten (Squared) Things You Can Do with Data."

10 Download it. Upload it. Spool it. Import it. Dump it. Delete it. Fragment it. Encrypt it. Decrypt it. Give it a key.

09 Network it. Transfer it. Password-protect it. Mask it. Tokenize it. Hack it. Breach it. Leak it. **08** Bus it. Drive it. Put it in a dashboard.



To listen to the Practical Significance podcast, visit https:// magazine.amstat.org/ podcast-2.

07 Explore it. Transform it. Perturb it. Reduce its dimension. Analyze it. Crunch it. Cluster it. Group it. Classify it. Make it longitudinal or make it a time series. Graph it. Visualize it. Chart it. Extrapolate beyond it. Overfit it. Pool it.

> **04** Back it up. Manipulate, wrangle, clean, munge, scrub, check, purge, or deduplicate it.

06 Collect it. Gather it. Harvest it. Silo it. Generate it. Mine it. Process it. Format it. Label it. Name it. Enter it. Log it. Propagate it. Host it. Share it. Curate it. Store it. Archive it. Put it in a warehouse or a hub or a bank or a repository or a vault.

03 Partition it. Slice it. Fuse it. Join it. Harmonize it. Integrate it. Augment it. **05** Normalize it. Virtualize it. Tag it. Put in a glossary. Put it in a dictionary. Make a hierarchy of it. Make it more granular. Or less granular.

02 Govern it. Manage it. Federate it. Map its flow. Migrate it. Mutate it. Bind it. Question its lineage, provenance, quality, fidelity, integrity, or latency and whether it is actionable.



#01 And the number one thing you can do with data:

Argue about whether it is singular or plural.







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