IMS Bulletin



April/May 2016

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Read it online at http://bulletin.imstat.org

UK Royal Statistical Society awards for Smith, Reid, Cressie

The UK's Royal Statistical Society (RSS) has announced the recipients of its honours for 2016. Three IMS Fellows were selected to receive the Guy Medals in Gold and Silver, and the Barnett Award.

The Guy Medal in Gold is awarded to Sir Adrian Smith for sustained excellence in the development of Bayesian statistical methodology and its application. Professor Sir Adrian Smith, FRS, is vice-chancellor of the University of London; he was formerly the Queen Mary University principal and worked at the UK Government's Department for Business,



Innovation and Skills. His work in statistics has been critical to the transformation of Bayesian thinking from philosophical debate to practical methodology, including path-breaking work on the now ubiquitous use of Monte Carlo methods for conducting inference in realistically complex models. He played an instrumental role in broadening the focus of the RSS from the statistical community to the impact that the discipline of statistics has on modern society, an approach that he

continued within the Civil Service on leaving academia.

The Guy Medal in Silver for 2016 is awarded to Nancy Reid for her path-breaking

paper "Parameter Orthogonality and Approximate Conditional Inference," written jointly with Sir David Cox, which is one of the most highly cited and influential papers in RSS journals within the last 30 years. The award also recognises Nancy's many other important contributions to statistical theory and methodology, including composite likelihood methods, design of experiments, survival analysis and saddle point approximations; and her outstanding leadership of, and service to, the statistical research community.



Finally, the Barnett Award Lecture, recognising excellence in environmental statistics,



was made to Noel Cressie. In addition to advancing fundamental methodology, his extensive publication list includes applications of statistical methods to address a diverse array of issues in the environmental sciences. Noel's many publications include a wide range of environmental-science applications, in addition to fundamental methodology. His authoritative book Statistics for Spatial Data, published in 1991, is very widely cited by researchers in environmental science and in many other disciplines beyond statistics.

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Contact information

IMS Bulletin Editor: Anirban DasGupta

Assistant Editor: Tati Howell

Contributing Editors: Robert Adler, Peter Bickel, Stéphane Boucheron, David Hand, Vlada Limic, Xiao-Li Meng, Dimitris Politis, Terry Speed and Hadley Wickham

Contact the IMS Bulletin by email:

- e bulletin@imstat.org
- w http://bulletin.imstat.org
- 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 PO Box 22718, Beachwood OH 44122, USA
- **t** 877-557-4674 [toll-free in USA]
- t +1 216 295 5661[international]
- f +1 216 295 5661
- e erg@imstat.org

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IMS Members' News

Peter Whittle elected foreign member of National Academy of Engineering

Among the 80 new members and 22 foreign members elected to the US National Academy of Engineering (NAE) is Peter Whittle, Emeritus Churchill Professor of Mathematics for Operational Research at the University of Cambridge, UK. Peter was elected for "contributions to the mathematics of operations research and statistics."

Election to the NAE is among the highest professional distinctions accorded to an engineer. Academy membership honors those who have made outstanding contributions to "engineering research, practice, or education, including, where appropriate, significant contributions to the engineering literature" and to "the pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering, or developing/implementing innovative approaches to engineering education."

Individuals in the newly elected class will be formally inducted during a ceremony at the NAE's annual meeting in Washington DC on October 9, 2016. A list of this year's members is at http://www.nae.edu/Projects/MediaRoom/20095/149240/149788.aspx

Xihong Lin receives National Cancer Institute Outstanding Investigator Award

IMS Fellow Xihong Lin, who is Henry Pickering Walcott Professor of Biostatistics and chair of the Harvard's Department of Biostatistics, has received a prestigious National Cancer Institute Outstanding Investigator Award. This seven-year \$6.6 million award provides extended funding stability and enable her to develop and apply innovative statistical and computational methods for analyzing massive genetic and genomic data in cancer epidemiology and clinical science. This work will aid in the development of cutting-edge methods for discovering genetic and environmental factors of cancer; provide a



better understanding of cancer progression; and inform new approaches to studying cancer progression and new treatment strategies.

In a news story at http://www.hsph.harvard.edu/ Xihong said she was "flattered" to receive this enabling award, which will give her "plenty of flexibility and freedom to explore cutting-edge data science research in cancer."

For a full description of the award, visit the NIH website at https://projectreporter.nih. gov/project_info_description.cfm?aid=8955524&icde=26738243.

R. Dennis Cook named Kansas State University Alumni Fellow

IMS Fellow R. Dennis Cook is one of 12 distinguished Kansas State University alumni to be honored as 2016 Alumni Fellows. Cook is an Alumni Fellow for the College of Arts and Sciences and will present guest lectures April 6–8. The Alumni Fellows were chosen based on their high levels of professional accomplishment and distinguished service in their respective careers. Dennis Cook is a full professor and director of the School of Statistics at the University of Minnesota. He is best known for "Cook's Distance," a now ubiquitous statistical method. He has authored over 225 research articles, two textbooks and two research monographs. In 2005, Cook received the COPSS Fisher Lectureship and Award. He is a Fellow of IMS and ASA. Cook earned two degrees from K-State: a master's in 1969 and a doctorate in 1970, both in statistics. For more information about the Alumni Fellows program, including a full listing of the 2016 Alumni Fellows, visit www.K-State.com/Fellows.

l Other News

Profile: Sanghamitra Bandyopadhyay

Sanghamitra Bandyopadhyay is the first female Director of the Indian Statistical Institute (ISI), where she is a professor in the Machine Intelligence Unit, specializing in computational biology. Her research is mainly in the areas of evolutionary computation, pattern recognition, machine learning and bioinformatics. As ISI Director she



oversees the functioning of its centres—Kolkata, Bangalore, Delhi, Chennai and Tezpur—as well as several other statistical quality control and operation research units spread across India.

Sanghamitra Bandyopadhyay obtained a bachelor of science in physics from Presidency College, Kolkata before obtaining another bachelor's degree (of technology) in Computer Science in 1992 from Calcutta University. She then obtained a master's degree in computer science from the Indian Institute of Technology, Kharagpur, before pursuing a PhD at ISI, obtaining it in 1998. She has worked in universities and institutes across the world, in the USA, Australia, Germany, China, Italy and Mexico. She has authored or co-authored more than 145 journal papers and 140 articles in international conferences and book chapters, and published six books. She has also edited journal special issues in the area of soft computing, data mining, and bioinformatics.

Sanghamitra is a Fellow of India's National Academy of Sciences, the Indian National Academy of Engineering, and the West Bengal Academy of Science and Technology, and a senior member of the IEEE. She is the recipient of several prestigious awards including: the Dr. Shanker Dayal Sharma Gold Medal, the Institute Silver Medal from IIT Kharagpur, the Young Scientist Awards of the Indian National Science Academy, the Indian Science Congress Association, the Young Engineer Award of the Indian National Academy of Engineering, the Swarnajayanti Fellowship from the Department of Science and Technology, and a Humboldt Fellowship. She was awarded the Shanti Swarup Bhatnagar Prize in Engineering Science.

Sanghamitra notes on the "Director's Desk" (http://www.isical.ac.in/director.php) that the Indian Statistical Institute has grown over a period of more than eight decades from a small laboratory into "a unique institution of higher learning in India. Over the years ISI has defined education and research in the field of statistics and related sciences and technologies, not only in India but also around the globe." She comments that the logo of the Institute, the Banyan tree with its myriad roots, and its motto ("Unity in Diversity"), have come to reflect developments in "statistics, mathematics, computer science, social sciences, physics and earth sciences, biological sciences, library science and quality control and reliability, and their real-life applications."

Geetha Ramachandran, 1949-2016

Professor Geetha Ramachandran, Professor of Statistics at the California State University at Sacramento passed away on February 18; she was 67. Professor Ramachandran worked in the areas of sampling and complex surveys and obtained her PhD from the Indian Statistical Institute, where she was a close academic associate of Debabrata Basu. She was on the faculty of Rutgers University, University of Georgia, Rider College at Princeton, University of Dar-es-Salaam, and University of Philippines at various times of her career. She was also an advisor to the state government at California in numerous capacities. She is survived by her husband Dr. D. Ramachandran, and daughters Rageshree and Sohini.

□ = access published papers online

IMS Journals and Publications

Annals of Statistics: Peter Hall and Runze Li http://imstat.org/aos @http://projecteuclid.org/aos

Annals of Applied Statistics: Stephen Fienberg http://imstat.org/aoas

http://projecteuclid.org/aoas

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

Annals of Applied Probability: Timo Seppäläinen http://imstat.org/aap

Mhttp://projecteuclid.org/aoap

Statistical Science: Peter Green http://imstat.org/sts
Mhttp://projecteuclid.org/ss

IMS Collections

http://imstat.org/publications/imscollections.htm

Mhttp://projecteuclid.org/imsc

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

IMS Co-sponsored Journals and Publications

Electronic Journal of Statistics: George Michailidis http://imstat.org/ejs Mhttp://projecteuclid.org/ejs

Electronic Journal of Probability: Brian Rider Mhttp://ejp.ejpecp.org

Electronic Communications in Probability: Sandrine Péché

http://ecp.ejpecp.org

Current Index to Statistics: George Styan http://www.statindex.org

[20] log into members' area at imstat.org

Journal of Computational and Graphical Statistics: Thomas Lee http://www.amstat.org/publications/jcgs

http://www.amstat.org/publications/jcgs ©log into members' area at imstat.org Statistics Surveys: Donald Richards

http://imstat.org/ss

Mhttp://projecteuclid.org/ssu

Probability Surveys: Ben Hambly
http://imstat.org/ps

nttp://www.i-journals.org/ps/

IMS-Supported Journals

Annales de l'Institut Henri Poincaré (B): Thierry
Bodineau & Lorenzo Zambotti http://imstat.org/aihp

Mhttp://projecteuclid.org/aihp

Bayesian Analysis: Marina Vannucci
Mhttp://ba.stat.cmu.edu

Bernoulli: Eric Moulines http://www.bernoulli-society.org/ ぬhttp://projecteuclid.org/bj

Brazilian Journal of Probability and Statistics:
Nancy Lopes Garcia http://imstat.org/bjps
Mhttp://projecteuclid.org/bjps

Stochastic Systems: Peter W Glynn
Mhttp://www.i-journals.org/ssy/

IMS_Affiliated Journals

ALEA: Latin American Journal of Probability and Statistics: Servet Martinez

nttp://alea.impa.br/english

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

OBITUARY: Peter Gavin Hall

1951-2016

On 9 January 2016, in Melbourne, Australia, the statistics community lost one of its greatest statisticians. Peter Hall was born in Sydney, Australia, to William Hall and distinguished radio astronomer Ruby Payne-Scott. He earned his degrees from the University of Sydney, the Australian National University (ANU) and the University of Oxford, and he spent his career as an academic at the ANU (until 2006), the University of Melbourne (since 2006) and the University of California at Davis, where he had a fractional appointment since 2005. In 1977 Peter married Jeannie Hall, who held the high post of cabinet secretary for successive Australian Prime ministers.

Peter was a wonderful person. He was gentle, generous, passionate, enthusiastic, optimistic and very supportive. He had a massive impact on hundreds of statisticians, both junior and senior, all over the world. As a colleague (AD) and a regular visitor (RJC), we were able to observe how Peter worked with younger people, helping them solve problems they thought they wanted to solve, and, more importantly, advancing their careers while doing so. It was fascinating, and exciting, to watch how Peter operated. He first sorted out the problem that his younger visitors actually wanted to solve, framed it in a concrete way, and then, in a burst of energy beyond what any of us can do, simply solved it. His lunches were famous for wide-ranging discussions—including, surprisingly, aviation, where he regularly read blogs about aviation design, e.g. the Boeing 787 Dreamliner, and labor issues, e.g., pilot complaints.

Peter was extremely prolific. His work was deep and founded on unbelievably creative and beautiful ideas. He wrote more than 600 papers, most of which appeared in the top statistics or probability journals. As he was absolutely passionate about science

and mathematics in general, the breadth of problems he tackled was very wide. He made extraordinary and enormously influential contributions to many areas of statistics, including: the bootstrap and Edgeworth expansions, rates of convergence in central limit theorems, deconvolution and inverse problems, spatial statistics problems, functional data analysis, smoothing methods, fractals, classification and clustering, and signal detection, extreme-value statistics, martingale theory and ranking techniques.

The diversity of topics that Peter studied originated from his passion for science. He was fascinated by all sorts of problems, ranging from the most applied biological or physical questions, to the most theoretical puzzles in number theory. Faced with a new challenge (something he particularly enjoyed) his typical approach was to gain insight by first exploring its fundamental theoretical properties. This is how he managed to unravel the most surprising and important characteristics of problems, and, from there, suggest highly innovative, ground-breaking and creative statistical methods. His constant search for understanding, and his sheer tenacity as a researcher, led him to develop some of the most difficult and most influential theory in modern statistics.

He received the most prestigious awards available throughout his career. Among other recognitions, he was a Fellow of the UK's Royal Society, of the Australian Academy of Science and of the Australian Academy of Social Sciences, a foreign associate of the US National Academy of Sciences, and an Officer of the Order of Australia. He also had honorary doctorates and numerous other distinguished awards, including the 1989 Committee of Presidents of Statistical Societies (COPSS) Presidents' Award.

Despite his stature, Peter had a gentle and



Peter Hall

unassuming nature. Regardless of how important you were, he always managed to make you feel included through the sheer warmth of his personality. He was loved and admired by many people around the world. He offered especially strong support to young scientists, and women in particular, and trained more than sixty young statisticians at the doctoral or post-doctoral level. All the visitors that we know of departed with a sense that they had been in the presence of genius, but genius with a kind face and one whose goal was to support their careers, instead of his own.

Peter was also strongly committed to his profession more generally, and the amount of service and support he provided to mathematics and science throughout his life, both in Australia and internationally, was also quite extraordinary. Among many other things, he served as President of the IMS, of the Bernoulli Society, and of the Australian Mathematical Society, and as Vice-President of the Australian Academy of Science; he served on innumerable committees and advisory boards, and was editor and associate editor of many journals. He was extremely active in supporting Australian Mathematics and Statistics, regularly interacting with cabinet ministers about how to appreciate the key role of Statistics and Mathematics in the age of data deluge.



Student Puzzle Corner 13

We consider a problem on Gaussian extreme values. It comes across as a difficult calculation, but when looked at the right way, it is actually not at all difficult. Here is the exact problem.

Consider a sequence of iid random variables $X_1, X_2, \dots \sim N$ (μ, σ^2) . For any given $n \ge 1$, suppose $\bar{X} = \bar{X}_n$ denotes the mean and $X_{(n)}$ denotes the maximum of the first n observations X_1, \dots, X_n . Define $\mu_n(\bar{X}) = E(X_{(n)} \mid \bar{X})$, and $V_n(\bar{X}) = Var(X_{(n)} \mid \bar{X})$.

- (a) Find explicit closed form deterministic sequences a_n , b_n such that $b_n \left[\mu_n(\bar{X}) a_n \right] \stackrel{\text{a.s.}}{=} 1$.
- (b) Find explicit closed form deterministic sequences c_n , d_n such that $d_n \left[V_n(\bar{X}) c_n \right] \stackrel{\text{a.s.}}{\to} 1.$

Student members of the IMS are invited to submit solutions (to bulletin@imstat.org with subject "Student Puzzle Corner"). The deadline is now **April 15, 2016**.

The names and affiliations of (up to) the first 10 student members to submit correct solutions, and the answer to the problem, will be published in the next issue of the Bulletin. The Editor's decision is final.

Obituary: Peter Gavin Hall, 1951–2016 continued from previous page

Outside academia, Peter had two great passions: steam trains and photography. He developed his love of trains as a young boy, fascinated by the impression of power and



Peter was an avid train photographer

invincibility that they gave. It was his love of trains that got him interested in photography, which he saw as a way of recording steam trains, although later he developed a genuine passion for photography more generally. He introduced photography to his sister, the distinguished Australian artist Fiona Hall, of whom he was very proud and whose work he admired. In a forthcoming interview of Peter in *Statistical Science*, he said of his sister, "Her eye for composition was just spectacular. I learned a lot just by watching her take photographs."

Peter also had a passion for animals. He was particularly fond of cats, but he had a special connection with yellow crested cockatoos, which he attracted by feeding them through his office window at the ANU. Amusingly, the cockatoos obtained their food in the early morning by knocking on





Peter was someone

really special. He was an extraordinary, kind, gentle and generous person, of the type most people do not even have the chance to meet once in their lifetime. He was an exceptional scientist who made many cutting-edge and influential contributions to statistics. He was an outstanding leader, one whose enthusiasm and passion for research has been a motivation and a great source inspiration for many. His absence will leave a huge hole in the hearts of many people all over the world.

Written by Aurore Delaigle, University of Melbourne, and Raymond Carroll, Texas A&M University

l Calls for Nominations

First International Prize in Statistics

Nominations are open for the first International Prize in Statistics, to be awarded at the ISI World Statistics Congress in Marrakech in July, 2017. The purpose of the Prize is to call public attention to the important role that statistics, data analysis, probability, and understanding of uncertainty have played and are playing in the advancement of society, science, technology and human welfare. The Prize was created by five international statistical societies (American Statistical Association, International Biometric Society, International Statistical Institute, Institute of Mathematical Statistics, Royal Statistical Society).

Nominations are open through August 15, 2016. See the information at http://statprize.org/nominations.cfm. The first International Prize in Statistics recipient will be announced in October 2016, and will be honored during a special ceremony in Marrakech in 2017. The Prize will carry with it a cash award of at least \$75,000.

An international prize recognizing excellence in statistics has been a dream for many people for many decades, and the International Prize in Statistics Foundation is thrilled to be making this long-awaited prize a reality. But your help is needed! Please spread the word through your networks, especially via social media. We need to make sure we receive outstanding nominations for the Prize.

Questions may be directed to Ron Wasserstein (ron@amstat.org) or Susan Ellenberg (sellenbe@upenn.edu).

Tweedie Award winner

The Institute of Mathematical Statistics has selected Alexandre Bouchard-Côté as the winner of this year's Tweedie New Researcher Award. Alexandre received his PhD in 2010 from the University of California, Berkeley, and is currently Assistant Professor of Statistics at the University of British Columbia in Vancouver: see http://www.stat.ubc.ca/~bouchard/. The IMS Travel Awards Committee selected Alexandre "for his excellence in work at the interface of probabilistic modeling, Monte Carlo inference, Bayesian statistics and machine learning, and for his contributions to statistical and computational

Alexandre will present the Tweedie New Researcher Invited Lecture at the IMS New Researchers Conference (University of Wisconsin–Madison, July 28–30).

methods in phylogenetics and natural

language processing."



2016 Pickard Lecture

The Statistics Department at Harvard University is soliciting nominations for the 2016 Pickard Lecture Award. This biennial award is funded by the David K. Pickard Memorial Endowment in memory of Professor Pickard, who was an exceptional teacher of statistics. Every two years, we host a lecture and reception to recognize an outstanding university faculty member, who gives a talk on a topic to do with teaching and pedagogy.

Additional information about the award and previous winners are available at http://www.stat.harvard.edu/Site_Content/Pickard_Lecture.html.

We welcome all nominations until June 15. All university faculty from outside Harvard University are eligible. Please send your nominee's CV and a letter of recommendation to Madeleine at mstraubel@fas.harvard.edu. You may direct any questions to her as well.

Fifteenth Annual Janet L. Norwood Award for outstanding achievement by a woman in the statistical sciences

The Department of Biostatistics and the School of Public Health, University of Alabama at Birmingham (UAB) is pleased to request nominations for the 15th annual Janet L. Norwood Award for outstanding achievement by a woman in the statistical sciences. The award will be conferred on September 14, 2016. The recipient will be invited to deliver a lecture at the UAB award ceremony, and will receive all expenses, the award, and a \$5,000 prize. Acceptance of the award is conditional on delivering the lecture on September 14.

Eligible individuals are women who have completed their terminal degree, have made extraordinary contributions and have an outstanding record of service to the statistical sciences, with an emphasis on both their own scholarship and on teaching and leadership of the field in general and of women in particular and who, if selected, are willing to deliver a lecture at the award ceremony. For additional details about the award, please visit our website at http://www.soph.uab.edu/awards/norwoodaward.

To nominate, please send a full curriculum vitae accompanied by a letter of not more than two pages in length describing the nature of the candidate's contributions. Contributions may be in the area of development and evaluation of statistical methods, teaching of statistics, application of statistics, or any other activity that can arguably be said to have advanced the field of statistical science. Self-nominations are acceptable. Send nominations to David B. Allison, Distinguished Professor, Quetelet Endowed Professor of Public Health, Associate Dean for Science: e dallison@uab.edu. The deadline for receipt of nominations is June 24. Electronic submissions of nominations is encouraged. The winner will be announced by Monday, July 4.

I Medallion lecture preview: Gerda Claeskens



Gerda Claeskens is professor of statistics at KU Leuven in Belgium. She obtained her PhD degree in 1999 from the University of Hasselt. Before joining KU Leuven in 2004, she was a faculty member of the statistics department at Texas A&M University. Her main research interests include model selection, nonparametric estimation and testing, and inference after model selection. In 2008 she co-authored a book on the topic of model selection and model averaging with N.L. Hjort. Dr. Claeskens received the Noether Young Scholar Award in 2004, and was elected IMS fellow in 2012. She serves as associate editor for several journals, including the *Annals of Statistics* and *Biometrika*. Gerda's Medallion Lecture will be delivered at this year's JSM, which takes place in Chicago from July 30–August 4. See the preliminary program at http://www.amstat.org/meetings/jsm/2016/program.cfm

Model averaging and post-model selection

Several estimators are often available for a single population quantity. Examples include estimators of the mean of the response in a multiple linear regression model when submodels are considered that include only subsets of the set of available covariates. A "model averaged estimator" results when such estimators constructed from different models are used in a weighted average, which is to be used as a single estimator of the population quantity of interest. Theoretical properties of such a weighted estimator may be very simple when all estimators are independent and when the weights are deterministic. More complicated situations arise with correlated estimators, often based on the same set of data, as typically happens in variable selection problems, and when the weights are random too. Random weights are frequently in use. Consider for example the use of a variable selection criterion such as Akaike's information criterion (AIC) which assigns weight one to the estimator obtained using the model with the best AIC value and gives weight zero to all other estimators from the non-selected models. Since the AIC value is computed from the data, the resulting weight is, obviously, random.

The process of model averaging gives rise to several interesting problems. Several choices have to be made in order to construct a model averaged estimator such as, "which and how many estimators will be averaged over?" and, "which weights will be used?"

Data-driven frequentist weights can be

chosen by minimizing an estimator of a mean squared error expression. In general there might not be a unique set of such weights, meaning that the resulting weighted estimators might not be identical for different values of the weights, and also the value of the weights should be interpreted with care. We obtain that there are multiple weight vectors which yield equal model averaged predictions in linear regression models. In particular, a restriction to the so-called singleton models, where each model only includes one parameter, results in a drastic reduction in the computational cost.

If the fact that the weights are random variables rather than fixed numbers is taken into account already while selecting the weights, different values of the "optimal" weights are found, as compared to starting with fixed weights. In particular, we show that the model averaged estimator is biased even when the original estimators are unbiased and that its variance is larger than in the fixed weights case. This relates to the "forecast combination puzzle," which finds that there is no guarantee that the *optimally* weighted averaged forecast will be better than the equally-weighted case or even improve on the original forecasts.

The distribution of model averaged estimators is, in general, hard to obtain. We work out the special case of an estimator after model selection by the Akaike information criterion, AIC. All but one of the random weights are zero, only for the selected model

the weight equals one. For AIC selection we obtain an asymptotic selection region that expresses when a certain model is selected. We exploit the overselection properties of AIC to construct valid confidence regions that take the model selection uncertainty into account. While the asymptotic distributions of estimators-post selection are typically no longer normal, the particular form of the AIC allows us to use simulation to obtain asymptotic quantiles for use in confidence regions.

This research opens perspectives for other post-selection inference, as well as for the more general model averaging inference.

The presented work has been obtained jointly with A. Charkhi, B. Hansen, J. Magnus, A. Vasnev and W. Wang.

More Previews in forthcoming issues

The 2016 IMS lectures are at: ENAR (Austin, March 6–9), the World Congress [WC] (Toronto, July 11–15) and JSM (Chicago, July 30–August 4). Speakers are:

Gerda Claeskens [Medallion (ML) @ JSM]

Pierre del Moral [ML @ WC]

Frank Den Hollander [ML @ WC]

Vanessa Didelez [ML@ WC] Peter Diggle [ML @ ENAR]

Arnaud Doucet [ML@WC]

Arriada Dodcet [ML @ Wc]

Christina Goldschmidt [ML@WC]

Scott Sheffield [Doob @ WC]

Sara van de Geer [Wald@WC]

Nanny Wermuth [ML@JSM]

Bin Yu [Rietz WC]

Ofer Zeitouni [Schramm @ WC]

I Recent papers

Stochastic Systems Volume 5 (2015)

Focusing on the interface of applied probability and operations research, Stochastic Systems is the flagship journal of the INFORMS Applied Probability Society and is published through a cooperative agreement between INFORMS and the IMS. This open-access journal seeks to publish high-quality papers that substantively contribute to the modeling, analysis, and control of stochastic systems. The contribution may lie in the formulation of new mathematical models, in the development of new mathematical methods, or in the innovative application of existing methods.

Access papers at http://www.i-journals.org/ssy/

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The morphing of fluid queues into Markov-modulated Brownian motion	
Moderate deviations for recursive stochastic algorithms	PAUL DUPUIS AND DANE JOHNSON; 87—119
Control of parallel non-observable queues: Asymptotic equivalence and optimality of periodic policies	JONATHA ANSELMI, BRUNO GAUJAL AND TOMMASO NESTI; 120—145
On patient flow in hospitals:	

A data-based gueueing-science perspective MOR ARMONY, SHLOMO ISRAELIT, AVISHAI MANDELBAUM, YARIV N. MARMOR, YULIA TSEYTLIN AND GALIT B. YOM-TOV; 146—194

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Models with hidden regular variation: Generation and detection.	BIKRAMJIT DAS AND SIDNEY IRA RESNICK; 195—238
Tightness of stationary distributions of a flexible–server system in the Halfin–Whitt asymptotic regime $\ldots\ldots$	ALEXANDER L. STOLYAR; 239—267
On bid-price controls for network revenue management	BARIŞ ATA AND MUSTAFA AKAN; 268—323
Solving the drift control problem	MELDA ORMECI MATOGLU, JOHN VANDE VATE AND HUIZHU WANG; 324–371
Giant component in random multipartite graphs with given degree sequences	DAVID GAMARNIK AND SIDHANT MISRA; 372-408

Additional Accepted Papers

On queue-size scaling for input-queued switches. DEVAVRAT SHAH, JOHN N. TSITSIKLIS AND YUAN ZHONG; 1–25

Dynamic scheduling for parallel server systems in heavy traffic:

Graphical structure, decoupled workload matrix and some sufficient conditions for solvability of the Brownian Control Problem V. PESIC AND R. J. WILLIAMS; 1–64

Probability Surveys Volume 12 (2015) & 13 (2016)

Probability Surveys publishes survey articles in theoretical and applied probability. The style of articles may range from reviews of recent research to graduate textbook exposition. Articles may be broad or narrow in scope. The essential requirements are a well specified topic and target audience, together with clear exposition. Probability Surveys is sponsored by IMS and the Bernoulli Society.

Access papers at http://www.i-journals.org/ps/

Volume 12 (2015)

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Vlada's Point: Peer Review I — Perspectives

Contributing Editor Vlada Limic has been frustrated by the peer review process:

If you are reading this, chances are that peer review is regularly on your mind. It is in fact more than likely that you have recently written or read a peer review report, or discussed some aspect of the editorial process with a colleague.

Scientific publishing is a vast and complex topic, and my intention is to focus on one particular aspect of it only. Before doing anything else, I would like to turn your attention to the discussions by our peers in the *IMS Bulletin* and elsewhere.

Wikipedia 1 tells us that modern peer review, with anonymous referees included in the process, started only in the 20th century. This is not surprising since, before the expansion of university education, the number of active mathematicians (as an example; pick another scientific discipline if you wish) was minuscule compared to nowadays. The number of math journals was correspondingly small, and the number of papers submitted to each was sufficiently small that the editor-inchief or the members of the editorial board could read each and every preprint in detail before making a decision. That was the time of artisanal scientific publishing—and I use here the word artisanal with great respect. The changes came first slowly, and then more and more rapidly. I joined the train with LaTeX and the internet already in place. I can therefore only guess at the extent of the transformation that occurred in the early to mid 1990s.

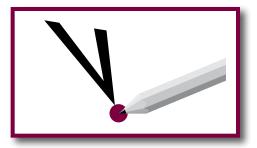
Various problems soon emerged, undoubtedly due to the tremendous and unanticipated simultaneous throughput pressure on all the participants in the editorial process. While problem solving is one of the trademarks of our profession, efficient response to social and demographic changes cannot be done overnight (or by studying a toy model), so our community reacted

to these challenges with a certain delay. In particular, volume 39, issue 2 (March 2010) of the *IMS Bulletin*² has a section devoted to various aspects of scientific publishing. Ethical conduct and misconduct (some, but not all, related to peer review) is the theme of the article by Peter Imrey. It is followed by a letter by Dimitris Politis, that offers three interesting thoughts on the editorial process. Just below it, the *Bulletin* solicits opinions and ideas from other peers.

Written feedback came, at least from Xuming He, Dimitris Politis, and Jean Opsomer in volume 42, issues 2, 3 and 4, respectively. In particular, Dimitris writes in *Refereeing and Psychoanalysis*, it is "important that the peer review is as fair and unbiased as humanly possible," and he informs us of the ethical principles ³ about to be adopted by the *Annals of Statistics*. Larry Wasserman's critique ⁴ "A World Without Referees" merits a careful reply. I note it down for a future column, and continue with my program that could be called "A World of Happy Peers".

I am convinced that most, if not all, ideas come in response to an adequate amount of frustration. In 2010 my refereeing-related frustration level was still sub-critical and so I missed on that *IMS Bulletin*'s call. I remember well the sequence of events, a couple of years after, that led to the needed super-critical state. It is part of our guild-type behavior not to share the details on any particular task. In fact, you already know the details—the counterproductive, time- and energy-consuming situation I got into is recurring, and you have almost surely been its victim on several occasions.

That *n*th iteration (with little variation) was finally sufficient for me. I woke up one morning with an idea that seemed good and practical (relatively easy to implement). I had some verbal encouragement from colleagues, and a lot of help from a family member. And so I set on a path that led... nowhere.



I take that back: the path led to a number of things, including this series of columns. Yet the particularly annoying feature of peer reviewing stayed.

Here's my point in "raw 5 state" (elaborations are postponed to the sequel): The advent of manuscript-central has greatly accelerated the transition of tasks (transfer of drafts/preprints, sending of prompting messages, transfer of reports, opinion letters, and copyright). From the very beginning, the same machine had the capacity to greatly enhance the most important (communication-wise and learning-wise) practical aspect of the review process, yet it completely ignored it. The imbalance thus created contributed to a notable increase in the frequency of careless or otherwise dishonest (peer-reviewed publications and) peer reports, gradually leading to questioning of the very foundations of the peer review. The speed at which the machine arrived and took over, combined with the ever-rising pressure which it exerts on the grassroots human power (a.k.a. peer reviewer), has captivated the rulers (a.k.a. publishing companies, editorial boards, hiring/promotion/award committees etc.) and has been distracting everyone ever since.

Still, there is hope on the horizon...

- 1 https://en.wikipedia.org/wiki/Scholarly_peer_review
- 2 http://bulletin.imstat.org/wp-content/uploads/ Bulletin39_2.pdf
- 3 http://www.imstat.org/aos/principles.html
- 4 http://www.stat.cmu.edu/~larry/Peer-Review.pdf
- 5 inspired by sci fi

IMS books in Project Euclid bookstore

Did you know that Project Euclid sells selected volumes of IMS books? The following books (all softcover/paperback) are available to order from the Project Euclid bookstore, at http://services.projecteuclid.org/

IMS Lecture Notes - Monograph Series

Empirical Processes

Peter Gänssler

This monograph presents a thorough and detailed description of the topics in the area of empirical processes. Several portions of the material are new and high-quality research that should be of interest to researchers and graduate students in probability, statistics, and mathematics. \$14.73

Inequalities in Statistics and Probability

Edited by Y. L. Tong

This volume contains 30 research papers, some of them concentrating on models in fields of application in which inequalities are of particular value since exact results are not available. \$17.77

The Likelihood Principle

James O. Berger and Robert L. Wolpert

This monograph presents a discussion and generalization of the likelihood principle and examines its implications for statistical inference. \$17.77

Approximate Computation of Expectations

Charles Stein

This monograph presents and abstract approach to the approximate computation of expectations. \$14.73

Fundamentals of Statistical Exponential Families with Applications in Statistical Decision Theory

Lawrence D. Brown

This monograph presents a systematic treatment of the analytical an probabilistic properties of exponential families. \$68.80

Group Representations in Probability and Statistics

Persi W. Diaconis

These expanded lecture notes delve into the uses of group theory, particularly non-communicative Fourier analysis, in probability and statistics. \$54.52

Small Sample Asymptotics

Christopher Field and Elvezio Ronchetti

This monograph provides coherent development of the ideas and techniques of small sample asymptotics. The authors aim to obtain asymptotic expansions which give accurate results for small sample sizes n, even down to n=1. \$47.80

Stochastic Inequalities

Edited by Moshe Shaked and Y. L. Tong

This volume is a collection of papers based on the lectures given at the joint IMS-ASA-SIAM Summer Research Conference on Stochastic Inequalities, July 1991. \$78.78

Multivariate Analysis and Its Applications

Edited by T. W. Anderson, K. T. Fang and I. Olkin

This volume, based on an International Symposium held at Hong Kong Baptist College in 1992, presents work of many major figures in the theory of Multivariate Analysis and Highlights important recent trends in applications. \$86.86

Adaptive Designs

Edited by Nancy Flournoy and William F. Rosenberger

This volume contains 20 papers whose topics include two-arm clinical trials, adaptive dose-response designs for quantile estimation and maximizing survival in the presence of opposing hazard functions, linear models, multinomial models, quality control and group testing. \$69.64

Bayesian Robustness

Edited by J. O. Berger, B. Betro, E. Moreno, L. R. Pericchi, F. Ruggeri, G. Slinetti, and L. Wasserman

This volume contains the Proceedings of the Second International Workshop on Bayesian Robustness held in Rimini, Italy, from May 22-25, 1995. With fourteen invited papers (with Discussion) and seven contributed papers, all refereed, this volume spans a variety of topics including the latest theoretical developments, methodology and applications. Among the topics are: hierarchical models, model selections, clinical trials, large sample theory, time series, and speech and audio signal analysis, all treated in the context of robustness.

\$78.88

IMS Collections

From Probability to Statistics and Back. High-Dimensional Models and Processes—A Festschrift in honor of Jon A. Wellner

Edited by M. Banerjee, F. Bunea, J. Huang, V. Koltchinskii, and M. H. Maathuis.

Many of the papers included in this volume were presented at the 2010 conference "From Probability to Statistics and Back: High-Dimensional Models and Processes" in Seattle. They cover a broad range of topics related to Jon A. Wellner's work, which has been especially influential in semiparametric statistics, estimation and testing problems under shape constraints, empirical processes theory (both classical and abstract), survival analysis, biostatistics, bootstrap, probability in Banach spaces and high-dimensional probability.

IMS Collections, volume 9. Softcover book, \$109.40

Advances in Modern Statistical Theory and Applications—A Festschrift in honor of Morris L. Eaton

Edited by Galin Jones and Xiaotong Shen

This volume is dedicated to Morris L. Eaton, whose pioneering and fundamental research has spanned many areas with particular emphasis on multivariate statistics, decision theory, probability inequalities, invariance, and the foundations of Bayesian inference. Perhaps less well-known are his substantial contributions to many applied problems in clinical trials and other topics in biostatistics. The contributions to this volume, from Eaton's collaborators, colleagues, friends and former students, reflect his broad interests and cover topics on inference, Markov chain Monte Carlo, multivariate analysis, and corporate bond pricing models, among others.

IMS Collections, volume 10. Softcover book, \$67.44

NSF-CBMS Regional Conference Series in Probability & Statistics

Nonparametric Bayesian Inference

Edited by Peter Müller and Abel Rodriguez

These notes arose out of a short course at UC Santa Cruz in summer 2010. Like the course, the notes provide an overview of some popular Bayesian nonparametric (BNP) probability models. The discussion follows a logical development of many commonly used nonparametric Bayesian models as generalizations of the Dirichlet process (DP) in different directions, including Pólya tree (PT) models, species sampling models (SSM), dependent DP (DDP) models and product partition models (PPM).

Volume 9. Published by IMS and ASA.

Softcover Book, \$46.60

IMS Textbooks and Monographs

These two book series are published by Cambridge University Press on behalf of IMS. As an IMS member you can order a copy with a 40% discount from http://www.cambridge.org/ims

The volumes currently available are:

IMS Textbooks

Probability on Graphs by Geoffrey Grimmett

Bayesian Filtering and Smoothing by Simo Särkkä

Stochastic Networks by Frank Kelly and Elena Yudovina

The Surprising Mathematics of Longest Increasing Subsequences
by Dan Romik

Noise Sensitivity of Boolean Functions and Percolation by Christophe Garban and Jeffrey Steif

Core statistics by Simon Wood

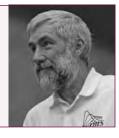
IMS Monographs

Large-scale Inference by Bradley Efron
Nonparametric Inference on Manifolds
by Abhishek Bhattacharya and Rabi Bhattacharya
The Skew-normal and Related Families
by Adelchi Azzalini (with Antonella Capitanio)
Case-control Studies by Ruth Keogh and David Cox

WWW.CAMBRIDGE.ORG/IMS

I Terence's Stuff: Four funerals and a tribute

A recent spate of funerals has made Terry Speed think about how we can pay tribute to our esteemed colleagues before it's too late...



I shocked someone recently when I said that I am getting very familiar with our local cemetery. I have been to four funerals there over the last two years, all for local mathematicians or statisticians to whom I was at one time close. One was for the person who first interested me in algebra, one was for my PhD supervisor, one was for the person who taught me functional analysis, and the most recent was for Peter Hall. Their ages were 90, 85, 94 and 64, respectively. I found Peter's funeral by far the saddest, as he was much too young to die, and he had so much more to give the world.

At funerals and memorial services we celebrate the life of the person who has died. This is appropriate, and can be quite uplifting. But I have come away from my last two years of funerals hoping that I will do much more with people close to me while they are alive.

Three things have stood out for me. First was the amount I learned from the shared memories of others—about people I thought I knew reasonably well. This included aspects of their lives about which I knew little or nothing: hobbies or other non-professional activities, their wider sphere of influence, details about their childhood and early life, and influences and experiences. We speak of "work—life balance" as a desirable goal for a career, but less often do we reflect on the unbalanced view we can have of our colleagues and teachers.

(A side issue here is the total inadequacy of obituaries, however thoroughly and well written they are. Their stylized form and their brevity seldom capture the essence of a person. We need to do much more than write obituaries.)

A second, lasting regret was the number of questions I still have for them, questions I will no longer be able to ask directly. Questions such as "What motivated you to...?", "How ever did you get the idea to...?" "Why did you...?" or "What do you think of....?" We're all curious about the thought processes of others, especially those who we admire, those from whom we wish to learn. Questions need to be asked sooner, not left to later.

My third concern was one of personal failing, wondering whether they died knowing the esteem in which I held them, whether I passed that on adequately while they were alive. I was lucky to have the opportunity to visit three of my four friends in hospital during their last weeks, and I hope this conveyed something to them about how I felt. But visits are not always possible, and even if they are, we do not always take the time, or feel able, to say everything we could.

Something more concrete might be called for as a way of marking someone's life and achievements.

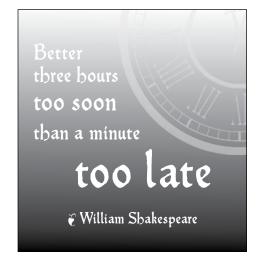
To celebrate International Women's Day this year, a group of women mathematics graduate students from my local university organized a morning tea tribute to Alison Harcourt, née Doig. Alison is alive and well in the department from which she graduated (with honours) in 1950. After a masters there, she went to the UK for several years. During that time she and Ailsa Land discovered the branch and bound method of combinatorial optimization. She returned to a position in the statistics department in 1963, and taught us the elements of linear and integer programming, including the branch and bound method—without that name. I didn't know she had (co-)discovered it until this year.

In her informal speech, Alison talked

about her schooling in rural Victoria and later Melbourne, how she got attracted to mathematics, statistics, and her major research area, and what it was like to be a woman in an almost entirely male world. We were able to hear her life story, learn from and question her about her long career, and honour her.

How can we do more with and for our esteemed colleagues while they are still alive? We can invite them to talk about their careers, as was done with Alison Harcourt. We can hold a conference or workshop in their honour, as was done for Peter Hall's 60th birthday, and for my algebra professor on his retirement. A group of colleagues or former students can produce a Festschrift volume, or dedicate an issue or volume of a journal to a respected colleague. We can record a conversation or interview in Statistical Science; a truly outstanding one with Peter Hall will come out there very soon. Round-table Q&A sessions between "elders" and groups of graduate students or junior faculty are a great way to get questions answered. Bin Yu set up three of these for me when I was last in Berkeley. They were great fun for me, and I hope also for the people participating. There are many possibilities.

Try one, try another. Just don't wait until it's too late.



I IMS meetings around the world

Joint Statistical Meetings: 2016–2020

IMS sponsored meeting

JSM 2016 July 30-August 4, 2016 Chicago, IL

w http://amstat.org/meetings/jsm/2016

The 2016 Joint Statistical Meetings will be held July 30 to August 4 at McCormick Place, 2301 South Lake Shore Drive, Chicago, IL 60616. The theme of JSM 2016 is "The Extraordinary Power of Statistics."

The IMS program chair for invited sessions is Jan Hannig, University of North Carolina e jan.hannig@unc.edu. The IMS contributed program chair is Alexander Aue, University of California,

Davis e aaue@ucdavis.edu

Make a note of these important dates. Online submission of abstracts has closed, but submitted abstracts can be edited between March 31 and April 18, 2016.

Registration and housing open May 2, 2016, and the early-bird registration deadline is June 1. The 2015 JSM housing reservations went very quickly, so if you are planning to attend, be sure to book your accommodation via the JSM website as soon after May 2 as possible.

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IMS Annual Meeting JSM 2018 @ JSM 2017: July 28-August 2, July 29-August 3, 2018

2017, Baltimore, MD Vancouver, Canada **IMS Annual Meeting** @ JSM 2019 July 27-August 1,

2019, Denver, CO

JSM 2020 August 1-6, 2020 Philadelphia, PA

IMS Annual Meeting @ JSM 2021 August 7-12, 2021, Seattle, WA

IMS sponsored meeting

Joint 2018 IMS Annual Meeting and 12th International Vilnius Conference on **Probability Theory & Mathematical Statistics** July 2-6, 2018 Vilnius, Lithuania

w TBC

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

IMS co-sponsored meeting

Frontier Probability Days

May 9-11, 2016. University of Utah, Salt Lake City, UT

w http://www.math.utah.edu/~firas/FPD16/

Frontier Probability Days (FPD'16) is a regional workshop whose purpose is to bring together mathematicians who have an interest in probability and its applications. Plenary Speakers: Mu-Fa Chen (Beijing Normal University); Alan Hammond (University California, Berkeley); Kay Kirkpatrick (University of Illinois, Urbana-Champaign); Tai Melcher (University of Virginia); Soumik Pal (University of Washington); Sebastien Roch (University of Wisconsin, Madison); Eric Vanden Eijnden (New York University); Bálint Virág (University of Toronto). There will also be many shorter talks. If you would like to participate and/or speak at the conference, please register (free but required) before April 24, 2016. Registration is required but is free. Travel and lodging expenses may be partially covered from an NSF grant: see the website for details.



forthcoming IMS Annual Meeting and JSM dates

2016

IMS Annual Meeting/ 9th World Congress:

Toronto, Canada, July 11-15, 2016

JSM: Chicago, IL, July 30 - August 4

2017

IMS Annual Meeting

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

2018

IMS Annual Meeting:

Vilnius, Lithuania, July 2-6, 2018

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

2019

IMS Annual Meeting

@ JSM: Denver, CO, July 27-August 1, 2019

2020

IMS Annual Meeting: TBD

JSM: Philadelphia, August 1-6, 2020



More IMS meetings around the world

IMS co-sponsored meeting

The 10th ICSA International Conference December 19–22, 2016 Shanghai Jiao Tong University, Shanghai, China

IMS Rep: Ming Yuan, University of Wisconsin–Madison

w http://www.math.sjtu.edu.cn/conference/2016icsa/

The tenth ICSA international conference will be held at Xuhui campus of Shanghai Jiao Tong University in China. The theme is *Global Growth of Modern Statistics in the 21st Century*. The International Chinese Statistical Association (ICSA) is a non-profit organization, established in 1987, with the aim of promoting the theory and applications of statistical disciplines through scholarly activities, including publication of journals in statistics and probability, scientific meetings, and other educational programs. The plenary speakers are: Jim Berger, Tony Cai, Kai-Tai Fang, Zhiming Ma, Marc A. Suchard, Lee-Jen Wei and C.F. Jeff Wu.

IMS co-sponsored meeting

Fourth IMS Asia Pacific Rim Meeting June 27–30, 2016, Hong Kong, China

w http://ims-aprm2016.sta.cuhk.edu.hk/ The IMS Asia Pacific Rim Meeting series promotes interaction and networking among statisticians and probabilists from Asia, the Pacific Rim, and other parts of the world. The previous three meetings were held in Seoul, Tsukuba, and Taipei. We are pleased to announce that the fourth meeting will take place on the beautiful campus of The Chinese University of Hong Kong, during the period June 27-30, 2016. The program covers recent developments and the state-of-the-art in a variety of modern research topics in statistics and probability. Program chairs: Ming-Yen Cheng (cheng@math.ntu.edu.tw) and Xuming He (xmhe@umich.edu).

ENAR 2017 & 2018 dates

IMS sponsored meetings

March 12–15, 2017: in Washington DC March 25–28, 2018: in Atlanta, GA

w http://www.enar.org/meetings.cfm

IMS co-sponsored meeting

WNAR Annual Meeting in conjunction with the XXVIII International Biometric Conference July 10–15, 2016, Victoria, BC, Canada

w http://biometricconference.org/

The next WNAR Annual Meeting, in conjunction with the XXVIII International Biometric Conference (IBC2016), will be held July 10–15, 2016 at the Victoria Conference Centre in Victoria, British Columbia, Canada. A list of invited sessions is at http://biometricconference.org/invited-sessions/. There will also be four full day short courses. Registration is open.

IMS co-sponsored meeting

NSF/CBMS Regional Research Conference on Topological Data Analysis May 31–June 4, 2016. Austin, Texas, USA

w https://stat.utexas.edu/training/cbms-2016

The conference will feature Sayan Mukherjee from Duke University as the principal lecturer, and five additional featured speakers including Rabi Bhattacharya, Susan Holmes, Ann Lee, Lek-Heng Lim and Yusu Wang. This conference will introduce graduate students and junior researchers to TDA, an active new field, which lies at the exciting intersection of topology, geometry, and statistics and serve as an opportunity to foster research collaborations.

IMS co-sponsored meeting

Stochastic Networks Conference 2016 June 20–24, 2016. San Diego, CA

w http://stochasticnetworks2016.ucsd.edu/
The aim of the conference is to bring
together researchers who share an interest in
stochastic network models, to survey recent
developments, and to identify future research
directions. As in the past, the 2016 meeting
will be structured in a workshop format,
with approximately 20 hour-long invited
talks, allowing ample unscheduled time to
maximize interactions between speakers
and participants and to facilitate a fruitful
exchange of ideas. In addition, there will be a
poster session for contributed papers.

Stochastic networks is a multifaceted area of research dealing with the modeling, stability, control, performance, approximation, and design of stochastic networks. It gives rise to challenging and subtle mathematical problems, whose solution often requires a combination of ideas and techniques from several branches of mathematics, including probability theory, stochastic processes, analysis, optimization, algorithms, combinatorics, and graph theory. Research in this area is strongly motivated by applications in diverse domains, ranging from traditional areas of telecommunications and manufacturing to service operations, biological and social networks, revenue management, and health care.

Like its predecessors, the 2016 Stochastic Networks Conference will emphasize new model structures and new mathematical problems that are motivated by contemporary developments in various application domains, as well as new mathematical methods for stochastic network analysis.

IMS co-sponsored meeting

39th Conference on Stochastic Processes and their Applications (SPA)
July 24–28, 2017. Moscow, Russia
w TBC

IMS co-sponsored meeting

NSF/CBMS Conference on Discrete Painlevé Equations May 16–20, 2016. Edinburg, Texas, USA

w https://sites.google.com/site/nsfcbms2016utrgv/

The main lectures and the supplemental lectures plan to address the following major themes: (1) the basic theory of nonlinear difference equations; (2) the connection between discrete integrable systems and continuous integrable systems; (3) the connection of geometry with discrete Painlevé equations, especially the ell-discrete Painlevé equation; (4) asymptotic analysis of discrete Painlevé equations; and (5) obtaining special solutions through elementary methods such as Hirota's bilinear form and Bäcklund and other transformations.

IMS co-sponsored meeting

Advances in Statistics, Probability and Mathematical Physics June 10–11, 2016 University of Pavia, Italy

w http://www-dimat.unipv.it/eugenioconference/

The conference will honor Eugenio Regazzini on the occasion of his 70th birthday. The program will feature invited talks of authoritative speakers who have been working on topics related to the ones Eugenio has contributed to in Statistics, Probability and Mathematical Physics. Invited speakers: Jim Berger, Eric Carlen, Persi Diaconis, Ed George, Alexander Gnedin, Robert C. Griffiths, Ildar Ibragimov, Michael Jordan, Giovanni Peccati, R.V. Ramamoorthi, Chiara Sabatti.

IMS co-sponsored meeting

2017 IMS-China International Conference on Statistics and Probability

June 28–July 1, 2017. Nanning, Guangxi Province, China

w TBC

Local organizing committee chair: Zijia Peng, Guangxi University for Nationalities, China e pengzijia@126.com. Scientific program committee chair: Ming Yuan, University of Wisconsin–Madison, USA e myuan@stat.wisc.edu. The website is under construction, but please mark your calendars not for this conference.

IMS co-sponsored meeting

The 25th ICSA Applied Statistics Symposium 2016 June 12–15, 2016 Atlanta, Georgia, USA

w http://www.math.gsu.edu/~icsa/

Contact: Yichuan Zhao e yichuan@gsu.edu

Keynote speakers: Bin Yu, David Madigan and Paul Albert; Banquet speaker Michael Eriksen. Details of the scientific programs are on the symposium website. See the website for calls for the Student Paper Award applications and short course proposals.

IMS sponsored meeting

18th Meeting of New Researchers in Statistics and Probability University of Wisconsin–Madison

July 28–30, 2016 (immediately before JSM)

w http://www.stat.wisc.edu/imsnrc18/about.html

Anyone who has received a PhD in or after 2011, or expects to receive one by the end of 2016, is eligible to attend, though participation is by invitation only; the application deadline has passed.

IMS co-sponsored meeting

2016 UK Easter Probability Meeting April 4–8, 2016, Lancaster, UK

w http://www.lancaster.ac.uk/maths/easter-probability-meeting/

e probability@lancaster.ac.uk

The meeting is on "Random Structures Arising in Physics and Analysis" and consists of four mini-courses (from Alice Guionnet, Michel Ledoux, Jason Miller and Vladas Sidoravicius) and twelve invited talks. Registration has now closed.

IMS co-sponsored meeting

9th World Congress on Probability and Statistics July 11–15, 2016. Toronto, Canada

w http://www.fields.utoronto.ca/programs/scientific/16-17/WC2016/ This meeting is jointly sponsored by the Bernoulli Society and the IMS. The Scientific Programme Chair is Alison Etheridge. The Local Chair is Tom Salisbury. The 9th World Congress on Probability and Statistics will be hosted by the Fields Institute.

IMS co-sponsored meeting

Reproducibility of Research: Issues and Proposed Remedies March 8–10, 2017 Washington DC, USA

w http://www.nasonline.org/programs/sackler-colloquia/upcomingcolloquia/

This meeting is one of the Arthur M. Sackler Colloquia, which address scientific topics of broad and current interest that cut across the boundaries of traditional disciplines.

IMS co-sponsored meeting

6th IMS-FIPS (Finance, Insurance, Probability & Statistics) Workshop July 7–9, 2016. Edmonton, Alberta, Canada

w http://www.mathfinance2016.com

The primary purpose of the workshop is to bring together a global cast of leading academic experts, practitioners and junior researchers to share research that underscores the contributions of probability and statistics to the development of quantitative models, methods, techniques and technologies in the fields of finance and insurance.

I Other meetings and events around the world

NEW

Conference on New Developments in Probability May 6–8, 2016

Northwestern University, Evanston, IL

w http://www.math.northwestern.edu/~auffing/wipconference.html Women in Probability is hosting a new conference series devoted to current topics in probability theory. The inaugural Conference on New Developments in Probability will be held May 6-8, 2016 at Northwestern University in coordination with its Emphasis Year in Probability. This year's conference is supported by NSF and Northwestern University. The invited speakers are: Rodrigo Banuelos (Purdue); Nayantara Bhatnagar (U Delaware); Sandra Cerrai (U Maryland); Ioana Dumitriu (U Washington); Rick Durrett (Duke); Vadim Gorin (MIT); Davar Khoshnevisan (U Utah); Lea Popovic (Concordia); Arnab Sen (U Minnesota); Gigliola Staffilani (MIT); Elisabeth Werner (Case Western).

The conference will also feature a mini-celebration of Alexandra Bellow's 80th birthday with talks by Alexandra Bellow (Northwestern) and Roger Jones (DePaul).

Please see the conference website for updates and further details. Financial assistance for attending the conference is available to early career researchers and those without alternative sources of financial support. See the registration section of the conference website for details on how to request financial support. Priority will be given to requests made before April 8.

Local Organizers: Antonio Auffinger, Elton Hsu. Scientific Committee: Kay Kirkpatrick, Tai Melcher, Kavita Ramanan

NIMBioS Tutorial: Evolutionary Quantitative Genetics 2016 August 8–12, 2016

University of Tennessee, Knoxville, USA

w http://www.nimbios.org/tutorials/TT_eqg2016

This tutorial will review the basics of theory in the field of evolutionary quantitative genetics and its connections to evolution observed at various time scales. Application deadline: May $\scriptstyle\rm I$

Columbia-Princeton Probability Day 2016 April 8, 2016

New York, USA

w http://www.math.columbia.edu/department/probability/cpday16/ cpday16.html

Main Speakers: Rick Kenyon (Brown), Joel Lebowitz (Rutgers), Allan Sly (Berkeley), Peter Winkler (Dartmouth); Junior Speakers: Guillaume Barraquand (Columbia), Hao Shen (Columbia). Registration is free on the probability day website.

Conference on Experimental Designs and Analysis (CEDA) 2016 December 15–17, 2016

Taipei, Taiwan

w http://www3.stat.sinica.edu.tw/ceda2016/

Contact: Frederick Kin Hing Phoa e fredphoa@stat.sinica.edu.tw Experimentation is one of the most common activities in scientific researches and industrial processes. An experiment is cost-efficient only when it is carefully designed and its results are correctly analyzed. The CEDA 2016 will highlight the most recent advances in the design and analysis of experiments and demonstrate their applicability to practitioners in scientific and industrial communities. In addition, it provides an excellent platform to share research ideas among senior mentors, junior researchers and Ph.D. students/graduates.

Registration and abstract submission are open.

This conference takes place just before the (IMS co-sponsored) 10th ICSA Conference in Shanghai, China (December 19–22).

XXXIII International Seminar on Stability Problems for Stochastic Models June 12–18, 2016, Svetlogorsk, Russia

w http://tvp.ru/conferen/2016_1218_06_1_Eng.htm

Seminars on Stability Problems for Stochastic Models have a long tradition. They were started by Prof. Vladimir Zolotarev in the 1970s. The seminars are attended by leading probabilists from all over the world. The seminars traditionally aim at bringing together people from Eastern and Western parts of Europe to share their expertise, new results, exchange the ideas and discuss open problems.

Featuring minisymposia on topics suggested later; round tables on "Actual problems of applied mathematics in Baltic countries" and "Promotion of modern fundamental mathematical methods into various areas of science and technologies, interdisciplinary co-operation". Also an exhibition of scientific literature and software demonstrations.

NIMBioS Workshop: Next Generation Genetic Monitoring November 7–9, 2016

University of Tennessee, Knoxville, USA

 $\textcolor{red}{\textbf{w}} \ \textbf{http://www.nimbios.org/workshops/WS_nextgen}$

Our workshop will help unlock the conservation potential of genomics research, and ensure that genetic and non-genetic factors are considered in quantitative fashion when evaluating and managing wild and cultivated species. More broadly, we will lay a foundation for developing new theory and approaches for describing, quantifying, and interpreting the complex, multidimensional information contained in biodiversity datasets. Application deadline: July 24,







Workshop on Algorithms for Modern Massive Data Sets (MMDS 2016) June 21–24, 2016 UC Berkeley, USA

w http://mmds-data.org/

This four-day series of academic workshops addresses algorithmic and statistical challenges in modern large-scale data analysis. The goals of this series of workshops are to explore novel techniques for modeling and analyzing massive, high-dimensional, and non-linearly structured scientific and internet data sets and to bring together computer scientists, statisticians, mathematicians, and data analysis practitioners to promote the cross-fertilization of ideas.

2016 Women in Statistics and Data Science Conference October 20–22, 2016 Charlotte, NC

w http://ww2.amstat.org/meetings/ wsds/2016/index.cfm

The American Statistical Association invites you to join the 2016 Women in Statistics and Data Science Conference—the only one for the field tailored specifically for women. WSDS will gather academic, industry, and government professionals and students working in statistics, biostatistics, and data science.

Featured speakers: Cynthia Clark, retired
National Agricultural Statistics Service
administrator; Stacy Lindborg, vice president
of biostatistics at Biogen Idec; Wendy
Martinez, director of the Mathematical
Statistics Research Center at the Bureau of
Labor Statistics; Bin Yu, chancellor's professor at the University of California, Berkeley.
Registration opens June 2.

Third International Conference on Analysis and Applied Mathematics September 7–10, 2016 Almaty, Kazakhstan

w http://www.icaam-online.org
The aim of the International Conference
on Analysis and Applied Mathematics
(ICAAM) is to bring mathematicians
working in the area of analysis and applied
mathematics together to share new trends
of applications of mathematics. We plan
to found the conference series to provide a
forum for researches and scientists to communicate their recent developments and to
present their original results in various fields
of analysis and applied mathematics

Statistical Methods in Finance 2016 December 19–22, 2016 Chennai, India

NEW -

w http://www.cmi.ac.in/~sourish/ StatFin2016/

The second international conference and workshop on Statistical Methods in Finance aims to expose the participants to new and active areas of research and to engage researchers into working groups. The conference is jointly organized by Indian Statistical Institute and Chennai Mathematical Institute with support from International Society for Business and Industrial Statistics.

Novel Statistical Methods in Neuroscience

June 22–24, 2016. Magdeburg, Germany

w http://www.math.ovgu.de/neurostat.html Contributed poster presentations are highly welcome, submit before May 1. Registration is open until May 15, but please note that the number of participants is limited and registration is on a first come first serve basis. More information including a list of speakers can be found on the workshop webpage. This workshop will take place right before the Human Brain Mapping Conference.

2016 IISA Conference on Statistics August 18–21, 2016 Corvallis, Oregon, USA

w http://iisaconference.org/

NEW -

NEW -

NEW

Theme: Statistical and Data Sciences: A key to healthy people, planet and prosperity.

The 2016 International Indian Statistical Association Conference will be held in Corvallis, Oregon August 18–21, 2016. It will bring together statisticians worldwide from academia, industry, government, and research institutes. Featuring plenary speakers Kanti Mardia and Xiao-Li Meng; and keynote speakers Katherine Ensor, Debashis Ghosh, Kannan Natarajan and Ajit Tamhane.

IWSM 2017 July 2–7, 2017 Groningen, The Netherlands

w http://iwsm2017.webhosting.rug.nl/
The IWSM is one of the major activities of
the Statistical Modelling Society, founded
with the purpose of promoting and encouraging statistical modelling in its widest sense,
involving both academic and professional
statisticians and data analysts. The spirit of
the workshop has always been to: focus on
problems motivated by real life data and on
solutions that make novel contributions to
the subject; encourage interaction as there are
no parallel sessions; and welcome both junior
and senior statisticians.

Greek Stochastics Workshop on Big Data and Big Models July 10–13, 2016 Tinos, Greece

w http://www.stochastics.gr/meetings/theta/ Abstract submission deadline: 1 April 2016. Three short courses given by: Eric Moulines (When Langevin Meets Markov), Yee Whye Tee (Scalable Methods for Bayesian Statistics and Machine Learning) and George Michalidis (Modeling, computation, inference and applications of graphical models).

I Other meetings and events around the world

Simons Conference on Random Graph Processes May 9–12, 2016

Blanton Museum of Art, UT Austin, Texas, USA

w http://www.ma.utexas.edu/conferences/simons2016/

Organizers: Francois Baccelli and Charles Radin

Deadline for Registration: May 1, 2016

This workshop, funded by the Simons Foundation, is the third in a series of meetings organized at UT Austin on related topics, alternating yearly in an emphasis on mathematics one year, and on network applications the next. The 2016 workshop will again be on the mathematics of stochastic processes and graphs, this time focusing on the studies of processes in, and on, large graphs. Our aim is to bring together a diverse set of eminent researchers from various communities in this broad subject, to give a global picture which will hopefully lead to interactions and cross-fertilization.

Invited Speakers: David Aldous (Berkeley, USA)

Eli Ben-Naim (Los Alamos, USA)

Remco van der Hofstad (Eindhoven, The Netherlands)

Alexander Holroyd (Microsoft/Seattle, USA)

Richard Kenyon (Brown Univ., USA)

Laurent Massoulie (Microsoft/Inria, France)

Elchanan Mossel (UPenn & Berkeley, USA)

Joe Neeman (UT Austin, USA & Hausdorff Inst., Germany)

Joel Spencer (NYU, USA)

Michael Steele (UPenn, USA)

Balazs Szegedy (Budapest, Hungary)

Lutz Warnke (Cambridge, UK)

Nick Wormald (Monash Univ., Australia)

Previous conferences in the series: 2014 Simons Workshop on Stochastic Geometry and Point Processes; 2015 Simons Conference on Networks and Stochastic Geometry

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

Submit the details at www.imstat.org/submit-meeting

Workshop on Geometry and Stochastics of Nonlinear, Functional and Graph Data August 15–19, 2016

Rønne, Bornholm, Denmark

w http://csgb.dk/activities/2016/geometry/

Contact: Oddbjørg Wethelund e oddbjorg@math.au.dk

The field of nonlinear statistics (NS) seeks to answer the fundamental questions that arise when defining new statistical models and tools in nonlinear spaces. The field spans from theoretical statistics and geometry to the development of data analysis tools that are directly applicable to actual data. A typical application area is bioimaging.

NS is a rapidly evolving research field. While there is a deep understanding of the mathematical and computational aspects of many data types living in nonlinear spaces, a detailed understanding of random variation in these spaces and how to handle randomness statistically is largely missing.

With this workshop, we want to reach out to key researchers in two closely related fields: functional data analysis (FDA), and random topology and graphs (RTG). The recent movement in FDA towards increasingly complex data structures has paved the way for a deeper statistical understanding of practical and commonly used methods in NS. The study of statistical properties of random graphs is closely related to NS through concepts like manifold learning, dimensionality reduction and topological data analysis. Complex topological properties of data living in nonlinear spaces, such as persistent homology, are studied in random topology.

The two fields FDA and RTG share problems and methodology, unresolved questions, and technical solutions with NS, and it is our belief, backed by world-leading experts in all three fields, that extended collaboration will lead to new results and development beyond the current state-of-the-art in these areas.

Stochastic Geometry, Stereology and their Applications June 5–10, 2016



Sandbjerg Estate, Sønderborg, Denmark

w http://csgb.dk/activities/2016/stochgeom/

Contact: Oddbjørg Wethelund e oddbjorg@math.au.dk

This interdisciplinary workshop will bring together scientists from integral geometry, geometric probability, geometric measure theory, stochastic geometry, stereology, applied probability, spatial statistics and bioimaging. An important scope of the workshop is to discuss recent theoretical advances in stochastic geometry and their potential for applications. The workshop will celebrate the scientific achievements of AU professor Eva B. Vedel Jensen.

| Employment Opportunities around the world

Austria: Vienna

WU (Vienna University of Economics and Business)

Full Professor of Mathematics for Economics and Business http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=26827135

Canada: Toronto, ON

University of Toronto, Department of Statistical Sciences

Associate Professor - Financial Insurance http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=27392057

China: Shanghai

Shanghai Center for Mathematical Sciences

Chair Professor/Tenured Faculty/Tenure-track Faculty/Non Tenure-track Faculty/Postdoctoral http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=26467509

Kazakhstan: Astana

Nazarbayev University

Chair of the Department of Mathematics http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=27155819

Kazakhstan: Astana

Nazarbayev University

Assistant, Associate and Full professor in Mathematics http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=27013893

New Zealand: Wellington

Victoria University of Wellington

Senior Lecturer/Associate Professor in Actuarial Science http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=27000302

United Kingdom: Coventry

University of Warwick

Professor/Associate Professor/Assistant Professor http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=27047890

United States: Los Angeles, CA

Institute for Pure and Applied Mathematics, UCLA

Director

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=26863646

United States: Riverside, CA

University of California, Riverside

Multiple Ladder-Rank Faculty Positions in Business Analytics including Endowed Chairs (open rank) http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=27285841

United States: Orlando, FL

University of Central Florida College of Medicine

Assistant, Associate or Full Professor of Medicine (Biostatistician) http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=27071868

United States: Wichita, KS

Wichita State University,

Department of Mathematics, Statistics, and Physics

Assistant Professor of Statistics http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=27133274

United States: East Lansing, MI

Michigan State University, Department of Statistics and Probability

Fixed Term Teaching Specialist http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=26830277

United States: Durham, NC

Statistical Science, Duke University

Visiting Faculty

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=27206736



International Calendar of Statistical Events

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

April 2016

April 4–8: Lancaster University, UK. UK Easter Probability
Meeting 2016: Random Structures Arising in Physics and Analysis
w http://www.lancaster.ac.uk/maths/easter-probability-meeting/

April 4–8: Cambridge, UK. Advances in Numerical and Analytic Approaches for the Study of Non-Spatial Stochastic Dynamical Systems in Molecular Biology w https://www.newton.ac.uk/event/sdbw03

April 5–8: Lausanne, Switzerland. SIAM Conference on Uncertainty Quantification w http://www.siam.org/meetings/uq16/

April 8: New York, USA. Columbia-Princeton Probability

Day 2016 w http://www.math.columbia.edu/department/probability/
cpday16/cpday16.html

April 25–27: Knoxville, Tennessee, USA. **NIMBioS Tutorial: Game** Theoretical Modeling of Evolution in Structured Populations **w** http://www.nimbios.org/tutorials/TT_gametheory

May 2016

May 2–6: Fields Institute, Toronto, Canada. **Dependence, Stability, and Extremes w** http://www.fields.utoronto.ca/programs/scientific/15-16/dependence/

May 6–8: Northwestern University, Evanston, IL, USA.

Conference on New Developments in Probability w http://www.
math.northwestern.edu/~auffing/wipconference.html

Days w http://www.math.utah.edu/~firas/FPD16/

May 9–12: Blanton Museum of Art, UT Austin, Texas, USA. Simons Conference on Random Graph Processes w http://www.ma.utexas.edu/conferences/simons2016/

ms May 16–20: Edinburg, Texas, USA. NSF/CBMS Conference on Discrete Painlevé Equations w https://sites.google.com/site/nsfcbms2016utrgv/

May 18–21: Cappadocia, Turkey. International Conference on Information Complexity and Statistical Modeling in High Dimensions with Applications w http://www.ic-smhd2016.com/

May 25–27: Illinois Institute of Technology. **Spring Research** Conference 2016 w http://iit.edu/src2016

May 28–29: Istanbul, Turkey. IWMST-2016: International Workshop on Mathematics and Statistics w http://conf-scoop.org/science/iwmst

May 31–June 4: Austin, Texas, USA. NSF/CBMS Regional Research Conference on Topological Data Analysis w https://stat.utexas.edu/training/cbms-2016

June 2016

June 1–4: Berlin, Germany. 5th Berlin Workshop on Mathematical Finance for Young Researchers w http://www.math.hu-berlin.de/~mfy2016/

June 1–4: Malta. 4th Stochastic Modeling Techniques & Data Analysis Conference w http://www.smtda.net/smtda2016.html

June 5–10: Sandbjerg Estate, Sønderborg, Denmark.

Stochastic Geometry, Stereology and their Applications w http://csgb.dk/activities/2016/stochgeom/

June 6–10: Pittsburgh, PA, USA Statistical Challenges in Modern Astronomy VI w http://www.scma6.org

June 10–11: Pavia, Italy. Advances in Statistics, Probability and Mathematical Physics w http://www-dimat.unipv.it/eugenioconference/

June 11–16: Avignon, France. 3rd ISNPS Conference w http://www.isnpstat.org

ims June 12–15: Atlanta, GA. 3rd ICSA Applied Statistics
Symposium w http://math.gsu.edu/~icsa/

June 12–18: Svetlogorsk, Russia. XXXIII International Seminar on Stability Problems for Stochastic Models w http://tvp.ru/conferen/2016_1218_06_1_Eng.htm

June 12–18: Snowbird, Utah, USA. Mathematics Research Community on Algebraic Statistics w http://www.ams.org/programs/research-communities/mrc

June 13–17: Sardinia, Italy. **ISBA 2016 World Meeting w** http://www.corsiecongressi.com/isba2016/

June 15–18: Cartagena, Colombia. **Second International Congress** on Actuarial Science and Quantitative Finance **w** http://icasqf.org

June 19–22: Santander, Spain. 36th International Symposium on Forecasting w http://forecasters.org/isf/

June 20–22: Centre de Recerca Matemàtica, Spain. Conference on Probability and Statistics in High Dimensions: A scientific tribute to Evarist Giné w http://www.crm.cat/en/Activities/Curs_2015-2016/Pages/MEG.aspx

June 20–23: Geneva, Switzerland. ICES-V, the 5th International Conference on Establishment Statistics w TBC

June 20–24: San Diego, CA. Stochastic Networks Conference 2016 w http://stochasticnetworks2016.ucsd.edu/

June 21–24: UC Berkeley, USA. Workshop on Algorithms for Modern Massive Data Sets (MMDS 2016) w http://mmds-data.org/

June 22–24: Magdeburg, Germany. Novel Statistical Methods in Neuroscience w http://www.math.ovgu.de/neurostat.html

June 23–25: Xuzhou, China. **International Workshop on**Mathematical Reliability and Safety (MRS 2016) w http://mrs2016.
jsnu.edu.cn/

June 25–July 6: Edmonton, Alberta, Canada. **PIMS Summer School** 2016 in Mathematical Finance w http://www.mathfinance2016.com

June 27–30: Hong Kong, China. Fourth IMS Asia Pacific Rim Meeting w http://ims-aprm2016.sta.cuhk.edu.hk/

June 27–30: Copenhagen, Denmark. 26th Nordic Conference in Mathematical Statistics (NORDSTAT 2016) w www.nordstat2016. dk

June 27–July 1: Barcelona, Spain. 3rd Barcelona Summer School on Stochastic Analysis w http://www.crm.cat/en/Activities/Curs_2015-2016/Pages/3rd-BCN-Summer-School-on-Stochastic-Analysis.aspx

July 2016

Insurance, Probability & Statistics) Workshop w http://www.mathfinance2016.com

July 10–13: Tinos, Greece. **Greek Stochastics Workshop on Big Data and Big Models w** http://www.stochastics.gr/meetings/
theta/

July 10–15: Victoria, BC, Canada. WNAR Annual Meeting in conjunction with the XXVIII International Biometric Conference w http://biometricconference.org/conference-information/

World Congress in Probability and Statistics
w http://www.fields.utoronto.ca/programs/scientific/16-17/WC2016/

July 25–27: NIMBioS, Knoxville, TN, USA. Discrete and Algebraic Mathematical Biology: Research and Education w http://www.nimbios.org/workshops/WS_mathbio

July 25–29: CRM Montreal, Canada. Statistical Causal Inference and its Applications to Genetics w http://www.crm.umontreal.ca/2016/Genetics16/index_e.php

July 28–30: University of Wisconsin–Madison. 18th Meeting of New Researchers in Statistics and Probability w http://www.stat.wisc.edu/imsnrc18/about.html

ims July 30 – August 4: Chicago, USA. JSM 2016 w http://amstat.org/meetings/jsm/

August 2016

August 1–3: Ilulissat, Greenland. **Applied Probability Symposium w** http://thiele.au.dk/events/conferences/2016/ilulissat/

August 7–10: Hamilton, ON, Canada. Ordered Data and their Applications in Reliability and Survival Analysis: An International Conference in Honour of N. Balakrishnan for his 60th Birthday (ODRS 2016) w http://mathandstats.mcmaster.ca/odreliabilityandsurvival/

August 8–12: University of Tennessee, Knoxville, USA.

NIMBioS Tutorial: Evolutionary Quantitative Genetics 2016 w

http://www.nimbios.org/tutorials/TT_eqg2016

August 14–19: Stanford, CA, USA. MCQMC 2016: 12th
International conference on Monte Carlo and quasi-Monte Carlo
methods in scientific computing w http://mcqmc2016.stanford.edu

August 15–19: Rønne, Bornholm, Denmark. Workshop on Geometry and Stochastics of Nonlinear, Functional and Graph Data w http://csgb.dk/activities/2016/geometry/

August 17–19: Maastricht, The Netherlands. **Small Area Estimation Conference 2016 w** http://www.sae2016.nl

August 18–21: Corvallis, Oregon, USA. 2016 IISA Conference on Statistics w http://iisaconference.org/

August 21–24: Birmingham, UK. International Society for Clinical Biostatistics 2016 Conference w http://www.iscb2016.info/

August 24–26: Kerman, Iran. 13th Iranian Statistical Conference w http://isc13.uk.ac.ir/index.php?slc_lang=en&sid=1

August 31–September 2: London, UK. **Population-based Time-to-**event **Analyses w** http://csg.lshtm.ac.uk/pta2016/

September 2016

September 5–8: Manchester, UK. RSS 2016 International Conference w www.rss.org.uk/conference2016

International Calendar continued

September 6–10: Minsk, Republic of Belarus. Computer Data Analysis and Modeling: Theoretical and Applied Stochastics (CDAM 2016) w http://www.cdam.bsu.by

September 7–10: Almaty, Kazakhstan. Third International Conference on Analysis and Applied Mathematics w http://www.icaam-online.org

September 15–16: Ghent, Belgium. Flexible Statistical Modeling past, present and future w http://www.fsm16.ugent.be/

September 28–30: Washington DC. 2016 ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop w http://www.amstat.org/meetings/biopharmworkshop/2016/

October 2016

October 14–16: Niagara Falls, Canada. International Conference on Statistical Distributions and Applications (ICOSDA 2016) w http://people.cst.cmich.edu/lee1c/icosda2016/

October 20–22: Charlotte, NC, USA. 2016 Women in Statistics and Data Science Conference w http://ww2.amstat.org/meetings/wsds/2016/index.cfm

November 2016

November 7–9: University of Tennessee, Knoxville, USA. NIMBioS Workshop: Next Generation Genetic Monitoring w http://www.nimbios.org/workshops/WS_nextgen

November 9–13: Miami, FL. International Conference on Questionnaire Design, Development, Evaluation, and Testing w http://www.amstat.org/meetings/qdet2/index.cfm

December 2016

December 4–9: Atlantic City, NJ, USA. 72nd Annual Deming Conference on Applied Statistics w www.demingconference.com

December 5–9: Canberra, Australia. Australian Statistical Conference, 14th Australasian Data Mining Conference, 9th Conference on Teaching Statistics w www.asc2016.com.au

December 15–17: Taipei, Taiwan. Conference on Experimental Designs and Analysis (CEDA) 2016 w http://www3. stat.sinica.edu.tw/ceda2016/

December 19–22: Chennai, India. Statistical Methods in Finance 2016 w http://www.cmi.ac.in/~sourish/StatFin2016/

December 19–22: Shanghai, China. 10th ICSA International Conference w http://www.math.sjtu.edu.cn/conference/2016icsa/

March 2017

March 8–10: Washington DC, USA. Reproducibility of Research: Issues and Proposed Remedies w http://www.nasonline.org/programs/sackler-colloquia/upcoming-colloquia/

June 2017

June 28–July 1: Nanning, Guangxi Province, China. 2017 IMS-China International Conference on Statistics and Probability w TBC

July 2017

July 2–7: Groningen, The Netherlands. **IWSM 2017 w** http://iwsm2017.webhosting.rug.nl/

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

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

ims July 24–28: Moscow, Russia. 39th Conference on Stochastic Processes and their Applications (SPA) w TBC

July 29 – August 3: Baltimore, USA. IMS Annual Meeting at JSM 2017 w http://amstat.org/meetings/jsm/

July 2018

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

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

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

July 2019

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

August 2020

w http://amstat.org/meetings/jsm/

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 \$115. An additional \$74 is added to the dues of members for each scientific journal selected (\$49 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 2016 are available to *The Annals of Applied Probability* (\$199), *The Annals of Applied Statistics* (\$199), *The Annals of Probability* (\$199), *The Annals of Statistics* (\$199), *Statistical Science* (\$174), and *IMS Bulletin* (\$125). General subscriptions are for libraries, institutions, and any multiple-readership use. Institutional subscriptions for 2016 are available to *The Annals of Applied Probability* (\$475), *The Annals of Applied Statistics* (\$475), *The Annals of Probability* (\$475), *The Annals of Statistics* (\$475), *Statistical Science* (\$270), and *IMS Bulletin* (\$118). Airmail rates for delivery outside North America are \$135 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.

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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 2,000 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 \$125. 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 \$285.00. 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 in the *Bulletin* and on the IMS website at http://imstat.org/meetings are free. Send them to Elyse Gustafson; see http://www.imstat.org/program/prog_announce.htm

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)	\$250
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2/3 page	4.9" wide x 8" high (125 x 203 mm)	\$365
Full page (to edge, including 1/8" bleed)	8.75" wide x 11.25" high (222 mm x 286 mm)	\$420
Full page (within usual <i>Bulletin</i> margins)	7.5" wide x 9.42" high (190 mm x 239 mm)	\$420

Deadlines and Mail Dates for IMS Bulletin

Issu	ie	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	June 15	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

^{*} Note that the August 2016 issue has an early deadline of June 15

next **April/May** 2016

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

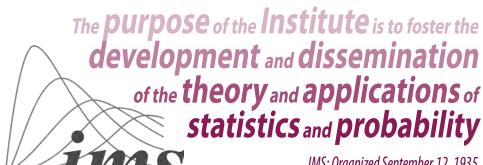
DEADLINES submissions

May 1, then **June 15**

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

Journal

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



IMS: Organized September 12, 1935

THE ANNALS

of

http://projecteuclid.org/aoap **APPLIED PROBABILITY**

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