

April/May 2017

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2017 Tweedie Award winner

The Institute of Mathematical Statistics has selected **Rina Foygel Barber** as the winner of this year's Tweedie New Researcher Award.

Rina is an Assistant Professor in the Department of Statistics at the University of Chicago, since January 2014. In 2012–2013 she was an NSF postdoctoral fellow in the Department of Statistics at Stanford University, supervised by Emmanuel Candès. Before her postdoc, she received her PhD in Statistics at the University of Chicago in 2012, advised by Mathias Drton and Nati Srebro, and a MS in Mathematics at the University of Chicago in 2009. Prior to graduate school, she was a mathematics teacher at the Park School of Baltimore from 2005 to 2007.



Rina Barber

Rina lists her research interests as: high-dimensional inference, sparse and low-rank models, and nonconvex optimization, particularly optimization problems arising in medical imaging. Her homepage is <https://www.stat.uchicago.edu/~rina/>.

The IMS Travel Awards Committee selected Rina “for groundbreaking contributions in high-dimensional statistics, including the identifiability of graphical models, low-rank matrix estimation, and false discovery rate theory. A special mention is made for her role in the development of the knockoff filter for controlled variable selection.”

Rina will present the Tweedie New Researcher Invited Lecture at the IMS New Researchers Conference, held this year at the Johns Hopkins University from July 27–29 (see <http://groups.imstat.org/newresearchers/conferences/nrc.html>).

On hearing about her award, Rina said, “I feel so honored to be selected for this award. There is so much exciting new research in statistics right now, and it’s been an incredible experience to be a part of the growing research community in high-dimensional statistics and inference. I’m looking forward to getting to meet colleagues and learn about new research directions at the New Researchers Conference this summer.” We asked what she was planning for her lecture. She replied, “I am tentatively thinking that I will talk about distribution-free inference for prediction and classification problems, but the two projects I’m working on in these areas are both still in early stages so this could change!”

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IMS Members' News

Royal Statistical Society (RSS) West Medal to Danny Pfeffermann

Danny Pfeffermann has had a long career in social statistics, with particular methodological interests in time series, multilevel modelling, survey non-response and small area estimation. He has for many years held down multiple roles; he has been President of the Israeli Statistical Society and is currently the National Statistician in Israel, a Professor at the Hebrew University in Jerusalem and Professor of Social Statistics at Southampton University (UK), while continuing a role with the Bureau of Labor Statistics in the US. He uses his expertise to train the next generation of official statisticians, as well as pursuing his research interests which also inform his work directing a national statistical office.



Danny Pfeffermann



Peter Guttorp

Peter Guttorp receives RSS Barnett Award

The RSS Barnett Award is awarded to *IMS* Fellow Peter Guttorp for his sustained and excellent contribution to the field of environmental statistics. Peter's contributions span both advanced methodological developments and their application to a range of environmental systems, including climate change, atmospheric and geophysics. His work has influenced policy across environmental sciences, and he was a member of the Intergovernmental Panel on Climate Change that was awarded the Nobel Peace Prize in 2007.

RSS Research Prize awarded to Rajen Shah

The Research Prize is awarded to Rajen Shah, an outstanding young researcher who has developed ground-breaking methodology in diverse fields: high-dimensional inference, interaction search and goodness-of-fit tests. His work is at the frontiers of modern statistical methods and is characterized by innovative methodology, sharp analysis and practical relevance. Of specific note is Shah's 2013 paper (co-written with Richard Samworth), "Variable selection with error control: Another look at Stability Selection," which made substantial improvements on an earlier idea of Peter Bühlmann and Nicolai Meinshausen.



Rajen Shah

Anton Wakolbinger and co-authors win 2017 Itô Prize

The 2017 Itô Prize is won by Adrián González Casanova, Noemi Kurt, Anton Wakolbinger and Linglong Yuan, for their paper entitled "An individual-based model for the Lenski experiment, and the deceleration of the relative fitness" published in *Stochastic Processes and Their Applications*. The Itô Prize honors the memory and celebrates the legacy of Professor Kiyosi Itô and his vast and seminal contributions to probability theory. It is awarded every two years and recognizes significant contributions to the advancement of the theory or applications of stochastic processes over the corresponding period. The award will be presented at the 39th Conference on Stochastic Processes and their Applications (SPA), July 24–28, 2017, in Moscow, Russia, where the authors will give a plenary talk (<http://www.spa2017.org/>). The paper is freely available to access until the end of 2017 via ScienceDirect: <http://www.sciencedirect.com/science/article/pii/S030441491600020X>.

More Members' News

IMS Elections 2017

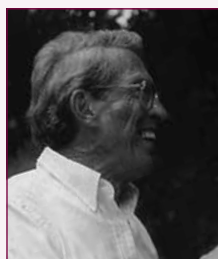
The annual elections are taking place for the next IMS President and six places in the IMS Council. We introduced the candidates in the last issue. Voting is open now—<https://secure.imstat.org/secure/vote2017/vote2017.asp>—and you have until June 16 to decide.

ISI Elected members

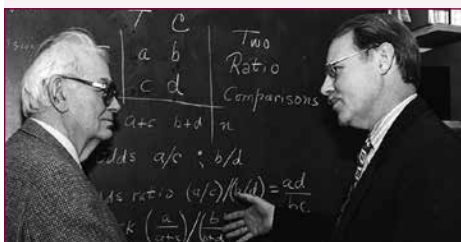
We congratulate the following new International Statistical Institute (ISI) Elected Members, who were elected recently in ISI Membership Elections. Among those elected in the first round of 2017 were: **Sévérien Nkurunziza**, University of Windsor, Canada, and **Xiaojing Wang**, University of Connecticut, USA. The final round of 2016 included: **Veerabhadran Baladandayuthapani**, University of Texas MD Anderson Cancer Center, USA; **Ding-Geng Chen**, University of North Carolina, USA; **Hideki Nagatsuka**, Chuo University, Japan; **Sudhir Paul**, University of Windsor, Canada; **Vladimir Pozdnyakov**, University of Connecticut, USA; **Niansheng Tang**, Yunann University, PR China; and **Rand Wilcox**, University of Southern California, USA.

WHO ARE ALL THESE PEOPLE?

In last issue's XL-Files, Xiao-Li Meng set a picture quiz. Nobody has yet correctly identified *everyone* in the pictures below. If you can, and you're over 21, you'll be invited to a "libation and inspiration" at JSM 2017 to celebrate the lives of the nine great statisticians who passed away in 2016. Email your entry and age-proof to meng@stat.harvard.edu.



How many of these 14 people can you name? There's a prize for the first 8 to tell Xiao-Li who they all are!



Credit: Jay Goodman

= access published papers online

IMS Journals and Publications

Annals of Statistics: Ed George and Tailen Hsing
<http://imstat.org/aos>
<http://projecteuclid.org/aos>

Annals of Applied Statistics: Tilmann Gneiting
<http://imstat.org/aoas>
<http://projecteuclid.org/aoas>

Annals of Probability: Maria Eulalia Vares
<http://imstat.org/aop>
<http://projecteuclid.org/aop>

Annals of Applied Probability: Bálint Tóth
<http://imstat.org/aap>
<http://projecteuclid.org/aap>

Statistical Science: Cun-Hui Zhang
<http://imstat.org/sts>
<http://projecteuclid.org/ss>

IMS Collections
<http://imstat.org/publications/imscollections.htm>
<http://projecteuclid.org/imsc>

IMS Monographs and IMS Textbooks: David Cox
<http://imstat.org/cup/>

IMS Co-sponsored Journals and Publications

Electronic Journal of Statistics: Domenico Marinucci
<http://imstat.org/ejs>
<http://projecteuclid.org/ejs>

Electronic Journal of Probability: Brian Rider
<http://ejp.ejpecp.org>

Electronic Communications in Probability: Sandrine Péché
<http://ecp.ejpecp.org>

Current Index to Statistics: George Styan
<http://www.statindex.org>
 log into members' area at imstat.org

Journal of Computational and Graphical Statistics: Diane Cook
<http://www.amstat.org/publications/jcgs>
 log into members' area at imstat.org

Statistics Surveys: Donald Richards
<http://imstat.org/ss>
<http://projecteuclid.org/ssu>

Probability Surveys: Ben Hambly
<http://imstat.org/ps>
<http://www.i-journals.org/ps/>

IMS-Supported Journals

ALEA: Latin American Journal of Probability and Statistics: Victor Perez Abreu
<http://alea.impa.br/english>

Annales de l'Institut Henri Poincaré (B): Gregory Miermont, Christophe Sabot
<http://imstat.org/aihp>
<http://projecteuclid.org/aihp>

Bayesian Analysis: Bruno Sansó
<http://ba.stat.cmu.edu>

Bernoulli: Holger Dette
<http://www.bernoulli-society.org/>
<http://projecteuclid.org/bj>

Brazilian Journal of Probability and Statistics: Francisco Louzada Neto
<http://imstat.org/bjps>
<http://projecteuclid.org/bjps>

Stochastic Systems: Assaf Zeevi
<http://www.i-journals.org/ssy/>

IMS-Affiliated Journals

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

OBITUARY: Stephen E. Fienberg

1942–2016

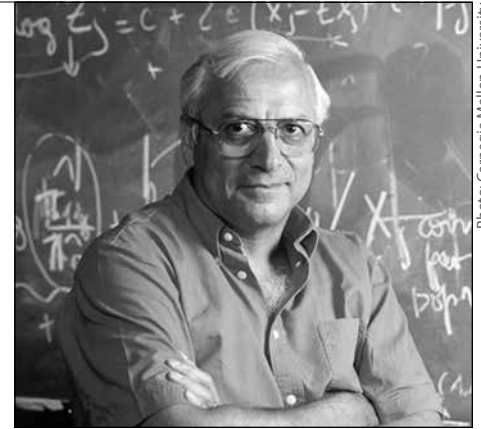
STEPHEN (STEVE) E. FIENBERG was the “superman of statistics” (L. Wasserman), “a hero of the statistics profession” (M. Straf), “the ultimate public statistician” (A. Carriquiry, E. Lander), and “the best kind of Bayesian” (E. George). His life and illustrious career ceased at the age of 74, on December 14, 2016, after a four-year battle with cancer.

Steve was Maurice Falk University Professor of Statistics and Social Science at Carnegie Mellon University (CMU) and co-director of the Living Analytics Research Centre, with additional appointments in the Machine Learning Department, Heinz College, and Cylab. For his outstanding contributions to the profession, he received the COPSS and Wilks awards, the NISS Distinguished Service Award, the Lise Manchester Award from the Statistical Society of Canada, the Founders’ Award from the American Statistical Association, and the Zellner Medal from the International Society for Bayesian Analysis. He was an elected member and lifetime National Associate of the National Academies (National Academy of Sciences and National Research Council), an honor bestowed for his extraordinary contributions to the Academies. He was an elected fellow of IMS, ASA, the Royal Society of Canada, American Academy of Arts and Sciences, American Academy of Political and Social Science, American Association for the Advancement of Science and an elected member of the International Statistical Institute. Elyse Gustafson, who worked with Steve on IMS matters for nearly 20 years, describes his extraordinary impact: “Steve’s involvement was endless: he was President of the IMS, Editor of the *Annals of Applied Statistics*, and chair of nearly every IMS committee at some point.

But what he really did for the IMS can’t be easily judged by where he served, it was how he did it. He led with his heart and his love for the organization. The IMS is stronger because of his leadership and vision.”

Steve’s impact on research, education and the practice of statistics is astonishing in its breadth. He published seven books and over 340 papers in leading journals in statistics, sociology, and machine learning, and wrote hundreds of editorials and reviews. Among the many areas where Steve made foundational contributions is categorical data analysis. His first technical paper appeared in the *Annals of Mathematical Statistics* in 1968 on the geometry of an $r \times c$ contingency table. CMU students will fondly remember him bringing a physical 3D tetrahedron to class to demonstrate the geometry of log-linear models. Throughout his career, he continued to work on the geometry of exponential families and shone new light on the potential of algebraic statistics. *Discrete Multivariate Analysis: Theory and Practice* (co-authored with Y. Bishop and P. Holland, 1975), and his 1980 book, *The Analysis of Cross-Classified Categorical Data*, are classics in the field. Going far beyond this seminal work, Steve made fundamental contributions to causal inference, mixed membership models, forensic science, statistics and the law, surveys, census and other problems related to the federal statistics on accuracy of prediction and population size estimation. He was consistently at the forefront of many developments in statistical sciences, including the foundations of inference and Bayesian analysis.

Steve’s outstanding leadership and vision is reflected in new journals that he spearheaded. He created *Chance* magazine with Bill Eddy in 1988. He co-founded



Steve Fienberg: “Statistics is what I do!”

the *Journal of Privacy and Confidentiality* in 2009, and served as its Editor-in-Chief until his last days. When Brad Efron was asked by the IMS to start a new journal, *Annals of Applied Statistics* (AOAS), the first person he approached was “the top social science statistician in the US,” Steve Fienberg. AOAS was created in 2007, and Steve held multiple editorial positions, including Editor-in-Chief (2013–16). The *Annual Reviews of Statistics and Its Applications* was launched under Steve’s leadership in 2014. Nancy Reid and Stephen Stigler recall: “His energy and enthusiasm for it were contagious, and his encyclopedic knowledge and vast network of colleagues were invaluable.”

He was a tireless champion of the importance of statistics, promoting it to the broader scientific community, government, media, policymakers, and the general public. Steve always insisted on establishing the rightful presence of statistics in many other disciplines by publishing across disciplines, creating and supporting multi-disciplinary centers, advocating for inclusion of statisticians on committees of the Academies, and serving as a role model for many around the world. Of his own role models, in a 2013 *Statistical Science* interview, Steve said: “Both Fred [Mosteller] and Bill [Kruskal] were Renaissance men and I didn’t know how I would do things in the same way they did, but it became very clear to me that just doing papers in the *Annals* and *JASA* wasn’t enough.” Steve’s actions matched his words. The list of real-life

problems where he left his mark, in his own words, includes: the National Halothane Study, Sun-Times Straw Poll, 1970 Draft Lottery, social indicators, criminal justice, crime victimization, election night forecasting, social networks, legal applications, cognitive aspects of survey design, census undercount, privacy and confidentiality, disability and the National Long-Term Care Survey, administrative record linkage, human rights estimation, and the bank, telecom and theme park collaborations at the Living Analytics Research Center. “He was one of the very few scientists whose contributions were truly multidisciplinary in being relevant both in Statistics and the Social Sciences, and thus he set a standard for all of us working in these fields. Most importantly, studying his work helped [me] to understand when a mathematical argument is needed and when it is not,” said Tamás Rudas of the Hungarian Academy of Sciences.

Stephen Fienberg was a giant in Statistics, but it was his human side that has left a deeper impact on many of us. He was an exceptional and tireless mentor. He advised 46 PhD students and many postdocs and junior faculty. Together with his wife Joyce, he included his mentees into their extended family and built an extensive network of friends across the globe. Amidst his many professional activities, he always found time and energy for mentoring. He would help you unravel statistical incantations, and with his encouragement, many have become leaders in their fields. Invariably, his advice also included a few extra tips on good wines, great books, and special travel spots. Steve’s mentorship style defied boundaries of geography or formal affiliations—many others, who were never his students or worked in the same

university, also consider him as a mentor, and all emphasize his generosity, the unwavering support and dedication, deep respect to all individuals no matter their academic age or stature, and a remarkable ability to have insights into other people’s work.

Steve was born on November 27, 1942, in Toronto, Canada. He received his bachelor’s degree in mathematics and statistics in 1964 from University of Toronto, where in his first statistics course Don Fraser introduced him to thinking geometrically about statistics, a skill that stayed with him throughout his career. Steve earned his PhD in Statistics from Harvard University in 1968 under the supervision of Fred Mosteller. During his first job at the University of Chicago, he met Bill Kruskal who influenced his work on surveys and involvement with the Committee on National Statistics (CNSTAT). The next eight years, he was at the University of Minnesota where he chaired the Department of Applied Statistics. In 1980, he became a Professor of Statistics and Social Science in the Department of Statistics at CMU, his academic home for the next 36 years. During that time, he served as a department head and dean, had numerous visiting positions, and made a brief return to Canada as a vice provost at York University.

Steve enjoyed life to its fullest. He adored his family, and was especially fond of his six grandchildren. He was an avid ice hockey player, half-joking that information on three variables—Pittsburgh location, age over 60, and being a hockey player—would disclose his identity with high certainty. He enjoyed traveling and attending meetings around the world. It was often easy to pick him out of the crowd because of his prominence and his affinity for wearing bright-colored shirts. He was not only a

lively dinner companion but also a conscientious guest. At a 1990 conference in Taipei, where Steve was one of four statisticians to receive a key to the city of Taipei, he so outdid everyone in the numerous rounds of traditional banquet toasts that he was subsequently introduced as “Professor Fienberg, who has ocean capacity.” He truly had enormous capacity for everything he did, especially for his work and our profession. Many of us have marveled at his multitasking ability, his exceptional high energy and endless enthusiasm. In Ed George’s words: “We have lost a dear friend, one of the greatest champions of statistics, whose wonderful influence on all of us will be missed but never forgotten.” This echoes what many of us feel.

In mid-October 2016, CMU celebrated Steve’s transfer to emeritus status. At the end of a two-day program, Steve gave a talk to reflect on his career. His opening slide, quoting Groucho Marx (“*Those are my principles, and if you don’t like them... well, I have others*”), while capturing his personality and sense of humor, also contained truth: Steve was a man of strong principles and opinions, and had an unwavering belief in the importance of statistical science and its role in advancing other fields. These qualities made him a hero of the statistics profession. Though Steve would simply say, “Statistics is what I do!”

*Written by Elena Erosheva and
Aleksandra Slavkovic*

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We are especially grateful to J. Fienberg, J. Abowd, A. Carriquiry, M. Cuellar, B. Efron, E. George, T. Gneiting, A. Goldenberg, E. Gustafson, R. Mejia, B. Murphy, N. Reid, A. Rinaldo, T. Rudas, M. Sadinle, S. Stigler, M. Straf, J. Tanur, L. Wasserman, and many others, who shared with us their recollections, insightful and personal comments about Steve and his lasting legacy on the IMS, statistics and the sciences.

OBITUARY: Ulf Grenander

1923–2016

ULF GRENANDER was born in 1923 in Vastervik, Sweden, a small coastal town on the Baltic Sea. His degrees were from Uppsala University (B.A., 1946; Licentiate of Philosophy, 1948) and Stockholm University, where he studied under the great statistician Harald Cramér and received his PhD in 1950.

Grenander traced his interests in probability and statistics to a childhood fascination with quantum mechanics. As an undergraduate, he was influenced by the former code breaker, and well-known analyst, Arne Beurling, and later by Harald Bohr, a mathematician and brother of Niels Bohr. Following his graduation, Grenander served a year in the military, about which he said, “Military service was not so bad! I discovered the pleasures of outdoor life instead of being a nerd.”

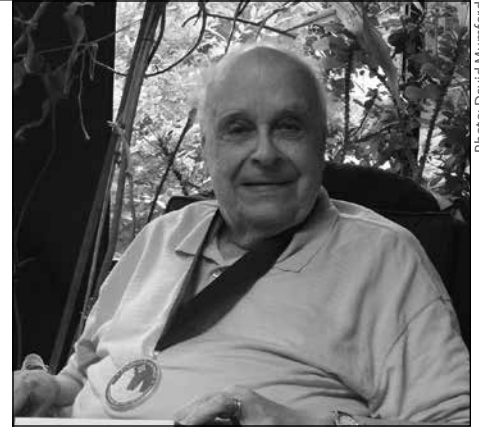
His graduate years culminated with his landmark dissertation on the mathematical foundations of statistical inference for continuous parameter stochastic processes. This drew the attention of Kolmogorov, among others, and many invitations followed. Grenander spent the 1951–52 academic year at the University of Chicago. He shared an office with Charles Stein and rented Jimmy Savage’s apartment. He met many prominent statisticians during his year in Chicago, including Bill Kruskal, Murray Rosenblatt, Leo Goodman and Joe Hodges.

Grenander and Rosenblatt struck up a collaboration that led to their influential *Statistical Analysis of Stationary Time Series*. While at Chicago, Jerzy Neyman invited him to spend the 1952–1953 year at Berkeley, where he met Gábor Szegő at a joint seminar with Stanford University. The two shared an interest in Toeplitz forms, and over the next few years they wrote their

well-known book *Toeplitz Forms and Their Applications*.

Grenander spent most of the years 1953–66 at the University of Stockholm, eventually becoming the Director of the Institute for Insurance Mathematics and Mathematical Statistics. During these years he made many more seminal contributions to inference and indulged an abiding interest in real-world problems by consulting for the insurance industry. His applied work had a lasting effect on the actuarial sciences, where he offered analytic solutions to replace empirical tables and used nonparametric maximum likelihood methods to more accurately predict payouts. He spent the 1957–58 academic year visiting the Division of Applied Mathematics at Brown University, at the invitation of William Prager, who had been impressed with Grenander’s work on Toeplitz forms. There, he taught probability and statistics, and rekindled a long-standing fascination with computing, thanks largely to the excellent computing resources donated by IBM. Although the Division was almost entirely focused on mechanics and dynamical systems, Grenander returned in 1966 and remained there, as the L. Herbert Ballou University Professor, until his retirement.

In the early 1960s, while still in Sweden, Grenander began a new research program, seeking more general and abstract formulations of statistical models. His 1963 monograph on *Probabilities on Algebraic Structures* explored the mathematical foundations for probability distributions on “regular structures,” and was the beginning of his effort to produce a general theory of patterns. In his 1981 monograph on *Abstract Inference*, he developed new nonparametric models and methods, including the “Method of Sieves.” These new directions became the



Ulf Grenander

foundations of a remarkable marriage of combinatorial and stochastic structure that he called “pattern theory.” Pattern theory blossomed at Brown, aided by Walter Freiberger and the eventual hiring of new faculty in probability and statistics.

By the 1980s, Grenander had begun to explore applications of the theory, including image restoration, image synthesis and analysis, language processing, and even musical composition. In an especially fruitful application, Grenander and collaborators undertook the construction of a library of models for the structures of the human body—a “digital anatomy” equipped with measures of normal shape and normal variability.

Many of today’s leaders in the quantification of biological shapes and their distributions were drawn to the field by Grenander’s elegant and rigorous formulations. In an interview he remarked, “I refer to pattern theory as the intellectual adventure of my life.”

Grenander published over 90 research papers and 15 authored books, and earned many honors and awards, including Fellow of the Institute of Mathematical Statistics (1953), Member of the Royal Swedish Academy of Science (1965) and Honorary Fellow of the Royal Statistical Society, London (1989). He delivered numerous prestigious lectures, received an honorary Doctorate of Science degree from the University of Chicago (1993), and was a Fellow of the American Academy of Arts

Ulf Grenander, 1923–2016

Continued from previous page

and Sciences (1995) and a member of the National Academy of Sciences, USA (1998). In recognition of his path-breaking contributions, the American Mathematical Society has established the endowed Ulf Grenander Prize in Stochastic Theory and Modeling.

Grenander's diverse scientific interests are reflected in the breadth of his influence. His seminal thesis under Cramér, together with his later collaboration with Rosenblatt, delivered a rigorous mathematical and statistical framework for signal processing. New methods for estimation and hypothesis testing for stationary stochastic processes emerged and were widely adopted by the engineering community. His work with Szegő on Toeplitz forms found numerous applications, including, for example, in the study of random fields, speech recognition, state-space modelling, model selection and information theory. His actuarial work remains fundamental to the insurance industry. And his work in abstract inference demonstrated, constructively, that virtually any decision function, density or regression surface, parametric or not, could be

systematically estimated given enough data, anticipating the utility of big data and its applications to machine learning. In the context of Bayesian inference, he argued for and demonstrated the potential of Monte Carlo methods, seeding a revolution in statistics and artificial intelligence. And his pattern theory led many of us to the conviction that structured probabilistic models would be fundamental to the most advanced technologies of the future, inspiring David Mumford's prediction that the 21st century would be the "Age of stochasticity."

Grenander was a voracious reader, broadly knowledgeable in history and science, and fluent in many languages. He was a passionate sailor and a skilled "do-it-yourself" electrician, plumber and carpenter. Almost single handedly he built entire wings of his summer home in Vastervik, which now accommodate frequent stays by his three children and six grandchildren, all of whom, in addition to his wife Emma-Stina, survive him.

Stuart Geman, Brown University

Pro Bono Statistics: Statistics in the Public Interest



Yoram Gat, one of our new Contributing Editors, describes himself in his blog (also called *Pro Bono Statistics*, <https://probonostats.wordpress.com/about/>) like this: "I am a statistician and software engineer, living in Israel. My interests include politics (theory and practice) and statistics (theory and practice)."

Statistics is generally practiced as a tool for owners of datasets. It is the nature of datasets that they are owned by large organizations—mostly governments and corporations. In this way, statistics becomes a tool employed by powerful organizations, and the powerful people who control them, to further their objectives. The average member of society is then subject to the effects of this tool without having a say about how it is employed. Over the last few years this situation has been highlighted by the "big data" industry and government mass surveillance operations. However, the pattern of statistics being the tool of the powerful has been in place ever since the rise of statistics (and is reflected in the term "statistics" itself).

To some extent the fact that statistics serves concentrated power

is unsurprising since this is a characteristic of much of, if not all of, science. Science and its application require resources and it is the powerful that have the resources to invest. It is therefore powerful organizations that control science and the effects of science on the public are mediated by the objectives of those organizations. The degree to which the effects are positive depends on the degree to which those objectives are aligned with the public interest.

In a well functioning democratic society the power of the state and other organizations is harnessed to benefit all the members of society. In these circumstances, therefore, increasing the power of those organizations, as statistics effectively does, is a positive outcome. That, however, is not the perceived situation in many countries around the world. There is a public sentiment, quite

Continues on page 8

Pro Bono Statistics

Continued from previous page

widespread globally, that concentrated power is serving narrow interests rather than those of the public. “Big data” business and mass surveillance, for example, have created significant concerns about the invasion of privacy and the potential for oppression. In such a situation, further empowering the powerful is an ethically questionable activity.

But if science in general naturally tends to buttress established power, statistics has the potential to be different. Statistics is a sub-branch of epistemology, the philosophical theory of knowledge, and inherits from epistemology its core commitment to skepticism. As much as it is concerned with generating new knowledge, statistics is concerned with critically examining established belief and debunking false claims. Such an examination is inherently subversive and has the potential to mount a persistent challenge to authority.

By deliberately and systematically adopting a critical outlook, statistics and statisticians can contribute to the wellbeing of society as a whole, and to the wellbeing of the average citizen. Rather than limiting themselves to analyzing data sets thrust upon them, answering questions handed to them, and serving agendas set for them, statisticians can actively cast the net of their inquiry far and wide, seek root causes and fundamental assumptions, examine claims of knowledge and question established power and self-proclaimed sources of authority with a critical and skeptical mind. It is not difficult to come up with examples where examinations of this kind could serve the public well.

Steps promoting this skeptical mission can be taken at the personal and at the institutional levels. At the personal level, students of statistics can be trained to proactively apply critical, methodical, open minded, radical thinking to the world around them. Rather than limit this attitude to specialized scenarios (answering textbook and test questions, data analysis, reviewing academic papers, and evaluating mathematical models and proofs), a habit of doubt, especially about convention and authority, may be inculcated. This can be part of the entire statistics curriculum—from widely administered introductory courses all the way to graduate courses, seminars and thesis advice.

Institutionally, statistical working groups can be formed with the purpose of identifying and critically examining various issues that are of interest to the public. Journals can be created that publish papers defining and evaluating criteria for the public value of existing beliefs, institutions and activities. Such work may to some extent overlap with work in other academic departments (sociology, economics, political science, medicine, environmental science) and in news-media. However, statistics always has a cross-disciplinary tendency and the emphasis of those investigations should be on radical doubt, on taking a fresh look without *a priori* commitments, on challenging dogma. Such a skeptical attitude is easier to maintain for those coming from the outside than for those working within a discipline or within an industry and who are therefore constantly subject to pressures to conform to the established views in those communities and to align with their power structures.

Modern official ideology often prides itself for encouraging skepticism and critical examination. Such ideals, however, are hard to live up to in practice, as the treatment of whistleblowers demonstrates. A community of skeptics within the establishment itself would quite possibly be met with alarm and hostility. Being critically examined and measured is a situation that average people are expected to live with in the educational system and in their workplaces, but which powerful people and institutions are often unaccustomed to. It should be interesting to see what happens if this changes.

Yoram would be happy to have a critical and skeptical conversation about the topics he discusses in this column. He invites readers to comment on this column at the Bulletin's website, <http://bulletin.imstat.org/category/pro-bono-statistics/> or you can email us at bulletin@imstat.org.

Yoram said the inspiration for the title of this column and his blog came from this cartoon by Sidney Harris



Recent papers: two co-sponsored journals

Stochastic Systems

Focusing on the interface of applied probability and operations research, *Stochastic Systems* is the flagship journal of the INFORMS Applied Probability Society and is published through a cooperative agreement between INFORMS/APS and the IMS. This open-access journal seeks to publish high-quality papers that substantively contribute to the modeling, analysis, and control of stochastic systems. The contribution may lie in the formulation of new mathematical models, in the development of new mathematical methods, or in the innovative application of existing methods. A partial list of applications domains that are germane to this journal include: service operations; logistics, transportation, and communications networks (including the Internet); computer systems; finance and risk management; manufacturing operations and supply chains; and revenue management.

Read it at <https://projecteuclid.org/euclid.ssy>

Volume 6: Number 2, 2016

Asymptotic behavior of a critical fluid model for a processor sharing queue via relative entropy AMBER L. PUHA AND RUTH J. WILLIAMS; 251–300
 Stein’s method for steady-state diffusion approximations: An introduction through the Erlang-A and Erlang-C models ANTON BRAVERMAN, J. G. DAI, AND JIEKUN FENG; 301–366
 Convergence properties of weighted particle islands with application to the double bootstrap algorithm PIERRE DEL MORAL, ERIC MOULINES, JIMMY OLSSON, AND CHRISTELLE VERGÉ; 367–419
 Clearing analysis on phases: Exact limiting probabilities for skip-free, unidirectional, quasi-birth-death processes SHERWIN DOROUDI, BRIAN FRALIX, AND MOR HARCHOL-BALTER; 420–458
 Construction of asymptotically optimal control for crisscross network from a free boundary problem AMARJIT BUDHIRAJA, XIN LIU, AND SUBHAMAY SAHA; 459–518
 Heavy-traffic limits for a fork-join network in the Halfin-Whitt regime HONGYUAN LU AND GUODONG PANG; 519–600

Probability Surveys

Probability Surveys is a peer-reviewed electronic journal which publishes survey articles in theoretical and applied probability. The style of articles may range from reviews of recent research to graduate textbook exposition. Articles may be broad or narrow in scope. The essential requirements are a well specified topic and target audience, together with clear exposition. The journal is sponsored by the Institute of Mathematical Statistics and by the Bernoulli Society. *Probability Surveys* is an Open Access journal. The full text of each article published is freely available to all readers.

Read it at <https://projecteuclid.org/euclid.ps>

Volume 14, 2017

Stein’s method for comparison of univariate distributions CHRISTOPHE LEY, GESINE REINERT, AND YVIK SWAN; 1–52
 Fringe trees, Crump–Mode–Jagers branching processes and m -ary search trees CECILIA HOLMGREN AND SVANTE JANSON; 53–154

Volume 13, 2016

Fractional Gaussian fields: A survey ASAD LODHIA, SCOTT SHEFFIELD, XIN SUN, AND SAMUEL S. WATSON; 1–56
 Hyperbolic measures on infinite dimensional spaces SERGEY G. BOBKOV AND JAMES MELBOURNE; 57–88
 On moment sequences and mixed Poisson distributions MARKUS KUBA AND ALOIS PANHOLZER; 89–155
 From extreme values of i.i.d. random fields to extreme eigenvalues of finite-volume Anderson Hamiltonian ARVYDAS ASTRAUSKAS; 156–244

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The IMS has eight funds that are open to contributions, detailed below. The Institute would like to thank the following individuals and organizations for contributing to the IMS. If you would like to make a contribution, please visit <http://imstat.org/membership/gift.htm>.

Blackwell Lecture Fund

The Blackwell Lecture Fund is used to support a lecture in honor of David Blackwell. The lecture's purpose is to honor Blackwell, to keep his name alive and to inspire young people to emulate his achievements. The first lecture was given in 2014.

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The IMS Gift Membership Program provides IMS memberships and journals for statisticians and probabilists in regions of the world where payments in hard currency would impose a difficult financial burden.

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The Le Cam Lecture Fund is an endowment fund set up by friends of Lucien Le Cam to memorialize his contributions to our field. The Le Cam lecturer should be an individual whose contributions have been or promise to be fundamental to the development of mathematical statistics or probability.

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The Open Access Fund supports the establishment and ongoing operation of IMS's open-access publications, including: Probability Surveys, Statistics Surveys, Electronic Journal of Probability, Electronic Communications in Probability and Electronic Journal of Statistics. Two further IMS open access ventures are the posting of all IMS journal articles to ArXiv, and assistance to members in posting to ArXiv.

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Schramm Lecture Fund

The Schramm Lecture Fund was created jointly by IMS and the Bernoulli Society. The lecture in probability and stochastic processes is named in honor of Oded Schramm. The lecture will be given annually and will be featured at meetings (co)-sponsored by the IMS or the Bernoulli Society with a strong attendance by researchers in probability and stochastic processes.

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Scientific Legacy Fund

The Scientific Legacy Fund supports the development of IMS web pages dedicated to ensuring the preservation of valuable historical information on IMS members and leaders of our fields. The IMS will use funds to cover costs of the development and maintenance of such pages.

Anonymous
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Springer

Tweedie New Researcher Fund

The Tweedie New Researcher Award Fund was originally set up with funds donated by Richard L. Tweedie's

friends and family. Funds are used to pay for the travel of the Tweedie New Researcher Award recipient to attend the IMS New Researchers Conference and to present the Tweedie New Researcher Invited Lecture.

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Meeting report: Evidence-based Decision and Meta-Analysis

Shahjahan Khan, University of Southern Queensland, Australia, reports on the workshop on Evidence-based Decision and Statistical Meta-Analysis with Application, sponsored by the Government of Brunei

The Department of Planning, Development and Research (DPDR) of the Ministry of Education, Government of Brunei Darussalam, organised a three-day workshop on Evidence-based Decision and Meta-Analysis with Applications from 23–25 January 2017 at the Rizqun International Hotel in Bandar Sri Begawan, Brunei.

Professor Shahjahan Khan, University of Southern Queensland, Toowoomba, Australia and the Chief Editor of *Journal of Applied Probability and Statistics (JAPS)*, presented the Workshop. The free statistical software MetaXL, an add-on to MS Excel, was extensively used to illustrate various statistical computations and conduct meta-analyses of different datasets from many diverse areas including education.

The Assistant Director of DPDR, Dr Hj Ashri bin Haji Ahmad welcomed the participants and introduced the presenter. Twenty-seven officials from different Departments of the Ministry of Education participated in the Workshop.

The first day of the Workshop was devoted to the presentations on introductory statistics using SPSS and the statistical methods that are essential for understanding meta-analysis of summary statistics from different independent trials/studies to provide necessary statistical background to the participants. The Workshop emphasised the importance for the decision-makers of being evidence-informed, especially the essence of the levels and quality of evidence including the design of studies. The systematic reviews, as opposed to narrative reviews, must avoid every kind of bias in order to make the systematic reviews and meta-analyses objective and reproducible.

In addition to introducing various types of effect measure of common effect size for different types of outcome variables, the Workshop covered different statistical models such as fixed and random effects models. Then the presenter introduced the recently published method, the inverse variance heterogeneity (IVhet) model and focused on the major problems with the random effects model in the way of comparing the two models to deal with heterogeneous meta-analyses.

MetaXL software, accessible at http://www.epigear.com/index_files/metaxl.html, was used to compare the results of the meta-analyses of the same dataset using the fixed, random effects, and IVhet models with particular emphasis on the variation in the redistribution of inverse variance weights under different models, in addition to any variation in the final results.

Because of the background and experience of the participants, and in view of the need of the Ministry of Education, several illustrations on meta-analysis of independent educational studies were included in the presentation and hands-on practices were undertaken. A complete set of notes, example datasets, and presentation slides were provided to all participants prior to the Workshop.

The Workshop was initiated and coordinated by Dr Siti Noor Naasirah Syahiirah Abdullah Teo, Dyg Siti Noorihan binti Hj Daud, and Dk Sri Muliaty Pg Mohamed. Clearly the Workshop shows the highest level of commitment of the Department to improve the quality of its statistics and engagement to make significant contributions in applied research.

The event was well covered by the media.

Group photo of workshop participants including (seated, from left–right) Dr Hj Ashri bin Haji Ahmad, Professor Shahjahan Khan, and Dr Habibah Binti Haji Sion.



Terence's Stuff: It Exists!

Once again Terry Speed is discovering that it's never too late to learn new things in statistics



One of the leading results on *Brownian motion is that it exists.*” So wrote David Freedman on page 1 of his book on the topic. I recalled this statement several years ago when I was writing in this column about proofs, and it came to mind again recently when some younger colleagues asked me to explain Dirichlet processes (DPs) to them. More precisely, they asked me to explain three-level hierarchical Dirichlet process (HDP) mixture models, something that I’d never seen before, but which are very easy to write down using a plate diagram, though not quite as easy to grasp. Until now, I’ve been a bit blasé about Bayesian nonparametrics, thinking that I could probably reach the end of my career without getting far into it. But I was wrong, for big data has caught up with me. One of the most exciting things in my world these days is a little machine known as the MinION, which can produce reads of hundreds of thousands of base pairs from a single DNA molecule, lots of them. This machine can be held in your hand (“smaller than your smartphone”), and plugged into your computer: if you’re not careful, this can crash it by delivering more data than it can take in. The desktop version called PromethION can generate a thousand times more data. Having been involved in DNA sequencing for a while, handheld machines generating 10–20 gigabasepairs of DNA sequence in 48 hours have almost ceased to impress me, but desktop versions generating 12 terabase pairs of sequence in 48 hours still get my attention. What is even more amazing to me is that

the signals from which all this DNA sequence data are derived are single electrical currents measured several thousand times per second. This is the big data that has forced my colleagues to come to terms with these models. Not just HDP mixture models, but also convolutional, and standard and long short-term memory recurrent neural networks, the statistical machinery of deep learning. I have finally been dragged into the twenty-first century.

What’s all this got to do with existence? Wonderfully, perhaps surprisingly, DPs first saw the light of day in 1973 in papers in our own *Annals of Statistics*, written by Thomas Ferguson and colleagues. And there he had to prove their existence. He did so using facts about Dirichlet distributions to show that Kolmogorov’s consistency conditions for a projective system were satisfied, and so a limit, the DP, should exist. That’s why I got called in. Who among the present generation of statistics students knows about the existence of random processes or projective limits? In 1973 and since then, alternative derivations of the DP were discovered. Some, such as the equivalent Pólya urn scheme, are indirect. Others, such as Ferguson’s use of gamma processes or Jayaram Sethuraman’s stick-breaking representation, are more direct and constructive. It turned out that some restrictions were necessary on the underlying measure spaces for Ferguson’s original existence proofs to work, restrictions which weren’t necessary for some other constructions. So we didn’t need Kolmogorov’s theorem after all.

Why do we need existence proofs anyway? Using DPs to analyse data boils down to simple arithmetic procedures whose behavior doesn’t appear to demand deep existence proofs. If people can use HDP mixture models effectively in practice without ever having thought of the question of existence, who are we to criticize? Louis

Bachelier found Brownian motion valuable before Norbert Wiener proved that it exists. I have the impression that physicists have sometimes drawn valid inferences about the world from theory that wasn’t fully grounded until later.

For most of my career, I have started thinking about the questions and the data that cross my path in traditional terms, including devising graphical displays that suggest a way ahead, using linear models and their generalizations, various forms of multivariate analysis, possibly latent variables, and at times context-specific models based on some scientific or technological background. There’s always been plenty of theory in the background for me to consult if I wished. In 2013, the International Year of Statistics, I attended the London Workshop on the Future of the Statistical Sciences. I felt at home, and I liked the published report. Now, with my scientific collaborators asking questions concerning data off the MinION, I no longer feel at home. I need to go far beyond what I currently know, and I have become deeply conscious of the power of deep learning. Most of the theory is unfamiliar, indeed much is unlike what I have come to think of as theory. I should have been paying closer attention, as none of these things are really new.

One may even become Stephen Stigler’s eighth Pillar of Statistical Wisdom.

Terry’s favorite gadget, a tiny DNA sequencer



IMS meetings around the world

Joint Statistical Meetings: 2017–2022

IMS sponsored meeting

IMS Annual Meeting @ JSM 2017:

July 29–August 3, 2017

Baltimore, MD

[w](https://www.amstat.org/meetings/jsm/2017/index.cfm) <https://www.amstat.org/meetings/jsm/2017/index.cfm>

Join us in Baltimore, Maryland, for one of the biggest statistical events of the year: with more than 6,000 attendees (including over 1,000 students) from 52 countries, and over 600 sessions, it's a busy few days! The theme is "Statistics: It's Essential."

Abstract submission is open now. Registration and housing open May 1.



IMS sponsored meetings: JSM dates for 2018–2022

JSM 2018

July 28–August 2,
2018

Vancouver, Canada

IMS Annual Meeting

@ JSM 2019

July 27–August 1,
2019, Denver, CO

JSM 2020

August 1–6, 2020

Philadelphia, PA

IMS Annual Meeting

@ JSM 2021

August 7–12, 2021,
Seattle, WA

2022 Joint Statistical

Meetings

August 6–11, 2022
Washington, D.C.

IMS co-sponsored meeting

19th Meeting of New Researchers in Statistics and Probability

July 27–29, 2017

Johns Hopkins University, Baltimore, MD

[w](http://groups.imstat.org/newresearchers/conferences/nrc.html) <http://groups.imstat.org/newresearchers/conferences/nrc.html>

Each year the IMS sponsors the New Researchers Conference (NRC) during the week preceding the Joint Statistical Meeting (JSM). This year, with JSM in Baltimore, the 19th NRC will be hosted by Johns Hopkins University from July 27–29.

This conference promotes interaction and networking among new researchers in biostatistics, statistics, and probability. The participants will present their research via a short expository talk and a poster and mingle throughout the day. Senior researchers from across these fields will give longer talks, as well as panels on teaching, mentoring, publishing, and grant writing. The meeting covers a wide range of topics in statistics and applied statistics, and some probability.

Anyone who has received a PhD in or after 2012, or expects to receive a PhD by the end of 2017, is eligible to apply. We expect that most or all travel costs to the conference will be covered.

The deadline for application is **March 24, 2017**.

More information can be found at the New Researchers site: <http://groups.imstat.org/newresearchers/conferences/nrc.html>.

Organizers: Elizabeth Ogburn, Bloomberg School of Public Health; Vince Lyzinski, Whiting School of Engineering, Johns Hopkins University.

IMS sponsored meeting

Joint 2018 IMS Annual Meeting and 12th International Vilnius Conference on Probability Theory & Mathematical Statistics

July 2–6, 2018

Vilnius, Lithuania

w TBC

The 2018 IMS Annual Meeting will be held in beautiful Vilnius, the capital of Lithuania, in conjunction with the 12th Vilnius Conference on Probability Theory and Mathematical Statistics. The Program Co-chairs are Peter Bühlmann (IMS) and Vygantas Paulauskas (Vilnius). The Local Chair is Remigijus Leipus. Details to follow.

IMS co-sponsored meeting

Bernoulli/IMS 10th World Congress in Probability and Statistics

August 17–21, 2020

Seoul, South Korea

w TBC

The next World Congress in Probability and Statistics will be in Seoul, South Korea.

At a glance:

forthcoming
IMS Annual
Meeting and
JSM dates

2017

IMS Annual Meeting

@ JSM: Baltimore,
MD, July 29 –
August 3, 2017

2018

IMS Annual Meeting:

Vilnius, Lithuania,
July 2–6, 2018

JSM: Vancouver,
Canada, July 28–
August 2, 2018

2019

IMS Annual Meeting @

JSM: Denver, CO,
July 27–August 1,
2019

2020

IMS Annual Meeting/

10th World Congress:

Seoul, South
Korea, August
17–21, 2020

JSM: Philadelphia,
August 1–6, 2020

2021

IMS Annual Meeting

@ JSM: Seattle, WA,
August 7–12,
2021

IMS co-sponsored meeting

Statistics Meets Friends:

**From Inverse Problems to Biophysics and back
November 29–December 1, 2017**

Göttingen, Germany

w TBC

This workshop is held on the occasion of the 50th birthday of **Axel Munk**. Web page coming soon.

NEW



IMS co-sponsored meeting

Bayesian Inference in Stochastic Processes (BISP)

June 13–15, 2017. Milan, Italy

w <http://www.unibocconi.eu/bisp10>

The workshop will provide an opportunity to review, discuss and explore developments on Bayesian inference in stochastic processes, gathering leading experts and talented young scholars working on the theory and the applications of stochastic processes, in a Bayesian framework. BISP is a biannual international workshop, now in its 10th edition. BISP-10 is endorsed by IMS, ISBA and the Italian Statistical Society (SIS).

BISP10 is dedicated to **Pietro Muliere**, on his 70th birthday. It will be preceded by a one-day conference on “Recent Developments in Bayesian Theory and Stochastic Processes” in his honor, to celebrate his influential research contributions in these fields: www.unibocconi.eu/muliereconference



Pietro Muliere

IMS co-sponsored meeting

**39th Conference on Stochastic Processes and their Applications (SPA)
July 24–28, 2017**

Moscow, Russia

w <http://www.spa2017.org/>

Registration is now open for the 39th Conference on Stochastic Processes and their Applications (SPA 2017) in Moscow. The abstract submission deadline is **May 1**.

The conference will feature the following keynote lectures:

- Lévy lecture: Grigorii Olshanski
- Doob lecture: Vladimir Bogachev
- IMS Medallion lectures: Takashi Kumagai and Marta Sanz-Solé
- Schramm lecture: Richard Kenyon
- Döblin Prize lecture: Allan Sly
- Itô prize lecture: Noemi Kurt

Plenary speakers are Sandra Cerrai, Massimiliano Gubinelli, Nicolas Curien, Mikhail Lifshits, Charles Bordenave, Dmitry Chelkak, Shi Zhan and Xicheng Zhang.

UPDATED

IMS co-sponsored meeting

**South-Eastern Probability Conference: Interacting Particle Systems
May 15–17, 2017. Duke University, Durham, NC, USA**

w <https://sites.duke.edu/sepc/>

Also honoring the contributions of Professor Rick Durrett on the occasion of his 65th birthday. Now a co-sponsored meeting.

NEW

IMS co-sponsored meeting

**The 5th Workshop on Biostatistics and Bioinformatics
May 5–7, 2017. Atlanta, Georgia, USA**

w <http://math.gsu.edu/~yichuan/2017Workshop>

Biostatistics and Bioinformatics have been playing a key and important role in statistics and other scientific research fields in recent years. The goal of this workshop is to stimulate research and to foster the interaction of researchers in Biostatistics & Bioinformatics research areas. The workshop will provide the opportunity for faculty and graduate students to meet the top researchers in a small group setting, identify important directions for future research, facilitate research collaboration.

The Keynote speaker is **Tony Cai**. Invited speakers are: **Jie Chen, Ying Guo, Timothy Hanson, Benjamin Haaland, Faming Liang, Lei Liu, Limin Peng, Lily Xu, Feifang Hu, Ming Tan, Hongzhe Li, Ying Yuan, Yajun Mei, Weixin Yao and Liang Li**.

The workshop will be providing partial **travel awards** to selected conference participants. Priority will be given to senior graduate students, post-graduate, recent PhD's, junior faculty, and under-represented groups. To be considered for a travel award you must submit a poster abstract and one application letter. The application letter should state why you would like to participate in the workshop, your research activity, your PhD University with how many years and advisor's name, and a brief description of the travel support. Applications will be accepted until it is full, and the deadline for submitting a poster is **April 30**. They should be emailed to Professor Yichuan Zhao at yichuan@gsu.edu.

Registration is open until **April 30, 2017**. See <http://math.gsu.edu/~yichuan/2017Workshop/registration.html>.

If you have any questions, please email the organizer, Dr. Yichuan Zhao, at yichuan@gsu.edu.

IMS co-sponsored meeting

**40th Conference on Stochastic Processes and their Applications (SPA)
June 11–15, 2018. Gothenburg, Sweden**

w TBC

The 40th Conference on Stochastic Processes and their Applications (SPA 2018) will be held June 11–15, 2018, at the Chalmers University of Technology in Gothenburg, Sweden.

More IMS meetings around the world

IMS co-sponsored meeting

Bayesian Nonparametrics

June 26–30, 2017

Ecole Normale Supérieure, Paris, France

w <https://www.ceremade.dauphine.fr/~salomond/BNP11/index.html>

The 11th Bayesian nonparametrics (BNP) meeting will be held in Paris from the 26th to the 30th of June at Ecole Normale Supérieure. The Bayesian nonparametrics conference is a bi-annual international meeting bringing together leading experts and talented young researchers working on applications and theory of nonparametric Bayesian statistics. It is an official section meeting of the Bayesian Nonparametrics section of the International Society for Bayesian Analysis (ISBA). Details to follow.

IMS co-sponsored meeting

6th Workshop on Stochastic Methods in Game Theory

May 5–13, 2017

Erice, Sicily, Italy

w <https://sites.google.com/site/ericegametheory2017>

Many decision problems involve elements of uncertainty and of strategy. Most often the two elements cannot be easily disentangled. The aim of this workshop is to examine several aspects of the interaction between strategy and stochastics. Various game theoretic models will be presented, where stochastic elements are particularly relevant either in the formulation of the model itself or in the computation of its solutions. The speakers are scholars in stochastics, economics, operations research, computer science, mathematics, control engineering. See website for details.

IMS co-sponsored meeting

2018 IMS Asia Pacific Rim Meeting

June 26–29, 2018

Singapore

w TBC

The next IMS Asia Pacific Rim meeting (IMS-APRM) will be held in Singapore from June 26–29, 2018. Details are forthcoming. Please mark the date in your diaries!

IMS sponsored meeting

WNAR/IMS Meeting

June 24–28, 2017

Santa Fe, New Mexico, USA

NEW w <http://www.wnar.org/WNAR-2017-Meeting>

Registration is now open for the WNAR/IMS 2017 Meeting, which will be in Santa Fe, New Mexico, at the Eldorado Hotel & Spa. The social program includes a Welcome Reception on Sunday June 25, the Reception after Presidential Invited Speaker on Monday June 26, and Banquet dinner on Tuesday June 27. Two short courses will be given on June 25: *“Clinical Trials: How to create, organize and implement a clinical trial from a statistical perspective”* presented by Dr. Tammy Massie, NIH; and *“Spatio-temporal dynamics statistical modeling in practice”* presented by Drs. Mevin Hooten, Trevor Hefley, and Perry Williams.

Student Paper Competition: the deadline to submit your abstract is Sunday April 30, and the paper must be submitted by Thursday May 25. Monetary prizes will be awarded to the best papers in written and oral competitions. All entrants will receive fee registration and a free banquet dinner ticket! For more details on eligibility and how to submit your paper, please visit <http://www.wnar.org/event-2491557>

IMS co-sponsored meeting

UPDATED

2017 IMS-China International Conference on Statistics and Probability

June 28–July 1, 2017

Nanning, Guangxi Province, China

NEW w <http://2017ims-china.gxun.edu.cn/index.htm>

The IMS-China International Conference on Statistics and Probability is an international conference, held regularly, which covers a wide range of topics in statistics, probability and their related areas. The conference provides an excellent forum for exchanges of the cutting-edge research at the frontiers of those areas, and for forging new research collaborations. Past IMS-China conferences were successfully held in Hangzhou (2008), Weihai (2009), Xian (2011), Chengdu (2013) and Kunming (2015). We anticipate that the 2017 conference, to be hosted by Guangxi University For Nationalities and held in the beautiful city of Nanning, will be another success.

The plenary speakers are **Mufa Chen**, Beijing Normal University, China, and **Bin Yu**, UC Berkeley, USA. The special invited speakers are **Peter Bühlmann**, ETH Zürich, Switzerland; **Krzysztof Burdzy**, University of Washington, USA; **Tony Cai**, University of Pennsylvania, USA; **Jon Wellner**, University of Washington, USA; **Cui-hui Zhang**, Rutgers University, USA; and **Xicheng Zhang**, Wuhan University, China.



ENAR 2018–2020 dates

IMS sponsored meetings

March 25–28, 2018: in Atlanta, GA

March 24–27, 2019: in Philadelphia, PA

March 22–25, 2020: in Nashville, TN

w <http://www.enar.org/meetings/future.cfm>

Other meetings and events around the world

Neuro-Statistics: the interface between Neuroscience and Statistics May 5–6, 2017

Minneapolis, MN, USA

[w http://irsa.stat.umn.edu/session/neuro-statistics-interface-between-neuroscience-and-statistics](http://irsa.stat.umn.edu/session/neuro-statistics-interface-between-neuroscience-and-statistics)

The modern world is one of data: every walk of life and every aspect of nature and human society generates information that can be used for scientific discovery and betterment of life on this planet. This workshop is on the frontier of collaborative research on the use of Statistics and Data Science methods towards understanding Neuroscience data and scientific objectives, and on the challenges and scope of this inter-disciplinary research. A half-day short course will be followed by multiple research presentations culminating in a poster session, on various aspects of how Data Science can help us understand better the human brain. Speakers will include three external researchers and a number of University of Minnesota researchers working on the cutting edge of neuroscience and statistics.

Registration is now open for the workshop: see the link on the website.

Students who contribute a first author poster or article to the workshop will receive a \$25 reimbursement towards their registration. Email irsa@stat.umn.edu if you would like to submit a poster or article.

2017 Fields Medal Symposium: Martin Hairer October 16–19, 2017

Fields Institute, Toronto, ON, Canada

[w http://www.fields.utoronto.ca/activities/17-18/fieldsmedalsym](http://www.fields.utoronto.ca/activities/17-18/fieldsmedalsym)

The 2017 Fields Medal Symposium will focus on the work of 2014 Fields Medalist Martin Hairer. Martin Hairer's work on regularity structures and rough paths has revolutionized the study of stochastic partial differential equations and related models in statistical physics. The symposium will reflect on this work and will consider its current and potential impact.

The Scientific Program of the Symposium is intended for a broad audience of mathematicians, graduate students, and other scientists. Associated activities include: a Public Opening, featuring a non-technical presentation for a general audience, by Martin Hairer; and a Student Night, involving undergraduates and high school students.

Funding is available for early career researchers, postdocs and graduate students. See the symposium website to apply or register.

Invited speakers include: Gérard Ben Arous, Alexei Borodin, Ajay Chandra, Arnaud Debussche, Hugo Duminil-Copin, Massimiliano Gubinelli, Martin Hairer, David Kelly, Jonathan Mattingly, Jean-Christophe Mourrat, Laure Saint-Raymond, Sylvia Serfaty, Gordon Slade, Herbert Spohn, Hendrik Weber, Lorenzo Zambotti.

LASR Workshop: Biostatistics and machine learning methods in -omics research

June 26–28, 2017

Leeds, UK

[w http://www1.maths.leeds.ac.uk/statistics/workshop/lasr2017/](http://www1.maths.leeds.ac.uk/statistics/workshop/lasr2017/)

The 34th Leeds Annual Statistical Research (LASR) Workshop will be held jointly with the EU-funded MIMOmics network. The workshop will take place from 26 to 28 June 2017 at the University of Leeds, Leeds, UK. This year's topic is "Biostatistics and machine learning methods in omics research". Registration is now open and can be done on the workshop webpage - it will close on 16 June 2017.

Bocconi Summer School in Statistics & Probability: Statistical Causal Learning

July 10–22, 2017

Como, Italy

[w http://spas.lakecomoschool.org](http://spas.lakecomoschool.org)

Summer school in Statistics and Probability held on the lake of Como, Italy, with a two-week course including lectures and supervised tutorials. The topic of the 2017 edition is Statistical Causal Learning. The instructors are Bernhard Schölkopf, David Lopez-Paz and Ilya Tolstikhin.

Closing date for applications: April 7, 2017.



2014 Fields Medalist Martin Hairer (left) talking with Michael Kateregga on the banquet cruise at last year's World Congress in Probability and Statistics, in Toronto, Canada

More meetings around the world

Data Science Summer School (DS³)

August 28–September 1, 2017

Paris, France

[w http://www.ds3-datascience-polytechnique.fr/](http://www.ds3-datascience-polytechnique.fr/)

Data Science Summer School (DS³) is organised by the Data Science Initiative at École Polytechnique, in the quiet and charming outskirts of Paris.

The primary focus of the event is to provide a series of courses covering the latest advances in the field of data science.

The event is targeted at students (MSc2, PhD), postdocs, academics, members of public institutions, and professionals.

The program features four short courses given by world experts: Y. Bengio (Deep Learning); P. Ravikumar (Graphical Models); P. Richtarik (Randomized Optimization Methods); and C. Szepesvari (Bandits). There will also be several special sessions (by O. Bousquet, D. Ernst, S. Meyn, and many other leading experts); a special session on Data Science for Smart Grids, followed by a discussion; and a roundtable conversation on the Future of Artificial Intelligence. There will be many networking opportunities, including poster sessions, meeting possibilities at the sponsor booths, welcoming cocktail, banquet, shuttle bus going back every evening from the Polytechnique campus. Young researchers will be also given the opportunity to present their works in the format of posters.

Bayesian Inference in Statistics and Statistical Genetics

August 16–20, 2017

Houghton, Michigan, USA

[w http://kliak.mtu.edu/2017/](http://kliak.mtu.edu/2017/)

The purpose of the workshop is to stimulate research collaboration in the development, analysis, and application of statistical techniques for complex, high-dimensional data arising in real world applications. The target audience is a mix of internationally renowned specialists, junior researchers, and graduate students who are interested in the forefront of the following areas of statistical research: Bayesian statistics, statistical climatology, statistical genetics, and other related areas.

Stochastic Processes and Algebraic Structures: From Theory Towards Applications

October 4–6, 2017

Västerås, Stockholm, Sweden

[w https://spas2017blog.wordpress.com/](https://spas2017blog.wordpress.com/)

The main topics of the conference are stochastic processes, algebraic structures and their statistical, financial, insurance, biological, engineering and industrial applications. This conference will bring together a selected group of mathematicians, researchers from related subjects as well as practitioners from industry who actively contribute to theory and applications of stochastic and algebraic structures, methods, and models. The conference is dedicated to Professor Dmitrii S. Silvestrov's 70th birthday.

Deadline for submission of abstracts is May 15, 2017. There will be no conference registration fee. For the optional conference dinner last day of the conference (in Stockholm) the fee is 50 EUR (500 SEK). Please fill in the registration form online before May 15, 2017.

IMA Conference on Inverse Problems from Theory to Application

September 19–21, 2017

Cambridge, UK

[w https://ima.org.uk/3536/ima-conference-inverse-problems-theory-application/](https://ima.org.uk/3536/ima-conference-inverse-problems-theory-application/)

An inverse problem denotes the task of computing an unknown physical quantity from indirect measurements. The corresponding forward problem maps the physical quantity to the measurements. In most realistic situations the solution of the inverse problem is challenging, complicated by incomplete and noisy measurements, as well as non-invertible forward operators which render the inverse problem ill-posed (that is lack of stability and/or uniqueness of solutions).

Conference topics: Imaging; Regularisation theory; Statistical inverse problems; Sampling; Data assimilation; Inverse problem applications.

Call for Papers. Papers will be accepted for the conference based on a 300 word abstract for oral or poster presentation. Abstracts should be submitted by 30 April via <https://my.ima.org.uk/>

Analytical and Computational Methods in Probability Theory and its Applications

October 23–27, 2017

Moscow, Russia

[w http://acmpt.ru/](http://acmpt.ru/)

This international conference on Analytical and Computational Methods in Probability Theory and its Applications (ACMPT-2017) will be held in Lomonosov Moscow State University and in RUDN University, Moscow, from October 23–27, 2017.

The conference will mark the 90th birthday of Alexander Solov'ev, an outstanding Russian mathematician and probabilist.

Meeting the Statistical Challenges in High Dimensional Data and Complex Networks

February 5–16, 2018

National University of Singapore

w <http://www2.ims.nus.edu.sg/Programs/018wstat/index.php>
 Organizing Committee Co-chairs: Jiashun Jin (Carnegie Mellon University) and Zhigang Yao (National University of Singapore)
 The program aims at showing the role of modern statistical methods in complex data and serves to support interactions among mathematicians, statisticians, engineers and scientists working in the interface of experiment, computation, analysis and statistics. Two workshops with a few special lectures will focus on the development of new statistical methods in high dimensional data and complex networks with their interactions in scientific and social sciences. It seeks to foster activity and collaboration on all aspects of the effects of the high dimensional data analysis and social networks.

This program includes the following two workshops, which are interconnected with each other.

1. *Workshop on High Dimensional Data Analysis*: We address the following topics of modern statistical analysis, from science frontiers to methodology development. Topics are closely related.

Topic on Science Frontiers: New data type and emerging new scientific problem; Recent development in biomedical research.
 Topic on Methodology Development: Random matrix theory; Classification and clustering; Recent advancement in machine learning and shape analysis

2. *Workshop on Social Networks*: We address many recent issues in social networks, including but not limited to: topic on Data collection and cleaning; and topic on network models

Plenary Speakers: William F. Eddy (Carnegie Mellon University) and Tze Leung Lai (Stanford University)

Invited Speakers

Aurore Delaigle (The University of Melbourne)

Stephan Huckeman (Georgia Augusta Universität Göttingen)

Zheng (Tracy) Ke (The University of Chicago)

Jing Lei (Carnegie Mellon University)

Shingyu Leung (Hong Kong University of Science and Technology)

Jinchi Lv (University of Southern California)

Steve Marron (The University of North Carolina at Chapel Hill)

Boaz Nadler (Weizmann Institute of Science)

Heping Zhang (Yale University)

Jian Zhang (University of Kent)

Hui Zou (University of Minnesota)

Linear Algebra and its Applications

December 11–15, 2017

Manipal, India

w <http://iclaa2017.com>

In sequel to CMTGIM 2012 and ICLAA 2014, the Department of Statistics at Manipal University, Manipal, India, is organizing an international conference on Linear Algebra and its Applications (ICLAA 2017) in December 11–15, 2017.

The theme of the conference shall focus on: Classical Matrix Theory; Matrices and Graphs; Combinatorial Matrix Theory; Matrix and Graph Methods in Statistics; and Co-variance Analysis and Applications.

Important Dates:

Last date for submission of registration form : September 1, 2017

Early bird payment of registration fee : September 1, 2017

Last date for submission of abstract of talk : September 30, 2017

Notification of Acceptance : October 15, 2017

We welcome your participation in ICLAA 2017 and invite you to contribute with a presentation of your recent research in the theme area if possible. Registration for ICLAA 2017 is open. Please visit <http://iclaa2017.com>.

ASA Symposium on Statistical Inference

October 11–13, 2017

Bethesda, MD, USA

w <https://www2.amstat.org/meetings/ssi/2017/>

The symposium follows up on the historic American Statistical Association *Statement on P-Values and Statistical Significance*, calling for moving statistical analysis and evidence-based decision making beyond “bright line rules” toward a “post $p < 0.05$ era.” This symposium will focus attention on specific approaches for improving practice across three broad sets of activities: conducting research in the 21st century; using research in the 21st century; and sponsoring, disseminating, reproducing, and replicating research in the 21st century.

More meetings around the world

Annual Meeting of the German Statistical Society

September 19–22, 2017

Rostock, Germany

[w](http://www.statistische-woche.de/index.php?id=1&L=1) <http://www.statistische-woche.de/index.php?id=1&L=1>

The meeting contains the plenary sessions being under a frame topic and a variety of contributed sessions and meetings of the sections. Furthermore, it includes the Gumbel Lecture, which is held by a prominent statistician of the younger generation, and a mini-symposium (Portfolio Analysis under Parameter Uncertainty), which is also organised by a young statistician. There are about 500 participants in this statistical week, who come from different areas of statistics.

Registration is open now. Participants intending to give a talk or to present a poster are invited to submit an abstract electronically via the conference submission system. Abstract submission deadline: May 1, 2017.

The German Statistical Society supplies a limited amount of grants covering travelling allowances for members younger than 35. Details can be found on the Society's homepage

Design and Analysis of Experiments (DAE 2017) Conference

October 12–14, 2017

Los Angeles, CA, USA

[w](http://www.stat.ucla.edu/~hqxu/dae2017/) <http://www.stat.ucla.edu/~hqxu/dae2017/>

The purpose of the Design and Analysis of Experiments (DAE) conference series is to provide support and encouragement to junior researchers in the field of design and analysis of experiments, and to stimulate interest in topics of practical relevance to science and industry. The meetings also attract top notch senior researchers, primarily from North America and Europe, and emphasize interaction between junior and senior researchers.

DAE 2017 is the ninth event in the DAE conference series. It will focus on emerging areas of research in experimental design, as well as novel innovations in traditional areas.

For sponsorship and program information, please contact: Weng Kee Wong [e](mailto:wk Wong@ucla.edu) wk Wong@ucla.edu or Hongquan Xu [e](mailto:hqxu@stat.ucla.edu) hqxu@stat.ucla.edu, DAE 2017 co-organizers and program co-chairs.



Fields Institute: Call for Proposals & Funding Opportunities

Toronto, ON, Canada

The Fields Institute invites applications for new thematic and focus programs beginning in 2019.

Proposals for Thematic and Focus Programs in 2019 and Beyond

Guidelines for preparation and submission of proposals for thematic and focus programs at the Fields Institute. They are also found here: <http://www.fields.utoronto.ca/resources/thematic-and-focus-program-proposals>

The next deadlines for submission of proposals or letters of intent for thematic and focus program are September 15, 2017 and March 15, 2018, to allow for external reviews before consideration by our Scientific Advisory Panel, which meets in November and May. Decisions are normally announced the following month. A complete proposal or letter of intent should be sent to proposals@fields.utoronto.ca.

Proposals for Major Thematic Programs

Major thematic programs of 4 or 6 months duration are the Institute's flagship activities. Organizers of major thematic programs are advised that a substantial lead time (up to two years) is recommended, and are encouraged to submit a Letter of Intent (LOI) of 3 to 5 pages in length prior to preparing a complete proposal. The purpose of an LOI is to allow the Fields Institute to provide feedback before organizers do the considerable work needed to prepare a detailed proposal. Complete proposals for major thematic programs are typically 15–20 pages.

Proposals for Short Thematic or Focus Programs

Short thematic or focus programs of 1 or 2 months duration provide a flexible and relatively rapid way to organize activities in areas of current research interest in the mathematical sciences. The Fields Institute particularly encourages summer programs of an interdisciplinary nature. Organizers of short thematic and focus programs are advised that a lead time of at least 18 months is recommended. An LOI is not normally needed, but can be considered prior to submission of a complete proposal.

Eighth International Workshop on Statistical Analysis of Neuronal Data (SAND8)

May 31–June 2, 2017

Pittsburgh, Pennsylvania, USA

w <http://sand.stat.cmu.edu/>

Registration is now open for the eighth international workshop on Statistical Analysis of Neural Data (SAND8). The 3rd Annual Conference for Statistical Methods in Imaging is also taking place on the same days, in parallel, at a nearby location in Pittsburgh.

SAND8 will begin with a panel discussion on “Emerging Challenges of Brain Science Data,” and will end with several talks that connect statistical analysis to mathematical modeling. In between there will be keynote talks by senior investigators and shorter presentations by junior investigators, the latter selected on a competitive basis. There will also be a poster session, to which all participants are invited to contribute. Talks and posters may involve new methodology, investigation of existing methods, or application of state-of-the-art analytical techniques. In addition, there will be a lunchtime discussion devoted to opportunities and challenges for women in computational neuroscience.

Confirmed keynote lecturers, panelists, and discussants include the following: Genevera Allen, Rice; Marlene Behrmann, CMU; Emery Brown, MIT/Harvard Medical School; Elizabeth Buffalo, U. Washington; Anne Churchland, Cold Spring Harbor; Peter Dayan, Gatsby; Alain Destexhe, CNRS, France; Adrienne Fairhall, U. Washington; Sonja Grun, Julich Institute, Germany; Alon Korngreen, Bar-Ilan, Israel; Mark Kramer, Boston U.; Andrew Leifer, Princeton; Brian Litt, Penn; Katherine Nagal, NYU; Jonathan Pillow, Princeton; Sridevi Sarma, Johns Hopkins; Aarti Singh, CMU; Andreas Tolias, Baylor; Timothy Verstynen, CMU.

This workshop series is concerned with analysis of neural data of all kinds, ranging from anatomy to electrophysiology, to neuroimaging. It aims to define important problems in neuronal data analysis and useful strategies for attacking them; to foster communication between experimental neuroscientists and those trained in statistical and computational methods encourage young researchers, including graduate students, to present their work; and to expose young researchers to important challenges and opportunities in this interdisciplinary domain, while providing a small meeting atmosphere to facilitate their interaction with senior colleagues. We are especially interested in attracting to this workshop people wishing to learn more about challenges in the analysis of neural data who are females, under-represented minorities, or persons with disabilities.

International Workshop on Perspectives on High-dimensional Data Analysis (HDDA-VII)

June 15–19, 2017

Guanajuato, Mexico

w <http://hddavii.eventos.cimat.mx/node/651>

The wealth of information has originated new problems in research areas that analyzes epigenomic, proteomic, high-resolution image data and network data, among others. The problems originated from high-dimensional data are faced by new statistical development. The purpose of this workshop is to foster the interaction of researcher in the area of high-dimensional data analysis and stimulate research. It will provide a venue for participants to meet leading researches of this field in an intimate setting, providing maximal chance for interaction.

Early bird registration deadline is April 23, 2017.

**Are you organizing a meeting?
It's free, and easy, to get it listed
here, and also at the online
calendar, [www.imstat.org/
meetings/](http://www.imstat.org/meetings/).**

**Submit the details at
imstat.org/submit-meeting.html**

**Announce the meeting as early
as possible to get the date on
people's radar, even if the website
and other details are yet to be
confirmed.**

Employment Opportunities around the world

United States: Berkeley, CA

UC Berkeley

Lecturer

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30782008

United States: Ann Arbor, MI

University of Michigan Statistics

RTG Postdoctoral associate

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=33140921

United States: Chicago, IL

University of Chicago, Department of Statistics

William H. Kruskal Instructor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=32728656

United States: New York, NY

The School of Professional Studies at Columbia University

Lecturer/Senior Lecturer in Discipline

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=33675705

United States: Atlanta, GA



EMORY

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Department Chair and Rollins Professor Biostatistics and Bioinformatics Rollins School of Public Health of Emory University

The Rollins School of Public Health (RSPH) of Emory University is recruiting a dynamic leader with a forward-looking vision for this rapidly evolving field to serve as Chair of the Department of Biostatistics and Bioinformatics (BIOS; sph.emory.edu/departments/bios). Applicants should possess a doctoral degree in Biostatistics, Statistics, or a related discipline; a prominent record of academic research, scholarship, service, and teaching; a demonstrated capacity to secure external research funding; dedication to faculty career development and to training the next generation of biostatistics students; and strong advocacy for methodological and collaborative research. Candidates should have a strategic understanding of trends in the field; demonstrated ability to foster creativity and innovation; and proven leadership and management abilities in a complex environment. The committee will accept applications from candidates with an established record that merits appointment as a tenured full professor. The Department Chair position is supported by an endowed Rollins chair.

The Department includes 35 primary faculty members currently supported by a wide range of external funding, as principal investigators, core directors, and co-investigators. Faculty investigators engage in research on a diverse range of issues such as survival analysis, spatial statistics, bioinformatics, imaging, statistical genetics, measurement error models, and clinical trials. There is a strong tradition of collaboration between BIOS faculty and faculty from other departments in the school, university, and a wide range of government and non-governmental organizations.

Applicants should apply to Emory position 69371 and send a letter indicating their interest accompanied by a curriculum vita to: Dr. Colleen McBride, Search Committee Chair, c/o Ashley Mastin (amastin@emory.edu). Applications will be kept confidential and references will not be contacted without the permission of applicants. See the full job ad at <https://www.sph.emory.edu/BIOSchair.pdf>.

The starting date is negotiable and salary is commensurate with qualifications. Review of applications will begin immediately and continue until the position is filled.

Emory University is an Equal Opportunity / Affirmative Action / Disability / Veteran Employer.

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United States: Memphis, TN**University of Memphis**

Assistant Professor Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=33040880**United States: Memphis, TN****University of Memphis**

Assistant Professor of Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=33548398

Visit the jobs section on the IMS website, where you can:

- * *View job opportunities in probability and statistics, including in academia and industry*
- * *Post your resume/CV online*
- * *Create personal Job Alerts so that you never let a matching job opportunity pass you by...*


<http://jobs.imstat.org/>





International Calendar of Statistical Events


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

April 2017


April 3–4: Ulm, Germany. **From Analysis to Stochastics**
 <http://www.uni-ulm.de/?id=uli2017>


April 5–7: Barcelona, Spain. **4th Control, Decision and Information Technologies (CoDIT17)**  <http://codit2017.com>


April 17–21: Yulara (Ayers Rock), NT, Australia. **Applied Probability @ The Rock**  <http://www.maths.adelaide.edu.au/APatR/>

April 20–22: Fort Lauderdale, Florida, USA. **20th Artificial Intelligence and Statistics (AISTATS)**  www.aistats.org


April 22: Washington DC, USA. **2017 National Math Festival**
 <http://nationalmathfestival.org/2017-festival/>



April 24–27: CIRM-Luminy, France. **Qualitative Methods in KPZ Universality**  <http://khanin-shlosman.weebly.com/conference.html>



April 26–28: Warwick, UK. **InSPiRe Conference: Methodology for Clinical Trials in Small Populations and Rare Diseases**  <http://warwick.ac.uk/inspireconference>

April 30–May 5: Ascona, Switzerland. **Statistical Challenges in Single-Cell Biology**  <https://www.bsse.ethz.ch/cbg/cbg-news/ascona-2017.html>

May 2017

May 3–5: Knoxville, TN, USA. **NIMBioS Investigative Workshop: Species' Range Shifts in a Warming World.**  http://www.nimbios.org/workshops/WS_rangeshifts

 **May 5–6:** Minneapolis, MN, USA. **Neuro-Statistics: the interface between Neuroscience and Statistics**  <http://irsa.stat.umn.edu/session/neuro-statistics-interface-between-neuroscience-and-statistics>

 **May 5–7:** Atlanta, GA, USA. **The Fifth Workshop in Biostatistics and Bioinformatics**
 <http://math.gsu.edu/~yichuan/2017Workshop>

 **May 5–13:** Erice, Sicily, Italy. **6th Workshop on Stochastic Methods in Game Theory**
 <https://sites.google.com/site/ericgametheory2017>


Continues on page 24

International Calendar *continued*

May 2017 *continued*

 May 15–17: Durham, NC, USA. **Southeastern Probability Conference** **w** <https://sites.duke.edu/sepc/>

May 29–30: Atlanta, GA, USA. **Statistical Perspectives of Uncertainty Quantification** **w** <http://pwp.gatech.edu/spuq-2017>

 May 31–June 2: Pittsburgh, Pennsylvania, USA. **Eighth International Workshop on Statistical Analysis of Neuronal Data (SAND8)** **w** <http://sand.stat.cmu.edu/>

May 31–June 2: Santorini, Greece. **Thera Stochastics: A Mathematics Conference in Honor of Ioannis Karatzas** **w** <http://www.math.columbia.edu/department/thera/>

June 2017


June 1–2: Brussels, Belgium. **Sparsity in Applied Mathematics and Statistics** **w** <http://homepages.ulb.ac.be/~majansen/workshopSAMS2017/>

June 5–7: Fort Collins, CO, USA. **14th Graybill Conference on Statistical Genetics and Genomics** **w** <http://graybill.wolpe2.natsci.colostate.edu/>

June 5–30: Vancouver, BC, Canada. **PIMS-CRM Summer School in Probability** **w** <http://www.math.ubc.ca/Links/ssprob17/>

June 6–9: London, UK. **17th Applied Stochastic Models and Data Analysis (ASMDA)** **w** www.asmda.es

June 6–9: Yorktown Heights, NY, USA. **ISBIS 2017: Statistics in Business Analytics** **w** www.isbis2017.org

 June 15–19: Guanajuato, Mexico. **International Workshop on Perspectives on High-dimensional Data Analysis (HDDA-VII)** **w** <http://hddavii.eventos.cimat.mx/node/651>

June 19–22: Turin, Italy. **First Italian Meeting on Probability and Mathematical Statistics** **w** <http://calvino.polito.it/~probat/torino2017>

June 19–23: Amsterdam, The Netherlands. **8th General AMaMeF Conference** **w** <http://8amamef.nl>

June 19–23: Beverly, MA, USA. **Quantitative Approaches to Biomedical Data Science Challenges in our Understanding of the Microbiome** **w** <http://bigdatau.org/innovationlab2017>

June 19–23: New York, USA. **Dynamics, aging and universality in complex systems** **w** <http://cims.nyu.edu/conferences/gba60/>


June 20–23: Rouen, France. **Sixth International Workshop in Sequential Methodologies** **w** <http://lmrs.univ-rouen.fr/RMR17/>

June 20–23: Riverside, CA, USA. **10th International Conference on Multiple Comparison Procedures** **w** <http://www.mcp-conference.org/hp/2017>

 June 24–28: Santa Fe, NM, USA. **2017 WNAR/IMS Meeting** **w** <http://www.wnar.org/WNAR-2017-Meeting>


June 25–28: Cairns, QLD, Australia. **37th International Symposium on Forecasting** **w** <https://forecasters.org/isf/>

June 25–July 15: Park City, Utah, USA. **Random Matrix Theory Summer Session** **w** <https://pcmi.ias.edu/upcoming>

 June 26–28: Leeds, UK. **LASR Workshop: Biostatistics and machine learning methods in -omics research** **w** <http://www1.maths.leeds.ac.uk/statistics/workshop/lasr2017/>

 June 26–30: Paris, France. **Bayesian Nonparametrics** **w** <https://www.ceremade.dauphine.fr/~salomond/BNP11/index.html>

June 26–30: Delft, The Netherlands. **10th Conference on Extreme Value Analysis: EVA 2017** **w** www.eva2017.nl


 June 28–July 1: Nanning, Guangxi Province, China. **2017 IMS-China International Conference on Statistics and Probability** **w** <http://2017ims-china.gxun.edu.cn/index.htm>

July 2017

July 2–7: Groningen, The Netherlands. **IWSM 2017** **w** <http://iws2017.webhosting.rug.nl/>


July 3–7: Wollongong, NSW, Australia. **ICORS 2017** **w** <http://niasra.uow.edu.au/icors2017/index.html>

July 9–13: Vigo, Spain. **38th Annual Conference of the International Society for Clinical Biostatistics** **w** TBC

 July 10–22: Como, Italy. **Bocconi Summer School in Statistics & Probability: Statistical Causal Learning** **w** <http://spas.lakecomoschool.org>

July 16–21: Marrakech, Morocco. **61st ISI World Statistics Congress 2017** **w** <http://www.isi2017.org/>

 July 24–28: Moscow, Russia. **39th Conference on Stochastic Processes and their Applications (SPA)** [w](http://www.spa2017.org/) <http://www.spa2017.org/>


 July 29 – August 3: Baltimore, USA. **IMS Annual Meeting at JSM 2017** [w](http://amstat.org/meetings/jsm/) <http://amstat.org/meetings/jsm/>

Come to JSM 2017: this is Baltimore Inner Harbor at night (photo by Mitch Lebovic)




August 2017

August 12–14: St Louis, MO, USA: **Second Workshop on Higher-Order Asymptotics and Post-Selection Inference (WHOA-PSI)²** [w](http://www.math.wustl.edu/~kuffner/WHOA-PSI-2.html) <http://www.math.wustl.edu/~kuffner/WHOA-PSI-2.html>

 August 16–20: Houghton, Michigan, USA. **Bayesian Inference in Statistics and Statistical Genetics** [w](http://kliak.mtu.edu/2017/) <http://kliak.mtu.edu/2017/>

August 25–29: Debrecen, Hungary. **XXXIV International Seminar on Stability Problems for Stochastic Models** [w](https://arato.inf.unideb.hu/isspsm2017/index.php) <https://arato.inf.unideb.hu/isspsm2017/index.php>

 August 28–September 1: Paris, France. **Data Science Summer School (DS³)** [w](http://www.ds3-datascience-polytechnique.fr/) <http://www.ds3-datascience-polytechnique.fr/>


August 28–September 1: New York, USA. **Dyson–Schwinger equations, topological expansions, and random matrices** [w](http://www.math.columbia.edu/departement/probability/seminar/guionnet.html) <http://www.math.columbia.edu/departement/probability/seminar/guionnet.html>


August 28–September 1: Vienna, Austria. **CEN-ISBS Vienna 2017 Joint Conference on Biometrics & Biopharmaceutical Statistics** [w](http://www.cenisbs2017.org) www.cenisbs2017.org

September 2017

September 4–7: Glasgow, UK. **RSS 2017 International Conference** [w](http://www.rss.org.uk/conference2017) www.rss.org.uk/conference2017


September 11–15: Leuven, Belgium. **Summer School on Advanced Bayesian Methods** [w](https://ibiostat.be/seminar/summerschool2017/Summer2017Bayesian) <https://ibiostat.be/seminar/summerschool2017/Summer2017Bayesian>

 September 19–21: Cambridge, UK. **IMA Conference on Inverse Problems from Theory to Application** [w](https://ima.org.uk/3536/ima-conference-inverse-problems-theory-application/) <https://ima.org.uk/3536/ima-conference-inverse-problems-theory-application/>


 September 19–22: Rostock, Germany. **Annual Meeting of the German Statistical Society** [w](http://www.statistische-woche.de/index.php?id=1&L=1) <http://www.statistische-woche.de/index.php?id=1&L=1>


September 25–27: Washington DC. **2017 ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop** [w](http://www2.amstat.org/meetings/biopharmworkshop/2017/) <http://www2.amstat.org/meetings/biopharmworkshop/2017/>

October 2017


 October 4–6: Västerås, Stockholm, Sweden. **Stochastic Processes and Algebraic Structures: From Theory Towards Applications** [w](https://spas2017blog.wordpress.com/) <https://spas2017blog.wordpress.com/>

October 11–13: Bethesda, MD, USA. **ASA Symposium on Statistical Inference** [w](http://www2.amstat.org/meetings/ssi/2017/) <http://www2.amstat.org/meetings/ssi/2017/>

 October 12–14: Los Angeles, CA, USA. **Design and Analysis of Experiments (DAE 2017) Conference** [w](http://www.stat.ucla.edu/~hqxu/dae2017/) <http://www.stat.ucla.edu/~hqxu/dae2017/>

 October 16–19: Fields Institute, Toronto, ON, Canada. **2017 Fields Medal Symposium: Martin Hairer** [w](http://www.fields.utoronto.ca/activities/17-18/fieldsmedalsym) <http://www.fields.utoronto.ca/activities/17-18/fieldsmedalsym>

October 19–21: La Jolla, CA, USA. **2017 ASA Women in Statistics and Data Science Conference** [w](#) TBC

 October 23–27: Moscow, Russia. **Analytical and Computational Methods in Probability Theory and its Applications** [w](http://acmpt.ru/) <http://acmpt.ru/>

November 2017

  November 29–December 1: Göttingen, Germany. **Statistics Meets Friends: From Inverse Problems to Biophysics and Back** [w](#) TBC

International Calendar *continued*

December 2017

NEW December 11–15: Manipal, India. **Linear Algebra and its Applications** **w** <http://iclaa2017.com>

February 2018

NEW February 5–16: National University of Singapore. **Meeting the Statistical Challenges in High Dimensional Data and Complex Networks** **w** <http://www2.ims.nus.edu.sg/Programs/018wstat/index.php>

March 2018

ims March 25–28: Atlanta, GA, USA. **ENAR Spring Meeting** **w** <http://www.enar.org/meetings/future.cfm>

June 2018

ims June 26–29: Singapore. **2018 IMS Asia Pacific Rim Meeting (IMS-APRM)** **w** TBC

July 2018

ims July 2–6: Vilnius, Lithuania. **Joint 2018 IMS Annual Meeting and 12th International Vilnius Conference on Probability Theory & Mathematical Statistics** **w** TBC

July 9–13: Edinburgh, UK. **ISBA 2018 World Meeting** **w** TBC

July 16–20: Bristol, UK. **33rd International Workshop on Statistical Modelling** **w** <http://www.statmod.org/workshops.htm>

ims July 28 – August 2: Vancouver, Canada. **JSM 2018** **w** <http://amstat.org/meetings/jsm/>

August 2018

August 1–9: Rio de Janeiro, Brazil. **International Congress of Mathematicians 2018 (ICM 2018)** **w** <http://www.icm2018.org/>

March 2019

ims March 24–27: Philadelphia, PA, USA. **ENAR Spring Meeting** **w** <http://www.enar.org/meetings/future.cfm>

July 2019

July 14–18: Leuven, Belgium. **40th Annual Conference of the**

International Society for Clinical Biostatistics **w** <http://www.icsb.info>

ims July 27–August 1: Denver, CO, USA. **IMS Annual Meeting at JSM 2019** **w** <http://amstat.org/meetings/jsm/>

March 2020

ims March 22–25: Nashville, TN, USA. **ENAR Spring Meeting** **w** <http://www.enar.org/meetings/future.cfm>

July 2020

July 5–11: Portoroz, Slovenia. **8th European Congress of Mathematics.** **w** <http://www.8ecm.si/>

August 2020

ims August 1–6: Philadelphia, PA, USA. **JSM 2020** **w** <http://amstat.org/meetings/jsm/>

ims August 17–21: Seoul, Korea. **Bernoulli/IMS World Congress on Probability and Statistics** **w** TBC

August 2021

ims August 7–12: Seattle, WA, USA. **IMS Annual Meeting at JSM 2021** **w** <http://amstat.org/meetings/jsm/>

August 2022

ims August 6–11: Washington DC, USA. **JSM 2022** **w** <http://amstat.org/meetings/jsm/>

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 <http://www.imstat.org/submit-meeting.html>. We'll list them here in the Bulletin, and on the IMS website too, at www.imstat.org/meetings/

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6: September	August 15	September 1	September 15
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