

August 2018

CONTENTS

- 1 **IMS election results 2018**
- 2–3 **Members' news:** Noel Cressie, Kerrie Mengersen, Ruth Williams, Emmanuel Candès, Po-Ling Loh, Gongjun Xu, Lingzhou Xue, Quentin Berthet
- 2 **Nominate IMS lecturers**
- 4 **IMS adopts Fairness and Diversity guidelines**
- 5 **Global Survey examines gender gap**
- 6 **Recent papers:** *Bayesian Analysis, Brazilian Journal of Probability and Statistics*
- 7 **Raising funds for Peter Hall Prize**
- 8 **Thanks to donors to IMS Funds**
- 11 **XL-Files:** BFF and BGF for IMS
- 12 **Obituaries:** P.K. Bhattacharya, George Cave
- 14 **Student Puzzle Corner 21** and solution to Puzzle 20
- 15 **Meetings**
- 18 **Employment Opportunities**
- 19 **International Calendar of Meetings**
- 23 **Information for Advertisers**

Read it online:
bulletin.imstat.org



New Council members

We are delighted to announce the 2018 election results, and introduce the newest members of IMS Council.

The next President-Elect is **Susan Murphy**, and the five new members of Council are: **Christina Goldschmidt, Susan Holmes, Xihong Lin, Richard Lockhart** and **Kerrie Mengersen**. All of these will serve a three-year term starting at the IMS meeting in Vilnius in July 2018.

Christina, Susan, Xihong, Richard and Kerrie will be replacing on Council **Andreas Buja, Gerda Claeskens, Nancy Heckman, Kavita Ramanan** and **Ming Yuan**, whose terms end July 2018. They will be joining **Jean Bertoin, Song Xi Chen, Mathias Drton, Elizaveta Levina** and **Simon Tavaré** (whose terms run through July 2019); and **Peter Hoff, Greg Lawler, Antonietta Mira, Axel Munk** and **Byeong Park** (who will be on Council until August 2020).

In addition to these elected members, IMS Council is made up of the Executive Committee and the Editors, who serve ex officio. The Executive Committee will, from August, comprise:

- President: **Xiao-Li Meng**
- Past President: **Alison Etheridge**
- President-elect: **Susan Murphy**
- Treasurer: **Zhengjun Zhang**
- Program Secretary: **Ming Yuan**
- Executive Secretary: **Edsel A. Peña**

Jon Wellner, outgoing past-president, will be leaving the Executive Committee after three years' service.

Judith Rousseau will be stepping down after six years as Program Secretary, replaced by **Ming Yuan**.

The IMS journal editors are: **Bálint Tóth** (*Annals of Applied Probability*); **Amir Dembo** (*Annals of Probability*); **Tilmann Gneiting** (*Annals of Applied Statistics*); **Ed George** and **Tailen Hsing** (*Annals of Statistics*); and **Cun-Hui Zhang** (*Statistical Science*). **T.N. Sriram** is Managing Editor for Statistics & Probability, and for the *IMS Bulletin*.

Thanks to all the outgoing officers, editors and council members for their dedicated service to our institute. Thanks, too, to all the candidates, and all who voted!



Susan Murphy



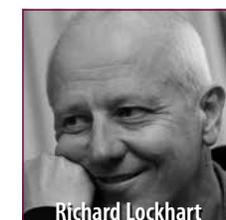
Christina Goldschmidt



Susan Holmes



Xihong Lin



Richard Lockhart



Kerrie Mengersen

Contact information

Managing Editor: T.N. Sriram
Assistant Editor: Tati Howell
Contributing Editors:
Anirban DasGupta, Yoram Gat, David Hand, Takis Konstantopoulos, Xiao-Li Meng, Regina Nuzzo, Dimitris Politis, Kavita Ramanan and Terry Speed

Contact the IMS Bulletin by email:

e bulletin@imstat.org
w <http://bulletin.imstat.org>
f <https://www.facebook.com/IMSTATI>

Contact the IMS regarding your dues, membership, subscriptions, orders or change of address:

✉ IMS Dues and Subscriptions Office
9650 Rockville Pike, Suite L3503A
Bethesda, MD 20814-3998
USA

t 877-557-4674 [toll-free in USA]
t +1 216 295 5661 [international]
f +1 301 634 7099
e staff@imstat.org

Contact the IMS regarding any other matter, including advertising, copyright permission, offprint orders, copyright transfer, societal matters, meetings, fellows nominations and content of publications:

✉ Executive Director, Elyse Gustafson
IMS Business Office
t 877-557-4674 [toll-free in USA]
t +1 216 295 2340 [international]
f +1 216 295 5661
e erg@imstat.org

Executive Committee

President: Alison Etheridge
president@imstat.org
President-Elect: Xiao-Li Meng
president-elect@imstat.org
Past President: Jon Wellner
president-past@imstat.org
Treasurer: Zhengjun Zhang
zjz@stat.wisc.edu
Program Secretary: Judith Rousseau
rousseau@ceremade.dauphine.fr
Executive Secretary: Edsel Peña
pena@stat.sc.edu

IMS Members' News

Australian Academy of Science elects new Fellows

The Australian Academy of Science (AAS) announced the election of 21 distinguished Australian scientists as New Fellows, among whom are **Noel Cressie** (University of Wollongong) and **Kerrie Mengersen** (Queensland University of Technology). **Ruth Williams** (University of California, San Diego) was also admitted as a Corresponding Member.

Noel Cressie is a world leader in statistical methodology for analyzing spatial and spatio-temporal data, and its applications to environmental science. His fundamental contributions changed the basic paradigm for analyzing observations in space and space-time. Noel has also contributed to research on pollution monitoring, climate prediction, ocean health, soil chemistry, and glacier movement, and is a NASA Science Team Member for the Orbiting Carbon Observatory-2 mission. Responding to the huge volumes of complex data in environmental research, Noel has made ground-breaking innovations for big data analytics for remote sensing and climate change.

Kerrie Mengersen has made internationally recognised contributions to the field of Bayesian statistics. She has consistently maintained a dual focus on statistical methodology and its application, with methodological contributions at the frontier of Bayesian theory, methodology and computation, and applied contributions to substantive problems in health, environment and industry. Kerrie is also well known for her leadership ability and passion for developing young researchers in statistics and the applied sciences.

Ruth J. Williams has been admitted to the AAS as a "Corresponding Member" (this is a special category within the Fellowship, comprising eminent international scientists with strong ties to Australia who have made outstanding contributions to science) for outstanding scientific contributions to her field. Ruth was born in Australia. Her work has had a deep and lasting impact on heavy traffic analysis within the field of stochastic networks. In 2016, she was awarded the John von Neumann Theory Prize "for seminal research contributions over the past several decades, to the theory and applications of stochastic networks/systems and their heavy traffic approximations."



Noel Cressie



Kerrie Mengersen



Ruth Williams

AnthonyWeate/QUT

Nominate an IMS lecturer

The IMS Committee on Special Lectures is accepting nominations for IMS Named and Medallion Lectures. The following lectures are available for nomination in 2018:

- The 2020 Blackwell Lecturer
- The 2021 Medallion Lecturers

The deadline is **October 1, 2018**.

Information on all lectures, including how to nominate, can be found here: <http://www.imstat.org/ims-special-lectures/>

IMS Members' News

Emmanuel Candès 2017 MacArthur Fellow

Professor Emmanuel Candès, the Barnum–Simons Chair in Mathematics and Statistics and chair of the statistics department at Stanford University, was recognized last year as one of the MacArthur Foundation's 2017 Fellows. The “Genius Grant” fellowship acknowledges individuals who show “exceptional originality in and dedication to their creative pursuits.” Emmanuel Candès is known for his contributions to a wide range of research in engineering and computer science, most notably compressed sensing. He plans to use his MacArthur grant to fuel the exploration of next-generation applications of big data.



Emmanuel Candès

Emmanuel Candès is known for developing a unified framework for addressing a range of problems in engineering and computer science, most notably compressed sensing, a technique for efficiently reconstructing or acquiring signals that make up sounds and images. Candès' research focuses on reconstructing high-resolution images from small numbers of random measurements, as well as recovering the missing entries in massive data tables.

Using an approach that draws on concepts from linear algebra and L1 minimization (a concept of high-dimensional geometry), Candès and colleagues were able to reconstruct high-resolution signals from sparse measurements under specified conditions. In diagnostic healthcare, for example, reducing the number of measurements needed to create high-resolution MRI scans shortens the amount of time patients must remain still in the scanner, an outcome with particularly beneficial implications for children. The ability to process and/or reconstruct audio, visual, and wireless signals from limited data has also led to significant refinements in digital photography, radar imaging, and wireless communications. Candès has expanded this work to address problems in low-rank matrix completion, devising statistical estimation methods for inferring missing entries in data arrays. (This is analogous to trying to identify a customer's movie preferences from the partial movie ratings that the user has provided.) His framework holds promise for phase retrieval, a problem arising in many applications such as crystallography, diffraction imaging (X-ray), and astronomical instrumentation.

Candès's work at the interface of applied and theoretical mathematics is generating new lines of research in information theory as well as laying the groundwork for improvements in many devices that make use of signal and image processing methods.

Bernoulli Society New Researcher Award 2019 winners announced

The Bernoulli Society New Researcher Award recognizes innovative research by new researchers. Among the 34 applications for the award, many of which were very strong, three IMS members have been chosen. Congratulations to **Po-Ling Loh**, University of Wisconsin–Madison, **Gongjun Xu**, University of Michigan, and **Lingzhou Xue**, Pennsylvania State University.

Each of the awardees will deliver a 30-minute talk at the **62nd ISI World Statistics Congress** to be held in Kuala Lumpur, Malaysia, August 18–23, 2019, and will receive funding from Bernoulli Society towards travel and other expenses.

The Bernoulli Society also awarded an honourable mention to **Quentin Berthet**, University of Cambridge (among others).

= 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: Amir Dembo

<http://imstat.org/aop>

<http://projecteuclid.org/aop>

Annals of Applied Probability: Bálint Tóth

<http://imstat.org/aap>

<http://projecteuclid.org/aop>

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: Andreas Kyprianou

<http://ejp.ejpecp.org>

Electronic Communications in Probability:

Giambattista Giacomini

<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: David Banks

<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/aihpc>

<http://projecteuclid.org/aihpc>

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>

IMS-Affiliated Journals

Observational Studies: Dylan Small

<http://www.obsstudies.org>

Probability and Mathematical Statistics: K. Bogdan,

M. Musiel, J. Rosiński, W. Szczotka, & W.A. Woyczyński

<http://www.math.uni.wroc.pl/~pms>

Stochastic Systems: Shane Henderson

<http://www.i-journals.org/ssy/>

IMS adopts Fairness and Diversity Guidelines

IMS Council recently adopted these guidelines for awards committee members.

Ensuring fairness and diversity: Guidelines for IMS Awards Committees

The term 'award' is taken to include all IMS Awards and Honors (including but not limited to: IMS Fellowship, invitations to deliver Special Lectures, and IMS Travel Awards).

Significance of Awards

The IMS gives awards to recognize individuals who have excelled in a number of ways. Award winners are regarded as role models and leaders, so it is important that the award selection process recognize the achievements of a diverse group that reflects the breadth of membership of the IMS and of the profession. Diversity in award recognition gives visible evidence of the IMS's commitment to equity. While selection committees strive for fairness in selecting awards based on established criteria, studies have shown that unconscious, unintentional assumptions can sometimes influence judgment, a phenomenon known as implicit bias.

The following guidelines may help awards committees improve the fairness and inclusivity of the awards process.

Composing committees and cultivating nominees

- a) Appoint diverse selection committees and committee chairs. Individual Presidents should be aware of the current composition of each award committee when they are making their appointments and should attempt to take diversity into account. Diverse committees provide access to a wider set of networks from which to cultivate nominations. Committee members and chairs from underrepresented groups may cushion against unintentional stereotyping. Do not expect committee members from underrepresented groups to advocate for diversity, it is everyone's responsibility to do so.
- b) Generate a large and diverse pool of nominees. Awards are selected based on established criteria, so this step is crucial to ensuring that the pool of nominees contains as many eligible candidates as possible. Increasing awareness of the award among all members of the IMS has the side benefit of increasing interest in the award and making the selection process more transparent and inclusive.
- c) Publicize the award among underrepresented groups. When possible, encourage such groups to identify potential nominees.
- d) Each award committee should periodically review and discuss practices for building a pool of nominees. Examine lists of nominees, short lists of nominees, and winners of awards for historical patterns, with an eye towards gender or other underrepresented groups.
- e) Each award committee should periodically review the description and guidelines for the award. Particular attention should be paid to the language used to describe the award. For example, are the words used associated more often with males than females? Are there restrictions that could disproportionately affect certain groups? For example, do age limits affect women who take time off to raise a family? For suggested changes, make recommendations to the IMS leadership.

Selecting winners:

- a) Discuss the process and criteria that will be used to evaluate nominees before reviewing nominations. Develop a rubric that matches published criteria for the award before reviewing any dossiers. Research has shown that implicit bias can enter via unintentional criteria shifting after nominees are discussed.
- b) Consider including those whose qualifications are strong but whose work may be less widely known. If prestige is considered important, it should be included in the prioritized list of criteria. If a letter of recommendation from an eminent scholar or leader will be given more consideration than a letter from a less well-known member of the society, nominators should be informed of this via the published criteria.
- c) Make a personal list of top nominees before hearing the recommendations of any other members. This avoids the undue influence of one member and ensures that the list of viable nominees is as large as possible before the discussion begins.
- d) Create short lists via inclusive rather than exclusive methods. For instance, select candidates that are outstanding, rather than finding reasons to eliminate candidates from consideration.
- e) Ensure that every committee member's voice is heard. Do not let any committee members remain silent.
- f) Take adequate time to make a decision. Research has shown that implicit bias is mitigated when committees have time for thoughtful reflection and discussion, instead of making snap judgments.
- g) Avoid conflict of interest. The following is a common conflict of interest statement for all IMS awards:
 - (i) No member of the Award Committee shall be eligible to receive the award during his or her term of service.
 - (ii) In the case of the Committee on Fellows, members of the Committee should not prepare individual nominations; however, they should actively recruit nominations for individuals they feel would be competitive for the award. Support letters should not come from members of the committee.
 - (iii) Members of the Award Committee who find that they have a potential conflict of interest with respect to a particular nominee, perhaps due to an existing or former professional or personal relationship, should exercise their best judgment. If in doubt, they should consult the Committee Chair, who should, in turn, consult the IMS President in cases where the committee itself is uncertain how to proceed.

Global Survey examines gender gap



The International Council for Science (ICSU) is partnering with 11 scientific groups, including the International Mathematical

Union (IMU) and the International Council for Industrial and Applied Mathematics (ICIAM), to examine and reduce the gap between men and women in mathematical, computing, and natural sciences.

A crucial component of this Gender Gap in Mathematical, Computing, and Natural Sciences project is the compilation of self-reported data from scientists via a global, multilingual, and multidisciplinary survey. The goal is to study social dynamics in the fields of physics, chemistry, astronomy, biology, computer science, and mathematics by asking a large number of scientists and practitioners about their experiences, challenges, and interests, as well as focused information about women in these fields. The analysis of the compiled data will allow comparisons across regions, countries, disciplines, level of development of the country, sector of employment, and age. The insights obtained from this survey will help inform interventions by ICSU and member unions to increase participation in STEM fields, especially for women.

The survey is now open to respondents from all over the world. It is available in English, French, Chinese, Japanese, Russian, Spanish, and Arabic. If you have studied or worked in mathematical, computing or natural sciences, or in the history and philosophy of science and technology, we encourage you to visit the link below to complete the survey and to share this information with your colleagues.

**2018 Global Survey of
Mathematical, Computing, and
Natural Scientists**
<http://statisticalresearchcenter.org/global18>

Participation will be open until October 31st, 2018.

The project consists of three tasks: Task 1 is the **Joint Global Survey**; Task 2 is a **data-backed study on publications**; and Task 3 is a **database of good practice**. The first two tasks will provide data on which to base conclusions, to direct actions to attract and retain women in science, and to develop and evaluate practical recommendations. Task 3 will collect information on effective practices.

As described on the Gender Gap project homepage (<https://icsugendergapinscience.org>), “Currently, existing data on participation of women in the mathematical and natural sciences is scattered, outdated, and inconsistent across regions and research fields. The project will provide evidence to support the making of informed decisions on science policy. Temporal trends will be included, as the situation of women in science is constantly evolving, sometimes with some negative developments. Data will be collected via both a joint global survey and

a bibliographic study of publication patterns. The survey is planned to reach 45,000 respondents in more than 130 countries using at least 10 languages, while the study of publication patterns will analyze comprehensive metadata sources corresponding to publications of more than 500,000 scientists since 1970. Contrasts and common ground across regions and cultures, less developed and highly developed countries, men and women, mathematical and natural sciences, will be highlighted.”

The Global Survey can be accessed at <http://statisticalresearchcenter.org/global18>.

The data is being collected by the Statistical Research Center of the American Institute of Physics.

IMS is a member of ICIAM. The National Academies of Sciences, Engineering and Medicine (NAEM) is the U.S. member to ICSU and many of the international scientific unions that are participating in this project.

Please share information about this survey with your colleagues and encourage them to participate. Thanks very much.

You can find GenderGapInScience on Twitter @GenderGapSTEM

2018 Global Survey of
Mathematical, Computing, and
Natural Scientists

Recent papers : two IMS-supported journals

Bayesian Analysis

Volume 13, No 3, September 2018

Bayesian Analysis is an electronic journal of the International Society for Bayesian Analysis. It seeks to publish a wide range of articles that demonstrate or discuss Bayesian methods in some theoretical or applied context. The journal welcomes submissions involving presentation of new computational and statistical methods; critical reviews and discussions of existing approaches; historical perspectives; description of important scientific or policy application areas; case studies; and methods for experimental design, data collection, data sharing, or data mining.

Access papers at <http://projecteuclid.org/euclid.ba>

Posterior Predictive p-Values with Fisher Randomization Tests

in Noncompliance Settings: Test Statistics vs Discrepancy Measures	LAURA FORASTIERE, FABRIZIA MEALLI, AND LUKE MIRATRIX; 681 - 701
Some Aspects of Symmetric Gamma Process Mixtures	ZACHARIE NAULET AND ÉRIC BARAT; 703 - 720
Power-Expected-Posterior Priors for Generalized Linear Models	DIMITRIS FOUSKAKIS, IOANNIS NTZOFRAS, AND KONSTANTINOS PERRAKIS; 721 - 748
Specification of Informative Prior Distributions for Multinomial Models Using Vine Copulas	KEVIN JAMES WILSON; 749 - 766
Bayesian Community Detection	S. L. VAN DER PAS AND A. W. VAN DER VAART; 767 - 796
Sampling Latent States for High-Dimensional Non-Linear State Space Models with the Embedded HMM Method	ALEXANDER Y. SHESTOPALOFF AND RADFORD M. NEAL; 797 - 822
Variable Selection via Penalized Credible Regions with Dirichlet-Laplace Global-Local Shrinkage Priors	YAN ZHANG AND HOWARD D. BONDELL; 823 - 844
A New Regression Model for Bounded Responses	SONIA MIGLIORATI, AGNESE MARIA DI BRISCO, AND ANDREA ONGARO; 845 - 872
Sampling Errors in Nested Sampling Parameter Estimation	EDWARD HIGSON, WILL HANDLEY, MIKE HOBSON, AND ANTHONY LASENBY; 873 - 896
Modelling and Computation Using NCoRM Mixtures for Density Regression	JIM GRIFFIN AND FABRIZIO LEISEN; 897 - 916

Brazilian Journal of Probability and Statistics

Volume 32, No 3, August 2018

The *Brazilian Journal of Probability and Statistics* is an official publication of the Brazilian Statistical Association and is supported by the IMS. It is published four times a year, in February, May, August, and December. The Journal publishes papers in applied probability, applied statistics, computational statistics, mathematical statistics, probability theory and stochastic processes.

Access papers at <http://projecteuclid.org/euclid.bjps>

Improving mean estimation in ranked set sampling using the Rao regression-type estimator	ELVIRA PELLE AND PIER FRANCESCO PERRI; 467 - 496
A large class of new bivariate copulas and their properties	ZAHRA SHARIFONNASABI, MOHAMMAD HOSSEIN ALAMATSAZ, AND IRAJ KAZEMI; 497 - 524
Diagnostics analysis for skew-normal linear regression models: Applications to a quality of life dataset	CLÉCIO DA SILVA FERREIRA, FILIDOR VILCA, AND HELENO BOLFARINE; 525 - 544
Parameter estimation for discretely observed non-ergodic fractional Ornstein-Uhlenbeck processes of the second kind	BRAHIM EL ONSY, KHALIFA ES-SEBAIY, AND DJIBRIL NDIAYE; 545 - 558
A Bayesian approach to errors-in-variables beta regression	JORGE FIGUEROA-ZÚÑIGA, JALMAR M. F. CARRASCO, REINALDO ARELLANO-VALLE, AND SILVIA L. P. FERRARI; 559 - 582
Sums of possibly associated multivariate indicator functions: The Conway-Maxwell-Multinomial distribution	JOSEPH B. KADANE AND ZHI WANG; 583 - 596
A note on weak convergence results for infinite causal triangulations	VALENTIN SISKO, ANATOLY YAMBARTSEV, AND STEFAN ZOHREN; 597 - 615
Semiparametric quantile estimation for varying coefficient partially linear measurement errors models	JUN ZHANG, YAN ZHOU, XIA CUI, AND WANGLI XU; 616 - 656
Weighted sampling without replacement	ANNA BEN-HAMOU, YUVAL PERES, AND JUSTIN SALEZ; 657 - 669
On Hilbert's 8th problem	NICHOLAS G. POLSON; 670 - 678

Raising Funds for an IMS Peter Hall Early Career Prize



Professor Peter Hall passed away on January 9, 2016. In his passing, the statistical community lost one of its most prolific and creative researchers. We also lost a friend, colleague, and mentor. Peter inspired and mentored many young researchers. His early work in probability profoundly affected his many contributions to theoretical statistics and beyond. It set the course of a research career which saw him tackle problems across a broad frontier with far-reaching impact on much of modern mathematical statistics.

For the past two years, we have been working towards the establishment of a Peter Hall Prize within the IMS. Our proposal for such a prize has now been approved by the IMS Council, with the following council resolution: *“IMS Council approves the permanent institution of a Peter Hall Prize to be awarded annually in recognition of early career research accomplishments and the promise in statistics, broadly construed.”*

It is now time to raise money for the endowment. We hope you will consider making a generous donation to help set up a permanent IMS Prize in Peter Hall’s name. These donations not only memorialize Peter’s research achievements and outstanding service to the profession, but go to help recognize early career researchers.

There are three different ways you can send your donation:

- 1 By credit card via the IMS website:
<https://secure.imstat.org/secure/orders/donations.asp>
- 2 By US dollar check, made payable to “IMS – Peter Hall Endowment Fund.” Mail to: *IMS – Peter Hall Endowment Fund, 3163 Somerset Drive, Shaker Heights, OH 44122.*
- 3 By electronic transfer or wire: please email Elyse Gustafson erg@imstat.org for bank transfer details.

For US residents, the donations will be tax-deductible. Per Internal Revenue Code Section 170, a contribution to an IMS Fund is considered a charitable contribution and is tax deductible under US tax laws. We confirm that this donation does not benefit you in any monetary or material fashion.

IMS will invest the fund as they do all of their long-term accounts. It would be helpful if you could let us know the amount of your donation by emailing Jon Wellner, jaw@stat.washington.edu. While this information would assist us in keeping track of progress toward the initial \$40,000 goal, offering it is of course completely optional. We look forward to receiving donations from you and thank you very much for your support in advance!

Sincerely yours,

IMS Ad-Hoc Committee for a Peter Hall Award or Prize:

Jon Wellner, Richard Davis, Alison Etheridge, Iain Johnstone, and Xiao-Li Meng, with Honorary Member Jeannie Hall

Thanks!

Thank you to these donors to the Peter Hall Early Career Award Fund:

Anonymous	Edsel Pena
Adelchi Azzalini	Brett Presnell
David Banks	Peihua Qiu
Rabi Bhattacharya	Aaditya Ramdas
Mary Ellen Bock	Nancy Reid
Alexandre Bouchard-Côté	Philip Reiss
Richard A. Davis	Johannes Ruf
Yanming Di	David Ruppert
Margaret Donald	Richard Samworth
Charles Goldie	Qi-Man Shao
Elyse Gustafson	Dylan Small
Jeannie Hall	Robert Smythe
Giles Hooker	Terence Speed
Tomoyuki Ichiba	Clifford Spiegelman
Gareth James	Stephen Stigler
Jiashun Jin	Stilian Stoev
Bingyi Jing	Gabor Szekely
Estate Khmaladze	Boxin Tang
Roger Koenker	Donatello Telesca
Runze Li	Ryan Tibshirani
Zenghu Li	Howell Tong
Xinhong Lin	Handan and Matt Wand
Yingying Fan and Jinchi Lv	Naisyin Wang
Yanyuan Ma	Qiyang Wang
Yoshihiko Maesono	Jon Wellner
Geri and Kristina Mattson	Aihua Xia
Carl Mueller	William Weimin Yoo
John Nolan	George Alastair Young
Fredos Papangelou	Harrison Zhou
Layla Parast	Johanna F. Ziegel
Byeong Uk Park	

Make your donation go further.

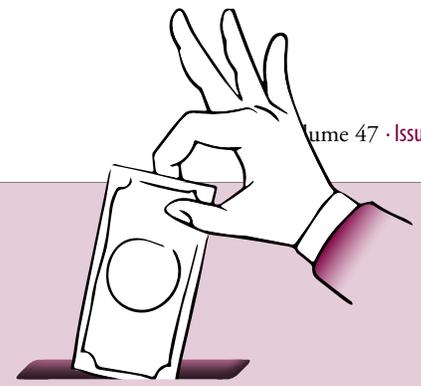
Make your donation go further

Donate to the Peter Hall Award Fund

Miki and David Donoho have
generously agreed to provide a
matching gift for donations received.

Fund
ve
e a
eived.

Thanks!



Donors to IMS Funds: thank you all!

The IMS has 10 funds that are open to contributions, detailed below. We 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://www.imstat.org/contribute-to-the-ims/>.

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.

David Aldous
Anonymous
Anonymous
Kenneth and Selma Arrow
David Banks
Alicia and Robert Bell
Peter and Nancy Bickel
Estate of David Blackwell
Karl and Aimee Broman
Linda Zhao and Lawrence Brown
Erhan Çinlar
Anirban DasGupta
Joan Fujimura and Kjell Doksum
Jianqing Fan
Arnoldo Frigessi
Joseph Gastwirth
Andrew and Caroline Gelman
Kenneth Griffin
Allan Gut
Donald and Janet Guthrie
Ben Hansen
Barry and Kang Ling James

Iain Johnstone
Barbara Rosario and Michael Jordan
Joseph and Caroline Ann Mitchell Kadane
Karen Kafadar
Su Yeon Kim
Jing Lei
Susan and Terrance Murphy
Richard Olshen
Walter Rosenkrantz
George G and Mary L Roussas
Tom Salisbury
Mary Jennings and Donald Sarason
Venkatraman E. Seshan
Juliet Shaffer
S. and D. Shreve
Terence and Freda Speed
Virginia and Stephen Stigler
CJ Stone
Guo-Qiang Zhang & Jiayang Sun
Richard Tapia
HM Taylor
Steven Thomson
Edward van der Meulen
Vincent Vu
Michael Waterman
Joseph Yahav
Zhaohui and Yuhong Yang
Qiwei Yao
Bin Yu and Ke-Ning Shen
Marvin Zelen

Ji Zhu

IMS Gift Membership Fund

Contributors from 2012. 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.

Andrew Barbour
Gopal K Basak
Ernest Bowen
Louis Chen
Herman Chernoff
Herold Dehling
Joel Dubin
Steven Ellis
Arnoldo Frigessi
Diana Gillooly
Ramanathan Gnanadesikan
Susan Gruber
Irwin Guttman
Risto Heijmans
Estate V. Khmaladze
Ernst Linder
Ryan Machtmes
Donald McClure
Edmund McCue
Luke Miratrix
Richard A. Olshen
Walter Sievers

Charles Stein
Steven Thomson
Bruce E. Trumbo
Anton Wakolbinger
Donald Ylvisaker

Peter Hall Early Career Prize Fund

The Peter Hall Prize Fund donors are listed on page 7.

Hannan Graduate Student Travel Fund

The Hannan Graduate Student Travel Award Fund will be used to fund travel and registration to attend and possibly present a paper or a poster at an IMS sponsored or co-sponsored meeting. Presentation of a paper/poster is encouraged, but not required.
Bettie and James Hannan
Naisyin Wang

Le Cam Lecture Fund

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.

Charles Antoniak
Miguel Arcones
Frederick Asare
Dianne Carrol Bautista
Rudolf Beran
Thomas Billings
David Blackwell
William Brady
Karl Broman
Lawrence Brown
F Thomas Bruss
Prabir Burman
Andrew Carter
Yu-Lin Chang & Pao-Kuei Wu
Gang Chen
Louis Chen
Chin Long Chiang
Bertrand Clark
Michael Cohen
Anirban DasGupta
Roger Day
Jay Devore
Kjell Doksum
David Donoho
Richard M Dudley
Lutz Duembgen
Robert Elashoff
Jianqing Fan
Kai-Tai Fang
Dorian Feldman
Thomas Ferguson
Dean Foster
Anthony Gamst
Li Gan
Jayanta Ghosh
Dennis Gilliland
Evarist Giné
Prem Goel
Alex Gottlieb
Z Govindarajulu
Priscilla Greenwood
Yuli Gu
Shanti Gupta
Peter Guttorp

Charles Hagwood
James Hannan
Paul Holland
Rafael Irizarry
Lancelot James
Paramaraj Jeganathan
Kun Jin
Iain Johnstone
Rafail Khasminski
Ja-Yong Koo
Hira Koul
Andrzej Kozek
Yury Kutoyants
Louise Le Cam
Kee-Won Lee
Erich Lehmann
Lei Li
Shili Lin
Hung-Kung Liu
Albert Lo
Richard Lockhart
VS Mandrekar
James Marron
George Martin
John McDonald
Paul Meier
Max Moldovan
Per Mykland
Peter Ney
Deborah Nolan
Richard Olshen
Michael Ostland
Edsel Pena
Mark Pinsky
Gilles Pisier
Madabhushi Raghavachari
RV Ramamoorthi
Guilherme Rocha
Walter Rosenkrantz
George G and Mary L Roussas
Habib Salehi
Frederic Schoenberg
Richard Smith & Amy Grady
Terry Speed
James Stapleton
Philip Stark
Charles Stein

David Steinsaltz
Stephen Stigler
Shiaoyun Sun
Takeru Suzuki
Anders Rygh Swensen
Shigeo Takenaka
Michael Talagrand
Steven Thomson
Lanh Tran
Howard Tucker
Sara van de Geer
Constance van Eeden
Guenther Walther
Jane-Ling Wang
Yazhen Wang
Shaoli Wang
Jon Wellner
Robert Wijsman
Colin Wu & Li-Ping Yang
Shen X
Jian-Lun Xu
Grace Yang
Yuhong Yang
Yannis Yatracos
Bin Yu
Marvin Zelen
Ping Zhang
Hongyu Zhao

Ersen Arseven
Frederick Asare
Arifah Bahar
Dianne Carrol Bautista
Peter Baxendale
Thomas Billings
Ernest Bowen
William Brady
Kevin Buhr
Herminia Calvete
Kathryn Chaloner
Louis Chen
Cindy Christiansen
William Cleveland
Jose Cordeiro
Louis Cote
Catherine Crespi
Angelos Dassios
Joel Dubin
Michael Fay
Raisa (Raya) Feldman
Kostas Fokianos
Anthony Gamst
Charles Geyer
Patricia Giurgescu
Charles Goldie
Christopher Green
Risto Heijmans
David Hoaglin
Robert Hoekstra
Fred Huffer
Jane Hutton
Ernesto Jardim
Brian Junker
Harry Kesten
Eric Key
Chandra Kiran Krishnamurthy
Luca La Rocca
Michael Lasarev
Zhengui Li
Yuan Liu
J Maindonald
Matthew Marler
John McDonald
Roy Mendelsohn
Maria Mendoza
William Mietlowski

Open Access Fund

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.

Dorothee Aepli
Anonymous
Anonymous

Donors to IMS Funds continued

Open Access Fund *continued*

Max Moldovan
 Carlos Mora Gonzalez
 Peter Ney
 Roberto Oliveira
 Richard Olshen
 Ross Pinsky
 Gilles Pisier
 Igor Pruenster
 Ruslan Pusev
 Andreas Ruckstuhl
 Arusharka Sen
 Walter Sievers
 Jonathan Skinner
 Richard Smith & Amy Grady
 Charles Stein
 David Steinsaltz
 Jason Stover
 Shigeo Takenaka
 Steven Thomson
 Lanh Tran
 Bruce Trumbo
 Naisyin Wang
 Shaoli Wang
 Wojbor Woyczynski
 Danyu Yang
 Marvin Zelen
 Huiming Zhu

Schramm Lecture Fund

The Schramm Lecture Fund was created jointly by the 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.

Anonymous
 Anonymous
 Anonymous
 A Barbour
 Cambridge University Press
 Raisa (Raya) Feldman
 Antal Jarai
 Thomas Kurtz
 Zhengu Li
 Russell Lyons
 John McDonald
 Microsoft
 Roberto Oliveira
 Richard Olshen
 Ross Pinsky
 Gilles Pisier
 Thomas Salisbury
 Timo Seppalainen
 Jeffrey Steif
 David Steinsaltz
 Kenneth Stephenson
 Edward C. Waymire

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
 William Miedowski
 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 fund 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.

William Anderson
 Elja Arjas
 Dianne Carrol Bautista
 William Brady
 Peter Brockwell
 Bradley Carlin
 Alicia Carriquiry
 Kathryn Chaloner
 Louis Chen
 John Connett
 Keith Crank
 William Dunsmuir
 Gary & Carol Gadbury
 Joseph Gani
 Charles Geyer
 Ramanathan Gnanadesikan
 Jay & Anne Goldman
 Peter Hall
 Yu Hayakawa
 James Hodges
 Iain Johnstone
 Thomas Louis
 Robert Lund
 Roy Mendelssohn
 Sean Meyn
 William Miedowski
 Max Moldovan
 Philippe Naveau
 Deborah Nolan
 Esa Nummelin
 Daniel Ocone
 Roberto Oliveira
 Gilles Pisier
 Jeffrey Rosenthal
 Kenneth Russell
 J. Andrew &

Lynn Eberly Scherrer
 Arusharka Sen
 Lynne Seymour
 David Smith
 Richard Smith & Amy Grady
 Terence Speed
 David Steinsaltz
 Naftaly & Osnat Stramer
 Shigeo Takenaka
 William Thomas
 Lanh Tran
 Marianne Tweedie
 Nell Tweedie
 Cathy Tweedie
 Xuan Yang
 Marvin Zelen
 Huiming Zhu

IMS General Fund

The IMS General Fund is for donations that are not assigned to a special purpose fund.

Gopal Basak
 Asit Basu
 Peter Baxendale
 Louis Chen
 Herman Chernoff
 Joel Dubin
 Subhashis Ghoshal
 William Harkness
 Paul Holland
 Donald McClure
 Gilles Pisier
 Dale Preston
 Stanley Sawyer
 Norman Severo
 Walter Sievers
 Steven Thomson
 Donald Ylvisaker
 Ken-ichi Yoshihara
 Marvin Zelen

XL-Files: BFF and BGF for IMS



Xiao-Li Meng writes:

BFF again? Yes, and this time it is for *Best Friends Forever*, not another Bayesian, Fiducial and Frequentist workshop – for that you need to wait until BFF6. [For BFF# history, see <http://bulletin.imstat.org/2017/05/xl-files-bayesian-fiducial-and-frequentist-bff4ever/>.] But what on Earth is *BGF*? Best Goal Forever (FIFA time)? Best Glass Forever (Zalto)? Well, read on...

At the end of my de-deaning year (if you ever care about its beginning, check <http://bulletin.imstat.org/2017/10/xl-files-isipta-ecsqaru-bfas-smpps-whoa-psi/>), my ego inevitably wants to bracket the five-year (2012–17) adventure, and all the milestones and millstones that came with it, with a pair of quotable quotation marks. The open quotation came almost from day one, when there were enough curious minds inquiring “Why do you want to be a dean?” My answer paraphrases an ice-breaker for academic remarks: “There are three reasons to be a professor: June, July, and August.” I say, there are three reasons to be a graduate school dean: students, students, and students.

Knowing well that by repeating three times does not turn an assertion into a fact—a fact that itself increasingly needs to be asserted—I supplied that opening line at a reception for the new dean, with a selfish reason. “Where do you find another profession with an *annual supply* of some of the best young talents from all over the world, to become your best friends for life?”

I of course was referring to the profession of scholarly advising, as I have been blessed with a trail of extraordinary students. A good number of them have become trusted friends and colleagues, who enrich me not only as a scholar but also as a person. Being a graduate school dean provided me with a larger platform to express my gratitude in potentially more impactful ways, from enhancing the admission process, to enriching professional development, and to enlarging the alumni network. The five-year adventure taught me that much can be accomplished when many—faculty, staff, and alumni—share the goal of attracting more extraordinary talents globally and providing concrete support to them, as they contemplate their future and launch their careers.

As I was contemplating my own future (and a new career?), I was reminded again of the extraordinary creativity of our students, and this time by two graduation presents. My students have been versatile in their choices of presents, and each of them brings me a fond, often nostalgic, memory of some inspirational and intoxicating moments, from re-heating a half-baked idea, to re-filling a half-full glass. But as much as I was prepared to be inspired again, I was literally lost for words during this graduation, not once, but twice.

The first present arrived in a large but relatively light box. Knowing how poetic the sender is—yes, data and poetry are superfecundation twins in their elusive way of expressing meaning—my initial guess was a decanter of some artistic form, aiming to remind me simultaneously that great ideas take time to evolve, and that aging is an art and can be intoxicating. “*Open the box first!*” the envelope of the accompanying note reads. So I did. What on Earth was *this* fancy container for??? The answer came at the end of a four-page handwritten

note, which ended with the penultimate paragraph: “*Here is me trying to be helpful, with my statistical training finally coming in handy. We know that, to obtain an extreme value, one draws many, rides most, and keeps one—the greatest one. For the greatness of what one willfully disposes attests to the greater-ness of what one retains.*”

Enough of a clue? Ready to be as speechless as I was? OK, here comes the eagerly anticipated treasure:

“*So, to my dear advisor and his budding future career: May your wastebasket ever be filled with great ideas!*”

Just as I became convinced *that* had to be my *Best Gift Forever* (BGF), I received a smaller and lighter box from another newly minted PhD. This time, I am still seeking words to describe what was inside. Fortunately, a picture [*below*] says more than my zero words (go ahead and put voices in my bobblehead/bubblehead!).

However, the declaration that BFF is BGF should be a resounding one, for individuals and for institutions. Surely a BGF for IMS is if those of us blessed with advising roles would do everything we can to attract many more young BFFs (pun intended) to the society, and to support them to lead in laying the foundations of Data Science using their talents and creativity in statistics and probability.

It is with these goals in mind that I am looking forward to my “budding” IMS presidency!

A gift that left Xiao-Li lost for words...



OBITUARY: P.K. Bhattacharya

1930–2018

PRODYOT KUMAR BHATTACHARYA passed away March 9, 2018, at his home in Davis, California. He was professor emeritus at the University of California at Davis and contributed to the field of statistics during a career that spanned more than 50 years.

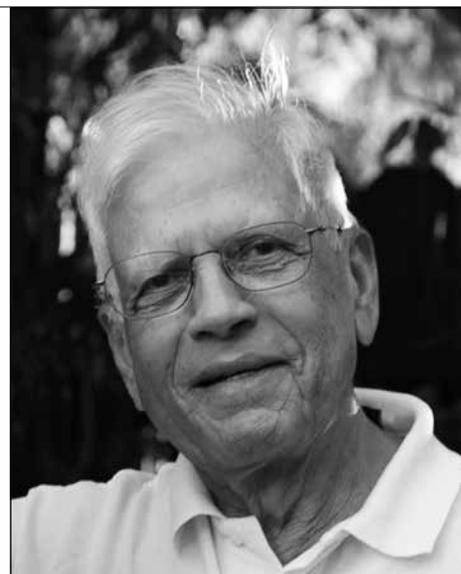
PK, as he was called by many colleagues and friends, entered Presidency College, Kolkata, to earn his bachelor's degree in statistics, and ultimately received his master's degree and PhD under the supervision of H.K. Nandi from The University of Calcutta. In 1960, he traveled to the United States and held postdoctoral positions at The University of North Carolina at Chapel Hill and Stanford University. After a brief period at the Indian Statistical Institute (ISI) in Calcutta, he returned permanently to the US in 1965 upon accepting a position at the University of Arizona. He spent sabbatical terms at the University of Minnesota, ISI, and Massachusetts Institute of Technology. In 1980, he left Arizona to help establish the UC Davis Division of Statistics, where he remained until his retirement in 1994—though his contributions to statistical science continued until 2016.

Prabir Burman and Debashis Paul, in an obituary they wrote for the IISA, credit PK with being “instrumental in developing a well-balanced and rigorous graduate program in Statistics at UC Davis.” Describing his teaching, they say he was “unusually gifted, with his ability to convey even the most difficult concepts and topics by breaking them down in understandable, short and logically connected pieces.” Even after retiring, he continued to teach a Ph.D. level mathematical statistics course for many years at the request of the Statistics Department. Theory and Methods of Statistics, PK's lecture notes for advanced

graduate students and research statisticians, co-authored with Prabir Burman, was published in 2016.

PK's early seminal work, published in the *Annals of Mathematical Statistics* in 1966, proposed a uniformly superior estimator for the mean of a multivariate normal vector under unknown variance and generalized loss function, an important expansion on Charles Stein's surprising result showing inadmissibility of the ordinary least squares estimator in dimensions exceeding two. Throughout his career, PK maintained special interest in nonparametric estimation functions and change-point analysis, an area that led to demonstrating the large sample behavior of the maximum likelihood estimator of an unknown change-point through a Brownian motion process with drift. His research was motivated by unusual problems across a spectrum of disciplines. Of particular note, his collaboration in a cosmological application led to a nonparametric inference method for a regression model having errors with infinite variance and a truncated response, an approach that reconciles the red shift effect of a light source in an ever-expanding universe and the truncation arising from the low luminosity of distant objects. The method allows analysis and interpretation of complex astronomical data, such as those collected by the Hubble Space Telescope.

PK was honored with a special volume of contributed papers by colleagues and former students in 2012: *Nonparametric Statistical Methods and Related Topics: A Festschrift in Honor of Professor P.K. Bhattacharya on the Occasion of His 80th Birthday* (World Scientific, edited by J. Jiang, George Roussas and Frank Samaniego).



PK Bhattacharya

PK Bhattacharya was born on September 30, 1930, in Calcutta (Kolkata), India. The fourth of six children, he lost his mother and younger sister when he was a young boy. Despite hardship at an early age, he found joy in the books he discovered at the local Boys' Own Library. He developed a special fondness for Bengali and English poetry and, for the rest of his life, could recite from memory the verses that moved him during his school days. He loved popular and classical Indian and western music, all kinds of food and spirits, and traveling to all corners of the world. He was happiest when sharing these lifelong passions with others, whether it was setting out his favorite selection of cheeses, introducing his grandchildren to classic movies, or attending an opera performance in San Francisco or New York.

PK left an indelible mark on science and the lives he touched through his intellect, humor, generosity, and spirit of adventure. He is survived by his wife of 54 years, Srilekha; his daughters, Suparna Jain and Aparna Anderson; and his grandchildren, Arjun and Anjali Jain and Anil and Mira Anderson.

Written by Aparna Anderson, Statistics Collaborative, Inc., with contributions from Prabir Burman and Debashis Paul, University of California at Davis

Remembering P.K. Bhattacharya

George Roussas writes in memory of his colleague:

Joining in the celebration of the life and achievements of PK Bhattacharya [see *obituary on previous page*], I wish to scribe a few words based on reminiscences from our lives on campus of UC-Davis.

PK was present almost from the establishment of Statistics at UC-Davis as an independent unit. Armed with keenness, farsightedness, and strategic thinking, he certainly was a decisive factor in its evolution to a unit of national and international acclaim.

I came to know PK through his contributions to non-parametric statistical methodology—overlapping with some of my interests—and this was a motive for my seeking a visiting appointment at UC-Davis in 1984. This scientific coincidence came to play a deciding role in the rest of my life and that of my family.

After obtaining my PhD degree from UC-Berkeley, and serving for ten years in the Department of Statistics at the University of Wisconsin-Madison, I accepted (because of a contractual obligation) an appointment at the University of Patras, Greece. Helping spread the gospel of modern statistics in Greece could have been an enticement, except that it was highly taxing from the beginning, and truly impossible later on. In 1984, UC-Davis was recruiting for a leadership position in Statistics, and PK was the chair of the search committee. He suggested that I offer a weekly seminar in an area of my competence, and later on, he strongly advised me to apply for the vacant position. I did so, was selected, and accepted an appointment on an experimental basis. That experiment lasted for 27 years until my retirement in 2012!

During my administrative years, I often sought PK's wise counsel on a host of issues, and I was always impressed by its depth and soundness. Beyond his high intelligence at the professional level, his low-key personality concealed a sharp and piercing mind regarding social issues, as I found out on various occasions.

PK was a modest man. It took quite some effort on the part of some of us to convince him to agree to a *Festschrift* as a token of appreciation for his many contributions to the profession. And late last year, he tentatively agreed to an hour-long videotaped interview for the UC-Davis Alumni Association to be scheduled for this year. Regrettably, that's now not going to happen. Perhaps his deteriorating health was a factor for his reluctance.

In summary, with PK's passing away, the statistical profession has lost a talented and creative researcher; the UC-Davis is deprived of a cornerstone of its structure; and humanity is poorer for the loss of a noble and a truly decent human being. His former students, colleagues and friends will cherish his memory for ever!

OBITUARY: George Cave

1947–2018



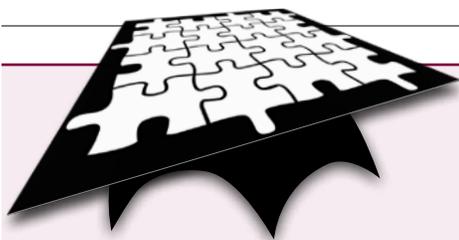
DR. GEORGE EDWARD CAVE of West New York, son of the late George Thomas Cave and the late Leatha Willa Cave, née Shelton, passed away at age 71 on April 18, 2018 in Washington DC.

While attending Memorial High School, George was President of the General Student Organization, a National Merit Scholar, and graduated as valedictorian of his class. In 1964, George was presented a distinguished medallion at the White House by President Lyndon Johnson for the first historic Presidential Scholars Award. George graduated from Harvard University with an A.B. in Government and International Relations, and received a PhD in Economics from the University of Chicago, specializing in Labor and Mathematical Economics. George worked as an Actuarial Analyst at Allstate Insurance and an Assistant Professor of Economics & Afro-American Studies at Princeton University. George had an illustrious career as a Senior Research Associate in the social and public policy research industry, most recently at Summit Consulting. His extensive education and experience made George a well sought-after consulting economist on methodological issues.

Alan J. Salzberg, PhD, was George's colleague at Summit Consulting. He said, "I had the pleasure of working with George over the last several years of his life. George was a man of great intelligence and insight, right up until the end. Though we have many PhD's in Economics and Statistics, we all knew he was the person to go to when an especially difficult technical question came up. If you walked up to his desk to ask him, he would quickly refer you to two or three texts on the subject. If you were lazy and sent him an email, then your "homework" assignment would get larger: he would write a short essay with half a dozen or more good references, and bunch of great ideas on how to solve the problem. And he never tired of the desire to learn—if you wanted to find George at lunchtime, the Georgetown Law library, right across the street from our office, was always a good bet. On the personal side, although he worked in a high pressure environment, George seemed immune to the pressures and was always even-tempered and good-humored. He epitomized the humble scholar who engaged ideas forcefully, but without criticizing his colleagues. He will be greatly missed."

George was preceded in death by his sister, Lillian J. Cave. He is survived by his sister, Peggy Cave-Harriott, of Florida.

Expanded from an obituary in The Jersey Journal on May 12, 2018



Student Puzzle Corner 21

Here's Anirban DasGupta's latest puzzle, probability this time:

This problem is a comparatively simple one. You can get a reasonable idea of the answers to the questions that we pose by large simulations, but you cannot get the algebraic answers that we are asking for. Here is the setup.

In a town, there are N residents. A subset of n residents have x_1, x_2, \dots, x_n acquaintances (i.e. friends) respectively. The acquaintance sets are random subsets of $\{1, 2, \dots, N\}$, and let us assume these sets are formed independently. To keep this problem simple, here are three fairly straightforward problems:

- Find an expression for the probability that the n residents do not have a common acquaintance.
- Give a numerical value for the probability that these n residents have at most one common acquaintance when $N=10^6$, $n=15$ and each $x_i = 4 \times 10^5$.
- Give an analytic approximation to the probability that they have exactly one common acquaintance when $n = N$, and each $x_i = N - \log N$, with the parameter $N \rightarrow \infty$.

[Note that part (c) is asking what is the probability that there is exactly one person in town *who is a friend of everybody?*]

The Student Puzzle Corner contains problems in statistics or probability. Solving them may require a literature search.

Student IMS members are invited to submit solutions (to bulletin@imstat.org with subject "Student Puzzle Corner"). The deadline is **September 7, 2018**.

The names of student members who submit correct solutions, and the answer, will be published in the following issue. The Puzzle Editor's decision is final.

Deadline: September 7, 2018

Answer to Puzzle 20

Congratulations to **Mirza Uzair Baig** [*pictured right*], at the University of Hawai'i at Mānoa, who wrote an excellent solution to the problem.



Note that the statistic T_n may be represented as

$$T_n = I_{Y_{(1)} < X_{(1)}, Y_{(n)} < X_{(n)}} \left[\sum_{i=1}^n I_{Y_i < X_{(1)}} + \sum_{i=1}^n I_{X_i > Y_{(n)}} \right] + I_{X_{(1)} < Y_{(1)}, X_{(n)} < Y_{(n)}} \left[\sum_{i=1}^n I_{X_i < Y_{(1)}} + \sum_{i=1}^n I_{Y_i > X_{(n)}} \right].$$

Denote the empirical CDF of X_1, \dots, X_n by F_n and that of Y_1, \dots, Y_n by G_n . Then, this above representation yields

$$T_n = n I_{Y_{(1)} < X_{(1)}, Y_{(n)} < X_{(n)}} \left[G_n(X_{(1)}) + 1 - F_n(Y_{(n)}) \right] + n I_{X_{(1)} < Y_{(1)}, X_{(n)} < Y_{(n)}} \left[F_n(Y_{(1)}) + 1 - G_n(X_{(n)}) \right].$$

Use the fact that for given u, v , $nF_n(u)$ and $nG_n(v)$ are binomial random variables with success probabilities $F(u)$ and $G(v)$. Now use the iterated expectation formula by conditioning on the minima and the maxima to get the mean, and similarly, but with a longer calculation, the variance.

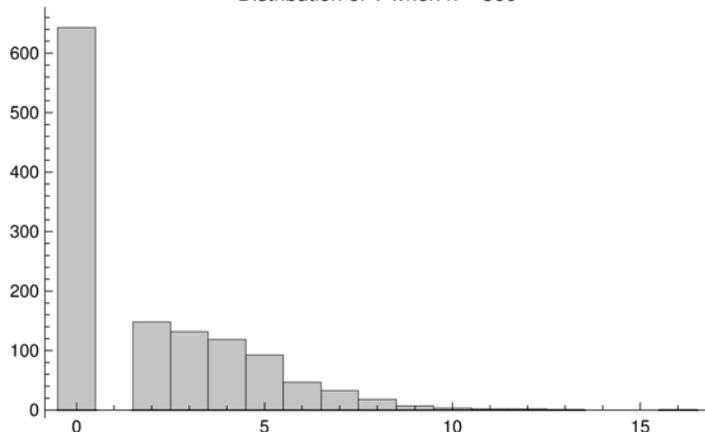
It is useful to think of T_n as approximately a sum of two

geometrics. Suppose W is a negative binomial with parameters $r = 2, p = 1/2$. Then for n not too small, T_n would have a point mass at zero mixed with the negative binomial. That is, write down a Bernoulli variable Z with parameter $1/2$; then T_n (in law) is approximately $Z(W + 2)$. This gives a quick explanation for why the mean and the variance under the null of T_n should be about 2 and 6.

You can see a plot of the null distribution of T_n below when $n = 300$; it is distribution-free in its usual sense.

Under specified alternatives, the negative binomial would be replaced by a sum of two geometrics, approximately independent, but not iid.

Distribution of T when n = 300



IMS meetings around the world

Joint Statistical Meetings: 2018–2023

IMS sponsored meeting

JSM 2018

July 28–August 2, 2018. Vancouver, Canada

[w](http://ww2.amstat.org/meetings/jsm/2018/) <http://ww2.amstat.org/meetings/jsm/2018/>

Have you been to JSM before? If it's your first time, it can be a bit overwhelming because of its size. Read the First Time Attendees guide

at <https://ww2.amstat.org/meetings/jsm/2018/firsttimeattendees.cfm> to help you find your feet. We hope you'll join us in Vancouver: 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 this year is "Lead with Statistics."



At a glance:

forthcoming
IMS Annual
Meeting and
JSM dates

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, August
7–12, 2021

2022

IMS Annual Meeting:
TBC
JSM: Washington,
August 6–11,
2022

IMS sponsored meetings: JSM dates for 2019–2023

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 Annual Meeting

@ **JSM 2023**

**August 5–10, 2023
Toronto, ON, Canada**

IMS co-sponsored meeting



Recent Progress on Dimer Model and Statistical Mechanics

August 15–16, 2018

Groton, CT, USA

[w](https://probsem18.math.uconn.edu/research-workshops/recent-progress-on-dimer-model-and-integrable-probability/) <https://probsem18.math.uconn.edu/research-workshops/recent-progress-on-dimer-model-and-integrable-probability/>

In a workshop on Recent Progress on Dimer Model and Statistical Mechanics (August 15–16, 2018, at the UConn Avery Point campus in Groton, USA), participants will be introduced to the main results and research problems on the dimer model. Particular attention will be given to the following areas at the forefront of current research: limit shape, fluctuations of height functions, and applications to other statistical mechanical model, including the Ising model and the six-vertex model. Registration is free but required: see the website. Funding is available for early career (particularly PhD students and postdoc) researchers. Members of underrepresented groups are strongly encouraged to apply. Apply for funding through the registration form on the meeting website. Students should have a short letter of recommendation sent by their PhD adviser to dimerconferenceuconn@gmail.com by July 15th, 2018 to guarantee full consideration.

IMS Sponsored meeting

Bernoulli/IMS 10th World Congress in Probability and Statistics

August 17–21, 2020. Seoul, South Korea

[w](#) TBC

Program chair is Siva Athreya and the Local chair is Hee-Seok Oh.

IMS co-sponsored meeting



2019 Seminar on Stochastic Processes

March 13–16, 2019

University of Utah, Salt Lake City, USA

[w](http://www.math.utah.edu/SSP-2019/) <http://www.math.utah.edu/SSP-2019/>
The Seminar on Stochastic Processes 2019 (SSP2019), will be held from March 13–16, 2019, at the University of Utah in Salt Lake City.

It will feature the Kai-Lai Chung lecture from Jean Bertoin (Universität Zürich), and invited speakers: Dan Crisan (Imperial College London); Kay Kirkpatrick (University of Illinois at Urbana-Champaign); Sunder Sethuraman (University of Arizona); and Amandine Véber (École Polytechnique).

There will be two hour-long tutorials on March 12. The speaker will be announced soon.

There are no registration fees, but all participants (including invited speakers) are asked to register (registration will be functional on the meeting website soon).

More IMS meetings around the world

IMS co-sponsored meeting

41st Conference on Stochastic Processes and their Applications (SPA) July 8–12, 2019. Evanston, IL, USA

w <http://sites.math.northwestern.edu/SPA2019/>

The 41st Stochastic Processes and their Applications conference will take place July 8–12, 2019, in Evanston, USA. It will feature the following invited lectures. Plenary Speakers: **Cécile Ané** (University of Wisconsin-Madison); **Béatrice de Tilière** (University Paris-Est Créteil); **James R. Lee** (University of Washington); **Dmitry Panchenko** (University of Toronto); **Yanxia Ren** (Peking University); **Allan Sly** (Princeton University); **Caroline Uhler** (MIT). IMS Medallion Lectures: **Krzysztof Burdzy** (University of Washington) and **Etienne Pardoux** (Aix-Marseille Université) Lévy Lecture: **Massimiliano Gubinelli** (Universität Bonn) Doob Lecture: **Jeremy Quastel** (University of Toronto) Schramm Lecture: **Stanislav Smirnov** (Université de Genève/St Petersburg State University).

IMS co-sponsored meeting

ICIAM 2019: the 9th International Congress on Industrial and Applied Mathematics

July 15–19, 2019

Valencia, Spain

w <https://iciam2019.org/index.php>

The 9th International Congress on Industrial and Applied Mathematics (ICIAM 2019) will be held in Valencia, Spain, from July 15–19, 2019. IMS is a member of ICIAM

The call for **organizing mini-symposia** at the ICIAM 2019 congress is now open. Please visit the webpage <https://iciam2019.org/index.php/infomation-for-delegates/submissions-calls/2-uncategorised/130-minisymposia> for details and online submissions.



IMS sponsored meetings

ENAR dates, 2019–2020

March 24–27, 2019: in Philadelphia, PA

March 22–25, 2020: in Nashville, TN

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

The 2019 ENAR/IMS meeting will be in Philadelphia, and the following year in Nashville.

IMS co-sponsored meeting **NEW**

The 7th International Workshop in Sequential Methodologies

**June 18–21, 2019
Binghamton, USA**

w <https://sites.google.com/view/iwsm2019>

IMS co-sponsored meeting

Michigan State Symposium on Mathematical Statistics and Applications: *From time series and stochastics, to semi- and nonparametrics, and to high-dimensional models* September 14–16, 2018

Henry Center for Executive Development, Michigan State University

w <https://stt.msu.edu/MSUStatSymposium2018/>

e MSUStatSymposium2018@stt.msu.edu

The 2018 Michigan State Symposium is a conference designed around the scientific legacy of Prof. Hira L. Koul, who was a member of MSU's department of statistics and probability for decades. The scientific areas which will be represented at the conference are all connected, often quite directly, to the work which Prof. Koul has produced. Topics covered will include: Semi- and non-parametric foundations of data science; Asymptotic theory of efficient and adaptive estimation; Inference for high-dimensional data; Inference for long-memory and other stochastic processes; Nonlinear Time Series analysis with applications to econometrics and finance; Robust multivariate methods; Survival analysis and its applications; and Sequential estimation and design. With ample time built into the schedule for discussions, the conference will give participants opportunities to engage in emerging and fruitful cross-group collaborations. It will bring together established and aspiring researchers from around the country and abroad, to explore frontiers of mathematical statistics.

Plenary invited speakers who have confirmed participation include: Richard Davis (Columbia University), Philip Ernst (Rice University), Jianqing Fan (Princeton University), Joseph Gardiner (Michigan State University), Tailen Hsing (University of Michigan), Richard Johnson (University of Wisconsin, Madison), S.N. Lahiri (North Carolina State University), Regina Liu (Rutgers University), Ursula Mueller (Texas A&M University), Lianfen Qian (Florida Atlantic University), Annie Qu (University of Illinois at Urbana-Champaign), Anton Schick (SUNY Binghamton), Donatas Surgailis (Vilnius University, Lithuania).

The conference will also cover a host of emerging applications of statistics, by colleagues at MSU, including in biomedical engineering, biostatistics, data science, finance and insurance, hospital management, neuroscience, nuclear physics, and others.

The conference website is: <https://stt.msu.edu/MSUStatSymposium2018/>. All inquiries can be directed to: MSUStatSymposium2018@stt.msu.edu.

Other meetings and events around the world

2018 University of Washington Biostatistics Summer Institutes NEW

July 9–27, 2018

Seattle, WA, USA

[w](http://www.biostat.washington.edu/suminst) <http://www.biostat.washington.edu/suminst>

Four institutes offering short courses in cutting edge ideas and approaches to statistical analysis of biological data:

4th Annual Summer Institute in Statistics for Big Data (SISBID)

<https://www.biostat.washington.edu/suminst/sisbid>

The Summer Institute for Big Data (SISBID) is designed to introduce biologists, quantitative scientists, and statisticians to modern statistical techniques for the analysis of biological big data.

10th Annual Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID)

<http://www.biostat.washington.edu/suminst/sismid>

This Summer Institute is designed to introduce infectious disease researchers to modern methods of statistical analysis and mathematical modeling and to introduce statisticians and mathematical modelers to the statistical and dynamic problems posed by modern infectious disease data.

23rd Summer Institute in Statistical Genetics (SISG)

<http://www.biostat.washington.edu/suminst/sisg>

For more than two decades, the Summer Institute in Statistical Genetics (SISG) has introduced geneticists to modern methods of statistical analysis and statisticians to the challenges posted by modern genetic data.

5th Annual Summer Institute in Statistics for Clinical Research (SISCR)

<http://www.biostat.washington.edu/suminst/siscr>

This Summer Institute is designed to introduce participants to state-of-the-art methodology for biomedical studies, including clinical trials and observational studies.

Random walks in correlated and dynamical random environments NEW

August 13–17, 2018

Texas A&M University, USA

[w](https://sites.google.com/site/rwrecw/) <https://sites.google.com/site/rwrecw/>

The conference includes two mini courses: *Random Walk In Cooling Random Environment* by Frank den Hollander; and one taught by Jean Dominique Deuschel. The conference is supported by the NSF and Texas A&M University math department. Local accommodations for participants will be funded.

IEEE International Conference on Data Science and Advanced Analytics (DSAA) NEW

October 1–4, 2018

Turin, Italy

[w](https://dsaa2018.isi.it/home) <https://dsaa2018.isi.it/home>

DSAA aims to be the flagship annual meeting spanning Data Science

IDEAS Dissemination Workshop NEW

September 26, 2018

Basel, Switzerland

[w](http://www.ideas-itn.eu/dissemination-workshop/) <http://www.ideas-itn.eu/dissemination-workshop/>

IDEAS is an H2020 Marie Skłodowska Curie Action Innovative Training Network for 14 early stage researchers working on statistical methods for early drug development. The network is funded by the European Union and the Swiss Government, and comprises of 8 full partners and 6 associated partners at major European universities, the pharmaceutical industry, and consulting companies. The aim of the workshop is to translate and promote novel methodologies developed by IDEAS. The event is geared towards statisticians and trialists with an interest in novel methods for early phase clinical trials and will therefore be of interest to those working in academia and industry.

MATRIX Call for Programs

MATRIX is an international research institute that hosts research programs where world-leading researchers in the mathematical sciences come together to collaborate in an intellectual stimulating environment. MATRIX is situated in the heart of the picturesque goldfields district of Victoria, Australia.

MATRIX is offering **fully-funded 1–4 week programs** (catering and accommodation) for 2019 and 2020, for 20 participants.

Program guidelines can be found at <https://www.matrix-inst.org.au/guidelines/>

Program proposals are due by **Friday 9th November 2018**. Applications can be submitted at <https://www.matrix-inst.org.au/call-for-programs/>

Further enquiries: office@matrix-inst.org.au

MATRIX 

Employment Opportunities around the world

United States: Washington DC

NISS Statistical Research Associate

NISS plans to appoint one or more PhD-level research analysts/statisticians to be deeply involved in statistical methodological development and/or the application of statistical, computational or quantitative methodologies to large (federal) statistical databases. Research Associates will be located in the Washington DC area and will report to both the Director of NISS-DC and the project or agency supervisor.

Research Areas

NISS participates in research projects that variously involve statistical design, computation, modeling and analysis. Research areas include, but are not limited to: survey methodology, Bayesian inference, statistical modeling, analysis of spatial data, time-dependent and causal analysis, statistical computing and graphics. Application areas include federal data time series and forecasting, psychometrics and education data, models of complex systems, image data analysis, and statistical graphics.

Research Associates are expected to produce publishable new methodology and also to collaborate on publishable research in an area of application.

Technical Requirements

The position requires a PhD in statistics, survey methodology, statistical computation or a quantitative social science such as educational psychology. Necessary technical expertise includes research and data analysis, knowledge of basic statistical computing software (SAS and R); additional computing skills either for data management or for computation with big data are a plus. In addition to strong written and oral communication skills, experience in enabling diverse audiences to understand complex, quantitative information is highly desirable. Commitment to collaborative research is essential.

Salary and Position

Salary will be commensurate with qualifications and experience. NISS offers employees a full set of benefits. The positions will remain open until filled. Employment will begin on 1 September 2018 or at mutual convenience.



Application to NISS

Applications should be submitted electronically (pdf) to: positions@niss.org and applications must contain the following:

- Application Cover Page
- Curriculum Vitae (including computing skills and relevant coursework)
- Transcript (unofficial)
- Names and contact information (street & email addresses, phone numbers) of three references who may be contacted
- Statement of research interest (no more than 2 pages double-spaced, 12 point font)
- Topic Area
- Research Areas: relevance of research area and/or experience to inference from large/federal databases
- Related experience or previous collaborations, if appropriate
- If doctoral degree was granted in 2014 or more recently, thesis abstract
- Visa status if not a U.S. citizen

Applications will be evaluated on the strength of the applicant's statistical skill and on the applicability to the research area. All qualified applicants are encouraged to apply, especially women and members of minority groups. U.S. citizenship is not required.

About NISS

NISS is an independent research institute that conducts high-impact cross-disciplinary and cross-sector research involving the statistical sciences. Please visit www.niss.org for more information.

Kazakhstan: Astana**Nazarbayev University**

Full-time positions in Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=41727399**United Kingdom: Cambridge****DAMTP, University of Cambridge**

Research Associate

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=41241297**United Kingdom: Glasgow****University of Glasgow, School of Mathematics & Statistics**

Professor of Statistical Science

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=40942349**United States: Storrs, CT****University of Connecticut**

Assistant Professor in Residence

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=40805440**United States: Storrs, CT****University of Connecticut**

Statistical Consulting Services (SCS) Director

(Academic Assistant 3)

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=41094919**United States: Williamstown, MA****Williams College**

Assistant Professor of Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=41716026**United States: Baltimore, MD****Johns Hopkins University**

Director of Data Analytics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=41736157**United States: Las Vegas, NV****University of Nevada, Las Vegas**

Mathematical Sciences, Assistant Professor in Residence

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=40922635<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

August 2018

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

August 2–9: Aarhus, Denmark. **Third Conference on Ambient Fields and Related Topics**  <http://math.au.dk/ambit3>

 August 13–17: Texas A&M University, USA. **Random walks in correlated and dynamical random environments**  <https://sites.google.com/site/rwrecw/>

  August 15–16: Groton, CT, USA. **Recent Progress on Dimer Model and Statistical Mechanics**  <https://probsem18.math.uconn.edu/research-workshops/recent-progress-on-dimer-model-and-integrable-probability/>

August 18–19: Tehran, Iran. **The First Iranian Actuarial Conference**  <http://iac1.ir/cnf/about?note&lang=en>

August 22–24: Leuven, Belgium. **ATMS workshop on Multi- and high-dimensional statistics, Copulas, Survival analysis and Model selection**  <http://feb.kuleuven.be/workshopATMS>

Continues on page 20

International Calendar *continued*

August 2018 *continued*

August 25–27: Shahrood, Iran. ISCI4: Fourteenth Iranian Statistics Conference **w** <http://isc14.shahroodut.ac.ir>

August 26–30: Melbourne, Australia. Joint International Society for Clinical Biostatistics and Australian Statistical Conference 2018 **w** <http://iscbasc2018.com/>

August 27–31: Marseille, France. Advances in Statistical Mechanics **w** <https://conferences.cirm-math.fr/1855.html>

August 29–31: Stockholm, Sweden. RESIM 2018 **w** <https://people.kth.se/~pierren/resim2018/resim2018.html>

September 2018

September 3–6: Cardiff, UK. Royal Statistical Society

International Conference **w** www.rss.org.uk/conference2018

September 8–10: St Louis, Missouri, USA. Third Workshop on Higher-Order Asymptotics and Post-Selection Inference (WHOA-PSI) **w** <http://www.math.wustl.edu/~kuffner/WHOA-PSI-3.html>

September 9–11: Oslo, Norway. ADVICE2018: First International Conference on Statistical Advice **w** <http://www.advice2018.bio/>

September 10–13: Leiden, The Netherlands. Workshop on Statistical Inference for Stochastic Process Models in Weather and Climate Science **w** <http://www.lorentzcenter.nl/lc/web/2018/1012/info.php3?wsid=1012&venue=Snellius>

September 14–15: Derby, UK. 2nd IMA Conference on Theoretical and Computational Discrete Mathematics **w** <https://ima.org.uk/7775/2nd-ima-conference-theoretical-computational-discrete-mathematics/>

 **September 14–16:** Michigan State University, USA. Michigan State Symposium on Mathematical Statistics and Applications: *From time series and stochastics, to semi-and nonparametrics, and to high-dimensional models* **w** <https://stt.msu.edu/MSUStatSymposium2018/>

September 22: Amherst, USA. STATFEST 2018 **w** <https://nhorton.people.amherst.edu/statfest/>

September 23–26: Ribno (Bled), Slovenia. Applied Statistics 2018 (AS2018) **w** <http://conferences.nib.si/AS2018/>

September 24–28: São Pedro, Brazil. Brazilian Symposium on Probability and Statistics **w** <http://www.sinape2018.com.br/>

 **September 26:** Basel, Switzerland. IDEAS Dissemination Workshop **w** <http://www.ideas-itn.eu/dissemination-workshop/>

October 2018

 **October 1–4:** Turin, Italy. IEEE International Conference on Data Science and Advanced Analytics (DSAA) **w** <https://dsaa2018.isi.it/home>

Meeting organizer's to-do list



October 3–7: Bodrum, Turkey. **11th International Statistics Days Conference** **w** <http://igs2018.mu.edu.tr/>

October 18–20: Cincinnati, OH, USA. **2018 Women in Statistics and Data Science Conference**
w <https://ww2.amstat.org/meetings/wds/2018/>

October 25–27: Barcelona, Spain. **Big Data Meets Survey Science**
w <https://www.bigsurv18.org/>

November 2018

November 1–2: Boston, MA, USA. **Biobanks: Study Design and Data Analysis** **w** <https://www.hsph.harvard.edu/2018-pqg-conference/>

December 2018

December 10–11: London, UK. **3rd IMA Conference: Mathematical Challenges of Big Data** **w** <https://ima.org.uk/9104/3rd-ima-conference-on-the-mathematical-challenges-of-big-data/>

December 13–15: Hsinchu, Taiwan. **Joint Conference for Experimental Design and Production Engineering 2018** **w** <http://www3.stat.sinica.edu.tw/jcedpe2018/>

December 17–19: Houston, TX, USA. **4th International Conference on Big Data and Information Analytics** **w** <https://sph.uth.edu/divisions/biostatistics/bigdia/>

December 17–20: Jerusalem, Israel. **Jerusalem Joint Statistical Event 2018** **w** <https://www.emr2018.com/>

December 27–30: Kolkata, India. **Tenth International Triennial Calcutta Symposium on Probability and Statistics** **w** <http://www.calcuttastatisticalassociation.org/sympBrochure.php>

January 2019

January 21–23: Lunteren, The Netherlands. **18th Winter School on Mathematical Finance** **w** <https://staff.fnwi.uva.nl/p.j.c.spreij/winterschool/winterschool.html>

February 2019

February 13–15: Hobart, Tasmania, Australia. **Matrix-Analytic Methods for Stochastic Models (MAM10)** **w** <http://www.maths.utas.edu.au/People/oreilly/mam/mam10.html>

February 14–16: New Orleans, USA. **Conference on Statistical Practice** **w** <https://ww2.amstat.org/meetings/csp/2019/>

March 2019

  **March 13–16:** University of Utah, Salt Lake City, USA. **2019 Seminar on Stochastic Processes** **w** <http://www.math.utah.edu/SSP-2019/>

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

June 2019

 **June 18–21:** Binghamton, USA. **7th International Workshop on Sequential Methodologies (IWSM)** **w** <http://sites.google.com/view/iwsm2019>

June 24–28: Oxford, UK. **12th International Conference on Bayesian Nonparametrics** **w** <http://www.stats.ox.ac.uk/bnp12/>

July 2019

July 1–9: Zagreb, Croatia. **11th International Conference on Extreme Value Analysis** **w** <http://web.math.hr/eva2019>

  **July 8–12, 2019.** Evanston, IL, USA **41st Conference on Stochastic Processes and their Applications (SPA)** **w** <http://sites.math.northwestern.edu/SPA2019/>

July 14–18: Leuven, Belgium. **40th Conference of the International Society for Clinical Biostatistics** **w** <http://www.icsb.info>

 **July 15–19:** Valencia, Spain. **ICIAM 2019** **w** <https://iciam2019.org/index.php>

International Calendar *continued*

July 2019 *continued*

July 22–26: Palermo, Italy. **European Meeting of Statisticians 2019**
w <http://www.ems2019.palermo.it>

 July 27–August 1: Denver, CO, USA. **IMS Annual Meeting at JSM 2019** w <http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx>

August 2019

August 18–23: Kuala Lumpur, Malaysia. **ISI2019: 62nd International Statistical Institute World Statistics Congress 2019**
w <http://www.isi2019.org/>

March 2020

 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

 August 1–6: Philadelphia, PA, USA. **JSM 2020**
w <http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx>

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

March 2021

 March 14–17: Baltimore, MD, USA. **ENAR Spring Meeting**
w <http://www.enar.org/meetings/future.cfm>

August 2021

 August 7–12: Seattle, WA, USA. **IMS Annual Meeting at JSM**

2021 w <http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx>

March 2022

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

August 2022

 July/August: Location TBC. **IMS Annual Meeting** w TBC

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

August 2023

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

August 2024

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

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/



Membership and Subscription Information

Journals

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

Individual Memberships

Each individual member receives the *IMS Bulletin* (print and/or electronic) and may elect to receive one or more of the five scientific journals. Members pay annual dues of \$105. An additional \$89 is added to the dues of members for each scientific journal selected (\$53 for *Stat Sci*). **Reduced membership dues** are available to full-time students, new graduates, permanent residents of countries designated by the IMS Council, and retired members.

Individual and General Subscriptions

Subscriptions are available on a calendar-year basis. **Individual subscriptions** are for the personal use of the subscriber and must be in the name of, paid directly by, and mailed to an individual. Individual subscriptions for 2018 are available to *The Annals of Applied Probability* (\$204), *The Annals of Applied Statistics* (\$204), *The Annals of Probability* (\$204), *The Annals of Statistics* (\$204), *Statistical Science* (\$168), and *IMS Bulletin* (\$115). **General subscriptions** are for libraries, institutions, and any multiple-readership use. Institutional subscriptions for 2018 are available to *The Annals of Applied Probability*, *The Annals of Applied Statistics*, *The Annals of Probability*, and *The Annals of Statistics* (each title \$505 online only / \$559 print+online), *Statistical Science* (\$288/\$317), and *IMS Bulletin* (\$132 print). Airmail rates for delivery outside North America are \$149 per title.

IMS Bulletin

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

The *IMS Bulletin* (ISSN 1544-1881) is published eight times per year in January/February, March, April/May, June/July, August, September, October/November and December, by the Institute of Mathematical Statistics, 3163 Somerset Dr, Cleveland, Ohio 44122, USA. Periodicals postage paid at Cleveland, Ohio, and at additional mailing offices. Postmaster: Send address changes to Institute of Mathematical Statistics, 9650 Rockville Pike, Suite L3503A, Bethesda, MD 20814-3998.

Copyright © 2018 by the Institute of Mathematical Statistics. Printed by The Sheridan Press, 450 Fame Avenue, Hanover, PA 17331, USA.

Information for Advertisers

General information: The *IMS Bulletin* and webpages are the official news organs of the Institute of Mathematical Statistics. The *IMS Bulletin*, established in 1972, is published 8 times per year. Print circulation is around 4,000 paper copies, and it is also free online in PDF format at <http://bulletin.imstat.org>, posted online about two weeks before mailout (average downloads over 8,000). Subscription to the *IMS Bulletin* costs \$115. To subscribe, call 877-557-4674 (US toll-free) or +1 216 295 2340 (international), or email staff@imstat.org. The IMS website, <http://imstat.org>, established in 1996, receives over 30,000 visits per month. Public access is free.

Advertising job vacancies

A single 60-day online job posting costs just \$295.00. We will also include the basic information about your job ad (position title, location, company name, job function and a link to the full ad) in the *IMS Bulletin* at no extra charge. See <http://jobs.imstat.org>

Advertising meetings, workshops and conferences

Meeting announcements here and on the IMS website at <https://imstat.org/meetings-calendar/> are free. Submit your announcement at <https://www.imstat.org/ims-meeting-form/>

Rates and requirements for display advertising

Display advertising allows for placement of camera-ready ads for journals, books, software, etc. A camera-ready ad should be sent as a grayscale PDF/EPS with all fonts embedded. Email your advert to Audrey Weiss, IMS Advertising Coordinator admin@imstat.org or see <http://bulletin.imstat.org/advertise>

	Dimensions: width x height	Rate
1/3 page	4.9" wide x 4" high (125 x 102 mm)	\$270
1/2 page	7.5" wide x 4" high (190 x 102 mm)	\$335
2/3 page	4.9" wide x 8" high (125 x 203 mm)	\$390
Full page (to edge, including 1/8" bleed)	8.75" wide x 11.25" high (222 mm x 286 mm)	\$445
Full page (within usual <i>Bulletin</i> margins)	7.5" wide x 9.42" high (190 mm x 239 mm)	\$445

Deadlines and Mail Dates for *IMS Bulletin*

Issue	Deadline	Online by	Mailed
1: January/February	December 1	December 15	January 1
2: March	February 1	February 15	March 1
3: April/May	March 15	April 1	April 15
4: June/July	May 1	May 15	June 1
5: August	July 1	July 15	August 1
6: September	August 15	September 1	September 15
7: Oct/Nov	September 15	October 1	October 15
8: December	November 1	November 15	December 1

the
next
issue is

**September
2018**

Read IMS Bulletin
articles online at
<http://bulletin.imstat.org>



DEADLINES
for
submissions
August 15, then
September 15

Please see inside
the back cover for
subscription details
and information for
advertisers, including
all our **deadlines and**
requirements

Journal
alerts

For alerts and special
information on all the
IMS journals, sign up
at the IMS Groups site
<http://lists.imstat.org>

The purpose of the Institute is to foster the
development and dissemination
of the theory and applications of
statistics and probability



IMS: Organized September 12, 1935

THE ANNALS
of
APPLIED
PROBABILITY

AN OFFICIAL JOURNAL OF THE
INSTITUTE OF MATHEMATICAL STATISTICS

Weakly harmonic oscillators perturbed by a conservative noise CÉDRIC BERNARDIN, PATRÍCIA GONÇALVES AND MILTON JARA	1315
Disorder chaos in some diluted spin glass models WEI-KUO CHEN AND DMITRY PANCHENKO	1356
A Liouville theorem for elliptic systems with degenerate ergodic coefficients PETER BELLA, BENJAMIN FEHRMAN AND FELIX OTTO	1379
A characterization of product-form exchangeable feature probability functions MARCO BATTISTON, STEFANO FAVARO, DANIEL M. ROY AND YEE WHYE TEH	1423
Stochastic coagulation-fragmentation processes with a finite number of particles and applications NATHANAEL HOZE AND DAVID HOLCMAN	1449
Rigorous results for the Stigler–Luckock model for the evolution of an order book JAN M. SWART	1491
Max κ -cut and the inhomogeneous Potts spin glass AUKOSH JAGANNATH, JUSTIN KO AND SUBHABRATA SEN	1536
Limit distributions for KPZ growth models with spatially homogeneous random initial conditions S. CHHITA, P. L. FERRARI AND H. SPOHN	1573
Border aggregation model DEBLEENA THACKER AND STANISLAV VOLKOV	1604
Backward SDEs for optimal control of partially observed path-dependent stochastic systems: A control randomization approach ELENA BANDINI, ANDREA COSSO, MARCO FUHRMAN AND HUYÊN PHAM	1634
A necessary and sufficient condition for edge universality at the largest singular values of covariance matrices XIUCAI DING AND FAN YANG	1679
Typical distances in the directed configuration model PIM VAN DER HOORN AND MARIANA OLVERA-CRAVIOTO	1739
Ordered and size-biased frequencies in GEM and Gibbs' models for species sampling JIM PITMAN AND YURI YAKUBOVICH	1793
Large deviations theory for Markov jump models of chemical reaction networks ANDREA AGAZZI, AMIR DEMBO AND JEAN-PIERRE ECKMANN	1821
Multiple-priors optimal investment in discrete time for unbounded utility function ROMAIN BLANCHARD AND LAURENCE CARASSUS	1856
Coexistence and extinction for stochastic Kolmogorov systems ALEXANDRU HENING AND DANG H. NGUYEN	1893
Initial-boundary value problem for the heat equation—A stochastic algorithm MADALINA DEACONU AND SAMUEL HERRMANN	1943

Ann. App. Prob. June 2018
<http://projecteuclid.org/euclid.aop>