Volume 49 • Issue 7

IMS Bulletin

October/November 2020

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Read it online:
imstat.org/news

New IMS President welcomed

As you will have noticed, there was no physical IMS Annual Meeting this year, as it was due to be held at the Bernoulli–IMS World Congress in Seoul, which is now postponed to next year. This meant that the IMS meetings that would normally have taken place there were held online instead, including the handover of the Presidency (traditionally done by passing the gavel, but this year with a virtual elbow bump!). Susan Murphy [*below left*] handed the Presidency to Regina Liu [*below right*].

Look out for an article from Regina in the next issue.

There was also a virtual IMS Council Meeting this year, also held via Zoom, which included discussions about how the IMS can recruit more new members—and, crucially, retain our existing members. If you have any thoughts on this, do share them with Regina: president@imstat.org. There was also an update on the plans for the 2022 IMS Annual Meeting, which will be held in London, just before the COLT meeting (http://www.learningtheory.org/), with a one-day workshop of interest to both communities held in between the meetings. We'll bring you more information soon. Below is a screenshot from the Council meeting, with members of the Executive Committee, journal editors and elected members of Council.

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Executive Committee

IMS Members' News

David Madigan appointed provost of Northeastern University

Northeastern University has appointed David Madigan as the next provost and senior vice president for academic affairs. A distinguished and innovative leader, Madigan moved to Northeastern after a successful career at Columbia University, where he oversaw an academic and research enterprise across several schools and research centers as executive vice president for arts and sciences, and dean of the faculty of arts and sciences. Read more at https://news.northeastern.edu/2020/03/23/david-madigan-appointed-as-northeastern-university-provost-and-senior-vice-president-for-academic-affairs/

Rene Carmona and Michael Ludkovski awarded grant on Electricity Grid Reliability

Princeton University Operations Research and Financial Engineering (ORFE) Professor Rene Carmona and University of California at Santa Barbara Professor Michael Ludkovski, along with Professor Ronnie Sircar (ORFE) and Dr. Glen Swindle (Scoville Risk Partner), have been awarded $3.5 million in funding from the US Department of Energy's Advanced Research Projects Agency–Energy. The team will adapt the science of risk measures to quantify the reliability in production by individual electricity producers, from natural gas units to wind farms, and their aggregate impact on the stability of electricity grid operations.

Philip Ernst named inaugural Don Gaver, Jr. Early Career Award winner

Philip Ernst, Associate Professor of Statistics at Rice University, has been named the inaugural winner of the **INFORMS Don Gaver, Jr. Early Career Award for Excellence in Operations Research**, the first institute-wide early-career award from the Institute for Operations Research and the Management Sciences.

Philip Ernst was recognized for *"outstanding research accomplishments in operations research, probability and statistics, including solving a nearly 100-year old conjecture by Yule on nonsense correlation; for collaborating to solve outstanding problems in queueing, mathematical finance and optimal control; for outstanding teaching; and for mentoring of PhD students and postdoctoral fellows."*

Philip earned his MA and PhD in Statistics from the Wharton School of the University of Pennsylvania in 2010 and 2014, respectively; he joined the Rice faculty in 2014 and was promoted to associate professor with tenure in 2019. In 2018, Philip received the IMS Tweedie New Researcher Award, and the Young Investigator Award from the Mathematical Sciences Division of the Army Research Office. In 2019 he received the Teaching and Research Excellence Award from the George R. Brown School of Engineering. He also won from Rice the Nicolas Salgo Distinguished Teacher Award, the Sophia Meyer Farb Prize for Teaching and the Graduate Student Association Teaching/Mentoring Award.

Philip will receive the award at the annual INFORMS meeting, held virtually on November 11. The award includes an engraved citation plaque, a cash award and a professional development funding supplement.

The award is named for INFORMS fellow and NAE member Donald P. Gaver, Jr. (1926–2018), whose research focused on queueing systems, naval logistics and telecommunications. His obituary appeared in the last issue.

Myles Hollander Lecture

Nancy Reid announced as Inaugural Myles Hollander Distinguished Lecturer

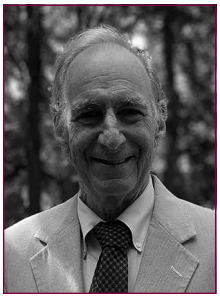
The Department of Statistics at Florida State University (FSU) is pleased to announce Nancy Reid, University Professor and Canada Research Chair in Statistical Methodology at the University of Toronto, as the inaugural speaker for its newly endowed Myles Hollander Distinguished Lecture. The lecture is co-sponsored by IMS.

Nancy Reid will present *"Three Rs—Reliability, Replicability, Reproducibility: The interplay between statistical science and data science,"* on October 30, 2020. For more information and to register for the virtual talk, visit stat.fsu.edu/HollanderLecture.

The Myles Hollander Distinguished Lectureship was established by the Robert O. Lawton Distinguished Professor and statistics professor emeritus at Florida State University Myles Hollander, in appreciation of the university, its statistics department, and the statistics profession. The annual lectureship will recognize an internationally renowned leader and pioneering researcher in statistics who has made a sustained impact on the field, and the lectures will feature topics spanning the breadth of statistics.

Nancy Reid obtained her PhD from Stanford in 1979 and taught at the University of British Columbia from 1980–85, before moving to the University of Toronto. Among her many professional honors are the COPSS Presidents' Award in 1992, Fellow of the Royal Society of London, Foreign Associate of the US National Academy of Sciences, and Fellow of the Royal Society of Canada. In 2014, she was appointed to the Order of Canada for her extraordinary contributions to the Canadian nation. Her research has had broad influence, including in statistical theory, likelihood inference, design of studies, and statistical science in public policy. Her main research contributions have been to the field of theoretical statistics. The goal is to use information from noisy data as efficiently as possible, and to elucidate general principles for doing so, in order to provide structures for developing new statistical methods in new areas of application.

Myles Hollander joined the FSU Department of Statistics in 1965 upon completion of his MS and PhD in Statistics at Stanford University, after earning his BS in Mathematics from Carnegie Institute of Technology. He made substantial and enduring research contributions to nonparametric statistics, reliability theory, survival analysis, biostatistics and probability theory, among other areas. Hollander co-authored textbooks on nonparametric statistics, biostatistics, and introductory statistics. He is a Fellow of IMS and ASA, and an Elected Member of the International Statistical Institute. Hollander served as editor of the *Journal of the American Statistical Association, Theory and Methods* (1994–96) after being Editor-elect (1993–94). In 2003, the American Statistical Association recognized him with the Gottfried E. Noether Senior Scholar Award for his excellence in theory, methodology, and applications in nonparametric statistics. At FSU, Hollander served as chair of statistics for nine years (1978–81 and 1999–2005). He received the Professorial Excellence Award in 1977, was named Distinguished Research Professor in 1996, and in 1998 was named Robert O. Lawton Distinguished Professor, the highest honor Florida State faculty bestow upon one of their own. He retired in 2007 after 42 years of service.



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IMS Journals and Publications

Annals of Statistics: Ming Yuan, Richard Samworth
https://imstat.org/aos
https://projecteuclid.org/euclid.aos

Annals of Applied Statistics: Karen Kafadar
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Annals of Probability: Amir Dembo
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Annals of Applied Probability: Francois Delarue, Peter Friz
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Statistical Science: Sonia Petrone
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IMS Collections
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IMS Monographs and *IMS Textbooks:* Nancy Reid
https://www.imstat.org/journals-and-publications/ims-monographs/

IMS Co-sponsored Journals and Publications

Electronic Journal of Statistics: Domenico Marinucci
https://imstat.org/ejs
https://projecteuclid.org/ejs

Electronic Journal of Probability: Andreas Kyprianou
https://projecteuclid.org/euclid.ejp

Electronic Communications in Probability: Giambattista Giacomin
https://projecteuclid.org/euclid.ecp

Journal of Computational and Graphical Statistics: Tyler McCormick https://www.amstat.org/ASA/Publications/Journals.aspx
log into members' area at imstat.org

Statistics Surveys: David Banks
https://imstat.org/ss
https://projecteuclid.org/euclid.ssu

Probability Surveys: Ben Hambly
https://imstat.org/ps
https://www.i-journals.org/ps/

IMS-Supported Journals

ALEA: Latin American Journal of Probability and Statistics: Roberto Imbuzeiro Oliveira
http://alea.impa.br/english

Annales de l'Institut Henri Poincaré (B): Grégory Miermont, Christophe Sabot
https://imstat.org/aihp
https://projecteuclid.org/aihp

Bayesian Analysis: Michele Guindani
https://projecteuclid.org/euclid.ba

Bernoulli: Mark Podolskij, Markus Reiß
https://www.bernoulli-society.org/
https://projecteuclid.org/bj

Brazilian Journal of Probability and Statistics: Enrico Colosimo
https://imstat.org/bjps
https://projecteuclid.org/bjps

IMS-Affiliated Journals

Observational Studies: Dylan Small
https://obsstudies.org/

Probability and Mathematical Statistics: K. Bogdan, M. Musiela, J. Rosiński, W. Szczotka, & W.A. Woyczyński
http://www.math.uni.wroc.pl/~pms/

Stochastic Systems: Shane Henderson
https://pubsonline.informs.org/journal/stsy

C.R. Rao at 100

Terry Speed had the tough task of outlining a very long—and extraordinarily productive—life, to mark C.R. Rao's 100th birthday: Professor Calyampudi Radhakrishna Rao (hereafter CRR) was born on September 10, 1920 in Hadagali, Karnataka State, India. He received an M.A. in mathematics in 1940 from Andhra University and an M.A. in statistics in 1943 from Calcutta University. From Cambridge University, he received a PhD in 1948, completing a thesis entitled *"Statistical Problems of Biological Classification"* under the statistician and geneticist R.A. Fisher.

CRR's research career was truly remarkable. He had no knowledge of statistics prior to joining the Indian Statistical Institute (ISI) in 1941 for a one-year training course, yet within a few months he was publishing research in experimental design jointly with K.R. Nair. At about this time, Calcutta University started a master's degree program in statistics, and CRR transferred to that, completing it two years later in mid-1943. By then he had well established research interests in combinatorial design, linear statistical estimation, multivariate statistical analysis and statistical characterization problems. These were to remain the broad themes of his lifelong research. The design research in his M.A. thesis led to his landmark 1947 paper introducing orthogonal arrays, which are widely-used combinatorial entities finding applications in the statistical design of experiments, coding theory, cryptography and software testing. The linear model research in this thesis took off from contributions of his teacher R.C. Bose, while multivariate analysis research extended methods CRR learned from S.N. Roy. Some was published soon after presenting the thesis, while much more was further developed over the next three years. The last part of this outstanding M.A. thesis published in 1947 solved a characterization problem involving the linearity of regressions posed in econometrics. It foreshadowed a lifelong interest in both topics. CRR was a co-founder of the Indian Econometric Society, and in 1972, with two top Russian mathematicians, he co-authored a pioneering book on characterization problems in statistics.

Following the completion of his outstanding M.A. degree, CRR was appointed by P.C. Mahalanobis to a position as technical apprentice in the Indian Statistical Institute (ISI). His duties were to assist Mahalanobis in the editorial work of *Sankhyā, the Indian Journal of Statistics*, and to take charge of the data analysis for an anthropometric project involving 9–11 measurements on about 4,000 individuals from the Indian state of Uttar Pradesh collected during the 1941 census. He also lectured part-time at Calcutta University to the master's class he had recently left. CRR had been unusually productive while completing his M.A., but in the period between then and his departure for Cambridge in August 1946 he was extraordinarily so. In that two-and-a-half years, he established himself as a world leader in statistics. His most famous publication from that time is a 1945 paper in which he derives a lower bound on the variance of an unbiased estimator of an unknown parameter. This result came to be known as the Cramér–Rao inequality, as it was derived independently by H. Cramér in 1946, and also M. Fréchet in 1943 and G. Darmois in 1945. The result is entirely analogous to the famous 1927 quantum mechanical uncertainty principle of W. Heisenberg and is derived in a similar manner. This paper also contains an important application of Fisher's sufficiency, now known as Rao–Blackwellization, as the idea was independently discovered by D. Blackwell in 1947, and the introduction of differential geometric notions into parametric statistical inference, a development that subsequently grew into a very active subfield of statistics. His geodesic distance between populations (distributions) extended those of Mahalanobis and Bhattacharya, and is used today in ecology. A noteworthy short paper from this period by CRR and his ISI colleague S.J. Poti gave the first example of a score test to test a null-hypothesis with a one-sided alternative. A couple of years later, during his PhD research with Fisher, CRR met a testing problem in genetics for which the score test provided an appropriate solution, and developed a general large sample theory for such tests. In 1948 he published this theory, and now it is recognized as the important closing of a triangle in the likelihood graph, the other two sides of which are J. Neyman and E.S. Pearson's 1933 likelihood ratio tests, and the 1943 tests of A. Wald. Score tests have had an enormous impact in statistics, especially in econometrics. Other substantial research contributions in this period include further work on a general theory of least squares and tests with discriminant functions in multivariate analysis. The latter was motivated by CRR's desire to develop further the ideas of Fisher and Mahalanobis, especially as they related to his ongoing anthropometric studies, which were not to be completed and published until 1949, after his return from Cambridge to Calcutta.

In 1946 Mahalanobis received a request from J. Trevor of the Anthropology Department of Cambridge University, to send someone who could use methods of multivariate analysis developed at the ISI to analyse measurements made on skeletal material dug out from ancient graves in Africa, to trace the origin of the people who lived in the region. CRR was deputed to work on the project and spent the years 1946–48 in Cambridge as a Research Scholar at the University Museum of Archaeology and Ethnology. He produced a report on the statistical analysis of the skeletal measurements, which was incorporated in his thesis for the PhD degree. At the same time he was working in Fisher's lab experimenting on mice, a requirement by Fisher to be his thesis advisor. This was yet another extraordinarily fruitful time for CRR. His research with the University Museum led to major contributions to the field of multivariate analysis, including a read (Discussion) paper at the Royal Statistical Society, two short notes in the journal *Nature* on biological classification, and an application of his methods to psychometrics. His studies with Fisher stimulated the general score statistics theory mentioned above, and led to a fine paper in the journal *Heredity* on three-factor linkage analysis in mice, while he continued to contribute to design of experiments and linear model theory. Two themes from this period were to be more fully developed in later papers, and summarized and illustrated in his highly successful books *Advanced Statistical Methods in Biometric Research* (1952) and *Linear Statistical Inference and Its Applications* (1965, 1973). His Indian anthropometric work was published in 1949, while his Cambridge work was published 1955. By the time he left Cambridge, CRR had made a number of seminal contributions to statistics, and with hindsight we recognize him as one the leading statisticians in the world. However, at that time his contributions were not fully recognized, and it took perhaps a decade or more for the statistical community to recognize his achievements fully.

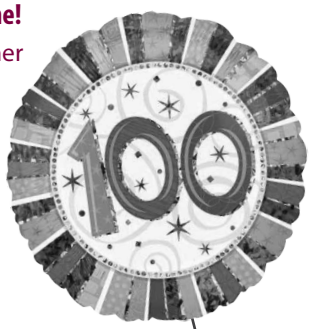
Shortly after his return to Calcutta in 1948, CRR was appointed Professor and head of the Research and Training School at the ISI. This was the beginning of his 30-year role as a leader of the ISI, culminating in his succeeding Mahalanobis as Director-Secretary in 1972. He strengthened the international reputation of the ISI, and he encouraged and supervised 51 research students, many of whom had outstanding research careers in their own right (and according to the Mathematics Genealogy Project, he has 671 academic descendants).

CRR's scientific career continued unabated, with research on growth curves, variance components, second-order efficiency, generalized inverses, and much else—including a popular book *Statistics and Truth: Putting Chance to Work*. His achievements have been recognized throughout the world through prizes, medals, memberships of learned academies and honorary degrees (see box below left).

C.R. Rao: Selected Awards and Achievements

- **Padma Vibhushan, the Government of India's second highest civilian award**
- **Swarup Bhatnagar Award, Council of Scientific and Industrial Research, India**
- **National Medal of Science, USA**
- **India Science Award**
- **ISI Mahalanobis Prize; ISI President**
- **Fellow of the Royal Society**
- **IMS Wald Lecturer; IMS President**
- **Awarded 39 honorary doctoral degrees from universities in 19 countries around the world**
- **Author of over 475 papers and 15 textbooks**
- **Samuel S. Wilks Memorial Award, ASA**
- **Life Fellow of Kings College, Cambridge**
- **Royal Statistical Society's Guy Medal in Gold and in Silver**
- **Jerzy Spława-Neyman Medal, from the Polish Statistical Association**

Read our birthday messages to CRR online!



Anirban DasGupta has collected together birthday messages and tributes to CRR from over 30 leading statisticians from around the world, whose work and lives have been touched by him. Read tributes from **G. Jogesh Babu, A. John Bailer, Anil K. Bera, Jim Berger, Rabi Bhattacharya, Mary Ellen Bock, Florentina Bunea, Herman Chernoff, Anirban DasGupta, Morris Eaton, Piet Groeneboom, David J. Hand, David R. Hunter, Ildar Ibragimov, Iain Johnstone, Hira Koul, Soumendra Lahiri, Runze Li, Wei-Liem Loh, Amita and Partha Majumder, Susan Murphy, Vijay Nair, Michael Perlman, Dominique Picard, Dimitris Politis, B.L.S. Prakasa Rao, Indrani Saha, Bimal Sinha, Kalyan Sinha, Terry Speed, Michael Stein, Bill Strawderman, Sara van de Geer, S.R.S. Varadhan, Brani Vidakovic** and **Larry Wasserman**.

Read them at **https://imstat.org/2020/09/30/c-r-rao-at-100/**

Rina Foygel Barber: 2020 COPSS Presidents' Award

Rina Foygel Barber is Professor in the Department of Statistics at the University of Chicago. Before starting at University of Chicago, she was an NSF postdoctoral fellow during 2012–13 in the Department of Statistics at Stanford University, supervised by Emmanuel Candès. She received her PhD in Statistics at the University of Chicago in 2012, advised by Mathias Drton and Nathan Srebro, and a Master's in Mathematics at the University of Chicago in 2009. Prior to graduate school, she graduated with a Sc.B. in Mathematics from Brown University in 2005, and was a mathematics teacher at the Park School of Baltimore from 2005 to 2007.

The Presidents' Award parallels the Fields Medal in mathematics and is given annually by the Committee of Presidents of Statistical Societies to a younger member of the statistical community in recognition of outstanding contributions to the profession. The Presidents' Award, along with the International Prize in Statistics, are the two highest honors in Statistics, and it has been described as the "Nobel Prize of Statistics."

Dr. Barber was recognized for her fundamental contributions to statistical sparsity and selective inference in high-dimensional problems; for the creative and novel knockoff filter to cope with correlated coefficients; for contributions to compressed sensing, the jackknife, and conformal predictive inference; and for her encouragement and training of graduate and undergraduate students.

Huixia Judy Wang, COPSS secretary/treasurer, took a moment to ask Dr. Barber several questions, which she answers here.

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

I was stunned! There are so many phenomenal researchers in our field, and so many fascinating new ideas and findings each year. It's an incredible honor to be selected.

Which part of your job do you like the most?

There are so many aspects of my work that I enjoy. I am fortunate to have worked with so many wonderful, talented, and creative students, and to have enjoyed collaborations with colleagues around the world who constantly inspire me and who have taught me so much. My favorite moments are when I have the chance to meet with students or collaborators to brainstorm and explore new ideas. I also enjoy teaching, and developing new ways to present topics or engage with students in the class. I appreciate that this job is very flexible, and the statistics community is very welcoming and family-friendly—with two young children, it's great to be able to work from home and set my own schedule, and I love that my kids are always welcome on campus too.

What advice would you give to young people who are entering the profession as PhD students and assistant professors at this time?

They are making a great decision! Statistics is such a dynamic, broad, and fascinating field, and there is such a wide variety of directions to pursue as a career. I would advise new statisticians to search for ideas, problems, and applications that they find fascinating and would love to learn about, even if working in those areas doesn't seem like it will be immediately productive – investing in broader knowledge and perspectives is always worth it in the long term, in order to pursue deeper questions and to maintain passion for our work.

Who are your most significant mentors? How have they impacted your career?

I have been fortunate to have phenomenal mentors throughout my career. In particular, I am so lucky to have worked with my PhD advisors, Mathias Drton and Nathan Srebro, and my postdoc supervisor, Emmanuel Candès. I learned so much from working with each of them, and have benefited immensely from their insight and mentorship. They have encouraged me to seek challenges and broader perspectives in my work and have offered invaluable guidance and support. My colleagues in my department have also been an amazing source of support, mentorship, and advice. Finally, I am immensely grateful to my parents and my husband—in addition to their constant support, their own passion for their work in the sciences and the arts has inspired me throughout my career.

Why were you drawn to high dimensional data, optimization and multiple testing?

For me, these areas offer the opportunity to study questions that are both mathematically beautiful and extremely practically relevant. I first became interested in these areas after learning about compressed sensing early on in my PhD, and have been fascinated by these topics ever since. I love that these topics lead to many

surprises, where research in this community takes a sudden turn to discover new ideas about methods that were previously believed to be fully understood, or problems that were previously believed to be impossible. Looking ahead, I'm excited to see how work in these fields continues to integrate with modern large-scale applications and with machine learning tools.

Anything else you will like to share about our profession?

I am incredibly grateful to be a part of this community, and am constantly inspired by the amazing work of my colleagues. I am also proud to see so many people in our field working towards equality, diversity, and social justice, as well as contributing in countless ways to help support all the efforts of the medical and public health fields during the coronavirus pandemic.

Finally, what are your hobbies/interests beyond statistics?

I love to be outside with my kids and to explore Chicago with them. I also love to read, and enjoy knitting and barre fitness.

Correction: *In the last issue, when announcing this award, we incorrectly stated that Rina was this year's Tweedie Award winner. The 2020 Tweedie Award winner is Adel Javanmard. Rina is this year's IMS Peter Gavin Hall Early Career Prize winner (and she won the Tweedie Award in 2017). Sorry for any confusion!*

Nominations sought for 2021 COPSS Awards

Please visit https://community.amstat.org/copss/home for details of eligibility and nomination requirements for all these awards. Please send your nomination, preferably by email in PDF format, to the committee chair for each award. The deadline for all these nominations is December 15, 2020.

New COPSS Leadership Academy Award: page 9

COPSS Presidents' Award

The Presidents' Award is presented annually to a young member of one of the participating societies of COPSS in recognition of outstanding contributions to the statistics profession. It is typically granted to an individual who either (i) has not yet reached his or her 41st birthday during the calendar year of the award or (ii) will be under age 46 throughout the award calendar year and will have received a terminal statistically-related degree no more than 12 years prior to that year (see COPSS website for more details on eligibility criteria).

Send nominations to **Paul Gustafson**, Chair, COPSS Presidents' Award Committee, and Professor, Department of Statistics, University of British Columbia

e gustaf@stat.ubc.ca

George W. Snedecor Award

The George W. Snedecor Award is presented biennially (odd-numbered years) to honor an individual who has been instrumental in the development of statistical theory in biometry and with a noteworthy publication in biometry within three years of the date of the award.

Send nominations to **Kerrie Mengersen**, Chair, COPSS GW Snedecor Award Committee, and Professor of Statistics, Queensland University of Technology

e k.mengersen@qut.edu.au

Distinguished Achievement Award and Lectureship

The Distinguished Achievement Award and Lectureship is given yearly to an individual in recognition of outstanding contributions to statistical methods that have had significant impact on scientific investigations. This award was formerly known as the RA Fisher Lectureship award from 1963–2019. The 2021 award winner will deliver the lecture at the JSM in Seattle.

Send nominations to **Daniela Witten**, Chair, COPSS Distinguished Achievement Award and Lectureship Committee, and Professor, Department of Biostatistics, University of Washington

e dwitten@uw.edu

F.N. David Award and Lectureship

The F.N. David Award and Lectureship are presented biennially (odd-numbered years) to a female statistician who serves as a role model to other women by her contributions to the profession through excellence in research, the leadership of multidisciplinary collaborative groups, statistics education, or service to the professional societies. The 2021 award winner will deliver the F.N. David Lecture at the JSM in Seattle.

Send nominations to **Nancy M. Gordon**, Chair, COPSS FN David Lecture and Award Committee, and Retired Associate Director for Innovation, US Census Bureau

e nancymg@mac.com

Nominate for an IMS Award

Peter Gavin Hall IMS Early Career Prize

https://www.imstat.org/ims-awards/peter-gavin-hall-ims-early-career-prize/

Peter Hall played a significant role throughout his professional career in mentoring young colleagues at work and through professional society activities. The Peter Gavin Hall Early Career Prize recognizes early career (PhD in 2013-2020) research accomplishments and research promise in statistics, broadly construed. Nomination deadline is December 1st.

Tweedie New Researcher Award

https://imstat.org/ims-awards/tweedie-new-researcher-award/

The 2021 Tweedie New Researcher Invited Lecture will be delivered at the 2021 New Researchers Conference, immediately before JSM in Seattle (meeting details to follow). New researchers (PhD in 2016–2020), who are members of IMS, are eligible. Nominations for the award are due December 1.

IMS Fellows

https://www.imstat.org/honored-ims-fellows/nominations-for-ims-fellow/

Past IMS President Alison Etheridge called for more diversity in Fellows nominations [*see Philip Protter's article in the Oct/Nov 2018 issue for some words of advice*]. Candidates for IMS Fellowship shall have demonstrated distinction in research in statistics or probability, by publication of independent work of merit. This qualification may be partly or wholly waived in the case of either a candidate of well-established leadership whose contributions to the field of statistics or probability other than original research shall be judged of equal value; or a candidate of well-established leadership in the application of statistics or probability, whose work has contributed greatly to the utility of and the appreciation of these areas. Candidates for fellowship should be members of IMS when nominated (you can email Elyse Gustafson erg@imstat.org to check this before you start). The nomination deadline is January 31.

Harry C. Carver Award

https://www.imstat.org/ims-awards/harry-c-carver-medal/

Nominations are invited for the Carver Medal, created by the IMS in honor of Harry C. Carver, for exceptional service specifically to the IMS. All nominations must be received by February 1.

…or apply for a Travel Award

Applications are also open for our two travel awards. The **IMS Hannan Graduate Student Travel Award** funds travel and registration to attend (and possibly present a paper/poster at) an IMS sponsored or co-sponsored meeting. This award is for graduate students (Masters or PhD) in statistics or probability. If you are a New Researcher (awarded your PhD in 2015–20), you should apply for the **IMS New Researcher Travel Award** to fund travel, and possibly other expenses, to present a paper or a poster at an IMS sponsored or co-sponsored meeting. Applicants must be members of IMS, though joining as you apply is allowed (student membership is free and new graduate membership discounted!). The deadline for both is February 1, 2021. See https://www.imstat.org/ims-awards/ims-hannan-graduate-student-travel-award/ and https://www.imstat.org/ims-awards/ims-new-researcher-travel-award/.

Breakthrough Prizes

Professor Sir Martin Hairer has won the 2021 Breakthrough Prize in Mathematics. Professor Hairer, Imperial College London, is recognised *"for transformative contributions to the theory of stochastic analysis, particularly the theory of regularity structures in stochastic partial differential equations."*

He receives US$3 million and a trophy, to be presented at a live awards ceremony next year, and will engage in a program of lectures and discussions.

The Breakthrough Prizes are the largest prizes in science. They aim to "help scientific leaders gain freedom from financial constraints to focus fully on the world of ideas; to raise the profile and prestige of basic science and mathematics, fomenting a culture in which intellectual pursuits are validated; and to inspire the next generation of researchers to follow the lead of these extraordinary scientific role models."

An interview with Professor Hairer, including more detail about his research, his inspiration, and what it feels like to win, is at https://www.imperial.ac.uk/news/203853/imperial-mathematician-scoops-3m-breakthrough-prize/

Also among this year's three Maryam Mirzakhani New Frontiers Prize winners are Nina Holden, ETH Zurich (*for work in random geometry, particularly on Liouville Quantum Gravity as a scaling limit of random triangulations*) and Lisa Piccirillo, MIT, (*for resolving the classic problem that the Conway knot is not smoothly slice*—see **Radu's Rides** on page 12).

Nominate for COPSS Leadership Academy Award

New award created for "Emerging Leaders in Statistics"

The **COPSS Leadership Academy Award** was established in 2020 to recognize early career statistical scientists who show evidence of and potential for leadership and who will help shape and strengthen the field.

The award is designed both to call attention to the efforts of these individuals and to provide a mechanism for them to share their vision for the field with each other and the statistical community. The award is open to all junior members of the international statistical community. Specifically, eligible candidates either (i) will be under age 36 throughout the award calendar year, or (ii) will be under age 41 throughout the award calendar year and will have received a terminal statistically-related degree no more than 10 years prior to that year. For example, an individual eligible for 2021 nomination must either (i) have been born in 1986 or later, or (ii) must have been born in 1981 or later with terminal statistically-related degree dated 2011 or later. For potential nominees with significant parenting responsibilities, a 1.5 year extension to the age limit will be granted. Nominees must also be a member of at least one of the COPSS and Friend Societies.

Members of the Leadership Academy will be selected based on outstanding contributions to the field of statistical science in one or more of the following areas: education, training, and mentoring; original research and software development; impactful and ethical practice; and service to the profession and to society.

Nominations must be sent by January 15, 2021, preferably by email in PDF format, to:

Catherine Calder
Chair of the COPSS Leadership Academy Award Committee, and Professor in the Department of Statistics and Data Sciences at the University of Texas at Austin
Email: calder@austin.utexas.edu

For more details on the award, its eligibility criteria, and the nomination process, please visit: https://community.amstat.org/copss/awards/leadership-academy

Nomination are also open for the other COPSS awards (Presidents' Award, Distinguished Achievement Award, F.N. David Award, G.W. Snedecor Award): see the calls on page 7.

https://worldstatisticsday.org

The third World Statistics Day will be celebrated around the globe on 20 October 2020 with the theme "Connecting the world with data we can trust". This theme reflects on the importance of trust, authoritative data, innovation and the public good in national statistical systems. The website above provides a platform to host national events so the global statistical community can virtually come together on 20 October 2020. What are ***you*** planning?

Saul Blumenthal

1935–2018


The Ohio State University
Saul Blumenthal

Saul Blumenthal, Professor Emeritus at The Ohio State University, passed away on Saturday, March 10, 2018, aged 82. Born in Philadelphia, Saul received his undergraduate and doctoral degrees from Cornell University. After serving on the faculty at the University of Minnesota, Rutgers, New York University, the University of Kentucky, and University of Illinois, he moved to Columbus and joined the Department of Statistics at The Ohio State University in 1983. He retired from OSU in 2006.

Saul was elected an IMS Fellow in 1977. He was the Managing Editor for Statistics during 1996–98.

Saul was an avid tax preparer with the AARP Tax Preparer program and was a board member of Chamber Music Columbus.

Saul was survived by his wife, Linda Karp Blumenthal; daughter Alice and sons Edward and David, and seven grandchildren.

Departmental obituary: https://stat.osu.edu/saul-blumenthal

Obituary: Hélène Massam

1949–2020

Hélène Massam

IMS Fellow Hélène Menexia Massam, Professor of Statistics at York University, Toronto, died on August 22, 2020 at the age of 71.

Née Kampouris, Hélène was born January 10, 1949 and grew up in Marseille, France. Soon after her admission to the École normale supérieure de Fontenay-Saint-Cloud at the age of 20, she followed geographer Bryan Massam to Montréal, Québec, and studied mathematics at McGill University (BSc '71; MSc '73; PhD '77). Her thesis in optimization was supervised by Sanjo Zlobec. She then moved with her family to Ontario, where she was a Research Associate (1977–78), a Postdoctoral Fellow (1978–81), and a Lecturer (1981–84) at the University of Toronto. Her interest in statistics was aroused by Don Fraser, with whom she collaborated throughout that period.

Hired by York University as an Assistant Professor in 1984, Hélène was promoted to the rank of Associate in 1988 and became a Full Professor in 1996. York remained her academic home to the end of her life, except for a leave without pay at the University of Virginia from 1997 to 2001. Sabbaticals allowed her to spend time abroad, notably in France, Italy, and Tunisia.

Hélène's first major publications addressed decomposition problems for various classes of exponential families. She then explored the structural properties of the rich class of Wishart distributions and various inferential issues related to the practical use of these models. With her main collaborator, Gérard Letac, and other coauthors, Hélène studied different aspects of Wishart distributions on symmetric cones, looked into quadratic and inverse regression for Wishart models, characterized the normal-Wishart law, derived the moments of the complex Wishart, and addressed the even more delicate case of the real analog. She also investigated the existence of a non-central Wishart distribution for a continuous shape parameter, designed efficient simulation schemes for the hyper-inverse Wishart and the G-Wishart, and much more.

Hélène's mastery of Wishart-type laws led her rather naturally to explore their use in graphical models. She proposed Wishart distributions for decomposable graphs, conjugate priors for non-decomposable graphs, reference priors for discrete decomposable graphical models, and so on. She also considered flexible covariance estimation and tests for different classes of graphical models. These contributions led to her election as a Fellow of the IMS in 2008.

In recent times, Hélène advanced the theory of, and inference for, discrete hierarchical models, tackled high-dimensional issues for these models, and worked on applications of graphical models, e.g., in genomics. She remained very active until her untimely death, publishing close to 70 refereed papers in total, including 11 in *The Annals of Statistics*. More work was underway.

In addition to advising 16 graduate students and 7 postdoctoral fellows, Hélène was a great mentor to many young colleagues. She was involved in setting up York's statistics PhD program and consulting unit. She served in editorial capacities for *Bayesian Analysis* (2004–09), the *Journal of Multivariate Analysis* (2010–13), and *The Annals of Statistics* (2015–19). She also organized many workshops and programs at the Fields Institute, SAMSI and CANSSI, among others.

Reserved by nature, Hélène was kind, positive, determined, and resilient. She enjoyed literature, classical music, and the opera. She also loved trekking. She is survived by two children (Alexandra and Laurent), five grandchildren, and her companion of the past 12 years (Gérard). We mourn her loss with them and with her many colleagues and friends.

Christian Genest, McGill University, and Xin Gao, York University

Obituaries in the *IMS Bulletin*

We publish obituaries in the *IMS Bulletin* of any IMS member or IMS Fellow—and, on occasion, of other prominent members of our communities. Sometimes, the news of someone's passing may take some time to reach us, so please, if you hear that a colleague or collaborator has died, do let us know so that we can arrange for an obituary to be written. If you would like to submit an obituary, please email bulletin@imstat.org. Thank you.

Obituary: Xiangrong Yin

1966–2020

Xiangrong Yin (left) was presented with his IMS Fellow plaque by Xiao-Li Meng in 2019

Xiangrong Yin, Professor of Statistics at the University of Kentucky, passed away suddenly on the afternoon of August 11th, 2020, at the age of 54.

Xiangrong Yin was born in 1966 in Changxing, China. His conscientious and hardworking traits, combined with his passion for mathematics, led him to study at Hangzhou University, where he obtained a bachelor's degree in the subject in 1986. Xiangrong dreamed of one day becoming a university professor, so he taught in the Department of Mathematics while working towards his Master's in mathematics, which he completed in 1993. He then spent a year pursuing graduate work in the Department of Mathematics and Statistics at McMaster University; however, due to a visa issue his wife, Xiaofang Shi, could not join him from China. Xiangrong then immigrated to the United States in 1996 and spent a year at Arizona State University, where his wife was finally able to move. He joined the graduate program in the School of Statistics at the University of Minnesota, where he would receive a Master's and doctoral degree in 1998 and 2000, respectively. Xiangrong and his wife also welcomed their first son, Kevin, during this time.

The direction of Xiangrong's research crystallized under his advisor, Dennis Cook, in the area of sufficient dimension reduction, which continues to be a topic of broad and current interest. This would prove to be a fruitful area of research for Xiangrong as he could leverage his innate understanding of deep mathematical concepts to address complex questions. Upon completion of his PhD in 2000, Xiangrong accepted an assistant professor position at the University of Georgia. (His second son, Stephen, was born a year later). Xiangrong was promoted to a tenured Associate Professor in 2006 and Full Professor in 2011. In 2014, he moved to the University of Kentucky's Department of Statistics, where he remained for the rest of his life.

In addition to sufficient dimension reduction, Xiangrong's research interests spanned feature selection, classification and discriminant analysis, high-dimensional regression, information theory, and computing algorithms. Perhaps his most path-breaking work focused on dimension reduction for the small-n, large-p problem by using methods developed for $n>p$. The proposed sequential approach is a quite simple, but highly efficacious framework for addressing this problem. The caliber of his research yielded nearly 70 publications — many in top-tier statistics journals — and numerous invited talks. This level of productivity increased his visibility as a leader both at his home institutions and in the field of statistics.

Xiangrong was a sought-after advisor, having co-advised or advised 16 PhD students and two Master's students, as well as having mentored three postdocs. All of his students have gone on to successful careers in industry, academia and government; Xiangrong was especially proud of the fact that 10 of his 16 PhD students landed tenure-track academic positions. As a mentor, he helped guide junior faculty members through some of the nuances of the academic world. He always emphasized how much the successes in one's career trump any negative experiences.

Xiangrong also worked tirelessly to serve his department, university, profession, and community. He re-energized the Department of Statistics colloquium series at the University of Kentucky by consistently inviting leaders in the field of statistics. He would regularly serve on important committees for the university, such as those involving tenure review. He served on the organizing committees for countless professional meetings and was a very active member of the International Chinese Statistical Association. He also selflessly devoted numerous hours of community service by volunteering for local and regional math and science competitions at his children's school.

The contributions in Xiangrong's all-too-brief, but accomplished career, culminated in his proudest professional moment in 2019, when he was awarded Fellowships by both the ASA and the IMS. Such honors are a testament to the positive impact he has left on our field.

The way Xiangrong harmonized the demands of his work with the simpler joys in life is very admirable. He always enjoyed meticulously planning his upcoming year's conference schedule and the exciting travels that accompanied those conferences. He also enjoyed frequent walks through the University of Kentucky Arboretum, on which he would invite his seminar guests to accompany him. Those of us who knew him personally and professionally will remember him as a skilled statistician, a wise mentor, a humble individual, and a great friend.

Written by Derek S. Young (University of Kentucky), with contributions from John Stufken, Solomon W. Harrar, Arnold J. Stromberg, Katherine L. Thompson, William S. Rayens, and R. Dennis Cook.

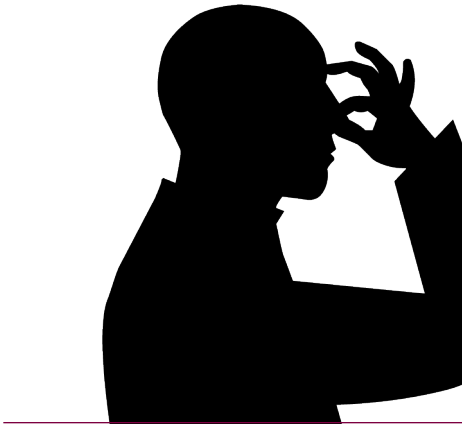
Radu's Rides:
The Stink of Mathematical Righteousness

Contributing Editor Radu Craiu writes:

In an interview for the Canadian Broadcasting Corporation, Robert Thurman, who was, until his retirement in 2019, the Je Tsongkhapa Professor of Indo-Tibetan Buddhist Studies at Columbia University, warned listeners about the potentially noxious and certainly annoying *"stink of enlightenment,"* which is the prideful attitude of spiritual seekers who start to believe that whatever progress they have achieved is enough to thumb their noses at others' efforts towards spirituality. The phrase not only stuck with me but also resonated deeply because of the complex relationship we statisticians have with mathematics.

Before I put your nose out of joint with the implications of the title, let me quickly add that I do not plead here for quick (and dirty) justifications of our ideas, rushing towards publication with only cursory mathematical backing and some conveniently favourable simulations that eventually lead to minimum publishable units. Our ties with Mathematics should—and do, in fact—run much deeper than that. They are also highly personal, as many of us have entered Statistics through its grand gates. One can wonder whether this is an auspicious passageway for a statistician's career or not, but that is a debate better left for another time. For the sake of this discussion, let us agree that if we had to paint this intellectual landscape with a broad brush, we would see that for some, Statistics is merely an offspring of Mathematics forever aspiring to prove its worth to an imperturbable parent. Others recognize the historical ties between the two fields, but are quick to point out that modern developments and demands have moved them further apart. The former group's members are intensely preoccupied by the mathematical rigour and beauty of a statistical idea or argument, while the latter's are constantly reminding us that Statistics is evolving in a direction in which mathematics plays second fiddle to the development of a "statistical method," a nutritional cocktail that contains the fiber of an astute idea and a dollop of intuition, with everything dressed in smart computation and marinated in an understanding of randomness that must be the envy of every bookie in the world.

What I describe above are evidently the two poles, with countless intermediate positions muddying the debate. Nevertheless, this is a schism with multiple reverberations in a field that has already plenty of rifts crisscrossing its history and membership. For instance, the impact on dissemination and publication of statistical papers is felt at all levels of seniority, with a more sobering impact on our young colleagues and students. You don't need to keep an ear too close to the ground to hear grumblings about papers being rejected by top journals simply because the mathematical proofs lacked novelty. At a recent JSM, held in a picturesque Canadian city, a statistician famous for both his statistical sense and mathematical prowess had deplored the fact that good statistical ideas are no longer publishable unless they are accompanied by a lengthy, preferably cumbersome, mathematical proof. In a more recent example, when the finding of a simpler proof was announced on a social media platform, many unsolicited suggestions made it very clear that it would be wiser to keep the more complicated version in the paper, lest it be rejected.



While it is widely recognized that statistics is now dancing with computer science, applied mathematics and other sciences at the Data Science shindig, our flagship journals seem to ignore this shift in research interests and focus. To crystallize the message, let me simply ask: where is one supposed to submit a paper that contains a good statistical idea/analysis that solves a relevant problem which is theoretically supported by, alas, non-spectacular theory? If the acceptable answers to this question involve only second- or third-tier journals, we may agree that this piece's title smells less funny. I am the first to admit that a beautiful mathematical proof is a sight to behold, a joyful bonus that hopefully accompanies a powerful idea.

But to ask most of our impactful work to produce one is akin to asking all Wimbledon champions to win by playing with a wooden racket. Funnily enough, even in the world of abstract beauty we stubbornly try to emulate, things have evolved. The concept of a computer-assisted proof, a sure heresy on these self-righteous shores, is now widely accepted in mathematics. An immediate example is offered by the recent proof that the Conway knot is not "slice," produced by MIT Assistant Professor Lisa Piccirillo (if you have a moment, read her uber-cool story here: https://www.bostonglobe.com/2020/08/20/magazine/math-problem-stumped-experts-50-years-this-grad-student-maine-solved-it-days/) and published in the *Annals of Mathematics*, a journal that is widely

Continues on **page 13**

regarded as the embodiment of mathematical rigour and prestige.

Publication aside, the search for mathematical prowess at the expense of statistical one is affecting the hiring process too. During my department's multiple inter-disciplinary hiring campaigns, we have encountered beautiful statistical ideas that deal with modern societal challenges. Only rarely these talks were accompanied by mathematical proofs that could make your (metaphorical, maybe) hairs stand on end. On the flip side, we have listened to talks that dodged questions of relevance and practicality, as both were sacrificed on the altar of a complex mathematical approach. We should aspire to nurture both paradigms, but I have no doubt that if statisticians want to increase their visibility and influence in society, they simply cannot leave behind the innovators from the former group.

At the end of a summer that has been much less (or way more) than most of us wanted it to be, which is a lesson in humility if there ever was one, I invite you to populate with your own thoughts and feelings this deceptively simple Zen koan: "Before enlightenment: chop wood and carry water; after enlightenment: chop wood and carry water." *Namaste*.

Recent papers

Annals of Statistics: Volume 48, No. 5, October 2020

The *Annals of Statistics* aims to publish research papers of the highest quality reflecting the many facets of contemporary statistics. Primary emphasis is placed on importance and originality. The Co-Editors are Richard J. Samworth and Ming Yuan. Access papers at **https://projecteuclid.org/info/euclid.aos**

Continues on **page 14**

Recent papers continued

Annals of Statistics: Vol. 48: No. 5, October 2020 continued

Annals of Applied Statistics: Volume 14, No. 3, September 2020

Statistical research spans an enormous range from direct subject-matter collaborations to pure mathematical theory. The *Annals of Applied Statistics* is aimed at papers in the applied half of this range. Our goal is to provide a timely and unified forum for all areas of applied statistics. The Editor in Chief is Tilmann Gneiting.
Access published papers at **http://projecteuclid.org/euclid.aoas**

Statistical Science Conversations

Statistical Science publishes 'Conversations' with some of the distinguished leaders in statistics and probability. These interviews are one of the most popular features of Statistical Science. The personal opinions and experiences given in these interviews add a human touch, while also giving insights into the intellectual history of our field. By making them openly available we hope to add to a broader understanding of the important roles that statistics and probability play in science and in society more generally. See https://imstat.org/journals-and-publications/statistical-science/conversations/ for links to the individual Conversations below, on Project Euclid.

Read Conversations with:

Hirotugu Akaike
T. W. Anderson
John C. Bailar III
Richard Barlow
George A. Barnard
Maurice Bartlett
James O. Berger
Harald Bergström
Peter Bickel
Lynne Billard
Z. William Birnbaum
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Henry Daniels
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H.A. David
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Charles Stein
George C. Tiao
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John W. Tukey and Elizabeth Tukey
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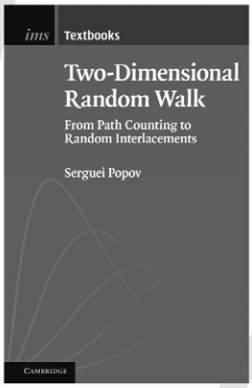

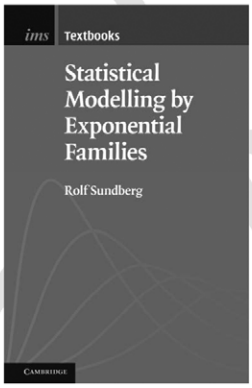

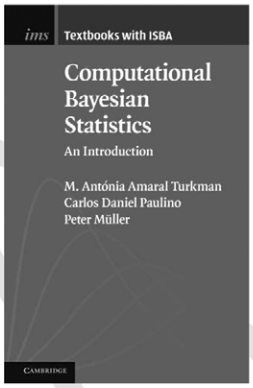

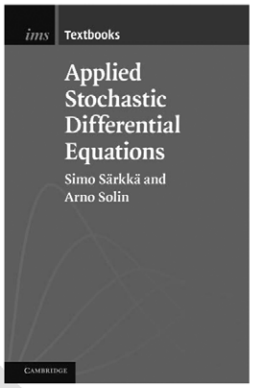

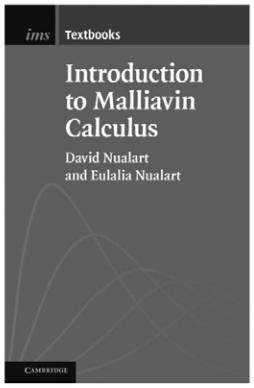

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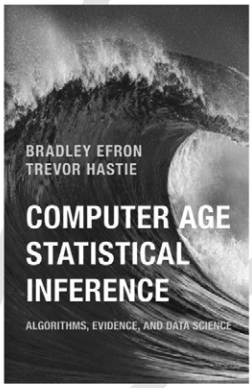

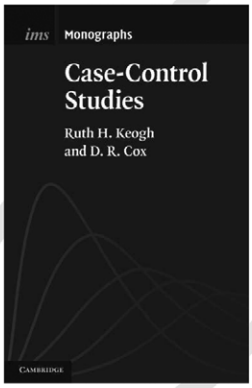

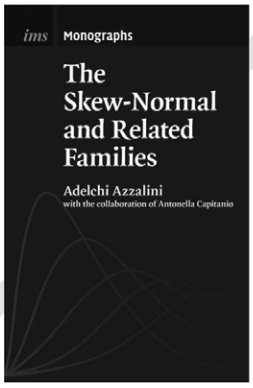

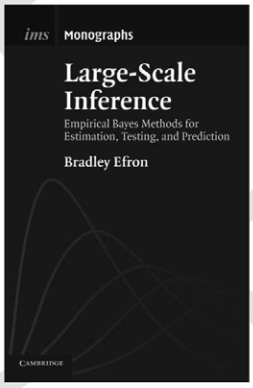

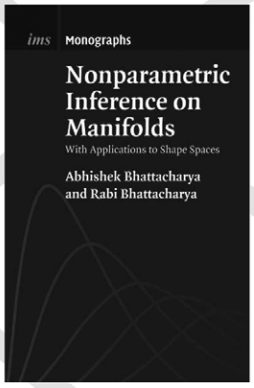

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How are book proposals submitted?

A book proposal may be submitted to any member of the Editorial Board (see below), joint for the two books series, or alternatively via **Diana Gillooly of Cambridge University Press** [dgillooly@cambridge.org], who is also happy to give advice.

The Editorial Board members are: **Coordinating editor Nancy Reid**, Professor of Statistical Sciences at the University of Toronto, and Canada Research Chair in Statistical Theory and Applications, and Director of the Canadian Statistical Sciences Institute [http://www.utstat.utoronto.ca/reid/]; **Algorithms editor Arnaud Doucet**, Professor of Statistics at the University of Oxford, and Research Scientist at DeepMind [http://www.stats.ox.ac.uk/~doucet/]; **Statistics editor Xuming He**, H.C. Carver Collegiate Professor of Statistics at the University of Michigan [http://www.xuminghe.com/]; and **Probability editor Ramon van Handel**, Associate Professor at Princeton University's PACM (the Program in Applied and Computational Mathematics) and ORFE (Operations Research and Financial Engineering), and Associated Faculty in Princeton's Mathematics Department [https://web.math.princeton.edu/~rvan/].

A proposal consists of a prospectus document and, ideally, draft or indicative material (such as sample chapters, or lecture notes, or perhaps a survey paper on the same subject as the book) that shows the style in which the book will be written.

In the prospectus we ask for:

- Working book title
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- Rationale and scope
- Readership/audience
- Competing/related books
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Include as much information as you yourself would require to offer a meaningful evaluation. There is no prescribed length.

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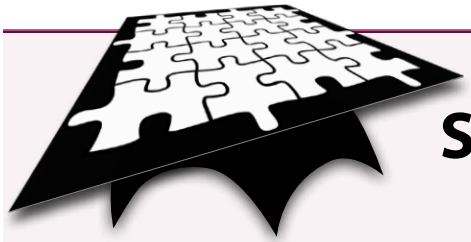
Your proposal will be screened by the Editorial Board and if appropriate it will undergo external peer review under the direction of the relevant member of the Editorial Board.

The review process can result in a range of opinion, falling somewhere between the extremes of "unconditional acceptance" and "unpublishable under any circumstances." We aim to make the process constructive, so there are often suggestions that the reviewers think will improve the book. These are passed to you, and we expect you to react to constructive comments, but we are always aware that it's your book, and we will not ask you to write to a prescription, or to write someone else's book.

After reviewing, the Editorial Board makes a recommendation to Cambridge University Press, which makes the final publication decision. If the decision is favorable, the Cambridge University Press editor will discuss contract terms with you and, once agreed, will issue a contract.

The process will vary in length depending on the nature of the project, the quantity of proposal material, the number of reviews considered necessary to reach a publishing decision, and even the time of year of submission. We will be able to give you an approximate timetable for this process after screening by the Editorial Board.



Student Puzzle Corner 31

Puzzle Editor Anirban DasGupta offers "more or less a textbook problem" this time, which pertains to various important questions on linear polymers. He says, "It will be easy for you to read about the connections; you can figure out most of the parts very quickly." Here is the problem:

Imagine a particle conducting a walk on the traditional square lattice, starting at the origin (0, 0). That is, at any time during the walk, the particle goes one unit distance to either the east, or the west, or the north, or the south. An *n*-walk is a walk that has taken *n* steps. The walk is called *self-avoiding* if the particle does not visit any given state twice.

Let $f(n)$ denote the number of n-walks that are self-avoiding.

(a) Compute $f(n)$ for $n = 2, 3$, and justify how you got these values.

(b) Compute $f(4)$ if you can, or place it within good lower and upper bounds.

(c) Try to give non-trivial lower and upper bounds on $f(n)$ of the form $c\,k^n$ for $c > 0$ and k a positive integer.

Deadline: December 1, 2020

Student members of IMS are invited to submit solutions to bulletin@imstat.org (with subject "Student Puzzle Corner").

The names of student members who submit correct solutions, and the answer, will be published in the issue following the deadline.

The Puzzle Editor is Anirban DasGupta. His decision is final.

Solution to Puzzle 30

Puzzle Editor Anirban DasGupta writes on the previous problem, which appeared in the August issue:

Well done to student member Bhargob Kakoty [*pictured left*], pursuing his Master's degree in Statistics at the Indian Statistical Institute in Delhi, who submitted a correct solution to the first part of the puzzle.

The probability that X_n is a new value is $p_n = \sum_{j:f(j)>0} f(j)(1 - f(j))^{n-1}$, and you can apply the DCT to conclude that $p_n \to 0$ as $n \to \infty$.

By direct calculation, or by a familiar geometric decomposition, $E(\tau_2) = 1 + \sum_j \frac{f(j)}{1 - f(j)}$;

for the Poisson case, the expression is the infinite series obtained by substituting $f(j) = \frac{e^{-\lambda}\lambda^j}{j!}$. The series does not seem to have a closed form formula.

The same argument results in $E(\tau_3)$ as a double series.

For the Poisson case, $P(\tau_2 = 2)$ simplifies. Indeed,

$$P(\tau_2 = 2) = 1 - \sum_j f^2(j) = 1 - e^{-2\lambda} \sum_j \frac{\lambda^{2j}}{(j!)^2}$$

$$= 1 - e^{-2\lambda} I_0(2\lambda),$$

where $I_0(z)$ is the modified first kind Bessel function $I_0(.)$. Using an integral representation for $I_0(2\lambda)$ and carrying in the $e^{-2\lambda}$ term inside that integral, it follows that $P(\tau_2 = 2)$ is monotone, and Fatou tells you that the limits as $\lambda \to 0, \lambda \to \infty$ exist, and equal 0, 1 respectively.

IMS meetings around the world

Joint Statistical Meetings: 2020–2025

IMS sponsored meeting

JSM 2021

August 7–12, 2021. Seattle, USA.

w https://ww2.amstat.org/meetings/jsm/2021/

The theme of the 2021 JSM is "**Statistics, Data, and the Stories They Tell.**" Registration and housing open May 3, 2021. The early registration deadline is May 31.

IMS sponsored meetings: JSM dates for 2022–2026

2022 Joint Statistical Meetings	**IMS Annual Meeting @ JSM 2023**	**JSM 2024**	**IMS Annual Meeting @ JSM 2025**	**JSM 2026**
August 6–11, 2022	**August 5–10, 2023**	**August 3–8, 2024**	**August 2–7, 2025**	**August 1–6, 2026**
Washington DC	**Toronto, Canada**	**Portland, Oregon, USA**	**Nashville, TN, USA**	**Boston, MA, USA**

One World ABC Seminar (online): **w** https://warwick.ac.uk/fac/sci/statistics/news/upcoming-seminars/abcworldseminar

Following the last-minute cancellation of ABC in Grenoble, and the likely cancellation of several workshops and conferences in the near future, including the ABC sessions at ISBA 2020, members of the scientific committee and other ABC researchers decided to launch an online seminar or webinar, around the theme of approximate Bayesian (ABC) methods. This initiative is called One World ABC seminar and is currently held **biweekly at 11:30 UK time (12:30 CET)**. This seminar is destined to aggregate people interested in ABC (approximate Bayesian computation) methods. Participation is free and unlimited but requires registration for access to the Blackboard Collaborate link, which allows for interactions from the participants. The organizers are welcoming proposals for future talks. This webinar is part of the larger One World seminar initiative, which gathers seminars in applied mathematics and data sciences. [*See next page for One World Probability Seminar*]

Myles Hollander Distinguished Lectureship

October 30, 2020

Online

w https://stat.fsu.edu/HollanderLecture

The Inaugural Myles Hollander Distinguished Lectureship will take place virtually on October 30, 2020. The annual Myles Hollander Distinguished Lectureship recognizes an internationally renowned leader and pioneering researcher in statistics who has made a sustained impact on the field, and the lectures feature topics spanning the breadth of statistics. The inaugural lecture will be given by Nancy Reid, University Professor and Canada Research Chair in Statistical Methodology at the University of Toronto.

ABC in Svalbard

April 12–13, 2021, Svalbard, Norway

w https://sites.google.com/view/abcinsvalbard/home

Registration is open, and limited to 100 participants so book soon! ABC in Svalbard is the next edition of a successful workshop series around ABC methods. It aims at attracting researchers at the forefront of research on approximate Bayesian computing methods and promoting original research in that field among various disciplines.

2022 IMS Annual Meeting

June 27–30, 2022

London, UK

w TBA

Mark your calendars for the 2022 IMS Annual Meeting. Held immediately before COLT, with extra workshop planned. Program and Local Chair: Qiwei Yao.

At a glance: *forthcoming IMS Annual Meeting and JSM dates*

2021

IMS Annual Meeting @ JSM: Seattle, **August 7–12, 2021**

2022

IMS Annual Meeting: London, UK, **June 27–30, 2022**

JSM: Washington DC, **August 6–11, 2022**

2023

IMS Annual Meeting @ JSM: Toronto, **August 5–10, 2023**

2024

IMS Annual Meeting/ 11th World Congress: Bochum, Germany, **August 12–16, 2024**

JSM: Portland, OR, **August 3–8, 2024**

2025

IMS Annual Meeting @ JSM: Nashville, TN, USA, **August 2–7, 2025**

More IMS meetings around the world

These IMS sponsored or co-sponsored meetings are known to be either postponed or canceled at the time of printing. Please check for updates on the meeting websites. And if you spot something we're missing, please let us know!

7th Bayes, Fiducial and Frequentist Statistics Conference (BFF7) (http://www.fields.utoronto.ca/activities/20-21/BFF7) is moved from October 26–28, 2020 to a future date. Note new website address.

The 8th Workshop on Biostatistics and Bioinformatics (https://math.gsu.edu/yichuan/2020Workshop/) has been postponed to SPRING 2021. New date coming soon.

Frontier Probability Days (http://lechen.faculty.unlv.edu/FPD20/) is now May 16–18, 2021. Registration open until March 16, 2021.

Mathematical Statistics and Learning (https://www.msl2020.org/) is moved to June 1–4, 2021.

Statistics in the Big Data Era (https://simons.berkeley.edu/workshops/statistics-big-data-era) will now take place June 2–4, 2021, at the University of California, Berkeley.

The 2020 WNAR/IMS/KISS/JR Annual Meeting (http://www.wnar.org/event-3603109) is postponed from June 14–17, 2020, to next year in Anchorage, Alaska; dates to be confirmed.

The Bernoulli–IMS World Congress 2020 (https://www.wc2020.org/) in Seoul, South Korea, is postponed to July 19–23, 2021. Details to follow.

The next IMS Annual Meeting will take place at JSM 2021, August 7–12, 2021, in Seattle, WA, USA.

FODS2020 ACM–IMS Foundations of Data Science Conference

October 18–20, 2020. Online: https://fods.acm.org

View program at https://easychair.org/smart-program/FODS2020/

The Association for Computing Machinery (ACM) and the IMS have come together to launch a conference series on the Foundations of Data Science. Our inaugural event, the ACM–IMS Interdisciplinary Summit on the Foundations of Data Science, took place in San Francisco in 2019. Starting in 2020 we will have an annual conference with refereed conference proceedings. This interdisciplinary event will bring together researchers and practitioners to address foundational data science challenges in prediction, inference, fairness, ethics and the future of data science.

One World Probability Seminar (OWPS): Ongoing and Online

https://www.owprobability.org/

The short term goal of the One World Probability Seminar is to provide access to a seminar for as many researchers as possible. For the indefinite future, the seminar is intended to foster ideas among our truly global research community and to help reduce our impact on climate change. Initially, the seminar will have an experimental character. We will need to understand how to work with online tools and learn how to deal with the vulnerabilities and bottlenecks of online traffic. Please join us in the long journey ahead!

22nd Meeting of New Researchers in Statistics and Probability

The IMS New Researchers Conference (http://groups.imstat.org/newresearchers/conferences/nrc.html) will either be postponed until spring 2021 or canceled. The primary purpose of the NRC is for new researchers to meet each other, interact, share ideas and be exposed to leaders in the field. Because JSM will be online, we feel it is best to delay the NRC until it can be held in person. We are exploring options for hosting NRC in early spring 2021 but do not have a location or date selected yet; we will update the website in early September. Otherwise, see you at the 2021 IMS NRC, the first week of August in Seattle before the Joint Statistical Meetings.

IMS Asia Pacific Rim Meeting 2022

***NEW DATES:* January 4–7, 2022**

Melbourne, Australia

w http://ims-aprm2021.com/

The sixth IMS Asia Pacific Rim Meeting (IMS-APRM) was scheduled to take place in Melbourne, Australia from 5 to 8 January 2021. It is postponed until January 2022.

Bernoulli–IMS 11th World Congress in Probability and Statistics

(including the 2024 IMS Annual Meeting)

August 12–16, 2024

Ruhr-University Bochum, Germany

w TBC

Details to follow, but for now, please save the date!

IMS sponsored meeting

ENAR dates, 2021–2022

March 14–17, 2021: Baltimore, MD, USA

March 27–30, 2022. Houston, TX, USA

w www.enar.org/meetings/future.cfm

Other meetings and events around the world

Video series "The Philosophy of Data Science" NEW

Online, on demand

w www.podofasclepius.com/philosophy-of-data-science

Are you looking for high-quality online seminars for students? Try the video series *"The Philosophy of Data Science"*. The series is aimed at early-career statisticians and data scientists, to provide an in-depth understanding of how scientific reasoning is essential to good practical data science.

Each episode will be a high-quality interview featuring top speakers in our field. Just imagine TED-style talks in statistics and data science. The featured speakers for the first two and keynote sessions are:

Session 1: *Scientific Reasoning for Practical Data Science*

Glen Wright Colopy, Pod of Asclepius; Andrew Gelman, Columbia University; Mihaela van der Schaar, University of Cambridge; Kathy Ensor, Rice University, ASA President 2022

Section 2: *Essential Reasoning Skills for Data Science*

Elina Vessonen, Finnish Institute for Health and Welfare; Joseph Wu, Brown University and University of Cambridge; Huub Brouwer, Tilburg University/Utrecht University

Keynotes Session: *The Philosophical Landscape of Science*

Samir Okasha, University of Bristol; Deborah G. Mayo, Virginia Tech.

More sessions and speakers are coming soon. Please join the series mailing list, to receive notifications when new episodes come out during the Fall semester. Sign up on the web page above.

ICSA 2020 Applied Statistics Symposium NEW

NOW ONLINE December 13–16, 2020

w https://symposium2020.icsa.org/

Due to COVID-19, the Organizing Committee has decided to move the symposium online, December 13–16 (Sunday–Wednesday), 2020. The theme of this conference is Advancing Statistics for Data Intelligence.

New Key Dates

- Invited session abstract submission deadline: October 15, 2020
- Early Bird registration deadline: discounted registration fee for early birds before or on October 31, 2020. Students: $20; ICSA members: $100; Non-ICSA members: $130 (free one-year membership)
- New! Poster session abstract submission and poster award competition deadline: October 31, 2020
- Online short course early bird registration deadline: October 31, 2020.

Scholarships for students and junior faculty are available. Career service is available for registered conference attendees for free

All the conference activities and events (including Monday night mixer/live poster session and Tuesday night award ceremony) will be scheduled as virtual events.

Call for Poster Awards Applications

Eligible poster presenters will be considered for poster awards. A student, postdoc, junior faculty, or junior statistician with PhD or terminal degree conferred in 2016 or later, who is also the first author of the poster and completes the symposium registration, is eligible for the poster award competition. The student paper award winners are not eligible for the poster award. Three to six poster award winners will be selected based on the evaluation criteria below. Each winner will receive a monetary prize ($550 for each prize) and an award certificate.

Poster award evaluation criteria:

- Statistical methodology and theories: novelty and appropriateness
- Applications: significance, importance, and impact
- Poster quality: style, organization, and visuals
- Presentation quality: clear presentation and proactive interactions with poster viewers

The abstract of the poster should be submitted through the ICSA 2020 Applied Statistics Symposium online system by October 31, 2020. More detailed instructions for poster size, preparation and production will be available on the symposium website.

Late-breaking sessions

The scientific program committee is soliciting proposals for late-breaking invited sessions. The session can be on any current topic in statistics and data science. **Topics related to Covid-19 is especially welcome**. There are usually four speakers (each with 25 minutes) or three speakers and a discussant, and the session has unity of theme. Each speaker can only give one invited talk. The invited session proposal needs to provide a session title, a few sentences describing the session, and a list of speakers with their affiliations, positions and the tentative titles of their talks. Submit abstracts through the symposium website. If you would like to organize a late-breaking session, please contact directly Momiao Xiong (Momiao.Xiong@uth.tmc.edu) or Jianhua Huang (jianhua@stat.tamu.edu).

Employment Opportunities around the world

Austria: Klosterneuburg

Institute of Science and Technology Austria
Assistant Professor (tenure-track) and Professor positions in Data Science
https://jobs.imstat.org/job//54543218

Canada: Vancouver, BC

Pacific Institute for the Mathematical Sciences (PIMS)
Director
https://jobs.imstat.org/job//54664649

China: Shenzhen

The Chinese University of Hong Kong, Shenzen
Multiple Tenured/Tenure-track/Teaching-track Faculty Positions
https://jobs.imstat.org/job//54780013

France: Cergy Pontoise Cedex

ESSEC Business School
Junior Professor of Statistics (Assistant or Associate)
https://jobs.imstat.org/job//54585408

Germany: Heidelberg

Heidelberg University
Tenure-Track Professorship Mathematical Statistics
https://jobs.imstat.org/job//54434292

Hong Kong

The University of Hong Kong
Tenure-track Assistant Professor/Associate Professor
https://jobs.imstat.org/job//54748726

Singapore

Yale-NUS
Open rank tenured or tenure track positions in Data Science
https://jobs.imstat.org/job//54586039

Singapore

Faculty Positions at the Department of Statistics & Applied Probability National University of Singapore

The National University of Singapore intends to hire faculty members whose research focus is in statistics. The positions can be at any level.

A PhD in statistics or a related field is required. The applicants should have demonstrated potential for excellence in research, teaching and service. The shortlisting of candidates will begin in December 2020.

Applicants should send an application letter, a CV, a research statement and a teaching statement and arrange for at least THREE reference letters to be sent directly to the Department of Statistics & Applied Probability.

Applications should be mailed by post or via e-mail to:

Search Committee
Department of Statistics & Applied Probability
National University of Singapore
6 Science Drive 2
Singapore 117546

E-mail: stasec@nus.edu.sg

NUS offers internationally competitive remuneration, generous research support and funding, relocation assistance and other benefits. The Department of Statistics & Applied Probability has close to 30 faculty. We provide a stimulating environment for our faculty to develop professionally.

For more information about the University, Department and Terms of Service, please visit our websites:
University: http://www.nus.edu.sg/
Department of Statistics & Applied Probability: www.stat.nus.edu.sg/

Singapore

Faculty Positions at the Department of Statistics & Applied Probability National University of Singapore

The National University of Singapore intends to hire faculty members whose research focus is in data science, broadly defined, and with interest or experience in big data analysis.

The positions can be at any level.

A PhD in statistics or a related field is required. The applicants should have demonstrated potential for excellence in research in data science, teaching and service. The shortlisting of candidates will begin in December 2020.

Applicants should send an application letter, a CV, a research statement and a teaching statement and arrange for at least THREE reference letters to be sent directly to the Department of Statistics & Applied Probability.

Applications should be mailed by post or via e-mail to:

Search Committee, Department of Statistics & Applied Probability National University of Singapore, 6 Science Drive 2, Singapore 117546

E-mail: stasec@nus.edu.sg

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University: http://www.nus.edu.sg/
Department of Statistics & Applied Probability: www.stat.nus.edu.sg/

South Korea: Seoul
Yonsei University
Non-Tenure Track Teaching Position
https://jobs.imstat.org/job//54770827

Switzerland: Lausanne
EPFL
Tenure-Track Assistant Professor of Applied Mathematics
https://jobs.imstat.org/job//54440038

Taiwan: Taipei City
Institute of Statistical Science, Academia Sinica, Taiwan
Tenure-Track Faculty Positions
https://jobs.imstat.org/job//54387703

United States: Berkeley, CA
University of California Berkeley
Assistant Professor-Stochastics-Industrial Engineering & Operations Research
https://jobs.imstat.org/job//54711202

United States: Berkeley, CA
University of California Berkeley
Tenure-track Assistant/Associate/Full Professor - Pure and Applied Mathematics
https://jobs.imstat.org/job//54604944

United States: Hayward, CA
California State University East Bay
Assistant Professor of Statistics and Biostatistics , Tenure-Track Faculty (2 positions) 20-21
https://jobs.imstat.org/job//54323565

United States: Stanford, CA
Stanford University, Department of Statistics
Stein Fellow in Statistics or Probability
https://jobs.imstat.org/job//51005468

United States: Berkeley, CA
of California, Berkeley, Department of Statistics
Department of Statistics, UC Berkeley
https://jobs.imstat.org/job//54585713

United States: Atlanta, GA
Georgia Institute of Technology
Tenure-Track Faculty
https://jobs.imstat.org/job//54741746

United States: Notre Dame, IN
University of Notre Dame
Assistant, Associate or Full Professor in Statistics - Multiple Positions
https://jobs.imstat.org/job//54626973

United States: Bloomington, IN
IU School of Public Health, Dept. Epidemiology/Biostatistcs
Chair & Full Professor
https://jobs.imstat.org/job//54405625

United States: Rockville, MD
Information Management Services, Inc.
Statistician/Programmer
https://jobs.imstat.org/job//54741604

United States: College Station, TX
Texas A&M University School of Public Health
Tenured: Professor and Department Head, Epidemiology and Biostatistics
https://jobs.imstat.org/job//54696455

United States: Richmond, VA
University of Richmond
Assistant Professor Data Science & Statistics
https://jobs.imstat.org/job//54548988

United States: Seattle, WA
University of Washington, Department of Statistics
Assistant Professor
https://jobs.imstat.org/job//54572339

International Calendar of Statistical Events

IMS meetings are highlighted in maroon with the ims logo, and new or updated entries have the NEW or UPDATED symbol. Please submit your meeting details and any corrections to Elyse Gustafson: erg@imstat.org

At the time of writing, some meetings are known to be POSTPONED or canceled. Where new dates are known, they are included here. Some meetings, marked ONLINE, are offering a virtual format. Please check meeting websites for updates.

Online and Ongoing

ONLINE ims **One World ABC Seminar**
w https://warwick.ac.uk/fac/sci/statistics/news/upcoming-seminars/abcworldseminar

ONLINE ims **One World Probability Seminar**
w https://www.owprobability.org/one-world-probability-seminar

ONLINE NEW ims **Video series:** *The Philosophy of Data Science*
w https://www.podofasclepius.com/philosophy-of-data-science

October 2020

ONLINE ims October 18–20: Seattle, WA, USA. **ACM–IMS Foundations of Data Science Conference w** https://fods.acm.org

ONLINE October 22–24: **Chaotic Modeling & Simulation (CMSIM) web conference w** http://www.cmsim.org/cmsim2020webconference.html

POSTPONED ims ~~October 26–28~~: [No date set yet for rearranged conference] Toronto, Canada. **7th Bayes, Fiducial and Frequentist Statistics Conference, BFF7**
w https://www.fields.utoronto.ca/activities/20-21/BFF7

November 2020

ONLINE November–December: Fridays in November and December 2020. **Big Data Meets Survey Science (BigSurv20)**
w https://www.bigsurv20.org/

December 2020

December 7–11: [*still showing as in-person conference, please check nearer the time*] Atlantic City, USA. **76th Annual Deming Conference on Applied Statistics w** https://demingconference.org

December 7–11: [*still showing as in-person conference, please check nearer the time*] Esch-sur-Alzette, Luxembourg. **SanDAL Winter School for PhD students & Postdocs w** https://sandal.uni.lu/winter-school/

ONLINE NEW December 13–16: **ICSA 2020 Applied Statistics Symposium w** https://symposium2020.icsa.org/

December 15–17: Manipal, India. **28th International Workshop on Matrices and Statistics (IWMS 2020) w** https://carams.in/events/international-workshop-on-matrices-and-statistics/

January 2021

January 4–5: Tokyo, Japan. **3rd International Conference on Computational Mathematics and Applied Physics (ICCMAP 2021) w** http://www.iccmap.iisrc.org

POSTPONED ims ~~January 5–8~~ [NOW January 2022]: Melbourne, Australia. **IMS Asia Pacific Rim Meeting (IMS-APRM2021) w** http://ims-aprm2021.com/

March 2021

 March 14–17: Baltimore, MD, USA. **ENAR Spring Meeting** **w** https://www.enar.org/meetings/spring2021/

April 2021

 April 12–13: Svalbard, Norway. **ABC in Svalbard** **w** https://sites.google.com/view/abcinsvalbard/home

April 22–23: Birmingham, UK. **3rd IMA and OR Society Conference on Mathematics of Operational Research** **w** https://ima.org.uk/14347/14347/

April 25–27: Gainesville, FL, USA. **Conference on Applied Statistics in Agriculture and Natural Resources** **w** https://conference.ifas.ufl.edu/applied-stats/

May 2021

 May 16–18: Las Vegas, USA. **Frontier Probability Days** **w** http://lechen.faculty.unlv.edu/FPD20/

June 2021

 June (dates TBA): Anchorage, Alaska, USA. **WNAR/IMS/JR Meeting** **w** https://www.wnar.org/page-18098

 June 1–4: Barcelona, Spain. **Mathematical Statistics and Learning** **w** https://www.msl2020.org

 June 2–4: Berkeley, CA, USA. **Statistics in the Big Data Era** **w** https://simons.berkeley.edu/workshops/statistics-big-data-era

June 14–17: New Orleans, USA. **Sixth International Conference on Establishment Statistics (ICES VI)** **w** https://ww2.amstat.org/meetings/ices/2021/index.cfm

June 14–18: Paphos, Cyprus. **International Symposium on Nonparametric Statistics 2020** **w** http://cyprusconferences.org/isnps2021/

June 20–26: Portoroz, Slovenia. **8th European Congress of Mathematics** **w** http://www.8ecm.si/

June 28-July 2: Kunming, China. **ISBA 2021: World Meeting of the International Society for Bayesian Analysis** **w** https://bayesian.org/isba2020-home/

June 28–July 2: Edinburgh, UK. **Extreme Value Analysis** **w** https://www.maths.ed.ac.uk/school-of-mathematics/eva-2021

June 28–July 2: Nový Smokovec, Slovakia. **LinStat 2021** **w** https://linstat2020.science.upjs.sk/

June 29–July 1: Nottingham, UK. **MIMAR (11th Modelling in Industrial Maintenance and Reliability)** **w** https://ima.org.uk/12183/11th-ima-international-conference-on-modelling-in-industrial-maintenance-and-reliability-mimar/

July 2021

ONLINE July 11–16: NOW ONLINE. **63rd ISI World Statistics Congress 2021** **w** http://www.isi2021.org/

July 5–9: Gold Coast, QLD, Australia. **2020 Australian and New Zealand Statistical Conference** **w** https://anzsc2020.com.au

July 15–18: Montreal, Canada. **Statistics 2021 Canada** **w** https://www.concordia.ca/artsci/events/statistics-2021.html

August 2021

August 5–7: Prague, Czech Republic. **3rd International Conference on Statistics: Theory and Applications (ICSTA'21)** **w** https://2021.icsta.net/

 August 7–12: Seattle, WA, USA. **IMS Annual Meeting at JSM 2021** **w** http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx

September 2021

September 8–9: Cambridge, UK. **Induction Course for New Lecturers in the Mathematical Sciences** **w** https://ima.org.uk/13572/induction-course-for-new-lecturers-in-the-mathematical-sciences-2021/

September 19–22: Ribno (Bled), Slovenia. **Applied Statistics 2020 (AS2020)** **w** http://conferences.nib.si/AS2020

January 2022

NEW  January 4–7 (postponed from January 2021): Melbourne, Australia. **IMS Asia Pacific Rim Meeting (IMS-APRM2021)** **w** http://ims-aprm2021.com/

Continues on **page 26**

International Calendar *continued*

March 2022

March 27–30: Houston, TX, USA. **ENAR Spring Meeting** **w** http://www.enar.org/meetings/future.cfm

May 2022

May 12–18: Erice, Italy. **7th Workshop on Stochastic Methods in Game Theory** **w** https://sites.google.com/view/erice-smgt2020/the-workshop

June 2022

June 27–30: London, UK. **IMS Annual Meeting** **w** TBC

June 27–July 1: Darwin, Australia. **Joint Southern Statistical Meetings 2022 (JSSM2022)** **w** https://statsoc.org.au/event-3529236

July 2022

July 10–15: Riga, Latvia. **XXXI International Biometric Conference (IBC2022)** **w** www.biometricsociety.org/meetings/conferences

August 2022

August 6–11: Washington DC, USA. **JSM 2022** **w** http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx

July 2023

July 15–20: Ottawa, Canada. **64th ISI World Statistics Congress** **w** TBC

August 2023

August 5–10: Toronto, ON, Canada. **IMS Annual Meeting at JSM 2023** **w** http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx

August 2024

August 3–8: Portland, OR, USA. **JSM 2024** **w** http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx

August 12–16: Bochum, Germany. **Bernoulli/IMS World Congress in Probability and Statistics** **w** TBC

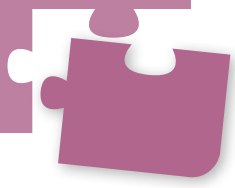
August 2025

August 2–7: Nashville, TN, USA. **IMS Annual Meeting at JSM 2025** **w** http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx

August 2026

August 1–6: Boston, MA, USA. **JSM 2026** **w** http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx

Are we missing something? If you know of any statistics or probability meetings which aren't listed here, please let us know. You can email the details to Elyse Gustafson at erg@imstat.org, or you can submit the details yourself at https://www.imstat.org/ims-meeting-form/ We'll list them here in the Bulletin, and on the IMS website too, at imstat.org/meetings-calendar/



Membership and Subscription Information

Journals

The scientific journals of the Institute of Mathematical Statistics are *The Annals of Statistics*, *The Annals of Probability*, *The Annals of Applied Statistics*, *The Annals of Applied Probability*, and *Statistical Science*. The *IMS Bulletin* is the news organ of the Institute.

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Each individual member receives the *IMS Bulletin* (print and/or electronic) and may elect to receive one or more of the five scientific journals. Members pay annual dues of $105. An additional $110 is added to the dues of members for each scientific journal selected ($70 for *Stat Sci*). **Reduced membership dues** are available to full-time students, new graduates, permanent residents of countries designated by the IMS Council, and retired members.

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IMS Bulletin

The *IMS Bulletin* publishes articles and news of interest to IMS members and to statisticians and probabilists in general, as well as details of IMS meetings and an international calendar of statistical events. Views and opinions in editorials and articles are not to be understood as official expressions of the Institute's policy unless so stated; publication does not necessarily imply endorsement in any way of the opinions expressed therein, and the *IMS Bulletin* and its publisher do not accept any responsibility for them. The *IMS Bulletin* is copyrighted and authors of individual articles may be asked to sign a copyright transfer to the IMS before publication.

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4: June/July	**May 1**	May 15	June 1
5: August	**July 1**	July 15	August 1
6: September	**August 1**	August 15	September 1
7: Oct/Nov	**September 15**	October 1	October 15
8: December	**November 1**	November 15	December 1

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