October 2024 • Issue #568

AMSTATNEWS

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

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2024 Highlights to Remember

ALSO:

New Member Spotlight: Apoorva Goyal

Leadership-in-Practice Committee Pilots Improvisation Workshop

DIONNE PRICE
PUBLIC LECTURE SERIES

Honoring the Legacy of Dionne Price and Her Commitment to Public Good

In honor of 2023 ASA President Dionne Price, the ASA established the Dionne Price Public Lecture Series.

Dionne chose the theme "One Community: Informing Decisions and Driving Discovery" for the Joint Statistical Meetings because of her deep commitment to working for the public good.

The ASA launched a $75,000 endowment campaign to fund the lecture series and ensure Dionne's name remains synonymous with promoting the practice and profession of statistics for generations to come.

The Lecture Series Aims to:

- Highlight the impact of statistics and data science on society, the sciences, and the public good
- Inspire future statisticians and data scientists
- Foster interdisciplinary discussion
- Showcase the pivotal contributions of early-career professionals to advances in science and their positive impact on society

Visit *bit.ly/3zBjsOc* or scan the QR code to donate today! Your support will honor Dionne and make this series possible.

Support the Lecture Series

Your support funds annual lectures, travel, venue/livestreaming costs, and lecturer honorariums.

Together, we will inform decisions and drive discovery through the Dionne Price Public Lecture Series.

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

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

features

columns

STAT*tr@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*.

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*.

ANNOUNCEMENTS

Amstat News Has New Publishing Schedule

Beginning in January 2025, we will print *Amstat News* eight times per year but continue to publish it online every month.

The deadline to send in your news items will remain the same. Submit your article by the first of the preceding month you would like your piece published to ensure its appearance in the correct issue (e.g., June 1 for the July issue). For details about how to submit an article, view our submission instructions at *https://magazine.amstat.org/about/submission-instructions*.

MORE ONLINE

Visit *https://magazine.amstat.org* or scan the QR code below to read the following articles:

Explore US Statistical Agencies with *Stats+Stories*

If you're interested in the health of federal statistical agencies or the work of US and international statistical agencies, check out the *Stats+Stories* podcast list included in *Amstat News* online.

Exploring the Future of Real-World Evidence: Insights from Kelly Zou

The 12th IMPACCT Real World Evidence Summit is set to take place October 29–31 in Boston. Industry leaders, researchers, and professionals will gather to explore the latest trends and advances in real-world evidence. In an exclusive interview, IMPACCT featured speaker Kelly H. Zou, who is head of global medical analytics at Viatris, shares her insights on the rapid advances in real-world evidence over the past year, challenges faced by the industry, and the role of AI and data analytics in transforming health care.

ASA GivesBack: Building Connections, Inspiring Impact

At this year's Joint Statistical Meetings in Portland, Oregon, the ASA GivesBack team hosted its third annual GivesBack project, creating meaningful connections between members and their communities. Participants engaged in various activities, including writing letters to older adults with Love For Our Elders and decorating cheerful pages for Color a Smile.

Scan the QR code to visit *Amstat News* online.

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Essential Role of Statistics in the Evolution of Trustworthy AI

Madhumita (Bonnie) Ghosh-Dastidar

I recently read an article in *MIT Sloan Management Review* titled "AI and Statistics: Perfect Together." This title reflects my already firm belief that statistics has an essential role to play in AI development. AI can affect society in a positive way, helping address societal challenges ranging from health and nutrition to equality and inclusion. In our daily work, it can be an effective assistant for tasks such as coding, summarizing, and reviewing literature. It can also help automate (daily) activities subject to human error, such as driving.

In the past year, there have been many exciting developments, especially in generative AI. However, the news has not been uniformly positive. Along the way, there have been negative headlines—for example, the rollout of Microsoft's chatbot with the headline "Dataset Trained Microsoft Chatbot to Spew Racist Tweets." In response, the European Union introduced new regulatory frameworks for AI. They were also needed in the United States, reflected in the White House executive order on the safe, secure, and trustworthy development and use of AI.

AI is nearly always associated with computer science and engineering. However, AI has required substantial statistical input along its entire developmental path, though it depends on massive computational resources. Statisticians have made groundbreaking contributions to both existing and emerging areas (ranging from public polling to automated driving systems). But not everyone recognizes the value added of our discipline or the central role the American Statistical Association plays in sustaining and enhancing our influence.

In fact, statistics and statisticians are essential to the deployment of safe, secure, and trustworthy AI.

ASA Initiatives Emphasizing Our Role in the Evolution of Safe AI

To quote the ASA Committee on Data Science and Artificial Intelligence in the ASA Statement on the Role of Statistics in Data Science and Artificial Intelligence:

> The central dogma of statistical inference—that there is a component of randomness in data—enables researchers to formulate questions in terms of underlying processes, quantify uncertainty in their answers, and separate signal from noise. A statistical framework allows researchers to distinguish between causation and correlation, and thus to identify interventions that will cause changes in outcomes. It also allows them to establish methods for prediction and estimation, to quantify their degree of certainty, and to do it all using algorithms that exhibit predictable and reproducible behavior. In this way, statistical methods aim to focus attention on findings that can be reproduced by other researchers with different data resources. Simply put, statistical methods enhance researchers' abilities to accumulate knowledge.

With that elegant statement setting the tone, I would like to highlight a few initiatives in our community designed to showcase the role of our discipline, brainstorm around problem solving, and build bridges between our field and computer science engineering.

Joint Statistical Meetings

My JSM invited speaker was Jason Matheny, president and chief executive officer of RAND. Before becoming RAND's president, Matheny led White House policy on technology and national security at the National Security Council and Office of Science and Technology Policy. In his JSM speech, "Working at the Intersection of Statistics and AI Policy," Matheny discussed open problems with AI and statistics, focusing on AI's technical issues, AI policy, and how they manifest in real-world consequences. "Statisticians are poised to play critical roles in the design, implementation, and evaluation of AI policy," he said, noting societal impacts (e.g., workforce, economic benefits, security). Matheny also explored how statisticians can support the development of fairness metrics, security measures, and model evaluation.

IDEA Forum

The ASA president and members of the board of directors will host the annual Influencing Discovery Exploration & Action (IDEA) Forum as a virtual event on November 22 from 3:00 – 4:30 p.m. ET. In collaboration with a working group led by Lingzhou Xue of Penn State and Mark Glickman of Harvard University, we have decided to focus on trustworthy AI and related principles. This follows President Joe Biden's lead with the White House executive order. The event will feature presentations from leaders in the field about trustworthy AI and related principles such as fairness and transparency, followed by a moderated Q&A.

Our first panelist is Jeanette Wing, a leading

You Can Make a Difference

As the president of the largest statistical association in North America, I am excited to announce our upcoming membership survey! Your feedback is invaluable in helping us understand your needs and enhance our services.

Look for your invitation in your inbox soon. I kindly ask that you take a few moments to complete the survey. Your insights will guide our initiatives and help us better serve our community.

As a token of our appreciation, we're offering three $150 gift cards through a lottery, with separate categories for students/early-career professionals and other members. Additionally, everyone who completes the survey can download a custom Zoom or Teams background as a thank you.

Thank you for your participation and for being an essential part of our association. Together, we can shape the future of our field!

MORE ONLINE
For a detailed overview of CSAB, scan the QR code.

expert in trustworthy AI. Wing is executive vice president for research and professor of computer science at Columbia University. She thinks the promise of AI is immense, but noting the systems can be brittle and unfair, she says, "For society to reap the benefits of AI systems, society needs to be able to trust them." Wing envisions a future in which we deliver on the promise of the benefits of AI and address scenarios that have life-critical consequences for people and society.

Our second panelist is Arvind Narayanan, a leading expert in fairness and machine learning. Narayanan is an associate professor of computer science at Princeton University, where he studies the societal impact of AI. His new book, *AI Snake Oil*, cuts through AI hype and provides an essential understanding of how AI works and why it often doesn't. His book is based on years of research on limits to prediction, the dangers of predictive decision-making, the reproducibility crisis in machine learning–based science, the limits of large language models, and the risks of social media algorithms.

We are in the process of confirming additional speakers. The IDEA Forum is particularly significant for statistical practitioners. As the integration of AI into various aspects of data analysis and decision-making continues, understanding the principles of trustworthy AI and related principles becomes essential.

CSAB Update

At the August board meeting, I welcomed an update about the ASA role in CSAB from past president Kathy Ensor of Rice University and Dave Hunter of Penn State. My takeaways were that we are showcasing our essential role in data science and strengthening ties to computer science and engineering, which will help facilitate future collaborations.

In April 2021, the ASA became a full member of CSAB, formally known as the Computer Science Accreditation Board, joining the world's two largest professional and technical societies for computing: the Association for Computing Machinery and Institute of Electrical and Electronics Engineers Computer Society. As the lead ABET, formally known as the Accreditation Board for Engineering and Technology, member society for computing, CSAB is responsible for developing accreditation criteria for several programs, including data science. For a more detailed overview, visit *https://bit.ly/3zyoHOT* or click on the QR code.

In their respective roles, Ensor and Hunter have ensured the ASA's collective voice is being heard in existing and new initiatives within CSAB. A few of those merit mention. First, CSAB successfully made the case within ABET that CSAB should lead the development of data science criteria. Also, CSAB's board recognizes statisticians need to be an integral part of formulating these criteria, given the widely acknowledged strong role statistics plays in data science.

Ensor's term on the CSAB Board has ended. Hunter will assume the role of board representative, with Kelly McConville of Bucknell University assuming the role of alternate. This fall, CSAB will formally request that ABET commissions CSAB to be the leading society for AI and machine learning programs. We are grateful for Kathy's leadership and service, as well as to Hunter and McConville for continuing to represent the ASA in this important arena.

I want to thank each of you for your continued support and involvement in our community's initiatives. It's your enthusiasm and commitment that make all these projects possible and meaningful. We have some exciting times ahead, and I can't wait to see how all our initiatives evolve. Remember, your feedback and ideas are always welcome, so don't hesitate to reach out. Let's keep the momentum going. Let's keep making a difference!

M. Ghosh Dastidar

ASA Giving Day 2024:

Empower Tomorrow Through Statistics and Data Science

Amanda Malloy, ASA Director of Development.

The ASA will host its annual Giving Day on November 22. This is an opportunity for the statistics and data science community to unite in support of initiatives that have a profound impact on the future of the field. This year's theme, "Empower Tomorrow Through Statistics and Data Science," emphasizes the critical role of statistics and data science in solving real-world problems, advocating for data literacy, cultivating future leaders, and enhancing K–12 education.

As we look to the future, it's clear statistics and data science will play a pivotal role in addressing the challenges of our time. But we can't do it alone. Your support on ASA Giving Day is essential to fueling the initiatives that will drive this transformation. Here's how your contributions can make an impact:

1. Showcasing the Impact of Statistics

Statistics and data science are at the forefront of solving some of the most pressing challenges in our world today. From public health and environmental sustainability to economics and social justice, the work of statisticians is making a tangible difference. ASA Giving Day is an opportunity to support initiatives that highlight these contributions, ensuring that the power of statistics is recognized and used to drive positive change.

2. Statistical Advocacy and Outreach

In an era in which data drives decision-making, the importance of statistical literacy cannot be overstated. The ASA's advocacy efforts are crucial to promoting the role of statistics in public policy and everyday life. By supporting the ASA on Giving Day, you can help fund initiatives that raise awareness about the critical role statistics play in informed decision-making, thereby ensuring data-driven policies are based on sound statistical principles.

3. Cultivating Future Leaders

The future of statistics depends on nurturing the next generation of leaders. ASA Giving Day provides a platform for members to support scholarships and programs designed to inspire and equip young talent with the skills and knowledge they need to pursue careers in statistics and data science. Your contributions will directly affect the cultivation of future statisticians and data scientists, who will continue to drive innovation and progress.

4. Improving K–12 Education

To truly empower tomorrow, it is essential to begin with today's students. Integrating statistical concepts into K–12 education is a priority for the ASA, and your support can make a significant difference. By funding educational initiatives that provide resources and training for teachers, the ASA aims to inspire young students and lay a strong foundation for statistical literacy from an early age. Your donations will help bring these vital resources to classrooms, sparking curiosity and interest in the field among young learners.

Get Involved

ASA Giving Day 2024 is more than just a day of fundraising; it's a movement to empower tomorrow through statistics and data science. Every donation, no matter the size, contributes to a larger goal of advancing the field and ensuring statistics continue to play a role in solving real-world problems.

Join us on November 22 to make a lasting impact. Together, we can empower the future through the power of statistics and data science. ■

MORE ONLINE
Visit *ww2.amstat.org/givingday* to learn more about the impact donations have, the annual ASA Chapter Challenge, and ways to win prizes.

Highlights from the August ASA Board Meeting

On Friday, August 2, ASA President Bonnie Ghosh-Dastidar called the meeting of the ASA Board of Directors to order. The board met at the Hyatt Regency Portland before the start of JSM. Highlights of the meeting follow.

Actions

- Approved the appointment of Feng Guo of Virginia Tech as the editor of *Statistics and Public Policy* for a three-year term beginning in 2025, with a transition beginning in fall 2024.
- Formally adopted the 2025 ASA budget reviewed in June. The board also revised its budget planning schedule to add an additional review of the next year's budget each October once financials for the first three quarters of the current year are in.
- Approved in principle revisions to the "visibility and impact" and "education" portions of the ASA strategic plan, with final modifications based on board feedback to be approved by members of the executive committee.
- Approved in principle a set of guidelines for data science accreditation by the ASA, with final modifications based on board feedback to be approved by members of the executive committee. Details about this new accreditation program will be made publicly available soon.
- Approved revisions to the ASA's policy for renaming awards.
- Approved in principle a draft statement on ethical principles in AI for practitioners brought forward by the Committee on Data Science and Artificial Intelligence and the Committee on Professional Ethics. The board delegated to the executive committee final approval after the committees proposing the statement have considered the board's feedback and made revisions accordingly.
- Approved renaming the Advisory Committee on Continuing Education to the JSM Continuing Education Committee.
- Approved the creation of a professional development committee to be housed within the leadership institute. The professional development committee will liaise with the JSM Continuing Education Committee, conference program committees, sections, chapters, and committees to ensure the ASA's professional development enterprise can effectively and efficiently meet the current and future needs of the communities served by the ASA.
- Delegated to the executive committee review and approval of changes to the charter of Statistics Without Borders.

2024 Board of Directors

Bonnie Ghosh-Dastidar, President

Ji-Hyun Lee, President-Elect

Nick Horton, Third-Year Vice President

Jenny Thompson, Second-Year Vice President

Susan Paddock, First-Year Vice President

Kendra Schmid, Third-Year Council of Chapters Representative

Melinda Holt, Second-Year Council of Chapters Representative

Tomi Mori, First-Year Council of Chapters Representative

Michelle Shardell, Third-Year Council of Sections Representative

Jana Asher, Second-Year Council of Sections Representative

Jennifer Parker, First-Year Council of Sections Representative

Ingrid Van Keilegom, International Representative

Antje Hoering, Publications Representative

Jean Opsomer, Treasurer

Ron Wasserstein, Executive Director and Board Secretary

Reports and Discussions

- Derek Curtis II, ASA director of finance and administration, updated the board on the status of the ASA's finances as of mid-year. Expenses and revenues are tracking on schedule.

- Curtis presented a draft of the 2023 audit. (The final audit report was received and accepted by the board in late August and appears on Page 17.)
- ASA Treasurer Jean Opsomer updated the board on the status of the ASA investment portfolio, particularly regarding the forecasting Opsomer previously reported. He noted we are in the first year of the 10-year modeling done by the Investment Committee. Opsomer and Curtis noted cash flow is on track with the investment model.
- The presidents updated the board on their strategic initiatives. 2024 President Bonnie Ghosh-Dastidar outlined her focus on AI and data science, community, and mentoring. 2025 President Ji-Hyun Lee's work will center on "building strong bridges," which she hopes to do by fostering opportunities, growing visibility, and diversifying membership.
- Amanda Malloy, ASA director of development, reported on fundraising results for the first half of 2024, noting we are well ahead of last year at this time. She updated the board on the ASA Partner Program and activities of the Development Committee. She said the "honor a colleague" program is underway. Malloy and Donna LaLonde, ASA associate executive director, announced the fundraising plans for the Dionne Price Lecture series.
- The board reviewed input provided by several committees to a request from the Bureau of Labor Statistics. The bureau is updating its Standard Occupational Classifications of "statistician" and "data scientist." The ASA will submit comments to the bureau.
- ASA Director of Science Policy Steve Pierson updated the board on the follow-up to the report on the status of the federal statistics data infrastructure and plans for the second report. He also noted the Data Science and Literacy Act is still making progress toward a bipartisan introduction of the bill.
- ASA Executive Director Ron Wasserstein updated the board on the rollout of a policy on section-hosted conferences and noted the policy is a strategy for increasing the number and effectiveness of section-hosted conferences while mitigating risks.
- Kendra Schmid, third-year Council of Chapters representative, reported on the activities of the Council of Chapters since the April board meeting and noted planned activities during JSM. She emphasized the importance of better connecting student chapters to the ASA's geographic chapters.
- Michelle Shardell, third-year Council of Sections representative, reported on the activities of the Council of Sections since the April board meeting and noted planned activities during JSM. She expressed the need to review the allocation of JSM invited sessions to chapters.
- Ghosh-Dastidar and Lee updated the board on the status of their strategic initiatives. Ghosh-Dastidar reviewed the ongoing initiatives in mentoring for both early and mid-career statisticians and data scientists, a planned webinar series on demystifying AI, and the New Member Meetup, planned for September. Lee is advancing initiatives on enhancing visibility of statisticians, increasing opportunity, diversifying and growing membership, and thriving in the AI era.
- Sarah Cumbers, CEO of the Royal Statistical Society, updated the board on the society's activities, including the rollout of its new strategic plan. Cumbers participated in the entire board meeting, bringing valuable perspective to the board on numerous matters.
- LaLonde updated the board on the suite of activities the ASA engages in to support K–12 education.
- LaLonde updated the board on the status of the survey of ASA membership, noting plans to roll it out in early fall.
- Kathy Ensor and Dave Hunter, the ASA's representatives to CSAB, updated the board on that organization's activities. CSAB is the arm of ABET that, among other things, accredits undergraduate data science programs.
- David Goldberg, director of the National Alliances for Doctoral Studies in the Mathematical Sciences (the "National Math Sciences Alliance") updated the board on the alliance's activities, emphasizing the importance of the ASA's support.
- David Matteson, director of the National Institute of Statistical Sciences, updated the board on the institute's activities. Regular reports on NISS are important because the ASA is one of the founding partners of the organization and has been actively engaged in it.

The board will have its final meeting of 2024 November 22–23 at the ASA headquarters in Alexandria, Virginia. ■

OCTOBER TIME SERIES

This Month in Statistics History

Penny S. Reynolds, University of Florida College of Medicine

MORE ONLINE
Download the resources PDF from *https://bit.ly/3MKe2DJ.*

Oct. 1, 1912

Dame Kathleen Ollerenshaw is born. She is first female president of Manchester Statistical Society 1981–83 (member for 70 years, 1944–2014); Institute of Mathematics and Applications president 1978–1979. Although best known as a mathematician, she used statistics to influence government policy on social issues, actively promoting improved school standards and girls' education.

Oct. 2, 1938

Donald E. Preece is born. He becomes a fellow of the Royal Statistical Society in 1963. A champion of experimental design (he famously constructed a double Youden rectangle from playing cards) and statistics education, he often complained about the emphasis on mathematically-oriented teaching at the expense of practicalities of study planning, design, data collection, and data cleaning.

Oct. 8, 1924

John A. Nelder is born. He became a fellow of the Royal Statistical Society in 1976, won the Guy Silver Medal in 1977, and Guy Gold Medal in 2005. Made major contributions to design of experiments, especially block designs. Head of statistics at Rothamsted 1968–84. Codeveloper with Peter McCullagh of generalized linear models, for which they received the inaugural Karl Pearson Prize.

Oct. 8, 1561

Edward Wright baptized. First proposed use of the median (1599) as a measure of central tendency, a 1616 translation from Latin into English of John Napier's pioneering work on logarithms and even an essay on variance estimation for navigational application. He also is the first and only fellow of Caius College Cambridge to be granted sabbatical leave to be a pirate.

Oct. 9, 1924

Maurice Quenouille is born. Became a fellow of the Royal Statistical Society in 1945, Institute of Mathematical Statistics in 1952, and Indian Statistical Institute in 1964. Best known for the method of jackknife resampling 1956—John Tukey gave it the cool name in 1958. He also made major contributions to experimental design and time series analysis.

Oct. 10, 1919

William Kruskal is born. Became an ASA Fellow in 1958, was 77th ASA President in 1982. Best known for the 1952 Kruskal-Wallis one-way ANOVA rank test (with W.A. Wallis) and, in 1954, a landmark series of papers with Leo Goodman on measures of association for cross-classifications.

William Kruskal

Oct. 12, 1917

Mavis Carroll is born. Became am ASA Fellow in 1971. Pioneered industrial application of statistics at General Foods, being one of a tiny minority of statisticians revolutionizing design of experiments and application of quality and process improvement methods. She was also a card shark and code-breaker during WWII.

W. Edwards Deming

Oct. 14, 1900

W. Edwards Deming was born. He became an ASA Fellow in 1942. He revolutionized business and postwar industry through his pioneering methods for statistical process control and quality management. He also developed sampling methods first used during the 1940 US Census and collaborated with Lineweaver and Burk in the development of their eponymous double-reciprocal plot.

Oct. 16, 1893

Karl Pearson publishes his paper introducing the method of moments as a means of curve fitting to asymmetrical distributions as a general method for determining parameter values of a frequency distribution. In Oct. 1906, he also introduced the terms leptokurtic, platykurtic, and mesokurtic to describe shapes

of frequency distributions. (He had proposed the blanket term "kurtosis" in June 1905).

Oct. 17, 1884

Charles Sanders Peirce and **Joseph Jastrow** publish the first randomized and blinded trial in experimental psychology. Random sequence allocation was performed by shuffling ordinary playing cards, blinding by conducting experiments in pairs with allocation concealed from one partner.

Oct. 18, 1919

George E.P. Box was born. He became an ASA Fellow in 1955, was the 73rd ASA president in 1978, won the Guy Silver Medal in 1964, and won the Guy Gold Medal in 1993. He was known for his quote, "All models are wrong but some are useful." He made major contributions to experimental design, quality control, time series analysis, and Bayesian inference.

Oct. 20, 1881

George W. Snedecor was born. He became an ASA Fellow in 1939 and became the 43rd ASA president in 1948. He founded the department of statistics at Iowa State University, possibly the first in the USA to use digital computers for statistical computations. He made major contributions to analysis of variance and covariance and developed the distribution of the ratio of two variances as a test of treatment differences, naming it the F-statistic in honor of **R.A. Fisher**. However, **P.C. Mahalanobis** had already tabulated it in 1932.

Oct. 24, 1899

Dorothy Swaine Thomas was born. She became an ASA Fellow in 1942. She was the 42nd president (and first woman president) of the American Sociological Association. She promoted statistically-based methodology for sociological data collection and interpretation.

Oct. 26, 1907

Margaret Jarman Hagood was born. She became an ASA Fellow in 1949 and was ASA director from 1953–55. She was president of the Population Association of America (1955) and Rural Sociological Society (1956, first female president). Her 1941 book, *Statistics for Sociologists*, was a landmark in the promotion of rigorous quantitative statistical methods for the social sciences.

Oct. 26, 1925

I. Richard Savage was born. He became an ASA Fellow in 1961 and was the 79th president in 1984. Editor of *Journal of the American Statistical Association* and *Annals of Statistics*. Brother of **Leonard "Jimmie" Savage**. World-renowned for applications of statistics to public policy, including AIDS spread, DNA fingerprinting, and human rights.

Oct. 27, 1678

Pierre Remond de Montmort was born. Best known for his book on probability, *Essay d'analyse sur les jeux de hazard* (1708, 1713). He gave solutions for probability problems presented by **Christiaan Huygens** in *De Ratiociniis in Ludo Aleae*. He also famously quarreled with **Abraham de Moivre**, who wrote rude remarks about him in *De Mensura Sortis* (1711).

Oct. 28, 1908

Margaret Gurney was born. She became an ASA fellow in 1968. Best known for work at the US Census Bureau on sample surveys and nonsampling error. Early programmer of the UNIVAC computer. Awarded Department of Commerce Silver Medal for work as an international statistical consultant and trainer.

Oct. 28, 1912

Sir Richard Doll was born. Best known for work with **Austin Bradford Hill** demonstrating the relationship of smoking and lung cancer.

Oct. 28, 1804

Pierre François Verhulst was born. Best known for development of the logistic function as a model for population growth 1838–1847, later rediscovered by Pearl and Reed (1920) and Yule (1925), who revived the name "logistic." Probably a bit biased by having developed the concept of the Average Man, **Adolph Quetelet** thought Verhulst's early death was because he was too tall, but it was more likely due to tuberculosis.

Oct. 30, 1933

Jerzy Neyman

Jerzy Neyman (ASA Fellow 1942) and **Egon Pearson** read a paper to Royal Society and first use the terms "Type I error" and "Type II error." It took time to find the right phrasing; in 1928, they called them "first and second source of error," then in February 1933, "errors of first and second kind."

Oct. 30, 1912

Jerome Cornfield was born. He became an ASA Fellow in 1951 and was the 69th ASA president in 1974. Major contributions to likelihood, Bayesian inference, multiple logistic regression, and clinical trial design. Although (or because) he smoked cigars, he played a major role in establishing the causal link between smoking and lung cancer.

Oct. 31, 1902

Abraham Wald was born. He became an ASA Fellow in 1945. Best known for his WWII work on aircraft survivability and survival bias, but also made major contributions to sequential analysis, estimation, and hypothesis testing. ■

JEDI CORNER

Making Data Visualizations Accessible

Shiya Cao, Founder of the Disability Inclusion Analytics Lab at Smith College

Shiya Cao is a MassMutual assistant professor in statistical and data sciences. Her research centers on disability inclusion and broader social inclusion topics using quantitative, qualitative, and design science methods. She is eager to help the statistics community pay attention to human, social, and emotional elements of data science.

People who are blind and visually impaired represent a substantial segment of the population, with 4% of 54,204 students in the 2022 American College Health Association survey reporting they are blind or have low vision. Those students frequently do not have access to data visualizations taught and used in postsecondary statistics and data science classes. Making data visualizations accessible to blind and visually impaired people would help improve equity in higher education and assist them with data-driven reasoning and communication.

The Guidelines for Assessment and Instruction in Statistics Education (GAISE) College Report lists creating and interpreting graphical displays as one of the nine central goals for introductory statistics. As statistics and data science educators, researchers, or practitioners, we should practice how to design accessible data visualizations and use them in a way that is inclusive of the blind and visually impaired community. Following are steps to achieve this goal.

Provide a Textual/Audio Description of the Graphic

According to the ACM Digital Library article "Visual Cues for Data Analysis Features Amplify Challenges for Blind Spreadsheet Users" by Minoli Perera and coauthors, a key question is how to present visualizations nonvisually. Providing a textual/audio description of the graphic is a common practice and has been well studied.

The best practice is to provide an alt text description for the graphic so blind and visually impaired students can use screen readers to comprehend the textual information and thus the graphic. However, alt text descriptions are often not informative or expressive. Creating a description that is concise and emphasizes the story using visual metaphors is key. Then, if needed, authors can point to longer descriptions of the graphic elsewhere.

For instructors who use R, the BrailleR package can make graphics with automatically generated screen reader descriptions.

Graphics: Be Specific with Words

In addition to using screen readers to convert textual descriptions to audio explanations, instructors can provide detailed audio descriptions in person or by recording. When doing so, the best practice, according to Rachel Friedensen and coauthors in "A Systematic Review of Research on Faculty with Disabilities," found on EBSCOhost, is to be specific with the words spoken to discuss the graphic. This approach can help all students better interpret graphs.

Use Screen Reader Tools for Data Visualizations

Screen reader tools such as SAS Graphics Accelerator and Apple's VoiceOver can support blind and visually impaired students when they are exploring graphics, according to Jonathan Zong and coauthors in the *Computer Graphics Forum* article "Rich Screen Reader Experiences for Accessible Data Visualization." These tools can provide textual descriptions of a graphic, such as its encodings, axis labels, and ranges. They can also turn the graphic into an easy-to-read table (SAS Graphics Accelerator) or report descriptive statistics (Apple's VoiceOver), as well as play a sonic representation of the graphic.

Make Data Visualizations More Accessible

Having visual guidelines that make graphics more accessible is helpful. For example, use high-contrast and color-blind safe colors, do not rely on color when differentiating data, use thick, bold lines, use a font that is at least six points, avoid highly ornamental fonts, minimize the use of italics and underlining, and consider zoom compatibility.

Create a Tactile Graphic

Blind and visually impaired students may want interaction with graphics that moves beyond textual or audio descriptions. The *GAISE College Report* also highlights the value of physical exploration to facilitate active learning. Creating a tactile graphic can help with this goal. One inexpensive hands-on approach is using handy materials such as wax string, dominoes, push pins and hot glue guns to "draw" graphs with raised lines, bars, or edges, so students can touch, create, or modify graphs.

Using the BrailleR package can turn a graphic into a scalable vector graphic or other similar file type for optimizing printing graphics via an embosser. Instructors can discuss with the university's accessibility resource centers the materials and equipment they have to create tactile graphics.

Consider a Multifaceted Approach

When teaching data visualizations for blind and visually impaired students, I recommend using a multifaceted approach. For example, create tactile graphics and clearly and explicitly explain those graphics when students are touching and feeling them. Instructors can also make the data visualizations more accessible by recording the audio explanations or creating textual descriptions so students can review them after class. ■

SIGNIFICANCE HIGHLIGHTS

September Issue Focuses on Statistics, Space

Anna Britten

The September issue turns to the heavens with a focus on statistics and space.

The bravery of astronauts is unimaginable for anyone working at a safe desk on terra firma. In the early decades of manned missions, risking death was part of the job description. Fortunately for today's crews, the risks are greatly diminished—in large part, due to statisticians.

This issue explores how astronauts stay alive and injury-free in the gravity-free environment of space—including the lunar surface—thanks to statistical techniques such as uncertainty quantification, principal component analysis, and predictive algorithms for assessing hypothetical environmental conditions.

We also look back at the *Challenger* tragedy through a statistical lens and are reminded of the human cost of poor statistical reasoning.

To end on an inspirational note, we interview a senior NASA data analyst who gets to spend every day investigating the possibility of life on other planets. And yes, we did ask him, "What are the odds?"

Come back down to Earth again with statistical stories about stand-up comedy, neglected tropical diseases, and teaching the terrified.

Access the digital version of *Significance* through the ASA membership portal or at *www.significancemagazine.com*. ■

New Member Spotlight: APOORVA GOYAL

This month, we welcome Apoorva Goyal, who answered the following questions so we could get to know her better.

How did you become interested in statistics and/or data science?

My interest in statistics and data science evolved gradually, influenced by a combination of academic experiences and the growing demand for data analytics in various fields. With the rising need for data analytics in health science and the relative scarcity of professionals actively working in that area, I recognized the potential impact of these skills.

Apoorva Goyal

During my master's at NYU, classes in R sparked this interest further, as they deepened my understanding and appreciation for data science. This academic foundation was pivotal when I started applying to graduate schools, as I sought out labs that specialized in data science within the field of genetics.

This combination of educational exposure and the increasing relevance of data analytics in health sciences solidified my commitment to pursuing a career in this exciting and impactful domain.

What do you consider your dream job?

My dream job involves combining my passion for genetics research with data science to drive innovations in precision medicine within a startup setting. I envision utilizing advanced data analytics techniques to interpret vast amounts of genetic data, identify patterns, and uncover insights that can directly impact patient care.

By harnessing the power of data science, I aim to contribute to the development of personalized treatment strategies tailored to individuals' genetic profiles, ultimately bridging the gap between genetics research and practical applications for patients in need.

What do you hope understanding statistics and/or data science helps you accomplish?

I hope that understanding statistics and data science will enable me to make meaningful contributions in my chosen field, particularly in the realm of genetics and Type 1 diabetes research. By leveraging these skills, I aspire to drive impactful research, uncover novel insights from complex data sets, and contribute to improving health care outcomes for individuals. Additionally, I aim to use my understanding of statistics and data science to address pressing challenges, inform evidence-based decision-making, and advance innovation in health care practices.

What is your favorite hobby?

My favorite hobby is dancing, and I find attending semiclassical dance workshops incredibly fulfilling. It's a wonderful way for me to express myself creatively and stay physically active.

Additionally, I recently pursued certification as a scuba diver, which has opened a whole new world of exploration and adventure for me. Living in Florida provides the perfect backdrop for my diving adventures, with its stunning marine life and picturesque diving sites.

What is something you would like people to know about you that we haven't asked?

One thing I'd like people to know about me is that I'm originally from India, where I was born and raised. Being a first-generation graduate student in my family is something I take pride in, and it's shaped my journey significantly. I hold two master's degrees and am in my second year of pursuing a PhD at the University of Florida.

View the list of new members at *https://magazine.amstat.org.*

NAIRR Pilot Presents Opportunity for Statisticians

To strengthen the connection between the statistical community and National Science Foundation, we continue the series introduced in the May 2023 issue 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.

This month's Q&A spotlights NSF's National Artificial Intelligence Research Resource (NAIRR) pilot that the foundation launched in January.

Program Director

Shrijita Bhattacharya is an assistant professor in the department of statistics and probability at Michigan State University. She earned her PhD in statistics from the University of Michigan, Ann Arbor, in 2018. Her research interests focus on variational inference–aided scalable Bayesian machine learning with applications to neural networks, Ising models, and computer models. She is the recipient of the NAIRR pilot grant and an NSF-collaborative research grant.

MORE ONLINE
To read our interview with Wen-wen Tung, a program officer in the Office of Advanced Cyberinfrastructure in the Computer and Information Science and Engineering Directorate, see *magazine.amstat.org.*

Learn more about NAIRR at *https://bit.ly/3AZSMr3.*

Please summarize the project and what it will accomplish.

The grant aims to develop a scalable Bayesian approach for learning the lower dimensional manifolds of large data sets, especially if the lower dimensional manifold has a convoluted nonlinear structure. Existing statistical approaches suffer from scalability issues with an increase in the sample size or dimension of the feature space. Our proposed Bayesian solution is not only scalable but also captures the best nonlinear manifold at a given intrinsic dimension, along with the uncertainty associated with the dimension itself. This opens the opportunity to save large data sets on low latency devices such as mobile phones, tablets, and low-memory computers for reuse on user-specific downstream tasks.

Since training on large data sets requires huge computational resources, the NAIRR pilot presents an exciting avenue for statisticians entering the artificial intelligence field. The NAIRR pilot is an initiative led by the National Science Foundation in collaboration with other federal agency partners and nongovernment partners.

If an NSF entity other than the Division of Mathematical Sciences partially or fully funded the award, please describe your approach to that entity.

Since the NAIRR pilot is a request for computational resources, the project team investigated the resources provided by each of the participating agencies and carefully designed the layout of the amount and time of resources. Visit *https://nairrpilot.org/opportunities/allocations* to see the distribution of the available resources from each participating agency.

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

The NAIRR pilot requires the submission of a three-page proposal. There are four components to this proposal scientific/technical goal, which includes motivation of the problem, its technical challenges, and its broader impact; estimation of computational resources with a description of the split between GPU, CPU, and memory requirements; support needs, which describes the help needed from support staff maintaining the resources; and team preparedness, which includes any preliminary work and detailed plan for using the allocated resources.

How do you envision the challenges and opportunities of the statistical community in this era of artificial intelligence?

Interpretable artificial intelligence requires a solid statistical and mathematical foundation of any proposed machine learning model. The statistical community can contribute to this era of interpretable AI if they can establish the scalability of the traditional statistical approaches to humongous data sets. However, storage and implementation of proposed algorithms on these data sets impose a heavy computation burden.

Without computational resources at one's disposal, the statistical community will face challenges in adapting to this modern era, in which tons of data are pouring in every second. The NAIRR pilot presents a most-needed opportunity for statisticians to contribute to the world of statistically principled AI. ■

Submissions Wanted for *Journal of Statistical Theory and Practice*

Shesh N. Rai, Dwijesh Chandra Mishra, Sudhir Srivastava, and Anand Seth

The editors of the *Journal of Statistical Theory and Practice* invite submissions for a special issue titled "Emerging Methods and Applications in Bio-Data Science Research."

The issue delves into the cutting-edge landscape of AI and data mining applications within bio-data science research. The editors aim to do the following:

- Showcase the potential of these techniques to harness the diverse wealth of bio-data—registry trends, survey insights, EMR narratives, and multiomics symphonies
- Highlight the specific AI and data mining algorithms and models driving breakthroughs in disease prediction, personalized medicine, and public health interventions

The editors invite scholars and researchers across the spectrum of bio-data science to contribute their expertise. They welcome original research articles, review papers, and critical perspectives on a variety of topics related to AI and biomedical research.

Visit the journal website at *https://bit.ly/4dYwrZp* for details and to submit your paper by December 31. ■

Society Created to Back *Journal of Privacy and Confidentiality*

The Society for Privacy and Confidentiality Research was formed in January 2024 as a nonprofit corporation with the primary focus of placing the *Journal of Privacy and Confidentiality* on a sustainable path with respect to people and finances.

"Since it was founded in 2008 by the late Steve Fienberg, Cynthia Dwork, and Alan Karr," said society President John Abowd, "*JPC* has become part of the research infrastructure in privacy and confidentiality, especially by integrating the work of statisticians, computer scientists, and domain scientists. We want to be sure that it outlives those who have gotten it to where it is now."

The journal's three lead editors have been Fienberg, Abowd, and Dwork. Lars Vilhuber of Cornell and Rachel Cummings of Columbia currently serve as managing editors.

"Historically, *JPC* has been fortunate to receive informal but essential support from editors and others. That is not a responsible model for the future," said Vilhuber.

Over time, the scope of the society's activities may expand to include webinars and conference sessions. In addition, as Secretary/Treasurer Karr notes, "We want to be outward-facing and to partner with other organizations that have similar interests, especially the newly formed ASA Privacy and Confidentiality Interest Group."

The board of directors includes Abowd (Cornell), Karr (Temple), Dwork (Harvard), Jerome Reiter (Duke), and Aleksandra Slavkovic (Penn State).

MORE ONLINE

Learn more about the Society for Privacy and Confidentiality Research at *www.socprivconfresearch.org.*

Check out the *Journal of Privacy and Confidentiality* at *journalprivacyconfidentiality.org.*

Leadership-in-Practice Committee Pilots Improvisation Workshop

Richard C. Zink, JMP Statistical Discovery

From left: Carol Co, Jordan Bryan, Tatiana Nevmyrych, Natalia Kan-Dobrosky, Justin DeMonte, James Atambire, Elizabeth Mannshardt, Weston McManus, Arielle Valint, Richard Zink, Rakhi Kilaru, Jill Eickmann, Laura Lancaster, Meichen Dong, and Jason Brinkley

MORE ONLINE
To learn more about improvisation, read a longer version of this article at *https://magazine.amstat.org.*

What do you think of when you hear "improvisation"? Spontaneity? Creating something without preparation? Making things up on the spot? These are all good answers.

For some of us, our minds go immediately to music: the complex solos performed in succession by a group of jazz musicians in a nightclub; the finger dexterity of a guitarist shredding a head-banging rock anthem; or the lyrical wordplay of hip hop artists crafting personal stories over a beat. Others might picture cooking and creating new dishes by mixing unfamiliar ingredients without formal measurements, dancing and how our bodies move in the moment according to the music, the ingenuity of MacGyver (or his comedic doppelganger MacGruber) as he developed ad hoc solutions to foil fiendish plots, or how the emotions experienced and shared between individuals in a theater scene may lead to different reactions from and outcomes for the characters.

For me, improvisation means comedy. As a high-school student in the late '80s and early '90s, improvisation meant *Whose Line Is It Anyway?* (the original, English version), a show in which comedians produced absurdity on the fly from audience suggestions. It was within the last seven or eight years I learned most of the comedic institutions I hold so dear (*Whose Line Is It Anyway?, Saturday Night Live*, *SCTV*, The Second City) were born from the improvisational theater games developed by Viola Spolin—an American theater educator and acting coach—as a means for stimulating creativity in children and adults. In fact, I consider her book *Improvisation for the Theater: A Handbook of Teaching and Directing Techniques the* text for improvised theater. But my personal journey with improvisation did not begin with comedy or even theater. My journey began with science!

In early 2017, I heard a podcast interview with actor Alan Alda. Alda improvised early in his career (including with Spolin) and, as host of

the television show *Scientific American Frontiers*, he realized scientists could improve their ability to communicate with nonscientists from training in improvisation. He wrote a book about it (*If I Understood You, Would I Have This Look on My Face?*) and, along with the Stony Brook University School of Communication and Journalism, developed the Alan Alda Center for Communicating Science, employing techniques from applied improvisation. But what is applied improvisation?

The Applied Improvisation Network defines the term as "the use of principles, tools, practices, skills, and mindsets of improvisational theater in nontheatrical settings that may result in personal development, team building, creativity, innovation, and/or meaning."

In other words, applied improvisation is the application of theater games and exercises to help us stretch our boundaries by becoming comfortable with the uncomfortable, including taking risks, making mistakes, and exhibiting vulnerability. Put another way, applied improvisation is the "other AI," the one that does not lead to computers taking our jobs, running amok, and the end of life and the world as we know it. (Yes, that was a joke at the expense of artificial intelligence. Your move, robots.)

I was intrigued. I found a six-week class, Fundamentals of Improv Comedy for Scientists, in Chapel Hill, North Carolina, and have been hooked ever since. That was seven years ago and many classes and performances since!

While I do perform locally for the benefit of making myself and others laugh, applied improvisation has numerous benefits to my career as a scientist. It has allowed me to become confident in my own knowledge and abilities, granting me control of my imposter syndrome and freeing me from the need to overprepare to "get things perfect." It is the ideal reinforcement to my leadership style, which seeks collaboration, stresses openness to new ideas, encourages others to actively contribute, and serves and supports others when things do not go as planned (as typically happens).

These tangible benefits led me to advocate for a pilot two-hour workshop in applied improvisation during my first meeting with members of the Biopharmaceutical Section Leadership-in-Practice Committee. Members of the committee were curious about this style of teaching and, after a three-page proposal and additional online discussion, they decided to take a chance on the idea.

I reached out to Jill Eickmann, cofounder, artistic director, and director of corporate training at Leela Improv Theatre Company. Leela has a 20-year history in San Francisco and recently established an East Coast training center in Raleigh, North Carolina. The company appealed to me since they had provided similar workshops to employees of Genentech, Google, and LinkedIn, among other science and technology companies.

From left: Arielle Valint, Meichen Dong, and Elizabeth Mannshardt listen to Jill Eickmann describe how the game "Statues" emphasizes skills relevant to the workplace.

Jill was open to and supportive of the idea of introducing applied improvisation to (bio)statisticians and data scientists and, with some additional planning and discussion, the event was scheduled for the evening of June 18.

I, along with fellow committee member Rakhi Kilaru, reached out to fellow quantitative scientists in the area in the hope they would take a chance on this novel opportunity. In the end, 14 people ranging from graduate school to late career and working for contract research organizations, consultancies, pharmaceutical companies, universities, a coordinating center, a science foundation, and a software company participated.

The evening began with introductions in a familiar setup—chairs organized in a circle facing the center—giving everyone equal opportunity to view and react to everyone else. Jill introduced herself and, after each person introduced themselves, we repeated names as a group until we reached the start of the circle. This way, we could more easily refer to each other by name over the next two hours. Once complete, we reviewed our goals for the evening, including team building, communication, presentation, and leadership. As

From left: Jason Brinkley listens as Weston McManus and colleagues describe the finer points of antiquing in the game "Panel of Experts."

a group, we agreed to the following rules to guide the evening:

- Choose to have fun
- Play from kindness and mutual respect
- Embrace a judgment- and consequence-free space
- Commit to group presence
- Timeouts encouraged if unsafe

For the last point, each participant would determine what was uncomfortable and what was unsafe for themselves. Everyone was invited to lean into spaces that felt uncomfortable, since that is the sweet spot for learning. If at any time something felt unsafe, people were encouraged to give a big "timeout" to have their boundaries honored.

Over the following two hours, we engaged in more than a half dozen physical and verbal group and paired exercises, pulling us out of our comfort zones and stretching our willingness to engage, share, and communicate. We built connections with one another, became mindful of our inner critics, and empowered our inner cheerleaders to take the steering wheel. We trained ourselves to react quickly and convincingly to the absurdity happening around us. We learned firsthand that the same presentation can be interpreted in many ways, all of which are correct. We learned to build off one another and expand our ideas together. We also became 'experts' in areas for which we had limited to no knowledge (e.g., cheese making or antiques sales) so we could discuss these topics with authority and confidence. After each exercise, Jill debriefed everyone to illustrate that the fun we were having contained useful lessons that could be applied to everyday work pursuits.

The time disappeared quickly and I was sorry for the evening to end. It is a common saying in improvisation that the performance or event you are enjoying is one of a kind, never to be experienced the same way again. Sure, Jill could repeat the same exercises with a new group or audience, but each new group of participants would contribute unique energy, emotion, background, and personal history, and the interactions of each person contributing to the whole would build something new and unique.

Now, because I am a biostatistician, I sent out a brief survey to gain feedback and data on the workshop. I received eight responses (out of 13, or 61.5% of participants; I did not complete one). All respondents gave the highest rating possible for the workshop. Reasons for taking the course were varied and included "stepping out of my comfort zone," "improving thinking on my feet," "gaining confidence," and "improving communication." Not surprisingly, participants expressed their love for personally meaningful exercises, several wished the workshop were longer, and many said they were willing to be pushed further. Everyone agreed the evening was a success and their colleagues would benefit from similar training.

It has been a few weeks since the workshop ended. I am grateful it was a success, and I am thankful the committee and Biopharmaceutical Section took a chance on this innovative leadership and communication training. Hopefully, there will be more opportunities for (bio)statisticians and data scientists to play—and develop important skills along the way. ■

2023 Audit Report for the American Statistical Association

American Statistical Association

Statements of Financial Position
December 31, 2023 and 2022

	2023	2022
Assets		
Cash and cash equivalents	$ 199,926	$ 247,090
Investments	17,366,047	16,772,476
Accounts receivable, net of allowance for expected credit losses of 2023—$8,598; 2022—$8,598	965,150	906,000
Prepaid expenses	356,308	338,794
Equity in joint venture	194,347	147,157
Property and equipment, net	4,606,264	4,928,171
Investments restricted for endowment	1,682,100	1,457,256
Total assets	$ 25,380,142	$ 24,796,944
Liabilities and Net Assets		
Liabilities:		
Accounts payable and accrued expenses	$ 1,150,388	$ 935,246
Due to joint venture	268,236	202,507
Deferred revenue	2,047,444	2,104,471
Bonds payable, net	1,828,697	2,204,593
Total liabilities	5,294,765	5,446,817
Commitments and contingencies (Note 11)		
Net assets:		
Without donor restrictions	17,611,620	17,249,698
With donor restrictions	2,473,757	2,100,429
Total net assets	20,085,377	19,350,127
Total liabilities and net assets	$ 25,380,142	$ 24,796,944

American Statistical Association

Statements of Cash Flows
Years Ended December 31, 2023 and 2022

	2023	2022
Cash flows from operating activities:		
Change in net assets	$ 735,250	$ (5,165,113)
Adjustments to reconcile change in net assets to net cash used in operating activities:		
Depreciation and amortization	358,316	353,019
Amortization of bond issuance costs	6,637	6,637
Equity in earnings from joint venture	(47,190)	(45,172)
Contributions restricted for investment in perpetuity	(22,356)	(91,069)
Unrealized and realized (gain) loss on investments	(2,262,444)	4,436,362
Gain on the sale of parking lot	-	(487,171)
Changes in assets and liabilities:		
(Increase) decrease in:		
Accounts receivable	(59,150)	(372,387)
Prepaid expenses	(27,514)	239,579
Increase (decrease) in:		
Accounts payable and accrued expenses	215,142	(81,566)
Due to joint venture	65,729	48,792
Deferred revenue	(57,027)	263,199
Net cash used in operating activities	(1,094,649)	(994,890)
Cash flows from investing activities:		
Purchases of investments	(604,648)	(630,735)
Proceeds from sale of investments	2,048,077	1,050,969
Purchases of property and equipment	(36,409)	(186,257)
Proceeds from the sale of parking lot	-	813,871
Net cash provided by investing activities	1,407,020	1,047,848
Cash flows from financing activities:		
Principal payment on bonds payable	(382,533)	(372,238)
Contributions restricted for investment in perpetuity	22,356	91,069
Net cash used in financing activities	(360,136)	(281,169)
Net decrease in cash and cash equivalents	(47,164)	(128,211)
Cash and cash equivalents:		
Beginning	247,090	375,301
Ending	$ 199,926	$ 247,090
Supplemental disclosures of cash flow information:		
Income taxes paid	$ 101,870	$ 267,455
Interest paid	$ 70,007	$ 75,261

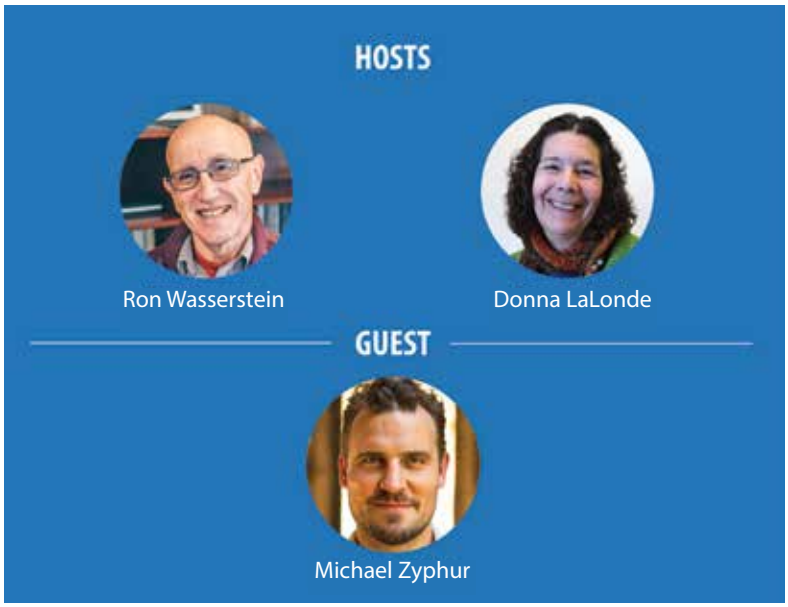
American Statistical Association

Statements of Activities
Years Ended December 31, 2023 and 2022

	2023			2022		
	Without Donor Restrictions	With Donor Restrictions	Total	Without Donor Restrictions	With Donor Restrictions	Total
Revenue and support:						
Meeting registration and exhibits	$ 3,701,992	$ -	$ 3,701,992	$ 3,409,000	$ -	$ 3,409,000
Membership dues	1,949,694	-	1,949,694	1,865,662	-	1,865,662
Royalties	1,663,139	-	1,663,139	1,518,619	-	1,518,619
Federal and private grants	778,643	-	778,643	524,643	-	524,643
Contributions and sponsorships	587,806	91,613	679,418	526,650	142,579	669,229
Advertising	676,430	-	676,430	687,373	-	687,373
Sales	177,218	-	177,218	155,225	-	155,225
Miscellaneous	111,283	-	111,283	47,202	-	47,202
Subscriptions	90,635	-	90,635	58	-	58
Accreditation	18,484	-	18,484	24,805	-	24,805
Maintenance fees and sections	9,496	-	9,496	221,991	-	221,991
Page charges	2,700	-	2,700	2,690	-	2,690
Net assets released from restrictions	47,121	(47,121)	-	39,884	(39,884)	-
Total revenue and support	9,594,640	44,492	9,739,132	9,024,594	102,695	9,127,289
Expenses:						
Program services:						
Meetings	2,921,647	-	2,921,647	2,738,454	-	2,738,454
Programs	2,301,959	-	2,301,959	2,436,935	-	2,436,935
Publications	1,237,410	-	1,237,410	1,154,655	-	1,154,655
Grants and awards	793,212	-	793,212	426,328	-	426,328
Section expenses	664,378	-	664,378	1,079,465	-	1,079,465
Education	440,891	-	440,891	391,539	-	391,539
Total program services	8,368,897	-	8,368,897	8,229,568	-	8,229,568
Supporting services:						
Management and general	2,224,167	-	2,224,167	1,512,135	-	1,512,135
Membership development	1,017,959	-	1,017,959	958,691	-	958,691
Fundraising	224,293	-	224,293	223,105	-	223,105
Total supporting services	3,463,419	-	3,463,419	2,693,931	-	2,693,931
Total expenses	11,832,316	-	11,832,316	10,923,499	-	10,923,499
Change in net assets before other income (loss)	(2,127,676)	44,492	(2,083,184)	(1,898,905)	102,695	(1,796,210)
Gain on sale of parking lot	-	-	-	487,171	-	487,171
Investment income (loss), net of fees	2,489,598	328,836	2,818,434	(3,464,101)	(391,973)	(3,856,074)
Change in net assets	361,922	373,328	735,250	(4,875,835)	(289,278)	(5,165,113)
Net assets:						
Beginning	17,249,698	2,100,429	19,350,127	22,126,533	2,389,707	24,516,240
Ending	$ 17,611,620	$ 2,473,757	$ 20,085,377	$ 17,249,698	$ 2,100,429	$ 19,350,127

Practical Significance Take II: Lifelong Learning—New Opportunities for ASA Members

This interview with Michael Zyphur, director of Instats, was conducted by Practical Significance *co-hosts Donna LaLonde and Ron Wasserstein during a recent episode. The American Statistical Association recently partnered with Instats, an organization dedicated to enhancing global research practices by offering expert-led training to researchers through its online platform. Zyphur, Wasserstein, and LaLonde explore this innovative learning experience, including the unique features that set the Instats platform apart.*



Donna LaLonde: Please, introduce yourself and tell us about your day job.

Michael Zyphur: I'm a professor of quantitative methods at the University of Queensland, in Brisbane, Australia. I graduated from Tulane University with a PhD in industrial and organizational psychology, so I've had years and years of stats classes and then training in psychometrics—as well as a variety of core quantitative methodologies. I'm the director of Instats, and I work to support multidisciplinary research with our individual and institutional partners to offer content that meets their knowledge community's needs and interests.

Ron Wasserstein: Tell us about the features that make Instats unique from the other learning platforms—from the partner perspective.

Michael Zyphur: Instats helps its partners offer their content and expertise by freely providing a full-service, technologically sophisticated, easy-to-use platform for delivering seminars and workshops, as well as connecting with the research community more broadly through free community forums, social networking, Q&A boards, and job postings.

We've made content creation extremely easy. And by that, what I mean is each workshop, seminar, and short course will get its own web page. And so, on the platform, some of the back-end features for our partners, you know, the experts who are on the platform who deliver content, is that almost everything at this point is AI-enabled. So, we've got ChatGPT fully integrated for drafting new workshop web pages and PowerPoint slides, so you never have to start from scratch. It takes about 20 seconds, and it's quite extensive.

Ron Wasserstein: Let's dig a little bit deeper into the learning experience from the learner's perspective. Do the courses typically have assignments, quizzes, and hands-on activities?

Michael Zyphur: The learner experience is highly varied, and the purpose of the platform is to empower the instructors to offer content in a style that is consistent with what they think is best.

Content that is more theoretical will be a little more discussion oriented. But if somebody wants to do something that involves a lot of exercises and hands-on work, they can also do that. The key for us is to work with our partners to ensure the description of their workshop or the content they're offering is accurate, so participants know what they're getting themselves into, then everything is completely fine from the learner's perspective.

So, there's a lot of variation there, which is consistent with the varied interests of the individuals who make up the knowledge communities represented on our platform.

Donna LaLonde: Would you walk us through the ASA member platform experience, from registering for a course through completion?

Michael Zyphur: The registration process for ASA members is similar to all registrants with one slight variation, which is an ASA member benefit. First, the registrant will create an Instats user account, which takes about 10 seconds. During user account creation, we'll inquire about membership in a professional association or society.

After user account creation, registrants will confirm their email address, and ASA members receive an automatic 30% discount on all fee-based content. We also whitelist their account so they can access content that is free for ASA members.

We offer quite a bit of free content: a free introduction to R; an introduction to some software packages; a free introduction to some techniques or methods. Those are usually quite brief, an hour, two hours, or something like that. They can just click register, and then they're automatically registered.

For fee-based content, click "Register" and the user is redirected to our credit card processor, and enrollment begins in that moment.

Those who enroll in an upcoming live-streaming seminar can access the offering by clicking the Zoom link, and you'll be taken directly into the meeting. You'll watch the person who's delivering and be able to ask questions, just like any Zoom meeting. Be assured, we don't record your camera view.

You can also miss the live session and still engage with the content asynchronously. We get the recordings and process them as quickly as we can. It's usually within 12 hours, and then they're up on the site having been professionally edited and ready for viewing.

Participants have 30 days of access to those recordings for any live workshop. We're a global organization, so we have people enrolling for workshops taking place at 3:00 a.m., so they're engaging with the content asynchronously.

Ron Wasserstein: That's really remarkable. How do users locate content of interest on the site?

Michael Zyphur: Users should visit our landing page (*instats.org*), and then scroll down under the "Seminars" heading. The first thing you'll see is offerings listed chronologically for our upcoming live-streaming workshops.

You can filter the live seminars, on-demand seminars, and structured courses and sort by keywords, date, topic, format, instructor, and cost. You can also search all the individual sessions within a workshop or seminar. For example, a three-day workshop might include three separate sessions per day. These can last from 40 minutes to two hours depending on the expert's discretion.

And at this point, we offer more than 150 workshops in the on-demand streaming space, and some are free. Many of them are fee-based and offered by leading experts in their areas. So, you can find the content you're after.

Ron Wasserstein: We're excited about the ASA-Instats partnership and learning opportunities for our members. What are some of the most popular existing courses?

Michael Zyphur: Some core topics are popular on our platform, and those are related to, for example, causal inference and methods with longitudinal panel data. And with the AI revolution, what we've also seen is a lot of content being generated by our partners on how to incorporate ChatGPT into research workflows—in ethical ways.

Regarding ChatGPT, I want to emphasize that we explore how we can put it to use in good faith. What is this technology? How can we use it, for example, to write Python code? How can we use it to write our code? How can we use it to make our research workflows more efficient and perhaps create some internal, informal reviews of manuscripts and papers?

In our view, AI is not going away. So those workshops that incorporate new AI methods are quite popular. That is true in both the live and on-demand space. So, we've got traditional topics that are of interest, as well as new and emerging areas being quite popular.

Ron Wasserstein: You've provided terrific insight into the instructor experience. What course offerings would you like to see ASA members bring to the platform?

Michael Zypher: That's an interesting question, and it's one I get asked a lot by new experts when they come onto the platform: "What do you think I should do? What kind of content should I offer?"

And the answer I almost always give is, "What do you love? What are you passionate about? Because we built this platform as a means to express yourself and your passions and your interests to other members of your research community."

We completely understand passion-driven scholarship and forms of communication—it's an incredibly important part of what it is to be a researcher, a scholar, an academic. So, if there's something you love or you believe the community needs to hear about, we're here to support it. ■

MORE ONLINE
Bookmark the ASA Instats website at *https://community.amstat.org/asainstats/home* to stay current on all the opportunities available to ASA members.

Panelists Take on Bridging Gap from Data to Climate Actions

Elizabeth Mannshardt and Yawen Guan

Throughout the last decade, extreme weather events, long-term hydroclimatic change, and fire weather and management have created public concern. For scientists, the challenge resides in assessing, predicting, and documenting climate change on such events to help develop solutions that mitigate their impact on the environment, economy, and society.

The ASA's Advisory Committee on Climate Change Policy sponsored the invited panel titled "From Data to Climate Actions" at the 2024 Joint Statistical Meetings. The panel, moderated by Elizabeth Mannshardt, was cosponsored by the ASA's Physical and Engineering Sciences and Statistics and the Environment sections. The panelists, who are climate data experts, explored considerations and innovations, taking the audience from data to information, to scientific and policy communications, to climate actions.

Panel members stressed the importance of now as the age for information about extreme events and the possible role of anthropogenic change, as well as the critical need to understand and quantify uncertainties in data, climate models, and projections in an ever-evolving data landscape. They indicated that just as trusted data and sound methods are vital to inform data-driven decisions to guide policy, scientific communication for data-driven decisions is crucial for current impact and future development.

Panelists agreed there is a need to focus on decisions and adaptation and that there is high potential for impact at the local level. They also placed a high priority on education and public awareness—and pointed to the need to democratize access to data and data science platforms.

Panelist Amy Braverman, a senior scientist and statistician at NASA's Jet Propulsion Laboratory with expertise in remote sensing data and climate models, opened by discussing the opportunities available with the wide array of existing and emerging data sources:

> Everything starts with the data we use/analyze. The data, along with the questions, require new methods and insights that drive innovation. Remote sensing data from space are the only truly global data source, and they remain under-exploited; the door is wide open (and begging us to walk through) for our community to contribute new ideas, especially those that exploit the vast amount of information remote sensing data provide.

Panelists

Amy Braverman, Jet Propulsion Laboratory

Josh Hacker, Jupiter Intelligence

Michael Stein, Rutgers University

Wen-wen Tung, Purdue University

Michael Stein, distinguished professor of statistics at Rutgers University and renowned for his contributions to spatial statistics and its applications to environmental and climate science, spoke to framing the science:

> The basics of anthropogenic climate change are well understood and have been for a long time. On the other hand, detailed projections of changes—such as changes in large-scale extreme events—remain major challenges, especially providing appropriate uncertainty quantifications.

In Braverman's overview of her work exploring the satellite data record, she noted the enormous amount of data spanning decades and said we need innovative methods and platforms to enable use of this data—and the data coming.

NASA's new Earth-focused missions provide data and key information to addressing and mitigating climate change. The Earth System Observatory will provide profoundly more data, with 1.5 million data collected per second. This drives the need for new approaches to model, test, and quantify uncertainties. NASA's Earth Science to Action program is working to bridge the gap between the data available and what people can do with it.

Stein's remarks also highlighted statistical challenges in modeling the extreme events over larger space and longer time scales and estimating and quantifying uncertainties for spatial and temporal data. Such statistical challenges are relevant in agriculture, electrical grid, and flood monitoring. He noted data scientists can contribute to understanding local climate impacts and adaptations.

Photo courtesy of Yawen Guan

From left: Wen-wen Tung, Michael Stein, Amy Braverman, Josh Hacker, and Liz Mannshardt, moderator, take part in the ASA's Advisory Committee on Climate Change Policy invited panel, "From Data to Climate Actions," at JSM 2024.

Josh Hacker, cofounder and chief science officer at Jupiter Intelligence and renowned for climate risk analytics, spoke to business considerations and risks:

> Understanding physical climate risks via probabilistic approaches or story lines falls back to a problem of understanding lots of data and how they can best be interpreted under deep uncertainty. Calibrated model output data, with at least some quantification of uncertainty, is available and can be put to use in ways not always immediately clear or in ways not originally envisioned by the data producers.

Hacker also noted that if we make climate change about money, something will happen in the business and technology space. He noted many economic models are also flawed, as models can't possibly cover all scenarios, and that tipping points can be hard to estimate and interact with each other.

Wen-wen Tung, a data scientist and atmospheric scientist at Purdue University with a commitment to education for sustainable development, cited UNESCO's 2024 global education monitoring report and noted the following:

> The United Nations' sustainable development goals accentuate the complex interplay between quality education and climate action. Through cognitive, socioemotional, and experiential learning, data science education can motivate and enable students to analyze and model climate data, communicate insights, and inform evidence-based policy decisions.

She spoke about the importance of empowering youth in climate action and stressed the importance of education, touching on the social and emotional aspects of addressing climate change in one's own community and the importance of considering human relation factors.

Discussion with the panelists included reflections on the participants' conversations with policy makers on Capitol Hill, as well as educational resources for preparing students, highlighting the need for data science ambassadors for communication to discuss climate change with policy advisers, decision-makers, the media, and the public.

Tung pointed to tools and data sets for students—such as the NOAA Atlantic hurricane database best track data (R Tidyverse [*https://nairrpilot.org*]; Python script and video [*www.youtube.com/watch?v=AqZljJ1LsdA*])—and national initiatives for increasing access to data science and AI resources for research and education, including the National Science Foundation's National Discovery Cloud for Climate and National Artificial Intelligence Research Resource Pilot.

Each panelist offered closing thoughts. Hacker stated, "A key to making climate data actionable is separating what is useful in assessment and decision contexts when we know perfection isn't possible."

Tung stressed the importance of education efforts: "The impact of data science education can be amplified if higher education deeply integrates climate across various disciplines, enabling statistics students to build efficacy in climate science through exploratory data analysis and cross-disciplinary collaboration."

"Climate change is happening," said Braverman. "Attention has shifted to mitigation and adaptation, which creates new possibilities for statisticians and data scientists to step out [of] the shadow of climate scientists and work directly with decision-makers to help them respond."

Stein said, "If your goal is to have an impact on policy, build relationships with policymakers, especially at the state and local levels."

For information about the ASA Committee on Climate Change Policy, visit *https://community.amstat.org/acccp/home*. ■

EDITOR'S NOTE

The views expressed by the authors and panelists are their own and do not necessarily represent those of their employers.

STAT*tr@k*

Promoting Your Consulting Business (Carefully) with Email

Steve Simon runs a small consulting business and is a faculty member in the department of biomedical and health informatics at the University of Missouri-Kansas City. He developed a website in 1999 that now has more than 2,000 pages covering topics in statistics, research ethics, and evidence-based medicine.

If you want to start an independent consulting business, congratulations. It is a unique experience with rewards and challenges. I have been told one of the biggest challenges can be finding new clients.

There are many ways to find clients, but I am focusing on emails. Emails should be written carefully—you do not want to come across like Ned Ryerson, the obnoxious insurance salesperson from *Groundhog Day*. If your emails are too strongly worded and sent too often, you may lose your audience or have your emails marked as spam.

Birth Announcement

The day you decide to hang out your shingle and start looking for clients, send out a birth announcement. Tell everyone about your new business: "I'm now the proud owner and sole proprietor of the independent consulting business P. Mean Consulting." You do not necessarily need to include you are looking for customers since it is implied.

Send the birth announcement to your relatives, teachers, college friends, high school friends, and even your kindergarten playmates if you are still in touch. This is a time when it is safe to be aggressive. Everyone loves to hear about new careers and opportunities. Your second cousin twice removed who works odd construction jobs might not need a consultant, but she might know a friend who does.

When someone sends out a congratulatory reply, follow up by thanking them and mentioning how business is going. If you already have one or two customers, share a few details so they will know the type of clients you want to work with.

You might only get a single shot to bug your second cousin twice removed but for people closer to you, you might decide to send an anniversary announcement. Let them know it is the anniversary of your new consulting business and briefly discuss your accomplishments. This is another chance to help them understand your work.

Branding Your Emails

The emails you send, regardless of the topic, give you an opportunity to remind everyone about your business. First, purchase an email domain name that reflects your company's name. (A Gmail account screams "Unserious!") I spend money on my email account (*mail@pmean.com*) each month, but I can use it as a tax deduction.

Set up your email system to include a signature with another reminder of your business: Steve Simon, P. Mean Consulting. Add a motto on a second line such as, "We're more than your average company," or include a link to your company website (*www.pmean.com*). I do not recommend using more than two lines for your signature since this might be a turnoff for some of your colleagues.

Most people forget you can customize how your name appears on your email. This is another opportunity to promote your business and/or your credentials. For example, "Steve Simon, PhD Statistician" or "Steve Simon, P. Mean Consulting." In my experience, this subtle difference prevents my emails from being marked as spam. I do not like to include my degree after my name, but it might make a difference to some of your clients. If you have taken the trouble to get an ASA accreditation of PStat® or GStat, consider adding that after your name, too.

Start a Newsletter

I recommend developing a newsletter you can distribute by email with a few articles that highlight your skills and knowledge. Other content might include relevant commentary about recent events in the news that touch on statistics or a curated list of interesting websites with brief descriptions.

It is critical to send your newsletter regularly. Do not flood your readers with additional newsletters when things are slow or neglect your newsletter when things are busy. Set up a regular, maintainable schedule during times of both feast and famine.

It is helpful to spend the extra money on a professional email automation system like Constant Contact or Mailchimp (the cost of the subscription can be deducted from your taxes). An important feature of an email automation system is the link allowing readers to subscribe or unsubscribe. Your recipients will likely feel better about clicking "unsubscribe" than sending you a message saying they are tired of your newsletters.

Use Your Business Cards

When you attend meetings and exchange business cards with other people, do not toss their business card in your desk drawer. I consider a business card a "spam-for-free" card, which means I send an email to the person I met. Include a compliment such as, "It was great talking to you about the hassles associated with missing data …" If it is relevant, ask for presentation slides or a paper they wrote about a particular topic. I have found people like to be perceived as helpful.

The person you email now has your contact information, even if they misplace your business card. You are also able to access their contact information, since you will have a record in your sent folder. I do not recommend including a direct solicitation in the email you send, since your business name will be in your email domain name or signature.

> The emails you send, regardless of the topic, give you an opportunity to remind everyone about your business.

How and When to Send Follow-Up Emails

I recommend sending emails to your contacts annually or semiannually. Find a news article, website, or journal publication you think they would like and say, "I saw this and thought of you." You do not have to include a direct solicitation; it cancels out the good vibes you were hoping to build with the resource you just shared.

Another opportunity to connect with an initial client is after you have finished working with them. I recommend waiting a week or month before sending them a short email to tell them how much you enjoyed the experience. You do not have to go overboard, but you might be in the wrong business if you are unable to tell a client something you liked about working on difficult statistical problems. Here you can be more direct. Let them know you would love to work with them again if the opportunity arises. Also, ask them whether they know anyone else who might need similar help?

Isn't Email Becoming a Dinosaur?

A lot has been written about Gen Zers abandoning email for other forms of electronic communication, so it is a good idea to consider other communication options. I am not a big fan of LinkedIn, but my profile has attracted several clients. You might consider joining Slack channels associated with professional user groups, posting regularly on a blog, or posting on X (formerly Twitter). These options could be a good substitute for an email newsletter. It can be hard to keep up with new systems, so if you are interested, pick one or two alternatives to supplement your email efforts.

Email represents a powerful way to promote your consulting business. Be mindful of the timing of your communication and send emails after a business card exchange or for birth announcements, newsletters, and thoughtful follow-ups. ■

STATS4GOOD

NSF Institutes Develop AI for Public Benefit

David Corliss is the principal data scientist at Grafham Analytics and founder of Peace-Work.

With AI affecting more aspects of our lives and the world around us, all statisticians and data scientists need to develop and apply emerging technology to benefit everyone. To meet this challenge, the National Science Foundation established 25 national artificial intelligence research institutes with the mission of advancing a cohesive approach to AI-related opportunities and risks. A key aspect of the AI institutes is to consider the ethical challenges presented by new technology, including fairness, transparency, and security. In addition to being the center for cutting-edge scientific research, the AI institutes are driving the development and implementation of AI to serve the greater good.

The institutes are supported by the National Science Foundation, but some have partnered with organizations such as the National Institute of Standards and Technology. The institutes focus on six broad areas of AI research, starting with basic research on the foundations of machine learning. Areas of research include the statistical basis of machine learning algorithms, intelligent networks and edge computing, and the interaction between humans and AI.

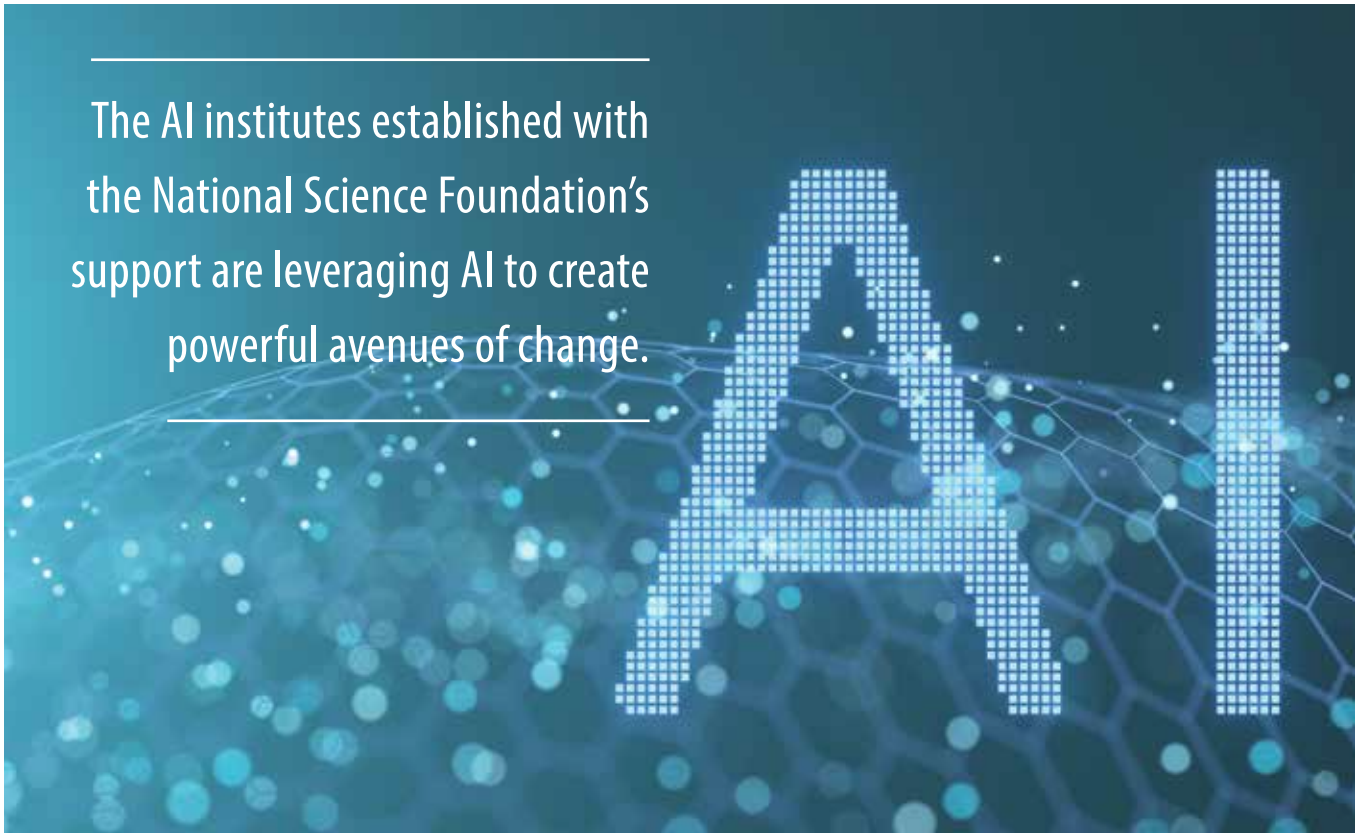
The institutes are developing the basic technology underlying all AI. Many leading universities are participating in this research to drive AI capabilities forward, including The University of Texas, Columbia University, Georgia Institute of Technology, The Ohio State University, Washington State University, and Duke University.

One of the most important areas of interest in AI—and sometimes an area of concern—is the impact on and use of AI in education. Several institutes concentrate on developing applications and tools to leverage AI in education for maximum impact while promoting ethical best practices. Others focus on the educational process itself, including engaged learning at North Carolina State and student-AI collaboration at the University of Colorado Boulder. Still other institutes focus on education for specific groups of people, such as adult learning and online education at Georgia Tech, workforce development at Washington State University, and children with speech and language challenges at the University at Buffalo. The AI Institute for Inclusive Intelligent Technologies for Education at the University of Illinois leverages AI to support all K–12 students with the goal of achieving education for everyone in a diverse, inclusive, and highly effective manner.

Almost half the institutes focus on developing AI applications in a particular area, leveraging the technology to support key areas that are important for economic growth. Some target intelligent applications in natural sciences applied to manufacturing. Another group develops intelligent applications in cyber infrastructure, security, and

Getting Involved

For opportunities this month, take a closer look at the AI Institutes at *https://bit.ly/4eqnyHM*. Depending on your interests, you are sure to find resources and potential collaborators on the map. This is the season for looking at educational opportunities and postings for 2025. Data for Good is attractive, so include it as an important feature in your program recruitment or career goals.



threat analysis. Several institutes focus on agriculture, with a particular interest in resilient agriculture and the effects of climate change.

The institutes have developed important partnerships with organizations and agencies. For example, the Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography at the University of Oklahoma works closely with NASA scientists and AI experts as a leading member of the new Science Understanding Through Data Science consortium, which will be featured in a future Stats4Good column.

From the perspective of Data for Good, the AI institutes perform high-impact work. Two stand out as leaders in leveraging AI for society's general benefit. One is the AI Institute for Societal Decision-Making at Carnegie Mellon University, which brings together social scientists and AI experts to develop solutions to better understand and improve human decisions using AI. The AI Institute for Trustworthy AI in Law and Society explores the question of trust in AI. This collaboration between four universities—the University of Maryland, Georgia State University, Morgan State University, and Cornell University—seeks to understand how AI is perceived, determine what constitutes trust in AI and how to promote it, and develop policy needed to foster trusted and trustworthy AI.

The AI institutes established with the National Science Foundation's support are leveraging AI to create powerful avenues of change where statistical science is the key catalyst in a technological revolution. The growing impact of the AI institutes is a call to action for the statistical scientific community. Statisticians and data scientists in all areas and disciplines are needed to support these initiatives in developing effective and trustworthy AI for public benefit. In addition to direct participation of these institutes, leveraging the publicly available data and resources they develop will have a huge effect on programs that create a better future for everyone through Data for Good. ■

JSM PORTLAND OREGON

Highlights to Remember

The Joint Statistical Meetings are a vital annual event, offering members of our profession a chance to convene, exchange ideas, and advance the field through collaborative discourse. This year, JSM took place in Portland, Oregon, with the theme "Statistics and Data Science: Informing Policy and Countering Misinformation." The JSM program committee curated an exceptional lineup, featuring 646 sessions, 343 individual posters, and 149 speed sessions.

Kelly Findley, Dave Zhao, Ryan Tibshirani, Saharon Rosset, Samir Rachid Zaim, and Rob Tibshirani take a time out from the basketball game they organized, a semi-regular JSM tradition.

Eric Sampson/ASA
2024 ASA President Bonnie Ghosh-Dastidar gives the President's Address Tuesday, August 8.

Meg Ruyle/ASA
Attendees wait in line for coffee and check out the photo booth in Spotlight Portland in the JSM EXPO August 5.

JSM 2024 Participants Brought Their 'A' Game to ASA Video Contest

The ASA's marketing project manager, Kim Gilliam, had a blast running the ASA Video Contest during JSM 2024 in Portland, Oregon. "I was thrilled with the response and range of perspectives showcased," she said. She plans to share them throughout the year on social media and in the ASA'a marketing campaigns. The contest winner, Anna Yu Lee, was chosen randomly from a drawing and received a $500 gift card. In addition to Lee, the following JSM attendees participated: Danielle Dematteis; Christina Zhou; Jennifer Aracely Rodriguez; Joshua Cook; Prasad Bhoite; Zhiheng Xu; Ren-Dwina Browne; Qiuyi Wu Pitch; Charles Smith; Anna Yu Lee; Brian Roberts; Christina Karamichalakou; and Karl Bisselou. Check out all the videos at *bit.ly/3BpOWYf.*

Scan me

ASA Award Winners

Founders Award

Richard De Veaux

For nearly 30 years of leadership, service, and dedication to the ASA, serving as JSM program chair and two terms as a member of the JSM Program Committee and Committee on Meetings; for leadership in numerous roles, including chair of the Statistical Learning and Data Science Section; for service on the Statistical Ambassadors Roundtable Working Group; and for two outstanding terms as an ASA Board member, first serving as Council of Sections representative and then as an ASA vice president.

Kathy Ensor

For exemplary dedication and service to the ASA over nearly three decades, including leadership of the Houston Chapter of the ASA and notable contributions to numerous ASA committees and sections; for serving as co-chair of the Advisory Committee on Data Science and chair of the Committee on Funded Research; for leadership and service in the Statistics and the Environment Section and Business and Economics Statistics Section; for developing the statistical expert witness course; and for distinguished leadership of the ASA as vice president and 2022 ASA president.

Barry Nussbaum

For service, leadership, and dedication to the ASA over a 25-year span; for chairing the Statistics and the Environment Section; for serving as member and chair of the Statistical Partnerships Among Academe, Industry, and Government Committee; for serving as a member of the Development Committee; for serving as the ASA representative to the National Institute of Statistical Sciences and the African International Congress on Statistics Organizing Committee; for outstanding leadership as the 2017 ASA president; and for ongoing service as an ambassador for our association.

Dionne Price

(posthumously)

For leadership and service to the ASA; for service to the Biopharmaceutical Section as its chair and JSM Program Committee chair and as a tireless volunteer for the Regulatory-Industry Statistics Workshop over many years; for service as a member of the 175th Anniversary Planning Committee; for leadership as chair of the JSM Policy Committee; for passionate commitment to the Diversity Mentoring Program; and for thoughtful, gracious leadership of the ASA through service as an ASA vice president and the 2023 president.

Julia Sharp

For outstanding leadership of the ASA in a rich variety of roles; for serving ASA chapters, including service to the South Carolina Chapter, chairing the Council of Chapters Governing Board, chairing the Chapter Status Committee, chairing the Traveling Course Committee, and for serving as council representative to the ASA Board of Directors; and for serving the ASA through chairing the Meetings Task Force, leading the Conference on Statistical Practice Steering Committee, serving as chair and founder of the Justice, Equity, Diversity, and Inclusion Outreach Group, and chairing the Nominations Committee. ■

2024 ASA Fellows

Eric Sampson/ASA

ASA Fellows smile for the camera during the ASA"s President Address and Awards at JSM 2024 on August 6.

Fellows of the American Statistical Association are members of established reputation who have made outstanding contributions to some aspect of statistical work. The number of new fellows each year is limited to no more than one-third of 1% of the ASA membership. At the 2024 Joint Statistical Meetings in Portland, Oregon, the following 47 ASA Fellows were inducted during the ASA's President's Address and Awards:

Arne C. Bathke, University of Salzburg, Austria

Claire McKay Bowen, Urban Institute

Hongyuan Cao, Florida State University

Howard Chang, Emory University

Yu Cheng, University of Pittsburgh

Tirthankar Dasgupta, Rutgers University

Guoqing Diao, The George Washington University

Lori Dodd, National Institute of Allergy and Infectious Diseases

Morgan Earp, National Center for Health Statistics

Birol Emir, Pfizer

David Fardo, University of Kentucky

Andrew O. Finley, Michigan State University

Konstantinos Fokianos, University of Cyprus

Andrea S. Foulkes, Massachusetts General Hospital

Tanya Pamela Garcia, The University of North Carolina at Chapel Hill

Samiran Ghosh, The University of Texas

Jeff Goldsmith, Columbia University

Douglas D. Gunzler, Case Western Reserve University/ The MetroHealth System

Alan Hartford, Clene Nanomedicine

Yulei He, National Center for Health Statistics

Megan D. Higgs, Critical Inference

Ying Hung, Rutgers University

Matthias Katzfuss, University of Wisconsin-Madison

Luke Keele, University of Pennsylvania

Linglong Kong, University of Alberta

John Kornak, University of California at San Francisco

Ana Kupresanin, Lawrence Berkeley National Laboratory

Jing Lei, Carnegie Mellon University

Ming Li, Coupang

Ruixiao Lu, Alumis

Li Ma, Duke University

Lester Mackey, Microsoft Research

David S. Matteson, Cornell University

Mark Rothmann, Center for Drug Evaluation and Research

Huiyan Sang, Texas A&M University

Michelle Shardell, University of Maryland School of Medicine

Lili Tian, SUNY at Buffalo

Beth Tipton, Northwestern University

Roger Vaughan, The Rockefeller University

Xinlei Wang, The University of Texas at Arlington

Yuhong Yang, University of Minnesota

Weixin Yao, University of California at Riverside

Jingjing Ye, BeiGene USA

Fei Ye, Vanderbilt University Medical Center

Recai M. Yucel, Temple University

Min Zhang, Tsinghua University Vanke School of Public Health

Hua Zhou, University of California at Los Angeles

Additional Awardees

Waksberg Award

The 2025 recipient of the Waksberg Award is Michael (Mike) Hidiroglou, who has worked for almost 40 years as a survey methodologist at Statistics Canada and is well known for his contributions to business surveys, development of estimation systems, and research in survey methodology. Hidiroglou will give the Waksberg Invited Address at the Statistics Canada Symposium in 2025 and write a paper planned for publication in the December 2025 issue of *Survey Methodology*.

Survey Methodology established an annual invited paper series in honor of Joseph Waksberg in 2001 to recognize his contributions to survey statistics and methodology. Each year, a prominent survey statistician is chosen to write a paper that reviews the development and current state of an important topic in survey statistics and methodology, reflecting the mixture of theory and practice that characterized Waksberg's work.

Waksberg was a giant in survey sampling for nearly seven decades, beginning at the US Census Bureau in 1940 and moving to Westat in 1973, where he served as chair of the board from 1990 until his death in 2006. The award includes an honorarium made possible by a grant from Westat.

Hidiroglou was selected by Denise Silva (chair), Jae-Kwang Kim, Kristen Olson, and Paul Smith, all appointed by *Survey Methodology* and the American Statistical Association.

Caucus for Women in Statistics and Data Science

Dong-Yun Kim and Jessica Kohlschmidt

The Caucus for Women in Statistics and Data Science honored Tae Rim Lee with the Societal Impact Award. Lee, a professor emerita at Korea National Open University, has held major leadership roles, including serving as president of several statistical and health information societies. She also served on various national and international committees, including the International Biometric Society and International Federation of Classification Societies.

Lee has been a strong advocate of e-learning, coordinating the e-ASEM Network from 2010 to 2020. She founded Women in Statistics in Korea in 2019 and has encouraged junior female statisticians to focus more on their own research. Although retired from her faculty position, Lee remains active, serving as vice president of the Korean Association of Senior Scientists and Engineers, promoting science and engineering through digital platforms. Her pioneering work continues to inspire and influence the younger generations in the statistics and education fields.

The Societal Impact Award was founded in 2021 by Wendy Lou of the University of Toronto. The award is given

annually to a statistician or data scientist who has actively worked to advance social justice or diversity, equity and inclusion through their research, teaching, or service.

Additionally, the Caucus for Women in Statistics and Data Science has been helping young career professionals and students travel to participate in the annual Joint Statistical Meetings since 2016. This year, they presented the Lee Travel Award to Jaihee Choi of Rice University and two Do Bui Travel awards to Kimberly Webb of Cornell University and Zihan Zhang of Georgia Institute of Technology.

Noether Scholar Awards

ASA Fellow Peter Rousseeuw was honored with the 2024 Gottfried E. Noether Distinguished Scholar Award. Rousseeuw has made significant contributions to robust estimation, innovative model-free cluster analysis, and the development of statistical depth functions. His work—renowned for advancing methodology, creating algorithms, and having broad application—has significantly shaped the landscape of statistical analysis and had a profound impact on both theoretical and practical aspects of nonparametric statistics.

Rousseeuw is emeritus professor of the University of Leuven, Belgium. He gave a talk titled "Robustness and Distance Correlation" during the Noether Award session at 2024 JSM.

The Gottfried E. Noether Early Career Scholar awards were presented to Edgar Dobriban of the Wharton School and Lucas Janson of Harvard. ■

MORE ONLINE

Download a PDF copy of the awards book at *https://bit.ly/3XAn1fF* to view all of this year's awardees.

View the recorded plenary sessions on the JSM 2024 website at *https://bit.ly/4dfAHCH.*

JSM PORTLAND OREGON

Committee of Presidents of Statistical Societies Awards

Eric Sampson/ASA

From left: Robert Tibshirani, Distinguished Achievement Award and Lectureship; Regina Liu, Elizabeth L. Scott Award; Veronika Rockova, Presidents' Award; and Emerging Leader Award winners Sandra Safo, Anru Zhang, Zheng Tracy Ke, Shu Yang, Jennifer Bobb, Abhirup Datta, and Bailey Fosdick

Jennifer Bobb

Kaiser Permanente Washington Health Research Institute

For significant methodological and applied contributions to the field of environmental biostatistics; for impactful research at the interface of cutting-edge statistical methods and real-world evidence to improve outcomes of people with substance use disorders; and for outstanding service to the profession.

Abhirup Datta

Johns Hopkins University Bloomberg School of Public Health

For fundamental methodological and theoretical contributions to geospatial statistics and machine learning with applications to the environmental and public health; for leading development and the application of Bayesian methods for improving mortality estimates in low- and middle-income countries; for prolific open-access software development; for being a role model in advising and mentoring of students and junior colleagues; and for service to the profession.

Daniele Durante

Bocconi University

For cutting-edge scientific contributions to statistical modeling of graphs; for Bayesian theory and methods for categorical data; and for exemplary service, dedicated mentoring, and creative outreach initiatives for early career data scientists.

Bailey Fosdick

GTI Energy and University of Colorado School of Public Health

For impactful statistical contributions in statistical network analysis methods; critical leadership for data-driven decision-making during the COVID-19 pandemic; and for the commitment to and advocacy for a more just, equitable, diverse, and inclusive society.

Zheng Tracy Ke

Harvard University

For pioneering contributions in statistical text analysis, especially optimal spectral algorithms for topic modeling; for outstanding contributions in developing statistical methods for complex network data, including mixed membership estimation and graph-cycle-count inference; for fundamental contributions in sparse inference and rare/weak signals; and for great services to the community such as organizing conferences and workshops and serving on various committees.

Sandra Safo

University of Minnesota

For significant contributions to statistical and machine learning methods for integrative analysis; for dedication to education and mentoring; and for far-reaching services to the profession and society.

Shu Yang

North Carolina State University

For fundamental contributions to the development of trial design and analysis using real-world data and causal inference methods for complex clinical and observational studies; for outstanding advising and mentoring; and for a pivotal role in bridging the gap between academia and the pharmaceutical and regulatory sectors.

Anru Zhang

Duke University

For exceptional contributions to high-dimensional statistical inference, statistical learning theory, and particularly for groundbreaking work on statistical tensor learning; for significant contributions to medical informatics and non-convex optimization; and for remarkable contributions to the statistical profession through mentorship of students and editorial services. ■

Regina Liu Wins 2024 Elizabeth L. Scott Award

Annie Qu

Eric Sampson/ASA

Regina Liu speaks during the JSM 2024 awards ceremony in Portland, Oregon.

Regina Liu received the 2024 Elizabeth L. Scott Award based on her outstanding achievements in research, education, service, and leadership and her superlative contributions to fostering opportunities for women, underrepresented groups, and junior researchers in statistics and nurturing their careers.

Liu holds the distinguished professor of statistics at Rutgers University. She has been part of the Rutgers community since 1983, serving as department chair from 2005–2020.

Liu is a world-renowned researcher in data depth and resampling. She introduced "simplicial depth" in the *Annals of Statistics* in 1990, which laid the foundation and framework for the notion of data depth. In 1999, her discussion paper in the *Annals of Statistics* developed data depth into a systematic multivariate statistical approach as a viable nonparametric alternative to the traditional normality-based approach. In addition, on resampling, Liu was among the first to make significant contributions to bootstrap outside the realm of independent and identically distributed settings. For example, her paper with Kesar Singh was the first to propose bootstrap for correlated data and coin the now standard terminology "moving block bootstrap."

Liu has an exceptional service record at Rutgers and in the statistics profession. She has served on numerous editorial boards and professional and university committees. In her service roles, she emphasizes the importance of female participation. An example of this is when she served as coeditor for the *Journal of the American Statistical Association* and made sure the editorial board included significant female and underrepresented members. She has also recommended and supported several female associate editors as they became chief editors.

Over the years, Liu has been appointed to many leadership roles. She served as the department chair at Rutgers for 15 years. Her vision and selfless efforts have been credited for the significant rise in the standing of Rutgers' department of statistics, and she has been a tireless advocate and mentor for junior faculty members. In addition, Liu is a great leader who put in many long hours and great effort toward her role as the former Institute of Mathematical Statistics president. Among her many initiatives and activities, diversity, equity, and inclusion were among her top priorities. She systematically recruited females and underrepresented groups to make sure they were well represented on IMS committees or in editorship positions. She also worked closely with the DEI committee to form new initiatives to broaden female membership.

Liu is a dedicated, inspirational professor and mentor to her students. She has been a role model for many students and junior researchers, especially female researchers. Many students and colleagues at Rutgers have benefitted from her kindness, generosity, wisdom, and high moral standards.

Liu is an outstanding, tireless, selfless, and courageous leader who has served as a role model and inspiration to many female statisticians. She exemplifies the true spirit of Elizabeth L. Scott's lifelong efforts to advance the careers of women in academia. ■

Citation

For her dedicated leadership and commitment to the statistical profession toward fostering opportunities, developing careers, and creating a supportive work environment for underrepresented groups and new researchers and for her outstanding research contributions to statistics, particularly in data depth and nonparametric statistics.

Tibshirani Wins 2024 COPSS Distinguished Achievement Award and Lectureship

Daniela Witten and Limin Peng

The Committee of Presidents of Statistical Societies selected Robert Tibshirani, professor of biomedical data science and professor of statistics at Stanford University, for the 2024 Distinguished Achievement Award and Lectureship. The award recognizes researchers who have made exceptional contributions to statistical methods with significant impact on scientific investigations. Tibshirani delivered the lecture at the 2024 Joint Statistical Meetings in Portland, Oregon. His lecture was titled "Pre-training and the Lasso."

Tibshirani has played a key role in many of the most important statistical developments of the past 40 years, including generalized additive modeling, false discovery rate estimation, the lasso and related methods for high-dimensional modeling, and post-selection inference. His early research on generalized additive models dramatically extended the flexibility of traditional linear regression, and generalized additive models are now standard techniques for nonparametric multiple regression.

Eric Sampson/ASA

Robert Tibshirani speaks during the JSM 2024 Awards Ceremony in Portland, Oregon.

Citation

For fundamental contributions to statistics and machine learning that have deepened, broadened, and created a bridge between those fields; for bringing key statistical ideas in multiple testing and high-dimensional learning to the broader scientific community; for high-impact textbooks on generalized additive models, the bootstrap, high-dimensional statistics, and statistical learning that have come to define those fields; and for outstanding mentoring of PhD students and junior researchers.

Tibshirani's work on the Least Absolute Shrinkage and Selection Operator (Lasso) was a breakthrough in statistical methodology and theory that has transformed the practice of feature selection and high-dimensional modeling in biomedicine and other scientific fields. The original paper on the Lasso has been cited over 55,000 times. Tibshirani's foundational contributions to the field of machine learning have bridged the gap between the algorithmic-type thinking that is pervasive in the field, and "classical" statistical thinking. He has also had a substantial impact on the field of genomics, through his pioneering work tackling the statistical challenges associated with high-throughput gene expression data, and by popularizing ideas in multiple testing and false discovery rate estimation for a wide biological audience. More recently, Tibshirani and his collaborators played a key role in developing the area of post-selection inference for penalized regression models; this work has contributed to moving the field of statistical machine learning from its original focus on prediction to its more recent focus on uncertainty quantification.

Tibshirani's work has received almost 500,000 citations, and he has an h-index of 181. In addition to hundreds of published articles, he has co-authored five best-selling textbooks on topics ranging from the bootstrap to generalized additive models to statistical machine learning. His talent of distilling a complicated idea into its most simple and accessible essence shines through in his textbooks. His co-authored textbook, *The Elements of Statistical Learning* (with T. Hastie and J. Friedman), is considered by many to be the "Bible of machine learning" and remains a key reference more than 20

years after its publication. As noted by his PhD advisor Brad Efron, "[Tibshirani] is arguably the most influential applied statistician working today." In the words of his PhD student Larry Wasserman, "Few statisticians have made a single contribution that has had a lasting impact on either the field of statistics or on fields that use statistical methods ... [he] has made a number of such contributions." In addition to his statistical brilliance, Tibshirani is known for his infectious enthusiasm, and for the mentoring that he has provided for generations of trainees.

Tibshirani received a bachelor of science in mathematics and statistics from the University of Waterloo in 1979, a master of science in statistics from the University of Toronto in 1979, and a PhD in Statistics from Stanford University in 1984. He then joined the University of Toronto faculty in 1985, where he stayed until moving to Stanford University in 1998.

Among his many awards, Tibshirani won the Guggenheim Foundation Fellowship (1994), the COPSS Presidents' Award (1996), the Gold Medal from the Statistical Society of Canada (2012), and the International Statistical Institute's Founders of Statistics Prize (2021). He is also a fellow of the Royal Society of Canada (2001), a fellow of the Royal Society of the UK (2019), and a member of the US National Academy of Sciences (2012). Tibshirani's fundamental contributions to methods, theory, and applications of statistics and machine learning make him a highly deserving recipient of the COPSS Distinguished Achievement Award and Lectureship. ■

Veronika Rockova Wins COPSS Presidents' Award

Veronika Rockova is a professor of econometrics and statistics and the James S. Kemper faculty scholar at the Booth School of Business at The University of Chicago. She joined Booth after completing her postdoctoral training in statistics at the Wharton School at the University of Pennsylvania. She earned a bachelor's degree in mathematics and a master's degree in mathematical statistics from Charles University in Prague. Subsequently, she pursued a master's degree in biostatistics at Hasselt University in Belgium and later completed her doctoral degree in biostatistics at Erasmus University in Rotterdam. Her research interests lie at the intersection of statistics and machine learning, with a primary focus on creating innovative decision-centric tools for extracting insights from extensive data sets. She specializes in Bayesian computation, variable selection, high-dimensional decision theory, and hierarchical modeling.

Veronika Rockova

The COPSS Presidents' Award citation recognized Rockova for pathbreaking contributions to theory and methodology at the intersection of Bayesian and frequentist statistics in the areas of variable selection, factor models, nonparametric Bayes, tree-based and deep-learning methods, high-dimensional inference, generative methods for Bayesian computation; for exemplary service to statistics; and for generous mentorship of students and postdoctoral researchers.

Citation

For pathbreaking contributions to theory and methodology at the intersection of Bayesian and frequentist statistics in the areas of variable selection, factor models, nonparametric Bayes, tree-based and deep-learning methods, high-dimensional inference, generative methods for Bayesian computation; for exemplary service to statistics; and for generous mentorship of students and postdoctoral researchers.

What was your first reaction to winning the prestigious COPSS Presidents' Award?

I was at a black-tie dinner event when I received a phone call from an unknown number. I did not answer, thinking it was spam. I then received a text message from Bo Li saying she had some important news for me. It was not until much later in the evening when it dawned on me that it might be COPSS. But this was the last thing I expected. The next day, Bo called me again and I cried on the phone. *How could it be me?*

What part of your job do you like the most?

The eureka moment of discovery. I like the confirmation of my intuition when research ideas work out the way I had anticipated. The best part is sharing such moments with my collaborators and students. Working

alone is not nearly as much fun. I enjoy exchanging ideas and mentoring. The progress and gratitude of my students/postdocs are the most rewarding.

What advice would you give young people entering the profession as PhD students and assistant professors?

I would advise them not to follow any advice. Just be yourselves and develop your own personal brand and style. Do not try to follow in someone's research footsteps. Create your own path, building on your own ideas despite what others may think.

MORE ONLINE
Learn more about Veronika Rockova at *www.magazine.amstatnews.org.*

Who are your most significant mentors? How did/do they impact your career?

My postdoc adviser Edward George has been my academic father. I do not think I would have turned out to be a professional academic if it had not been for him. He believed in me when others did not, including myself. He gave me a postdoc opportunity and provided me with a very encouraging environment. His mentorship included navigating tough academic waters as well as tenure pressure. I am trying to pay it forward with my advisees now. It is so important to be encouraging and to bring out the best in people. Ed taught me that. Besides Ed, my former PhD adviser Emmanuel Lesaffre who gave me my thesis topic "Bayesian Variable Selection." He triggered my interest in Bayes, advised my master's thesis in Belgium, and offered me a PhD position.

Why were you drawn to Bayesian statistics?

I took my first Bayesian class at Charles University in Prague while I was studying for my master's degree in mathematical statistics. That class was taught more as an obligation rather than as an integral component of the statistics curriculum. It was not until my Bayesian course at Universiteit Hasselt in Belgium (taught by Emmanuel Lesaffre) when I started appreciating the intuitive appeal of Bayes. It always felt to me like the most natural way of thinking. I lean towards things I understand more effortlessly. Bayes is still underrepresented, and I am particularly proud of being one of the few Bayesians to have won the COPSS Presidents' Award. Go Bayes!

How would you describe your statistics journey?

I love statistics. However, my path forward has not always been easy. Initially, I had to face challenges being one of the very few women in a mathematics (statistics) program at Charles University in Prague. I always felt like people, for some reason, did not expect much of me. I remember our mathematical analysis professor in the first semester starting off his first lecture with the statement: "At the end of the semester, most of you won't be here, especially women." I internalized this comment by assuming I was not supposed to be there. This feeling has never truly gone away.

Before I left to study for my second master's degree at Universiteit Hasselt in Belgium, one of the professors in Prague told me, "We hope we won't have to be ashamed of you," even though I was a straight A student. I may have looked for an escape and found the field of biostatistics as a viable alternative to mathematics.

At Universiteit Hasselt, and later during my PhD in biostatistics at Erasmus University in Rotterdam (the Netherlands), I felt like I had to overcome social integration challenges because I was born in Eastern Europe. Once again, I felt like people were making assumptions, which I had to try hard to dissolve.

Moving to the US was yet another challenge. I became a US citizen only a few months ago, but my social assimilation is still ongoing. I think the field of statistics (and econometrics) could be a bit less tribal and more open-minded. We are all trying to advance knowledge in the best way we can. I am happy that the Bayesian community quickly adopted me—I felt like I was accepted from the beginning. I do not think I can easily say that about many other academic environments I have been in. I like to think that regardless of who you are and where you come from, talent is universal. In my experience, statistics has a more supportive culture compared to other disciplines (such as economics or econometrics), however I think that there is still an unnecessary elitism with cellophane barriers to entry.

Finally, what are your hobbies/interests beyond statistics?

I have been playing classical piano since I was six and I still take lessons. Music is my creative outlet and a subtle mode of communication. I like that—unlike statistics—playing music involves not only good memory and brain acuity, but also emotional connection and expression. I feel more human when I play the piano. I am also an avid tennis player and a golf neophyte. ■

ICHPS 2025: Statistical Innovation to Improve Health Equity

An opportunity for professional growth, innovative thinking

Registration is open for the 15th International Conference on Health Policy Statistics, which will be held January 6–8, 2025, in San Diego, California, at the Hyatt Regency Mission Bay. Statisticians, health service researchers, health economists, epidemiologists, and policy analysts will gather to exchange and build on innovative ideas to improve health equity research. Following are several key features of the meeting.

Keynote Speakers

Whitney Robinson will discuss her experiences with interdisciplinary teams doing health services and equity research with examples from her work on gynecologic health using abstracted and structured electronic health record data linked to physician licensing data. She will argue that health systems often require compromising competing values, such as balancing the 'cleanness' of the data with the inclusiveness of the study populations, and that disciplines tend to prioritize these values differently. Robinson will make the case that explicit consideration of values and roles can improve work's rigor and translation into practice.

Robinson is an associate professor and faculty epidemiologist in the department of obstetrics and gynecology at Duke University School of Medicine. She is also a core faculty member in the Duke-Margolis Center for Health Policy and a member of the Duke Cancer Institute. Her ongoing research links health care systems and administrative data to investigate why Black women in the south are treated with hysterectomy at high rates at relatively young ages. In addition, Robinson often develops novel study design approaches to research population-level inequalities using regression-based analytic techniques. Unifying themes of Robinson's research are intersectionality, the public health critical race praxis, and life course theory.

Susan Paddock, executive vice president and chief scientist at NORC, will serve as discussant for the session.

The second keynote speaker is Sherri Rose, who will describe the challenges of conducting ethical research in the era of big data and AI. Ethics and fairness research for health AI spans many fields, including policy, medicine, computer science, sociology, public health, and statistics. Rose will discuss why algorithms are not neutral and data reflect societal bias. She will discuss team construction, minimum standards for research quality, rigor and reproducibility, least publishable units, and community-engaged research. Overarching themes are that centering health equity, developing methodology tailored to specific health questions, and rejecting harmful AI hype cycles are critical given the stakes involved.

Rose is a professor of health policy and codirector of the health policy data science lab at Stanford University. Her research centers on developing and integrating innovative statistical machine learning approaches to improve human health and health equity. Within health policy, Rose works on ethical algorithms in health care, risk adjustment, chronic kidney disease,

ICHPS Outreach Committee

Staci Hepler (chair), Wake Forest University

Sarah Lotspeich (co-chair), Wake Forest University

Nicholas Seewald, University of Pennsylvania

Elizabeth Eisenhauer, Westat

Ariadne Rivera Aguirre, New York University

Gary Hettinger, University of Pennsylvania

Statistical Innovation to Improve Health Equity
January 6–8, 2025
San Diego, California

MORE ONLINE
For more information and to register, visit *https://ww2.amstat.org/meetings/ichps/2025.*

and health program evaluation. Her honors include the National Institutes of Health Director's Pioneer Award, National Institutes of Health Director's New Innovator Award, and Mortimer Spiegelman Award, which recognizes a statistician under age 40 who has made significant contributions to public health statistics.

Haoda Fu, head of exploratory biostatistics at Amgen, will serve as discussant.

Workshops

The first day of the conference will feature 10 training workshops on topics such as statistical methods for policy evaluation and guidance for submitting trials to the National Institute on Aging. There will be an additional four workshops on the final day. Methodological topics will include heterogeneous treatment effect estimation, record linkage, Bayesian tree ensembles, Bayesian nonparametrics, feedback effects with time-dependent covariates, complex survey data, data-adaptive policy intervention design, and power analysis with planned error control for multiple outcomes. Other topics include synthesizing quantitative and qualitative methods for health policy evaluation and rethinking social identity data collection for equity. Additionally, the Alan Alda Center for Communicating Science will offer a workshop on effective communication.

The wide range of workshops will offer participants opportunities to learn and hone research skills to advance health equity. The full list of workshops and instructor(s) can be found at *ww2.amstat.org/meetings/ichps/2025/workshops.cfm*. Workshops can be added to a registration until December 4 for an additional $80 ($100 after December 4) and are available on a first-come, first-served basis. Students and participants from developing countries can add a workshop for $25.

Highlighted Invited Sessions

Concurrent sessions will take place on January 7–8. Invited and contributed sessions will cover diverse topics centered on this year's theme of "Statistical Innovations to Improve Health Equity." The 15 invited sessions focus on topics including methodological challenges such as complex study and survey designs, measurement error, data, and fusion. Many areas of real-world applications will also be discussed, from the overdose epidemic to mental health to LGBTQIA+ health.

Special Events

The conference will officially kick off the evening of January 6 with a welcome reception and poster session following the first keynote address. A continental breakfast will accompany the second poster session on the morning of January 7. Also on the program is a "Meet the Editor" session, which will bring together editors from methodological and applied journals to share their experiences, discuss characteristics of successful submissions, and highlight what health policy statistics researchers should (and should not) do as they seek to publish in high-impact publications.

An event of interest to students is a networking happy hour with several senior leaders in the field. It will provide an opportunity for students to gain insights into career directions. Additionally, the conference will conclude January 8 with a ceremony that recognizes students who received travel awards. Students also receive reduced conference and workshop registration.

Members of the Local Organizing Committee are planning activities to help conference attendees network in a less formal setting while also providing an opportunity to experience San Diego. The conference hotel, Hyatt Regency Mission Bay, is situated between downtown San Diego and La Jolla. It has several onsite amenities and is four blocks from historic Belmont Park. Limited rooms are available at a negotiated group rate if booked by December 12. ■

Call for Nominations: C. R. and Bhargavi Rao Prize

Members of the Rao Prize Committee are accepting nominations for the C. R. and Bhargavi Rao Prize for Outstanding Research in Statistics. The prize, awarded by the Penn State Department of Statistics, was established to recognize outstanding and influential innovations in the theory and practice of mathematical statistics, international leadership in directing statistical research, and pioneering contributions by a recognized leader in the statistics field.

The Rao Prize is awarded in odd-numbered years to an individual selected by the members of the Rao Prize Committee. The honoree receives a plaque and an invitation to visit Penn State to give a talk.

Nominations should include a letter describing the nominee's outstanding contributions to leadership and research in statistics, a current curriculum vita, and two supporting letters.

Submissions are due January 15, 2025, and should be emailed to Nicole Lazar, head of the department of statistics, at *nfl5182@psu.edu*.

C. R. Rao held the Eberly Chair in Statistics at Penn State from 1988–2001. He now serves as holder emeritus of the Eberly Chair in Statistics. He was the founding director of the Center for Multivariate Analysis. A President's National Medal of Science Laureate, Rao is recognized worldwide as a pioneer of modern statistical theory and one of the world's top five statisticians, with multifaceted distinctions as a mathematician, researcher, scientist, and teacher. His contributions to mathematics, statistical theory, and applications have become part of undergraduate and graduate courses in statistics, econometrics, and electrical engineering at universities worldwide. ■

Recent Rao Prize Honorees

2023: David Siegmund, Stanford University

2019: Grace Wahba, University of Wisconsin-Madison

2017: Donald Rubin, Harvard University

2015: Sir David R. Cox, University of Oxford

2013: Herman Chernoff, Harvard University (emeritus) and Massachusetts Institute of Technology

ASA Sections Offer Student Paper Awards

Many ASA sections sponsor student paper competitions to reward gifted students and help them mitigate the costs of attending Joint Statistical Meetings, which is an opportunity for students to get involved in the profession by presenting at the meetings.

Students can submit papers for awards from up to two sections; however, they cannot accept more than one prize.

Papers are due to the sections' award committees by November 15. Winners will be contacted by January 15, 2025. Winners must submit their abstracts via the JSM website at *ww2.amstat.org/meetings/jsm/2025/submissions.cfm* by February 3. Some sections schedule their student paper award winners in one JSM session, while others match each winner's topic with a similarly themed session.

Each section's award program varies in the submission requirements and what the winners receive. Find out which sections sponsor student paper competitions and get links for more information at *www.amstat.org/your-career/student-paper-competitions*. ■

View a comprehensive list of awards and scholarships by visiting *https://bit.ly/3XLGWcT* or scanning the QR code.

Hadley Wickham Wins 2025 ASA Statistical Computing and Graphics Award

The American Statistical Association Joint Statistical Computing and Statistical Graphics Section announced Hadley Wickham as the winner of the 2025 ASA Statistical Computing and Graphics Award. He received the award for his influence in statistical computing, visualization, graphics, and data analysis through significant contributions to R software.

Wickham is the chief scientist at Posit PBC, winner of the 2019 COPSS President's Award, and a member of the R Foundation. He builds computational and cognitive tools to make data science easier, faster, and more fun. His work includes packages for data science (e.g., the tidyverse, which includes ggplot2, dplyr, and tidyr) and principled software development (e.g., roxygen2, testthat, and pkgdown). He is also a writer, educator, and speaker promoting the use of R for data science.

Hadley Wickham

The ASA Statistical Computing and Graphics Award is the most prestigious award bestowed by the Joint Statistical Computing and Graphics Section. It recognizes an individual or team for innovation in computing, software, or graphics that has had a significant impact on statistical practice or research. Past awardees are Douglas Bates (2023), Howard Wainer (2021), Luke Tierney (2019), Bill Cleveland (2016), and Robert Gentleman and Ross Ihaka (2010).

The Award Committee consisted of the past and present chairs of the Statistical Computing Section (Claire McKay Bowen and Mine Cetinkaya-Rundel) and Section on Statistical Graphics (Susan VanderPlas and Lucy D'Agostino McGowan).

The award will be presented at the sections' mixer at the 2025 Joint Statistical Meetings in Nashville, Tennessee. Additionally, an invited session honoring Wickham will be organized by Joyce Cahoon. ■

Application Open for NSF Graduate Research Fellowship

Applications are being accepted for the National Science Foundation Graduate Research Fellowship Program, which recognizes and supports outstanding early-career graduate students who have demonstrated the potential to be high-achieving scientists and engineers.

Applicants must be pursuing full-time, research-based master's and doctoral degrees in science, technology, engineering, and mathematics or in STEM education at accredited US institutions.

The five-year fellowship provides three years of financial support inclusive of an annual stipend of $37,000.

The deadline to submit reference letters is October 11. Visit the application resources website at *https://nsfgrfp.org/applicants/application-resources* for additional information and details about how to apply.

Benjamini, Yekutieli, Heller Awarded Second Annual Rousseeuw Prize

Tel Aviv University's Yoav Benjamini, Daniel Yekutieli, and Ruth Heller received the Rousseeuw Prize for Statistics for their pioneering work on the false discovery rate.

The goal of the $1 million prize, given biennially by the King Baudouin Foundation, is to honor statistical research that has made a profound impact on society. In 2022, the first prize celebrated advancements in causal inference, and this year's award highlights the significance of false discovery rate and control methods.

The false discovery rate concept, first introduced in a 1995 paper by Benjamini and Yosef Hochberg, addressed a critical issue in scientific research: the risk of false discoveries when analyzing multiple hypotheses. Traditional methods, which aimed to control the probability of making even one false discovery (known as the family-wise error rate), often proved too stringent and limited the ability to identify true discoveries. In contrast, false discovery rate balances the need to control errors with the desire to maximize correct findings.

Yoav Benjamini

Daniel Yekutieli

Ruth Heller

ABOUT THE PRIZE

The Rousseeuw Prize highlights the continued relevance and importance of evolving and vibrant research on the false discovery rate. More information about the prize is available at *www.rousseeuwprize.org.*

Benjamini and Hochberg's method allows researchers to set a threshold for discoveries that adapt based on data, enabling more flexible and accurate results. Their work has been instrumental in fields such as genomics and brain research, in which the sheer volume of data requires sophisticated methods to distinguish true signals from noise. The false discovery rate has become a crucial tool in these areas, helping ensure scientific discoveries are both numerous and accurate.

Over the years, Benjamini, Yekutieli, and Heller have expanded the false discovery rate framework, developing new methodologies and applying them to various scientific domains. Their contributions have significantly advanced the field of statistics, providing researchers with powerful tools to extract meaningful insights from complex data. ■

Ellis R. Ott Scholarship Awardees for the 2024–2025 Academic Year

Each year, the Ellis R. Ott Scholarship Governing Committee awards two $7,500 scholarships to reward promising master's and PhD candidates pursuing degrees in statistics and related disciplines.

This year's recipients are:

- Valeria Ovalle Ocampo, MS, industrial engineering, University of Illinois at Chicago
- Luke Hagar, PhD, statistics, University of Waterloo

Valeria Ovalle Ocampo

Luke Hagar

Valeria Ovalle Ocampo
Awardee in the MS Category

Ovalle Ocampo completed numerous internships with Colombian companies and public institutions, where she used statistical studies to enhance plant production design aimed at improving the quality of the work environment and reducing musculoskeletal injuries.

She was also involved in a project geared toward implementing a standardized system for the improvement of management quality for a hospital serving the indigenous communities of the Valle del Cauca in Colombia. During this time, she helped with data collection from the Indigenous population of the Embera Chamí to devise projects that would help the hospital better serve the community.

She is currently working on her thesis, which focuses on ergonomics and human factors to improve workstation design to both optimize production and prevent overuse lower back injuries.

Ovalle Ocampo is passionate about improving industrial quality, and her primary goal is to become a lean manufacturing expert.

Luke Hagar
Awardee in the PhD Category

Hagar recently taught an undergraduate course at Waterloo in computational statistics and data analysis. He has also helped organize several conferences with the American Society for Quality and Statistical Society of Canada.

Hagar has conducted applied statistics research in collaboration with data scientists at Airbnb and linguistics professors to characterize variation in speech patterns. His research interests involve helping practitioners characterize real-life phenomena with flexible statistical models when designing studies. Since designing such studies typically requires intensive computer simulation, it is important to develop reliable and computationally efficient methods for study design.

The scholarship program honors Ellis R. Ott, founder of one of the earliest US-based applied and mathematical statistics departments at Rutgers University. Ott was a recipient of the Shewhart Medal and an early collaborator in the founding of the American Society for Quality.

Members of the Ellis R. Ott Scholarship Governing Board include Mark Vandeven (chair), William Henry, Mindy Hotchkiss, J. Stuart Hunter, Tom Murphy, Marcus Perry, Susan O. Schall, Ronald Snee, J. Richard Trout, Neil Ullman, and Lynne Hare.

Ellis R. Ott scholarships are awarded under the auspices of the Statistics Division of the American Society for Quality. More information can be found at *http://ellisottscholarships.org*. ■

Obituary

Greta Ljung

Greta Marianne Ljung, 82, former Boston University/MIT faculty member and principal scientist/statistician at AIR Worldwide, passed away peacefully in her home in Lexington, Massachusetts, on August 12, more than two and a half years after first being diagnosed with a rare form of cancer.

Ljung was born to Ellen and Johannes Ljung in the small town of Jeppo in the western part of Finland. The country was at war with Russia at the time and one of her first memories was of Russian planes dropping bombs on a nearby town while the family covered the windows with blankets to prevent their home from being seen at night. The war years brought much hardship, but the country prevailed.

Ljung graduated from high school near the top of her class and later studied at Åbo Academy in Finland, where she earned bachelor's and master's degrees in psychology. Following her graduation, she was a visiting fellow at the University of Uppsala in Sweden, where she had the opportunity to work with statistician and econometrician Herman Wold.

She later earned a PhD in statistics at the University of Wisconsin-Madison, where her adviser was the world-renowned statistician George E. P. Box. Their joint work resulted in several publications, including a 1978 *Biometrika* paper on a goodness-of-fit test for time series modeling—now often referred to as the Ljung-Box test. In 2016, she also became the co-author of the fifth edition of *Time Series Analysis: Forecasting and Control*, originally published by Box and Gwilym Jenkins in 1970. The importance of her published work is evidenced by more than 80,000 citations attributed to her by Google Scholar.


Greta Ljung

Ljung's professional work included faculty positions at Boston University and Massachusetts Institute of Technology. She was later principal scientist and chief statistician at AIR Worldwide in Boston, where she led the development of probabilistic models to estimate potential economic losses from natural hazards such as hurricanes, tornadoes, hailstorms, and wildfires.

She was a longtime member of the American Statistical Association and served as president of its Boston Chapter, covering five New England states. She served on several editorial boards and many committees. She always cared about the education of the next generations—twice she kindly donated many of her statistics textbooks and reference books to the department of mathematical sciences at Bentley University to support students.

After retirement, Ljung did volunteer work for several nonprofit organizations, including Finlandia Foundation in Boston. Her other interests included traveling, art, antiques, and outdoor activities such as gardening, swimming, and hiking. She was a passionate gardener and a strong advocate for the use of native plants to promote biodiversity and benefit wildlife.

Ljung is survived by her husband, Bert Beander, who she met in 1973 when they were graduate students at the University of Wisconsin. Long hours waiting for computer output in the university's computing center left plenty of time for conversation and led to a lifelong friendship and love between them.

She is also survived by her sister, Lisa-Teir Siltanen of Korsholm, Finland, and her brother, Stig Ljung of Ekenäs, Finland, as well as 10 nieces and nephews residing in Finland and Sweden. Her husband also had family in Sweden, and they made many trips to visit them over the years.

There will be a private burial at Westview Cemetery in Lexington, Massachusetts. In lieu of flowers, remembrances may be made to the Dana Farber Cancer Institute (*www.danafarber.org*) or Boston's Finlandia Foundation (*https://finlandiafoundationboston.com).*

Obituary

Shoutir Kishore Chatterjee

Shyamaprasad Mukherjee,
Retired Centenary Professor of
Statistics, University of Calcutta

The statistics community lost a luminary when Shoutir Kishore Chatterjee passed away on June 18, 2024, following a brief hospitalization at the age of 89. He leaves behind his son; daughter; two grandchildren; and numerous students, friends, and admirers. Chatterjee was associated with the department of statistics at Calcutta University for more than four decades and steered it as its captain for more than a quarter century.

He made significant contributions to promote quality and advance excellence in both teaching and research at Calcutta University and in statistics departments at other Indian universities. He left an indelible mark on the annals of statistics in India through numerous mentorship efforts and academic engagements. His research contributions to wide areas of statistical inference, along with their applications and uncanny devotion to foundations, inspired many.

A scholar par excellence, profound thinker, and scrupulous researcher, Chatterjee made seminal contributions to Stein-type sequential procedures in the multivariate set-up with nuisance-parameter–free performance. Subsequently, during his early research career, he delved into multivariate nonparametric inference methods, some carried out jointly with the late Pranab Kumar Sen.

Chatterjee's genuine curiosity and ensuing research seamlessly moved into other territories. For example, multivariate nonparametric tests against restricted alternatives, multivariate tolerance sets via density estimation, estimation of variance components, change detection and semi-sequential tests, variable selection in discrimination problems, and multiple scores in nonparametric testing. Chatterjee took a keen interest in, and contributed to, areas such as general asymmetric factorial experiments in estimation of the optimum point on a response surface.

His lectures inspired successive generations of students to carry on conducting research as part of their career goals in several areas Chatterjee touched on. He guided and supervised the research work of several scholars toward their PhD degrees, most of whom went on to earn wide international recognition for their contributions to statistics. The areas of research leading to his students' PhD dissertations covered aspects such as design and analysis of experiments, linear models, nonparametric and sequential inference, and the foundation of statistical inference.

Other than the PhD advisees whom he officially guided as a major adviser, Chatterjee energetically extended academic support to others, including his colleagues. He was invaluable as a resource to all who needed help.

Deeply engaged in statistical theory, Chatterjee also promoted statistics and its applications in various academic and other professional domains. For example, by taking part as the chair or member of university-wide committees and groups set up for such purposes. He guided activities of the Calcutta Statistical Association over a long time, served as its president, and served as the editor of the *Calcutta Statistical Association Bulletin*, a premier journal. He also served as a leader in organizing the Triennial Calcutta Symposium on Probability and Statistics, organized by the association with the department of statistics at Calcutta University.

Recognized by the University Grants Commission as a national lecturer, Chatterjee visited several universities in India and delivered short courses on advanced topics in their statistics departments. He was also instrumental in developing a modern curriculum in statistics at the undergraduate and postgraduate levels.

An embodiment of rectitude, Chatterjee acknowledged other's accomplishments while remaining silent about his own. Firm in his convictions, he was soft spoken and would gracefully accommodate others' views. He possessed profound knowledge of philosophy of religion and joined discussions on the subject regularly. Many of his colleagues, students, and friends sought his advice on complex problems in life—professional and personal. A tall man with simple

manners, he always extended a helping hand and ear.

Chatterjee authored *Statistical Thought: A Perspective and History,* which bears ample evidence of his deep insight into and genuine concern for minute details regarding the development of statistical methods and their applications through centuries. His other publication, *Human Development and its Quantification: A Holistic Approach*, reflected his concern for the holistic concept of human development and urge to make use of statistical, data-oriented methods for analytical treatments of debatable—and perhaps not so mainstream—issues of the importance in life. A preprint version appeared in *Sankhyā: The Indian Journal of Statistics*, Series B *(https://bit.ly/4dcGk4s).*

Chatterjee received many acknowledgements, awards, and accolades over the years for his scholastic accomplishments and human qualities. He presided over the Statistics Section of the Indian Science Congress in 1987, was awarded the Distinguished Teacher Award from the University of Calcutta, was selected as a national lecturer in statistics by the University Grants Commission from 1986–1987, and was selected as an Emeritus Scientist by the Council of Scientific and Industrial Research (India) from 1997–2000. Details about his life can be found in "A Conversation with Shoutir Kishore Chatterjee" in *Statistical Science (https://bit.ly/3XOSPiv).*

It is next to impossible to enumerate Chatterjee's lengthy list of virtues. His impact on statistical research and education in India and abroad will be felt for years to come. He will be sadly missed by his numerous students, admirers, friends, and colleagues. He shared his wisdom freely—as direct beneficiaries, we all mourn his loss, and we miss him.

JSM Sessions Focus on Privacy, Confidentiality

More than 20 sessions and panels centered on these issues in Portland

The 2024 Joint Statistical Meetings in Portland, Oregon, featured more than 20 sessions and panels about statistical data privacy and confidentiality. Following are a few highlights.

Multiple invited panel and paper sessions covering the federal statistical system, a new national data infrastructure, and national data governance highlighted the need for privacy-preserving technologies, tiered access regimes for data sharing, and a common approach to balancing the privacy and confidentiality of respondents against the needs for data sharing for public policymaking. Some speakers discussed specific research areas using statistical disclosure limitation to help share data to inform agricultural policies and access federal earnings data. In the case of accessing federal earning data, a discussion focused on the numerous ways the Internal Revenue Service's Statistics of Income program—one of the 13 federal statistical agencies—is exploring methods such as synthetic data, differential privacy, and secure remote queries to help researchers and policymakers gain better insights into individual and establishment earnings data.

A common session topic was the creation of synthetic data sets, such as in the context of federal statistics and health data. Panelists argued that among an arsenal of tools, synthetic data is one valuable tool for sharing and disseminating data. While it may not be the right tool for every situation, it provides another possible solution.

For example, data stewards can use synthetic data in a tiered access system in unison with other data-release methods. A session about generating synthetic data focused on use cases for when synthetic data is a feasible solution, such as allowing researchers to prepare code for their statistical analyses prior to accessing the confidential data. For this use, the synthetic data does not need to provide statistically valid results but could be a "mock data set" (i.e., a data set that has the same schema as the confidential data set). In other use cases, synthetic data will need to provide statistically valid results.

However, it is important to emphasize that synthetic data will never allow for the same richness of analyses as confidential data because the complexity of the statistical relationships in the synthetic data is limited by the sophistication of the synthetic data

The speakers all highlighted difficulties in communicating what risk and utility mean and the need to be able to better articulate these concepts.

generation model. In synthetic data, one can only detect those relationships, which are incorporated within the synthetic data model.

The tradeoff between disclosure risk and statistical utility is a key aspect of statistical data privacy, and numerous sessions highlighted this issue. One session focused solely on defining data utility. Although definitions vary in different contexts, the session speakers emphasized defining what utility of privacy-protected data means and preserving the usefulness of the data for research or policymaking.

Another session considered the tradeoff between risk and utility, with a focus on policy and proper implementation. Even just concretely defining what is meant by risk and utility is usually intricate and context dependent.

Each panelist provided their perspective on risk and utility, which differed in both subtle and not-so-subtle ways. One speaker advocated for differential privacy to numerically quantify risk, although they admitted differential privacy can be difficult to interpret and it is hard to achieve both satisfactory utility of the released data and meaningful privacy as measured by differential privacy.

Another speaker used the p-percent rule (i.e., whether the second-largest contributor can use the aggregate total to determine the largest contributor's value to within p-percent) to measure disclosure risk in some of their data releases. Risk and utility are context-dependent due to the wide variety of types of data that need to be protected (e.g., survey data, social science data, agricultural data, etc.) and the variety of formats of published data (e.g., tabular data, microdata, regression coefficients, etc.), so this makes the discussion complicated.

Ultimately, the speakers all highlighted difficulties in communicating what risk and utility mean and the need to be able to better articulate these concepts to a diverse set of stakeholders who have varying degrees of privacy expertise. ■

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.

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*.

Massachusetts

■ The Harvard Faculty of Arts and Sciences, Department of Statistics seeks to appoint a tenure-track faculty in Statistics. The application deadline is December 1, 2024. Please share our job posting with your network or apply here: *https://academicpositions.harvard.edu/postings/13763*. We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law.

Michigan

■ The University of Michigan Department of Biostatistics is seeking applicants for multiple open rank faculty positions with flexible starting dates. Candidates must have a strong research background with a PhD degree or equivalent in biostatistics, statistics, genetics, data science, computer science, bioinformatics, or other related quantitative discipline, and a strong research interest in health data science. For further details, visit: *http://apply.interfolio.com/152852.* Applications from women and minorities are encouraged. EOE/AA.

Missouri

■ Missouri University of Science & Technology invites applications for a Kummer Endowed Full or Associate Professorship in the Mathematics & Statistics Department, starting August 2025. The department seeks an excellent scholar with a mathematical or statistical research focus in data science. Learn more about the application process at *https://hr.mst.edu/careers.* (Position #00083283) and the department at *https://math.mst.edu*. Review of applicants will begin on October 15, 2024. The University of Missouri System is an Equal Opportunity Employer. Equal Opportunity is and shall be provided for all employees and applicants for employment on the basis of their demonstrated ability and competence without unlawful discrimination on the basis of their race, color, national origin, ancestry, religion, sex, pregnancy, sexual orientation, gender identity, gender expression, age, disability, or protected veteran status, or any other status protected by applicable state or federal law. This policy applies to all employment decisions including, but not limited to, recruiting, hiring, training, promotions, pay practices, benefits, disciplinary actions and terminations. For more information, visit *www.umsystem.edu/ums/hr/eeo* or call Human Resources at 573-341-4241. To request ADA accommodations, please call the Office of Equity & Title IX at 573-341-7734. ■

Top Ten **Ways to Improve JSM Based on the Paris Olympics**

Amstat News continues its entertaining offering by ASA Executive Director Ron Wasserstein, who delivers a special Top 10—one that aired during a recent edition of *Practical Significance*. Reflecting on the 2024 Joint Statistical Meetings held in Portland, Oregon, in August, Wasserstein says, "As often happens, JSM overlapped with the summer Olympics. As we look back on those glorious Olympics, the *Practical Significance* podcast team realized there were lessons for JSM that could be learned from the Olympics. So, here are the 'Top Ten Ways to Improve JSM Based on the Paris Olympics.'"

Wasserstein

PODCAST

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

10

To begin with, have JSM in Paris

09

A-list celebrities seen and photographed at plenary sessions

08

Attendees dress in the colors of their home country

07

Speed sessions involve actual running

06

Award medals to the top three speakers in every session, but …

05

Speakers are disqualified if they go over time or fail to get to at least half their slides

04

ASA president rides to the stage on a motorcycle with Tom Cruise

03

Potential host cities bribe ASA officials (wait, maybe that's not a good idea)

02

Simone Biles is the President's Invited Speaker

#01

Snoop Dogg

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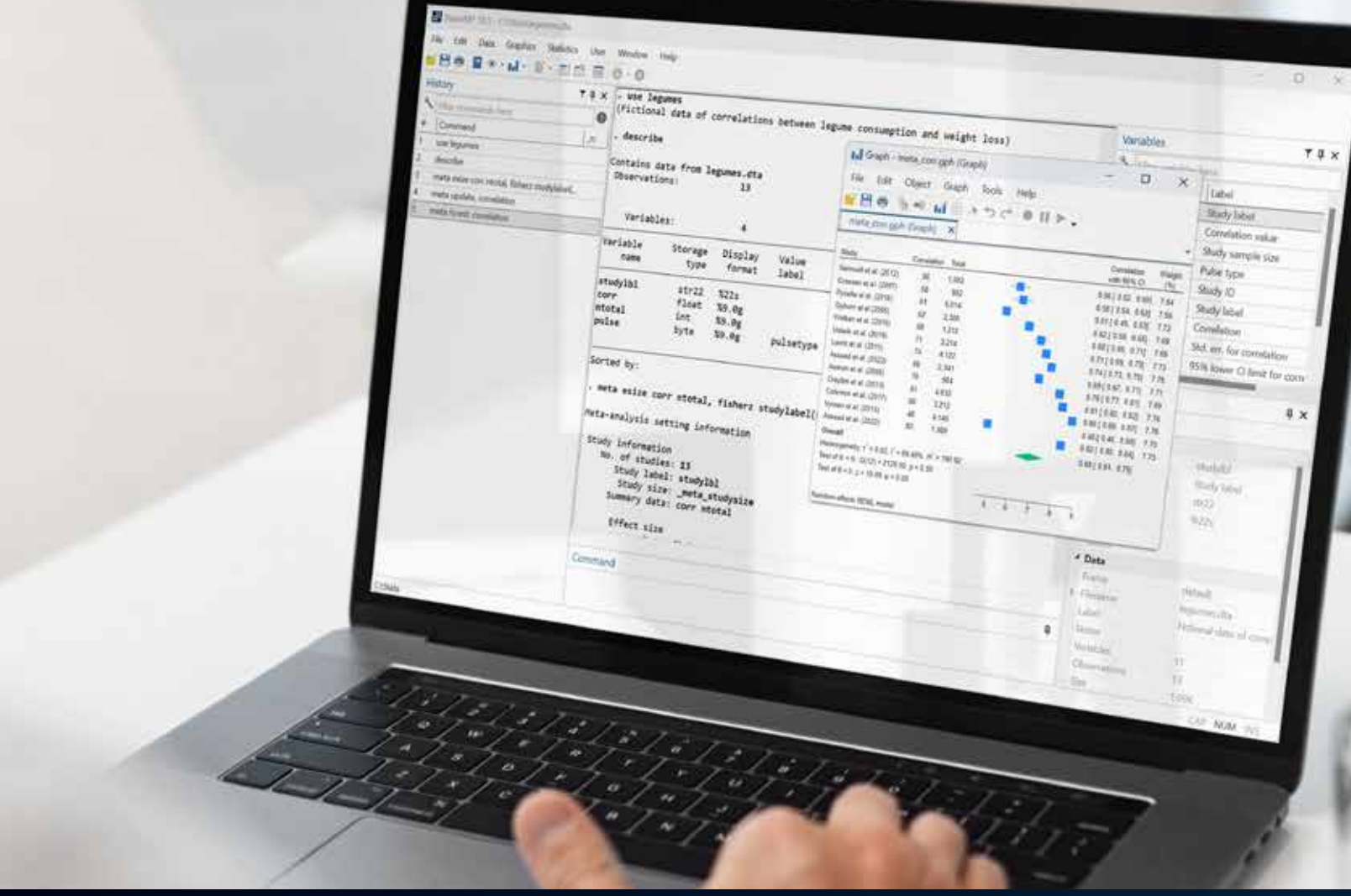

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