# IMS Bulletin



### June/July 2015

### **CONTENTS**

- 1 NAS elects Don Geman
- 2 Members' News: AMS Fellows, Alison Etheridge, **Emery Brown**
- 3 Carver Award: Patrick Kelly
- 4 IMS Travel Awards
- 5 Puzzle deadline extended: IMU Itô travel awards
- **6 IMS Fellows**
- 8 Obituary: Evarist Giné
- 9 Recent papers: AIHP
- 10 Medallion Lectures: Grégory Miermont; Kavita Ramanan; Nicolai Meinshausen
- 13 Treasurer's Report
- 15 Terence's Stuff: Ideas
- 16 IMS meetings
- 21 Other meetings
- **26 Employment Opportunities**
- 27 International Calendar
- 31 Information for Advertisers

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

### **Donald Geman elected to NAS**

The USA's National Academy of Sciences elected 84 new members and 21 foreign associates from 15 countries this year, in recognition of their distinguished and continuing achievements in original research. Among them was IMS Fellow Donald Geman, who is Professor in the Department of Applied Mathematics and Statistics at Johns Hopkins University, Baltimore, MD, and simultaneously a visiting professor at École Normale Supérieure de Cachan.

Donald Geman was born in Chicago in 1943. He graduated from the University of Illinois at Urbana-Champaign in 1965 with a BA in English Literature and from Northwestern University in 1970 with a PhD in Mathematics. He worked as a

Professor in the Department of Mathematics and Statistics at the University of Massachusetts following graduation, until he joined Johns Hopkins University in 2001.

Donald was elected a Fellow of IMS in 1997, and of the Society for Industrial and Applied Mathematics (SIAM) in 2010. He gave an IMS Medallion Lecture in 2012 at JSM San Diego, on "Order Statistics and Gene Regulation." (See photo.)

Donald Geman and Joseph Horowitz published a series



Donald Geman (right) gave an IMS Medallion Lecture in 20 at JSM in San Diego. He is pictured here with Peter Bickel, who chaired the session.

of papers during the late 1970s on local times and occupation densities of stochastic processes. In 1984, with his brother Stuart, he published a milestone paper which is still today one of the most cited papers in the engineering literature—according to Google Scholar the paper has over 16,900 citations. It introduces a Bayesian paradigm using Markov Random Fields for the analysis of images, and the Gibbs sampler algorithm. This SIN Hotel tooks selling the lines to the state of the sta approach has been highly influential over the last 30 years and remains a rare tour de force in this rapidly evolving field. In another milestone paper, in collaboration with Yali Amit, he introduced randomized decision trees—what Leo Breiman called random

Donald lists his current research areas as Computational Vision (scene interpretation by "entropy pursuit" and Turing tests for vision systems) and Computational Molecular Medicine (rank discriminants for predicting cancer phenotypes, hardwiring biological mechanisms into statistical learning, and modeling tumorigenesis). Read more on his website: http://www.cis.jhu.edu/people/faculty/geman/current-projects/

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2 · IMS Bulletin Volume 44 · Issue 4

### **IMS Members' News**

### **Fellows of the American Mathematical Society**

The Fellows of the American Mathematical Society program recognizes members who have made outstanding contributions to the creation, exposition, advancement, communication, and utilization of mathematics. The 2015 class of fellows included these IMS members:

Maury Bramson, University of Minnesota-Twin Cities: *For contributions to stochastic processes and their applications.* 

Paul Dupuis, Brown University: For contributions to the theoretical and numerical study of stochastic systems, as well as for editorial contributions and mentoring.

James Allen Fill, Johns Hopkins University, Baltimore: For contributions to theory and applications of Markov chains and to probabilistic analysis of algorithms.

Donald A.S. Fraser, University of Toronto: For contributions to the theory and foundations of statistics, as well as for leadership and influence on the advancement of the statistical sciences.

Jonathan Mattingly, Duke University: For contributions to the analysis of stochastic systems.

### Bruce Lindsay, 1947–2015

Bruce Lindsay, 68, passed away May 5 in State College, PA. An obituary was printed at www. thedalleschronicle.com/ obituaries/2015/may/09/ bruce-lindsay/. Bruce was holder of the **Eberly Family Chair** in Statistics at Penn State; he contributed important innovations in the theory of mixture models and likelihood-based estimation.

### Alison Etheridge elected Fellow of the UK Royal Society

Professor of Probability in the Departments of Mathematics and Statistics at the University of Oxford, Alison Etheridge, has been elected one of the 47 new Fellows and 10 new Foreign Members of the Royal Society.

According to the Royal Society's website, "Alison Etheridge has made significant contributions in the theory and applications of probability and in the links between them. Her particular areas of research have been in measure-valued processes (especially superprocesses and their generalisations); in theoretical population genetics; and in mathematical ecology. A recent focus has been on the genetics of



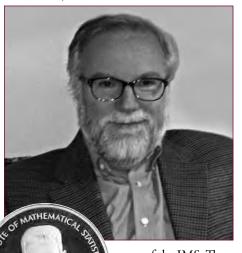
son Etheridge

spatially extended populations, where she has exploited and developed inextricable links with infinite-dimensional stochastic analysis. Her resolution of the so-called 'pain in the torus' is typical of her work in that it draws on ideas from diverse areas, from measure-valued processes to image analysis. The result is a flexible framework for modelling biological populations which, for the first time, combines ecology and genetics in a tractable way, while introducing a novel and mathematically interesting class of stochastic processes. The breadth of her contributions is further illustrated by the topics of her four books, which range from the history of financial mathematics to mathematical modelling in population genetics."

The Magdalen College Oxford website (Alison is a Magdalen Fellow by Special Election) states that Alison "became interested in the interface between probability and analysis, where she was particularly attracted by the way in which probabilistic arguments could be employed to provide untuitively appealing proofs of abstract results. ... Drawn to study superprocesses by their rich and beautiful mathematical structure, she sees them as having provided a first taste of modelling biological populations... Most recently her central interest has been a collection of mathematical problems arising in theoretical population genetics."

### **IMS Carver Award**

### Patrick Kelly selected to receive 2015 Carver Medal



IMS Council has approved the nomination of Senior Production Editor Patrick Kelly for the 2015 Carver Medal, as recommended by the Committee to Select the Carver Award. Patrick receives the award for "his unique and exceptional contributions to maintain the high standards of the IMS journals; especially with the increasing, and changing, demands in journal production over the past 25 years."

The Carver Medal was created by the IMS in 2002 in honor of Harry C. Carver, Founding Editor of the *Annals of Mathematical Statistics* and one of the found-

ers of the IMS. The medal is for exceptional service specifically to the IMS and is open to any member of the IMS who has not previously been elected President.

Commenting on Patrick's nomination, IMS Executive Director Elyse Gustafson said, "The work that Patrick does is quiet, but essential. The IMS journals are top in the field because of great authors and editors,

but ensuring that *all* articles are readable by the community—including the increasing number written by authors whose primary language is not English—is the vital last step in the process. Being a production editor is not a glamorous job, there is little fanfare to it. But I believe our journals would not be the same high quality they are, without Patrick."

The Carver Medals for 2015 and 2014 (to Ed Waymire) will be presented at JSM Seattle.

### **Emery Brown filmed at National Academy of Sciences meeting**

During the 152nd annual meeting of the US National Academy of Sciences, several events and sessions were recorded and are now available to watch online. One of the filmed "research briefings" features IMS member Emery N. Brown, who is Edward Hood Taplin Professor

of Medical, Engineering and Computational Neuroscience at MIT, and professor of anesthesiology at Harvard Medical School. Emery was elected a member of the NAS last year, along with Bin Yu and Emmanuel Candès (http://bulletin.imstat.org/2014/05/us-national-academy-of-sciences-elects-newmembers/).

The research briefing was on "The Dynamics of the



Unconscious Brain under General Anesthesia". You can watch it at http://www.nasonline.org/about-nas/events/annual-meeting/152nd-annual-meeting-online.html

#### 

IMS Journals and Publication

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

Annals of Applied Statistics: Stephen Fienberg http://imstat.org/aoas Mhttp://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 മൂhttp://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 http://projecteuclid.org/ssu

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

Mhttp://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/

ฒhttp://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

Mhttp://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

### **IMS Travel Awards announced**

### Meet the 13 people selected to receive this year's IMS Travel Awards.

The IMS Travel Awards provide funding for travel to present a paper or a poster at an IMS sponsored or co-sponsored meeting, for New Researchers who would not otherwise be able to attend. See http://www.imstat.org/awards/travel.html



**Jinyuan Chang** University of Melbourne, Australia



**Yong Chen**University of Texas School of Public Health, USA



Haeran Cho University of Bristol, UK



**Peng Ding** Harvard University, USA



Ethan X. Fang Princeton University, USA



**Lijie Gu** Soochow University, China



Xiao Guo University of Wisconsin— Madison, USA



**Chuan Hong** University of Texas Health Science Center at Houston, USA



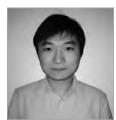
Matey Neykov Harvard University, USA



Pierre Nyquist
Brown University, USA



**Grigory Sokolov**Binghamton University,
USA



**Wei Sun**Purdue University, USA



**Thilaksha Tharanganie** Monash University, Australia



You...? Could this be you, next year?

Apply for an IMS Travel Award: http://imstat.org/ awards/travel.html

### Where are these New Researchers going with their awards?

Matey Neykov will be using his award to travel to the 2015 European Meeting of Statisticians (July 6–10, 2015, in Amsterdam, The Netherlands).

Pierre Nyquist will be at Ann Arbor, Michigan, for the Ninth International Conference on Extreme Value Analysis, EVA 2015 (June 15-19, 2015).

Grigory Sokolov will travel to the 5th International Workshop in Sequential Methodologies, June 22–24, at Columbia University in New York.

Chuan Hong will be at the **WNAR/IMS Annual Meeting**, which is at Boise State University from June 14–17.

The remaining nine travel award recipients — Jinyuan Chang, Yong Chen, Haeran Cho, Peng Ding, Ethan (Xingyuan) Fang, Lijie Gu, Xiao Guo, Wei Sun and Thilaksha Tharanganie — will be using their awards to travel to **JSM in Seattle** (August 8–13).

If you are attending any of these meetings, do go and introduce yourselves and, if you can, listen to their talks or look at their posters!

If you are a new researcher interested in attending an IMS sponsored or co-sponsored meeting (apart from the New Researchers Conference, which is funded separately), check out the information on how to apply at http://www.imstat.org/awards/travel.html

Until June extended June/July · 2015



### **Student Puzzle Corner 10**

The Student Puzzle Corner contains one or two problems in statistics or probability. Sometimes, solving the problems may require a literature search.

Current student members of the IMS are invited to submit solutions electronically (to bulletin@imstat.org with subject "Student Puzzle Corner"). The deadline has now been extended to June 18, 2015.

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.

It is the turn of a probability problem this time. We are going to look at some questions about how random walks evolve over time. Random walks provide a great deal of intuition about randomness in general. Add to that the fascinating results that give the subject a great deal of structure and universality, and the variety of random phenomena that are modeled using random walks in some form or the other. Here is the exact problem of this issue. It is of a classic nature; but to state it clearly, we will first need a few definitions.

For given  $d \ge 1$ , suppose  $X_1, X_2, \cdots$  are iid d-dimensional random vectors with common distribution F. Define  $S_0 = \mathbf{0}$  and for  $n \ge 1$ ,  $S_n = \mathbf{X}_1 + \mathbf{X}_2 + \cdots + \mathbf{X}_n$ . Then,  $S_n = \mathbf{X}_1 + \mathbf{X}_2 + \cdots + \mathbf{X}_n$ . is called a random walk driven by F. Take any fixed point  $\mathbf{x} \in \mathcal{R}^d$  and any fixed  $\epsilon >$ 0. The point **x** is called a recurrence point of the random walk  $S_n$  if  $P(||S_n - \mathbf{x}|| < \varepsilon$ for infinitely many  $\mathbf{n}$ ) = 1; i.e.,  $S_n$  returns to any given neighborhood of x, however small, infinitely many times with probability one. The set of all recurrence points **x** of the random walk  $S_n$  is called the recurrent class of  $S_n$ . These are all the definitions we need to state our exact problem. Here it is.

Explicitly characterize the recurrent class of  $S_n$  in the following three cases:

(a) d = 1, F = the two point distribution with  $P(X_i = \pm 1) = \frac{1}{2}$ 

(b) d = 2, F = the uniform distribution inside the unit two dimensional ball

(c) d = 3, F = the trivariate standard normal, i.e., normal with mean vector zero and the identity covariance matrix.

### **IMU Itô Travel Awards**

Takashi Kumagai is Chair of the Selection Committee for the International Mathematical Union Itô Travel Awards. He writes:

The International Mathematical Union (IMU) is supporting via the IMU Itô fund, the IMU Itô Travel Awards to invite young mathematicians to attend the Symposium on Stochastic Analysis, which is taking place at RIMS, Kyoto University, from 7 to 11 September 2015, as part of a celebration of the centennial anniversary of the birth of Professor Kiyosi Itô. See http://www.kurims.kyoto-u. ac.jp/~ryoki/proj2015/RIMS\_project\_SA.html

Those eligible to apply are PhD students and researchers who received their PhD within the past 8 years.

The support consists of travel grants of two types:

- a) full support (up to 250,000 Japanese Yen to support travel and local expenses),
- b) partial support (up to 150,000 Japanese Yen). The selection of awardees is made by an international committee

appointed by RIMS in consultation with the IMU. The payment will be given according to the regulations of Kyoto University.

### How to apply

Individuals wishing to apply for the award should send their CV and a short summary of his/her research to sa-appl@kurims.

(including the reference letter) is 5 June 2015.

kyoto-u.ac.jp and ask their supervisor (or another academic who knows his/her research well) to send a reference letter to the same email address. The deadline of the application

Note that all talks at the Symposium are invited plenary talks, so there will be NO contributed talks.

We hope that many PhD students and young researchers come and participate!

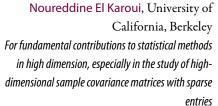


### **IMS Fellows 2015**

We announce the class of new IMS Fellows for 2015, who will be presented at the IMS Presidential Address and Awards session at JSM in Seattle. Congratulations, Fellows!



Sudipto Banerjee, University of California, Los Angeles
For outstanding methodological contributions to the field of spatial and spatio-temporal statistics and for his vibrant interest in challenging environmental and biomedical applications.





Peter Guttorp, University of Washington For influential contributions to inference for stochastic processes, spatial statistics and time series having a profound impact in environmental science and biology; and for leadership in strengthening statistics' link to the atmospheric and climate sciences.

Ben Hambly, University of Oxford For fundamental contributions to probability theory, and in particular to our understanding of random motions in random graphs and random environments.





Yaozhong Hu, University of Kansas For fundamental research in stochastic calculus for fractional Brownian motion; and for influential work in stochastic partial differential equations.

Davar Khoshnevisan, University of Utah For outstanding work in the theory of stochastic processes, in particular: geometric and asymptotic properties of random fields, and chaotic behavior of stochastic partial differential equations.





Axel Munk, Georg August Univ Göttingen & Max Planck Institute for Biophysical Chemistry, For ground-breaking contributions to change-point problems, fundamental research in inverse problems and its applications to biophysics, influential work on data analysis on manifolds and fingerprints, and leadership in German statistical community.

Douglas William Nychka, National Center for Atmospheric Research For outstanding theoretical contributions to nonparametric regression and the statistical analysis of dynamical systems; for development of widely used statistical software; for leadership in statistical climatology research and advocacy for statistics.





Igor Prünster, Università di Torino & Collegio Carlo Alberto
For groundbreaking research on discrete random
measures and their applications, and for outstanding
service to the profession.





Sylvia Richardson, University of Cambridge and MRC Biostatistics Unit For influential research in spatial statistics, hierarchical modeling, mixture models; for applications in biomedical science, epidemiology and genomics, and for service to the profession.

Judith Rousseau, Université Paris Dauphine For fundamental contributions to Bayesian statistics, including Bernstein—von Mises theorems and Bayesian nonparametrics, and for outstanding service to the community.





Laurent Younes, Johns Hopkins University, For fundamental contributions to the mathematical and statistical foundations of shape and image analysis; and for new methodology implemented in large and important medical imaging studies.

Ming Yuan, University of Wisconsin at Madison For fundamental contributions to nonparametric function estimation and high-dimensional statistical inference.





Tong Zhang, Rutgers University For influential contributions to statistical theory and methodology, especially in statistical machine learning and high dimensional data.

Ji Zhu, University of Michigan—Ann Arbor For outstanding research accomplishments on statistical learning.





Hui Zou, University of Minnesota For fundamental contributions to high-dimensional statistics, machine learning and statistical computing and for excellent editorial service.

### **OBITUARY: Evarist Giné-Masdeu**

### 1944-2015

Evarist Giné-Masdeu—or just Evarist Giné—passed away on March 13 in Hartford, CT. He was a significant contributor and co-creator of several branches of modern probability theory that have been profoundly influential, in particular in statistics and learning theory. This includes the areas of probability in Banach spaces; empirical process theory; asymptotic theory of the bootstrap and of U-statistics and processes; as well as nonparametric statistics. He wrote over 100 articles in leading scientific journals: 22 papers in the Annals of Probability alone, 10 in Probability Theory and Related Fields, and 8 in the Annals of Statistics. Moreover, he wrote two influential books, one on the central limit theorem in Banach spaces with Aloisio Araujo, and the other with Victor de la Peña on decoupling. With Richard Nickl he completed his third book Mathematical Foundations of Infinite-Dimensional Statistical Models just a few weeks before he tragically passed away—it will appear with Cambridge University Press.

Evarist was made a fellow of the IMS in 1984, an elected member of the ISI in 1991, became a corresponding member of the Institut d'Estudis Catalans in 1996, and gave a Medallion lecture at the 2004 Bernoulli-IMS World Congress in Barcelona. Over the years he was on the editorial board of many journals including the Annals of Probability, the Journal of Theoretical Probability, Electronic Journal of Probability, and Bernoulli; he was Senior Advisory Editor of JSPI. A conference was held on the occasion of Evarist's 70th birthday in June 2014 in Cambridge, UK, to honor his mathematical achievements. The photograph above was taken by Lucien Birgé at this conference: Evarist in full health and in his usual great spirits. Evarist was always extremely modest; with his usual sense of humor he wrote in an

email in July 2014 that this conference was "totally undeserved, but enjoyed nonetheless". In reality this conference was a special event that highlighted the many areas within mathematics and statistics in which Evarist and his work have had the most substantial impact. The great respect and admiration for his mathematics and his great personality were shared by the many friends and colleagues present in Cambridge.

Evarist was born on 31 July 1944 in Falset, a small town in Catalonia, into a family that was mostly engaged in agriculture and wine-making. His prodigious mathematical talent showed early and his family were convinced by a local teacher that Evarist should attend a secondary school that led to entrance to university. Evarist succeeded with distinction and studied mathematics at the Universitat de Barcelona, obtaining the degree of Llicenciat (comparable to BSc) in 1967. Evarist met and married his wife Rosalind Eastaway during that time.

Partly because of the Franco regime and partly because of their adventurous characters, they left Catalonia, and after some time teaching mathematics in Venezuela, Evarist was accepted by the PhD program in mathematics at the Massachusetts Institute of Technology (MIT). Evarist completed his PhD in 1973, under the supervision of Richard M. Dudley, his main work being on statistical tests for uniformity on Riemannian manifolds, published in the Annals of Statistics. This early work, highly cited in statistical literature in the following years, already showed one of the main features of Evarist's research: his deep interest in the problems motivated by mathematical statistics, where there was a need to develop both subtle and powerful mathematical tools. His prolific mathematical abilities produced two further papers during his PhD years,



Evarist Giné-Masdeu, known as Evarist Giné, last June at the conference in his honor in Cambridge, UK

both published in *AOP*, that also started one of the main lines of his research, the study of limit theorems in infinite-dimensional Banach spaces.

Evarist then spent 1974–75 in Berkeley as a lecturer, where he met Lucien Le Cam and the other greats of that Berkeley Golden Age in statistics. After some 'wandering years' that included a return to Venezuela and extended visiting positions at the Universitat Autonoma de Barcelona, Evarist finally settled at Texas A&M University, becoming a professor there in 1983.

Some of Evarist's most influential and original work was done in that time with Joel Zinn, a colleague and friend at Texas A&M. Their joint work resulted in the development of the most important tools of empirical processes theory, such as symmetrization inequalities, entropy bounds and random multiplier inequalities, that later penetrated many areas of mathematics, statistics and computer science (in particular, machine learning). The classical paper "Some limit theorems for empirical processes" (1984, with J. Zinn) contained some necessary and sufficient conditions for a class of sets to be a Donsker class—conditions which easily implied many of the existing results. Many more of Evarist's papers had a major impact. "Bootstrapping general empirical measures" (1990, with J. Zinn) contained necessary and sufficient conditions for the central limit theorem for the bootstrap in the empirical setting. His paper "Limit theorems for U-processes" (1993, with M. Arcones) combined methods from the theory of empirical processes with the method of decoupling

### **I** Recent papers: AIHP

# Annales de l'Institut Henri Poincaré (B), Probabilités et Statistiques Volume 51, Number 2, May 2015

The Probability and Statistics section of the *Annales de l'Institut Henri Poincaré* is an international journal that publishes high quality research papers. The journal, which is supported by the IMS, deals with all aspects of modern probability theory and mathematical statistics, as well as with their applications. The editors are Thierry Bodineau and Lorenzo Zambotti.

### Access papers at https://projecteuclid.org/aihp

Percolations on random maps I: Half-plane models	OMER ANGEL AND NICOLAS CURIEN; 405 - 431
Scaling limit of random planar quadrangulations with a boundary	JÉRÉMIE BETTINELLI; 432 - 477
The cut-tree of large recursive trees	JEAN BERTOIN; 478 - 488
Limit theorems for conditioned non-generic Galton—Watson trees	
Scaling limits of Markov branching trees and Galton—Watson trees conditioned on the number of vertices with out-degree in a given	ven set
A class of special subordinators with nested ranges	P. MARCHAL; 533 - 544
Weak convergence to stable Lévy processes for nonuniformly hyperbolic dynamical systems	IAN MELBOURNE AND ROLAND ZWEIMÜLLER; 545 - 556
An ergodic theorem for the extremal process of branching Brownian motion LOUIS-	PIERRE ARGUIN, ANTON BOVIER, AND NICOLA KISTLER; 557 - 569
The spatial Lambda-Fleming—Viot process: An event-based construction and a lookdown representation	
A generalised Gangolli—Lévy—Khintchine formula for infinitely divisible measures and Lévy processes	
on semi-simple Lie groups and symmetric spaces	DAVID APPLEBAUM AND ANTHONY DOOLEY; 599 - 619
On fluctuations of eigenvalues of random permutation matrices	GÉRARD BEN AROUS AND KIM DANG; 620 - 647
Fourier coefficients of invariant random fields on homogeneous spaces of compact Lie groups	
On the rate of convergence for critical crossing probabilities	I. BINDER, L. CHAYES, AND H. K. LEI; 672 – 715
Asymptotic direction of random walks in Dirichlet environment	LAURENT TOURNIER; 716 - 726
Random walks on discrete point processes	
Phase transition for the vacant set left by random walk on the giant component of a random graph	TOBIAS WASSMER; 756 - 780
Parametric first-order Edgeworth expansion for Markov additive functionals. Application to M-estimations	D. FERRÉ; 781 – 808

### **Evarist Giné, 1944–2015:** *continued from previous page*

to obtain limit theorems for U-processes. This led to his book (with V. de la Peña) on decoupling, which gave a thoughtful and systematic treatment of decoupling and its applications to randomly stopped processes, U-statistics and U-processes. "When is the Student *t*-statistic asymptotically normal?" (1997, with F. Götze, and D. M. Mason) solved the problem mentioned in the title, and thus the long-standing conjecture of Logan, Mallows, Rice and Shepp (1973).

After two years as a professor in New York at CUNY Evarist took up a professorship at the University of Connecticut in 1990, where he stayed until his death, ultimately as the head of the department of mathematics there. Evarist had eight PhD students, most notably Miguel Arcones, and had a substantial impact on a whole generation of probabilists and theoretical statisticians whose formative academic years were 1990–2010.

That Evarist is gone leaves a great emptiness in the mathematical community. For those who knew him personally and worked with him, he will always remain a great friend with whom they spent endless hours talking mathematics at the board or in his warm and hospitable house. The loss is even greater for his family: he is survived by his wife Rosalind, his two daughters Nuria and Roser, and his two grand-children Liam and Mireia. But his great enthusiasm, intellectual brilliance and profound original ideas will live on for many generations to come, through his mathematical writings, in our memories, and in his family.

Vladimir Koltchinskii, Richard Nickl, Sara van de Geer, Jon Wellner, Joel Zinn

### I Medallion Lecture preview: Grégory Miermont

Grégory Miermont received his education at Ecole Normale Supérieure (ENS) in Paris from 1998–2002. He defended his PhD thesis, which was supervised by Jean Bertoin, in 2003. He also spent a year in Berkeley, 2001–02, working under the supervision of David Aldous and Jim Pitman. Miermont held a CNRS researcher position from 2004–09, first in Orsay and then in Paris (Université Pierre et Marie Curie and ENS). From 2009–2012 he was a professor at Université Paris-Sud (Orsay), on leave to the University of British Columbia during 2011-2012. Since 2012, he is a professor at ENS Lyon. His research, in the area of random trees and random planar maps, has been recognized by several distinctions, including the 2009 Rollo Davidson Prize, the 2012 EMS Prize and the 2014 Wolfgang Döblin Prize. This Medallion Lecture will be given at SPA 2015 in Oxford, UK, July 13–17, 2015 (where there will also be the Schramm lecture by Michel Ledoux and another Medallion lecture by Scott Sheffield).



Grégory Miermont

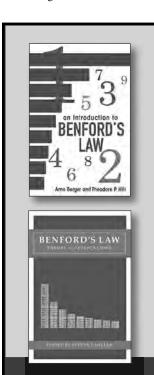
#### **Compact Brownian surfaces**

In recent years, it has been shown how random maps can be viewed as a discrete version for a canonically defined "random surface". Consider for instance a triangulation of the 2-dimensional sphere into \$n\$ triangles, chosen uniformly among the (finite) set of non-combinatorially equivalent such triangulations. The resulting random discrete sphere can be endowed with a natural distance function, for instance the graph distance on the set of vertices of the map.

One can try to renormalize these distances as the size \$n\$ goes to the infinity, in order to obtain a meaningful scaling limit for these random metric spaces, which would be a compact, non-trivial random metric space, the "Brownian map". This has been the object of active research over the past 10 years, starting with a pioneering work by Chassaing and Schaeffer, who were able in particular to identify the

appropriate renormalization rate to be \$n^{1/4}\$. The last step of the proof of convergence, consisting in uniquely identifying the limiting Brownian map, has been established in 2011 in two independent works by Miermont (dealing in fact the case of quadrangulations of the sphere) and Le Gall (for more general models of random maps).

The work I am going to discuss is a joint work with Jérémie Bettinelli, in which we establish a similar convergence result for random maps defined on orientable compact surfaces of the most general topology, and possibly with a boundary. This is achieved by using appropriate surgical operations, starting for appropriately conditioned version of the Brownian map, or its sibling, the Brownian disk. The latter is in turn defined as a gluing of infinitely many "slices", obtained by cutting the Brownian map along a marked geodesic path.



### An Introduction to Benford's Law

Arno Berger & Theodore P. Hill "This comprehensive book is a gem from an academic research perspective. Researchers in the field need now just look in one place for the mathematical foundations of Benford's law."

—Mark J. Nigrini, author of Benford's Law: Applications for Forensic Accounting, Auditing, and Fraud Detection

"This book will become a standard reference on Benford's law."

-Walter Mebane, University of Michigan

Cloth \$75.00

### Benford's Law

Theory and Applications Edited by Steven J. Miller "This important, impressive, and well-crafted book presents the theory and many diverse applications of Benford's law. The contributors cover a rich and fascinating selection of topics that will appeal to people with an interest in mathematics and statistics as well as experts in a broad range of disciplines."

—Iddo Ben-Ari, University of Connecticut

Cloth \$75.00

### Medallion Lecture preview: Kavita Ramanan



Kavita Ramanan

Kavita Ramanan is a Professor at the Division of Applied Mathematics at Brown University. She is a fellow of the IMS and a recipient of the Erlang Prize of the INFORMS Applied Probability Society. She received her PhD from Brown University in 1998, was a post-doctoral fellow at the Technion, Israel, and has had appointments as a Member of Technical Staff at Bell Labs, a Professor at the Department of Mathematical Sciences at Carnegie Mellon University, and an Adjunct Professor at the Chennai Mathematical Institute. She has served on the editorial boards of several journals, including the *Annals of Probability* and the *Annals of Applied Probability*, and has been granted several patents.

Kavita Ramanan's current research interests include stochastic analysis, large deviations, Gibbs measures and applications to stochastic networks.

Kavita will present her IMS Medallion lecture at the INFORMS Applied Probability Society conference to be held from July 5–8, 2015, at Koç University in Istanbul, Turkey. See http://home.ku.edu.tr/~aps2015/

### Infinite-dimensional scaling limits of stochastic networks

Models of stochastic networks arise in a wide variety of applications, ranging from telecommunications and computer systems to manufacturing and service centers. These networks typically consist of jobs, e.g., in the form of customers or packets, that require processing from multiple servers in the network, and are routed through the network and stored in queues while awaiting service. Different measures of network performance, such as stability, mean queue lengths and probability of large delays, are relevant for different applications. The goal of the mathematical theory of stochastic networks is to develop general techniques for the analysis of the performance, design and control of broad classes of networks.

Given the complexity of these networks, an exact analysis is often infeasible. Instead, valuable insight can often be gained from the study of approximate models that are more tractable and can be rigorously justified via a limit theorem to be exact in a suitable asymptotic regime. These "scaling limits" and the methods developed to analyze them are often of independent interest and useful in other areas of probability. While much of the research in the last two decades was devoted to the study of so-called multi-class queueing networks, whose scaling limits are characterized by reflected diffusions in non-smooth domains, more recently the focus has shifted to the study of more complex networks.

In my lecture, I will describe mathematical techniques developed to study two classes of networks that have been the focus of my recent work: single-server networks that use a certain class of scheduling policies that employ a continuous parameter to prioritize the service of different jobs, and a class of many-server networks that arise as models of randomized load-balancing. A common feature that makes

the analysis of both classes of models challenging is that the natural Markovian state space for establishing scaling limits of these models is infinite-dimensional.

In the context of single-server networks, it turns out that a certain infinite-dimensional Skorokhod map enables a unified analysis of several different scheduling policies in this class under quite general assumptions. For the class of many-server models, the analysis is much easier when the service distribution is exponentially distributed. However, the fact that service distributions are rarely exponentially distributed in practice leads to a natural set of questions: what is a suitable representation for the dynamics when the service distribution is general? What new tools are require to analyze scaling limits? Does the qualitative behavior of the network significantly differ from the exponential case?

My lecture will provide some answers: representations in terms of a system of interacting measure-valued stochastic processes appear to be fruitful; "hydrodynamic limits", which capture mean behavior, can be characterized by (a countable system of) partial differential equations; "diffusion approximations" that characterize fluctuations around the mean, may be described by certain (non-standard) coupled stochastic partial differential equations.

Moreover, I will demonstrate via concrete examples that, despite being infinite-dimensional, the scaling limits can be analyzed to provide interesting (and sometimes counter-intuitive) insight into the behavior of the original network.

Finally, I will also describe some remaining challenges and open problems.

### I Medallion Lecture preview: Nicolai Meinshausen

Nicolai Meinshausen is Professor of Statistics at ETH Zurich. Before taking up his current post in 2013, he was Professor of Statistics at the University of Oxford and a post-doc at UC Berkeley. His IMS Medallion lecture, Causal discovery with confidence using invariance principles, will be delivered at the JSM in Seattle on Monday, August 10, 2015, at 2:00pm.

### Causal discovery with confidence using invariance principles

I am not entirely sure why I received the great honour of a Medallion lecture, but I am rather sure it was neither for my rhetoric abilities nor for the work on the topic I want to speak about in Seattle. I will focus on the happier part of the two. By choosing causal inference as



Nicolai Meinshauser

a topic for the lecture and for my work over the past year, I am aware that I am entering a crowded, challenging and fascinating field. What is interesting about causal inference from a practical point of view? I think most people would agree that one of the defining advantages of causal models is (or would be) that they work equally well in new environments and settings. We should get the same predictive accuracy with a causal model, no matter whether we just observe or actively intervene on the predictors. Causal models show in other words invariance across different environments. While this aspect is well known and established, I want to show a few examples where the approach can be reversed: instead of trying to get a causal model which will then be invariant in its predictive accuracy across different environments, we can use the invariance property to infer the causal model. Having data from different environments, we can look for all models that are in fact invariant in a suitable sense across the environments. The causal model has to be one of them. This provides a novel way to perform causal inference. Confidence intervals for the causal coefficients follow naturally.

For this approach to work, one needs on the one hand more than just observational data, but one does not need data from carefully designed randomised studies on the other hand. The data need to be observed for example under different and unknown interventions. Or the system is observed in different environments that change the noise distribution at each variable in an unknown way. While inhomogeneity of data (for example biological experiments performed in different labs) is often perceived as a stumbling block for analysis, this opens the possibility that the inhomogeneity is actually good, at least for causal analysis. The exact form of the invariance can take different forms and will depend on assumptions we are willing to make about presence or absence of hidden variables, feedback loops and the type of interventions. I will show a few examples along with necessary assumptions. Empirical results on biological experiments show the scope and limitations of the approach. This is joint work with Christina Heinze, Jonas Peters, Peter Buehlmann and Dominik Rothenhaeusler.

### **Nominations open for IMS Lectures**

In 2015 these IMS lectures have been/will be given:

At APS (Istanbul, July 5-8, 2015), Medallion Kavita Ramanan;

At SPA 2015 (Oxford, July 13-17, 2015), Schramm lecture Michel Ledoux and two Medallion lectures Scott Sheffield and Gregory Miermont; and

At JSM (Seattle, August 8-13, 2015) Wald lectures Susan Murphy, Le Cam lecture Jon Wellner, and four Medallion lectures, Jiashun Jin, Michael Kosorok, John Lafferty and Nicolai Meinshausen.

#### **Nominate an IMS Named or Medallion Lecturer**

The IMS Committee on Special Lectures is accepting nominations for IMS Named and Medallion Lectures. Available for nomination this year are the 2017 Wald and Neyman Lecturers, and the 2018 Medallion Lecturers. See http://imstat.org/awards/lectures/ nominations.htm. The deadline for nominations is October 1, 2015.

The submission process is simple: send the nomination materials listed below via email to Elyse Gustafson e erg@imstat.org, with the subject line <LECTURE NOMINATION>. The items should be sent as a single PDF attachment. You will receive an email confirming receipt within 72 hours. If you do not receive this confirmation, please email or call Elyse: t 216.295.2340.

Nomination Materials: a nomination letter of half a page, including the nominator's name, the nominee's name and the name of the IMS lecture for which the nominee is nominated; together with a list of the nominee's five most relevant publications, with a URL where these publications are accessible.

### Treasurer's Report 2014

#### Introduction

#### Jean Opsomer, IMS Treasurer, writes:

This report details membership and subscription data for calendar year end 2014. The 2014 fiscal year end audit report will be published separately in the Fall of 2015 after the auditors have completed the annual process.

In 2014, the total number of IMS paid members decreased, but the total number of members increased. Subscriptions by institutions also decreased this past year. The financial status of the Institute continues to be stable, and actions have been taken to ensure its long-term stability. Details of the events of the past year and membership, subscription and sales data, are given below.

#### **Publications**

The following is a list of all current IMS core, co-sponsored, affiliated and supported journals:

### IMS Core Print/Electronic Publications

Annals of Probability; Annals of Applied Probability; Annals of Statistics; Annals of Applied Statistics; Statistical Science; Current Index to Statistics; IMS Collections; IMS Monographs; IMS Textbooks; IMS Bulletin

### Co-Sponsored Print/Electronic Publications

Electronic Communications in Probability; Electronic Journal of Probability; Electronic Journal of Statistics; Journal of Computational and Graphical Statistics; NSF-CBMS Series in Probability and Statistics; Probability Surveys; Statistics Surveys

### **Supported Publications**

Annales de l'Institut Henri Poincaré (B); Bayesian Analysis; Bernoulli; Bernoulli News; Brazilian Journal of Probability and Statistics; Stochastic Systems

#### **Affiliated Publications**

ALEA: Latin American Journal of Probability and Mathematical Statistics; Probability and Mathematical Statistics

### Membership Data

Total individual paid membership in the Institute as of December 31, 2014 decreased 4.9% from December 31, 2013. Table 1 (below) presents the membership data back to 2007.

TABLE 1: Membership, by Calendar Year

	2007	2008	2009	2010	2011	2012*	2013	2014	% change
Regular	2,266	2,179	2,045	1,970	1,863	1,792	1,737	1,616	-7.0%
Life/Retired Life	327	402	455	477	495	498	501	516	3.0%
Reduced Country/Retired/ IMS China	430	633	606	399	401	395	369	364	-1.4%
New Graduate	129	122	158	149	113	112	110	87	-20.9%
Student	1,160	1,328	1,368	1,160	1,116	1,023	1,036	1,187	14.6%
Total	4,312	4,664	4,632	4,155	3,988	3,820	3,753	3,770	0.5%
Total excluding free members (students, and in 2008–9 IMS China)	3,152	3,156	3,084	2,995	2,872	2,797	2,717	2,583	-4.9%

<sup>\* 2012</sup> member figures contain some estimates

As can be seen, the paid membership reached a high of 3,156 in 2008 and has been decreasing since then. This trend is similar to that of other professional societies. Nevertheless, this is clearly an area of concern, and the IMS Executive Committee continues to look for ways to address this issue.

Geographic Distribution of Members: The IMS membership is currently distributed as follows: 62% United States; 18% Europe; 11% Asia; 4% Canada; 3% Australia and New Zealand; <2% South America, Mexico and the Caribbean; <1% Africa.

Selection of Journals by Members: Print subscriptions by members continued to decrease in 2014, as expected, because members are opting to reduce their use of print while enjoying free electronic access to all journals. Members are charged actual cost for print copies of journals, so there is no net loss or gain to the bottom line from changes in print subscriptions by members. Table 2 (overleaf) shows the current selection of journals by members.

The IMS offers joint membership opportunities with the following societies:

- Bernoulli Society (BS);
- International Statistical Institute/Bernoulli Society (ISI/BS);
- International Society for Bayesian Analysis (ISBA);
- Applied Probability Society/INFORMS (APS/INFORMS);
- Sociedad Latino Americana de Probabilidad y Estadistica Matematica (SLAPEM).

### **Institutional Subscription Data**

Table 3 (overleaf) presents comparative subscription data for institutions to each of our scientific journals for 2014 and previous years. Almost all journals experienced subscription decreases in 2014. Overall institutional subscriptions decreased by 4.8%. The decrease to IMS journals, specifically, was 3.1%. We are seeing increases in our bundled offerings which are discounted on the whole. Approximately 60% of the non-member subscribers to IMS journals are in USA and Canada, with the remaining subscribers distributed throughout the world.

### **Book Sales Data**

Tables 4 and 5 (overleaf) present sales data for all the IMS book series. In 2010 IMS published its first volumes in a cooperative arrangement with Cambridge University Press to publish two series, *IMS Monographs* and *IMS Textbooks*. Sales of these volumes are going very well.

### Treasurer's Report continued

The CBMS-NSF Regional Conference Series published no new volumes in 2014. The IMS Collections series has seen very low sales, and has been formulated in order for the IMS to have minimal loss on these volumes. The Lecture Notes—Monograph Series ceased publication in 2009.

### **Financial and Audit Report**

The fiscal year ended December 31, 2014. The external audit of the IMS will be completed in July 2015. The full audit report will appear in the *IMS Bulletin* in the Fall.

#### **Conclusion**

The IMS Executive Committee has reviewed all data in this report. A long-term financial plan is already in place and the IMS continues to be strong and stable financially. The decrease in institutional subscriptions is being felt across the market and is not unexpected. The IMS leadership began planning for these decreases over 10 years ago and has ensured that IMS resources are shored up to protect the long-term stability and growth of the society.

Jean Opsomer, Treasurer

TABLE 2: Member\*\* subscriptions, by calendar year

PRINT (paid)	2007	2008	2009	2010	2011	2012	2013	2014	% change
AAP	497	428	382	280	197	126	84	100	19.0%
AOP	534	481	416	298	218	184	99	108	9.1%
AOAS	n/a	1,160	1,089	714	480	379	232	171	-26.3%
AOS	1,608	1,323	1,109	763	555	447	265	284	7.2%
STS	2,146	1,880	1,680	1,310	1,035	869	532	534	0.4%
Total	4,785	5,272	4,676	3,365	2,485	2,005	1,212	1,197	-1.2%

<sup>\*\*\*</sup> Previously this information was reported as all members (including organizational), however data has been reformatted to show individual members only, to reflect the change in classification and to better view the current status of the data.

TABLE 3: Institutional paid subscriptions, by calendar year

PRINT	2007	2008	2009	2010	2011	2012	2013	2014	% change
AAP	700	636	680	684	645	687	632	600	-5.1%
AOP	977	900	948	967	901	908	839	795	-5.2%
AOAS	n/a	174	247	320	331	380	342	346	1.2%
AOS	1,227	1,118	1,154	1,158	1,127	1,132	1,008	985	-2.3%
STS	976	865	890	899	861	865	769	753	-2.1%
Bulletin	275	174	176	166	142	128	169	102	-39.6%
CIS	n/a	295	297	267	273	249	229	216	-5.7%
AIHP s	[174]	228	271	286	289	326	324	297	-8.3%
Bernoulli <sup>s</sup>	199	198	264	278	280	321	307	292	-4.9%
BJPS s	n/a	n/a	64	78	88	117	119	124	4.2%
Total	4,354	4,588	4,991	5,101	4,966	5,001	4,738	4,510	-4.8%
Total IMS journals	3,880	3,693	3,919	4,028	3,865	3,888	3,590	3,479	-3.1%

s denotes IMS-supported journals. Numbers in [brackets] are prior to journal becoming IMS-supported.

TABLE 4: Total sales from the NSF-CBMS Regional Conference Series, the Lecture Notes—Monograph Series, and IMS Collections

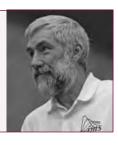
	to 2007	2008	2009	2010	2011	2012	2013	2014	TOTAL
Total NSF-CBMS sales (8 volumes)	5,854	108	57	108	57	13	40	12	6,249
Total LNMS sales (58 volumes)	27,587	454	235	297	124	40	9	19	28,765
Total IMS Collections sales (10 volumes)	n/a	n/a	9	3	5	3	7	4	31

TABLE 5: Total sales of IMS Monographs [M] and IMS Textbooks [T]

Book, volume, year published	to 2007	2008	2009	2010	2011	2012	2013	2014	TOTAL
M1: Large-Scale Inference (2010)			n/a	660	586	789	556	358	2650
M2: Nonparametric Inference on Manifolds (2012)			n/a	n/a	n/a	299	19	52	370
M3: The Skew-Normal and Related Families(2013)			n/a	n/a	n/a	n/a	29	283	312
M4: Case-Control Studies (2014)			n/a	n/a	n/a	n/a	n/a	353	353
T1: Probability on Graphs (2010)			n/a	639	491	326	249	180	1885
T2: Stochastic Networks (2013)			n/a	n/a	n/a	n/a	387	439	826
T3: Bayesian Filtering and Smoothing (2014)			n/a	n/a	n/a	n/a	n/a	408	408
T4: Noise Sensitivity of Boolean Functions (2014)			n/a	n/a	n/a	n/a	n/a	60	60
T5: Surprising Mathematics of Longest Increasing Subseque	ences (2014)		n/a	n/a	n/a	n/a	n/a	6	6
Total Monographs & Textbooks sales	n/a	n/a	n/a	1,299	1,077	1,115	1,240	2,139	6870

### **Terence's Stuff:** Ideas

Terry Speed is in love... with ideas. He recalls the influence of Wiener and Rissanen on his work with Bin Yu, just inducted into the National Academy of Sciences



oday, from Melbourne, I watched my friend, colleague and former (50%) PhD student Bin Yu being inducted into the US National Academy of Sciences in Washington DC. As a former President of the IMS, Bin Yu will be familiar to all of you, and I am sure you all shared my pleasure and satisfaction in this recognition of her research achievements. The time we worked together 28 years ago ranks among the happiest of my professional career. I wondered what it was that brought us together, and concluded that it was *ideas*.

Not long after I joined the Berkeley statistics faculty in 1987, I gave a talk about Jorma Rissanen's notion of minimum description length (MDL) and its use in model selection. At the time Bin was working with Lucien Le Cam on a topic in empirical processes, and doing very well with it, but she showed an interest in MDL. Together we began reading Rissanen's *Annals of Statistics* paper on stochastic complexity, which had appeared the year before. We also met up with Jorma, who lived and worked in nearby San José. Soon Bin was hooked on information theory in general and MDL in particular, beginning her many contributions to these topics.

My awareness of information theory went back to my first year at the University of Melbourne. I used to spend time between classes and labs in the library, mainly people-watching, but also dipping into books. One which fascinated me, to which I returned again and again, was Norbert Wiener's *Cybernetics*. There were so many ideas in that book, I'd put it back on the shelf with my head spinning. Fourier analysis,

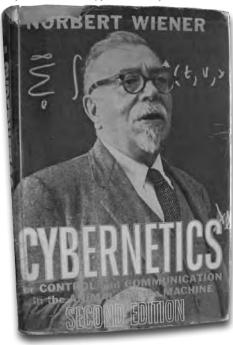
group theory, ergodic theory, statistical mechanics, Brownian motion, prediction, computers, communication, information, language, psychopathology... The list went on and on, all in one book. This was heady stuff for a freshman science student. I used to wonder whether the time would ever come when I could understand the mathematics, and perhaps properly appreciate the book.

Most of this went into cold storage for next four years, as I completed a fairly standard degree in math and stat. We did some Fourier analysis, and also some group theory, but didn't connect the two as Wiener had done. In 1965 I went to teach at Monash University, and began a part-time PhD supervised by Peter Finch. He too was interested in ideas, including information theory, and in due course he got me to teach two undergraduate courses on that topic. I used Wolfowitz's Coding theorems of Information Theory, spiced up by Shannon's classic for the introductory course, and Billingsley's Ergodic Theory and Information for the advanced course. I loved the ideas, I enjoyed the theory, and it was fun (and quite crazy) trying to teach it to undergrads. I was usually just one lecture ahead of the best students. (My explanation: it was the 1960s.) Also at that time I became exposed to ideas of computability and (un)solvability—themes discussed by Gödel, Turing and others—and learned some Hilbert space theory. Bit by bit, I was getting the background to understanding Wiener's book. Fast-forward over 20 years, to when Jorma Rissanen visited Canberra. He talked about MDL and the circle of closely related ideas: the work of Kolmogorov on random numbers, of Chaitin on algorithmic complexity, and of Solomonoff on inductive inference. Statistical theory hadn't seemed as interesting before, though I never dreamed that I would do research in the area. But soon after meeting Jorma I went to Berkeley, met up with Bin Yu, and they were able to

help me contribute a little to the field. So thank you Norbert Wiener for inspiring me with your ideas, and similar thanks to Jorma Rissanen. It was my pleasure to share some of these ideas with Bin Yu, and get an enormous amount back in return.

I am hardly alone in being in love with ideas. But one thing I knew back in 1961, in that library during the breaks between my people watching, was that ideas are just ideas until you have the technical skills to do something with them. At that time I didn't understand Fourier analysis on groups, the ergodic theorem, linear prediction and so on, and so my appreciation of Wiener's message was necessarily very superficial. I'm not sure I'm ready even now, as I still know little about psychopathology, Bergsonian time or the firing of neurons. But whether it's cybernetics or consciousness, evolution or the Big Bang, it is always a long journey to a deeper understanding of the fascinating ideas in science. If we take part of that journey with a brilliant person like Bin Yu, we are extraordinarily lucky. Thanks Bin, and congratulations!

Terry's well-thumbed copy of Wiener's Cybernetics



### I IMS meetings around the world

### Joint Statistical Meetings: 2015–2020

#### JSM 2015

August 8-13, 2015, Seattle, WA

w http://amstat.org/meetings/jsm/2015

IMS invited sessions include three Wald Lectures by Susan A. Murphy, the Le Cam Lecture

by Jon Wellner (*previewed in this issue*), and four **Medallion Lectures**: Jiashun Jin, Michael Kosorok, John Lafferty and Nicolai Meinshausen. Also there's the **IMS Presidential Address** by Erwin Bolthausen.



If housing reservations are any indication, JSM 2015 may be the biggest JSM yet. All the reserved rooms sold out within 24 hours! More have been added, but if you haven't booked your accommodation yet, don't delay: www.amstat.org/meetings/jsm/2015/housing.cfm

### 2015 NISS/ASA/IMS Writing Workshop for Junior Researchers: Sunday 9 August & Wednesday 12 August at JSM

The National Institute of Statistical Science (NISS), the ASA, and the IMS will hold a writing workshop for junior researchers (subject to availability of funds). The goal of the workshop is to provide instruction in how to write journal articles and grant proposals. Participants will be required to provide a recent sample of their writing, which will be reviewed by a senior mentor. The sample could be a current draft of an article to be submitted for publication, or it could be an early version of a grant proposal. (Submission of the manuscript will be required as part of the registration process. Prior experience suggests that the best results come from submitting an early draft of something that is written solely or primarily by the participant.)

The mentors will be former journal editors and program officers, who will critique (a portion of) the submitted material. Individual feedback will be provided as part of the opening session, and participants will be expected to prepare a revision in response. The workshop will open with a one-day session of general instruction in effective writing techniques. It will continue with a half-day session for participants whose native language is not English and will close with discussion and debriefing at a follow-up lunch.

The full-day session is scheduled for Sunday, August 9, in Seattle, Washington at JSM. At the close of the formal activities, mentors will meet individually with participants to go over the writing samples they submitted. Each participant will then prepare a revision of a critiqued portion of the paper and return this to the mentor by Tuesday evening, August 11. Mentors and participants will meet again in conjunction with a lunch on Wednesday, August 12, to discuss the success of the revisions. The lunch program will also include general feedback to participants, mentors, and organizers. The half-day session for non-native English speakers will be held on the morning of Wednesday, August 12, and will include a continental breakfast.

Attendance will be limited and will depend on the number of mentors available. To apply, go to http://www. amstat.org/meetings/wwjr/registration/. Applications are due by June 1, 2015, and successful applicants will be notified by June 30. Applications received after June 1 will be considered if space is available. There is no fee for participation. Participants will receive lunch on the Sunday and Wednesday. *Participants must agree to attend the full Sunday session, the half-day Wednesday session, and the Wednesday lunch*. We have requested funding for partial travel support.

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### IMS sponsored meetings: JSM dates for 2016–2020

JSM 2016 July 30–Aug 4, 2016, Chicago, IL IMS Annual Meeting @ JSM 2017: July 29–August 3, 2017, Baltimore, MD

JSM 2018 July 28–August 2, 2018 Vancouver, Canada IMS Annual Meeting @ JSM 2019 July 27–August 1, 2019, Denver, CO JSM 2020 August 1–6, 2020 Philadelphia, PA

### At a glance:

forthcoming IMS Annual Meeting and JSM dates

### 2015

IMS Annual MeetingJSM: Seattle, WA,

August 8-13, 2015

### 2016

### 9th World Congress:

Toronto, Canada, July 11-15, 2016

JSM: Chicago, IL, July 30 – August 4, 2016

### 2017

#### **IMS Annual Meeting**

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

### 2018

### IMS Annual Meeting:

TBD

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

### 2019

### IMS Annual Meeting

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

#### IMS co-sponsored meeting

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

w http://www.math.ucsd.edu/~williams/confer/stochnet2016.html 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 the 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

Fifth International Workshop in Sequential Methodologies (IWSM)
June 22–24, 2015
Columbia University New York NV

Columbia University, New York, NY

w TBC



ENAR dates: 2016-2018

IMS sponsored meetings

March 6–9, 2016: in Austin, Texas 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

NEW

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

Moscow, Russia

w TBC

#### IMS co-sponsored meeting



### Microsoft Research New England, Cambridge, MA

w http://research.microsoft.com/en-us/events/ims-data-science-2015/
The goal of this workshop is to foster the communication of communities broadly working in the area of data science, with a particular focus of stimulating increased interactions between statisticians, computer scientists, and domain experts in order to ambitiously attack important scientific problems involving big and complex data. As a first step, this workshop will provide an intimate setting for approximately 50 researchers (with substantial diversity). The emphasis will be on defining data science challenges in a variety of areas, providing a variety of perspectives and exposure to new problems, while jump-starting a dialog on solving these problems and enhancing communication across communities.

#### 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 Institute of Mathematical Statistics 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 successfully 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. For more information, you may contact the program chairs: Ming-Yen Cheng (cheng@math. ntu.edu.tw) and Xuming He (xmhe@umich.edu).

### Sixth IMS-ISBA joint meeting: BayesComp at MCMSki January 5–7, 2016 Lenzerheide, Switzerland



w http://www.pages.drexel.edu/~mwl25/mcmskiV/program.html Plenary speakers Stephen Fienberg, Steve Scott, David Dunson, Krys Latuszynski, Tony Lelièvre.

### More IMS meetings around the world

#### IMS co-sponsored meeting

### 10th Conference on Bayesian Nonparametrics (BNP) June 22–26, 2015 Raleigh, NC, USA

w https://stat.duke.edu/bnp10/

BNP is an official section meeting of the ISBA's Bayesian nonparametrics section. Abstract submission is open posters (deadline May 1, 2015 or until max capacity reached, whichever is earlier).

IMS members are eligible for a discount on registration: drop an email to Elyse Gustafson, erg@imstat.org, to ask for your discount code, which you can then enter when registering at http://bayesian. org/civicrm/event/info?reset=1&id=33. (Click "Register Now", then on the next screen "Enter Code:" and click "Apply" for the discount to appear. Note you cannot receive two discounts if you are both an IMS and ISBA member!)

#### IMS co-sponsored meeting

### International Symposium in Statistics (ISS) 2015 July 6–8, 2015, Memorial University, St. John's, Canada

w http://www.iss-2015-stjohns.ca/

The ISS-2015 is planned to discuss the methodological advances and challenges in the analysis of continuous and discrete correlated data both in parametric and semi-parametric setup.

The main topics of interest of this symposium are: Multivariate analysis in a wider non-normal elliptical distribution setup; Multivariate analysis for longitudinal categorical data; Time series volatility models; Spatial-temporal data analysis; Familial longitudinal data analysis in semi-parametric setup.

It is also of interest to discuss further challenges in analysis when data may contain measurement errors, missing values, and/or outliers, for example. The scientific program will include keynote, special invited, invited, and contributed paper sessions.

#### IMS co-sponsored meeting

### 9th International Conference on Extreme Value Analysis: EVA 2015 June 15–19, 2015, Ann Arbor, Michigan

w http://sites.lsa.umich.edu/eva2015

The ninth international conference on Extreme Value Analysis will take place at the University of Michigan, Ann Arbor. It will feature recent research on the probability and statistics of extreme value phenomena and its important applications to climate and weather, finance, insurance, engineering and computer science. All students, researchers, practitioners, and scientists with interests in statistics of extremes are welcome. Registration is open now.

#### IMS co-sponsored meeting

### 2015 Workshop on Finance, Insurance, Probability and Statistics (FIPS 2015)

June 25–27, 2015

#### Rutgers Student Center, New Brunswick, New Jersey

w http://www.fsrm.rutgers.edu/fips2015

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.

#### IMS co-sponsored meeting

### INFORMS Applied Probability Society Conference 2015 July 5–8, 2015, Istanbul, Turkey

w TBC

The next APS meeting will be held at the Koç University campus (Istanbul, Turkey) on July 5-8, 2015. Details to follow.

#### IMS sponsored meeting

### 2015 IMS-China Conference on Statistics and Probability July 1–4, 2015

### Kunming, Yunnan, P. R. China

w http://www.2015imschina.com

Contact: Qiwei Yao e q.yao@lse.ac.uk

The fifth IMS-China International Conference on Statistics and Probability will be held in Kunming, China, from July 1-4, 2015. Its scientific program will cover a wide range of topics in probability, statistics and their related areas. The conference will also provide an excellent forum for scientific exchanges and for forging new research collaborations.

#### IMS co-sponsored meeting

### 2015 European Meeting of Statisticians July 6–10, 2015 Amsterdam, The Netherlands

w http://ems2015.nl/

The European Meeting of Statisticians (EMS) is the main conference in statistics and probability in Europe. It is organized in a roughly two-yearly schedule and is sponsored by the European Regional Committee of the Bernoulli Society. The program consists of invited and contributed lectures, and posters, addressing a full range of subjects in statistics and its many applications.

The conference will be held at the campus of the VU University Amsterdam, from Monday, July 6 to Friday, July 10, 2015.

#### IMS sponsored meeting

### **WNAR/IMS Annual Meeting**

### June 14–17, 2015 [PLEASE NOTE NEW DATES]

#### **Boise State University, Boise, Idaho**

w http://math.boisestate.edu/wnar2015/

The 2015 Western North American Region of The International Biometric Society (WNAR)/ IMS Annual Meeting is in Boise, Idaho this year. It features a short course on *Modern Methods to Estimate Propensity Score Weights*, with instructors, by Dan McCaffrey and Matt Cefalu, RAND Corporation.

The Presidential Invited Speaker on June 15 is Sudipto Banerjee, talking on "Statistics for Space, Time and Big Data".

#### IMS co-sponsored meeting

### 38th Conference on Stochastic Processes and their Applications July 13–17, 2015, Oxford, UK

w http://spa2015.oxford-man.ox.ac.uk

The 38th Conference on Stochastic Processes and their Applications (SPA) will take place in Oxford, UK, from July 13–17, 2015. The conference is hosted by the Oxford-Man Institute of Quantitative Finance, the Mathematical Institute and the Department of Statistics, and is co-sponsored by IMS and the Bernoulli Society.

Plenary speakers: The plenary speakers include two Medallion lectures, from Grégory Miermont and Scott Sheffield; a Schramm Lecture from Michel Ledoux; and a Doob Lecture from Terence Tao. The full list is: Alan Hammond, Grégory Miermont (IMS Medallion Lecture), Alexei Borodin, Michael Cranston (Itô Prize Lecture), Bénédicte Haas, Haya Kaspi, Michel Ledoux (Schramm Lecture), Régine Marchand, Jason Miller, Sandrine Péché, Scott Sheffield (IMS Medallion Lecture, Christophe Sabot, Andrew Stuart, Terence Tao (Doob Lecture), Augusto Teixeira, Boris Tsirelson (Lévy Lecture).

**Discount for IMS members:** Registration is open, and IMS members get a **discounted** rate. To obtain the preferential delegate rate for IMS Academic Members (£284.00) and IMS Student Members (£210.00), please use the code **SPAIMS** when registering.

### IMS co-sponsored meeting

#### **ISNPS Meeting**

### Biosciences, Medicine, and novel Non-Parametric Methods July 12–15, 2015, Graz, Austria

w http://www.medunigraz.at/imi/isnps2015/index.php

The ISNPS (International Society of Non-Parametric Statistics) conferences take place biennially. After the very successful Second ISNPS Conference 2014 in Cádiz, Spain, it was decided to have a meeting every other year dedicated to a special topic. For 2015 this topic is "Biosciences, Medicine and novel Non-Parametric Methods". The ISNPS Meeting will take place immediately after the European Meeting of Statisticians in Amsterdam. It is hosted by the Institute for Medical Informatics, Statistics and Documentation of the Medical University of Graz in the city of Graz, Austria. The scientific meeting will be reminiscent of a workshop because of many plenary activities and opportunities to informally discuss novel, controversial or educational topics with respect to new methodologies and applications. Each day there will be one keynote speaker (TBC) introducing a special non-parametric or data problem followed by shorter related presentations and discussion.

### 17th IMS New Researchers Conference August 6–8, 2015

### University of Washington, Seattle, WA

w http://depts.washington.edu/imsnrc17/

e imsnrc17@uw.edu

The 17th IMS New Researchers Conference will be held just prior to the 2015 JSM. The purpose of the conference is to promote interaction and networking among new researchers in probability and statistics. The application deadline was March 27, 2015.

#### IMS co-sponsored meeting

### Statistics and Exoplanets August 3–5, 2015 Honolulu, Hawaii

w http://exostats.org

Statistics and Exoplanets is a Focus Meeting of the XXIX General Assembly of the International Astronomical Union (IAU); you will need to register for the IAU GA meeting in order to attend this meeting: see http://www.astronomy2015.org/. The meeting is sponsored by the International Statistical Institute, International Astrostatistics Association, Institute of Mathematical Statistics and the International Astronomical Union.

### 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. Previous congresses have been held in Istanbul (2012), Singapore (2008), Barcelona (2004), Guanajuato (2000), Vienna (1996), Chapel Hill (1994), Uppsala (1990), and Tashkent (1986).

### I Other meetings around the world

### 5th Annual NIGMS-funded Short Course on Statistical Genetics and Genomics July 27–31, 2015

### The University of Alabama at Birmingham, AL

w http://www.soph.uab.edu/ssg/nigmsstatgen/fifth

Focusing on the state-of-art methodology to analyze complex traits, this five-day course will offer an interactive program to enhance the ability of the researcher, to understand & use statistical genetic methods, as well as implement & interpret sophisticated genetic analyses. Limited number of Travel Fellowships available (only for participants residing in the US). The knowledge of R and UNIX is desired.

Topics to include: Intro (Biostatistics; Genetics & Genomics; Ethics); GWAS Design/Analysis/Imputation/Interpretation; Rare Variants Analyses; CNV Analysis; Gene x Gene and Gene x Environment Interaction; Pharmacogenetics/Pharmacogenomics; Analysis of DNA Methylation Microarray Data; Statistical Epigenomics; Transcriptome Analyses; Statistical Methods for NGS; Beyond GWAS: Pathway Analysis & Meta-Analysis.

### Applied Statistics 2015 (AS2015) September 20–23, 2015 Ribno (Bled), Slovenia

w http://conferences.nib.si/AS2015/

The aim of the conference, organized by the Statistical Society of Slovenia, is to bring together statisticians, working in diverse fields of statistics and its applications. Plenary speakers: Elja Arjas, Steve Borgatti and Ernst Wit. Abstract submission deadline is June 1



### The 5th International Workshop on Climate Informatics September 24–25, 2015

NCAR Mesa lab, Boulder, CO

w https://www2.cisl.ucar.edu/events/Cl2015

**Twitter** @Climformatics

Climate informatics broadly refers to any research combining climate science with approaches from statistics, machine learning and data mining. The Climate Informatics workshop series, now in its fifth year, seeks to bring together researchers from all of these areas. We aim to stimulate the discussion of new ideas, foster new collaborations, grow the climate informatics community, and thus accelerate discovery across disciplinary boundaries. The format of the workshop seeks to overcome cross-disciplinary language barriers and to emphasize communication between participants by featuring tutorials, invited talks, panel discussions, posters and break-out sessions. We invite all researchers interested in learning about critical issues and opportunities in the field of climate informatics to join us, whether established in the field or just starting out.

Since earth system sciences can be brought to bear on the study of climate, the scope of the workshop also includes data science approaches to problems at the nexus of climate and the earth system sciences.

#### **Key Dates**

July 27, 2015: Poster abstracts due August 17, 2015: Author notification August 17, 2015: Travel fellowship notification September 8, 2015: Revised abstracts due



### Mathematics of Planet Earth 2013+ Workshop on Education for the Planet Earth of Tomorrow September 30–October 2, 2015

NIMBioS at the University of Tennessee, Knoxville

w http://www.nimbios.org/education/WS\_mpe2015

The issues facing the planet call for a new type of workforce, trained in multidisciplinary and multi-national communication and collaboration. Held at the National Institute for Mathematical and Biological Synthesis (NIMBioS) at the University of Tennessee, Knoxville, the workshop will focus on planning for the multidisciplinary education of students as well as workforce development. The workshop will produce a MPE 2013+ Education Plan for the wider mathematical sciences community and those interested in high school, undergraduate and graduate education. Discussion sessions and panels will be included, as well as invited speakers with expertise in green education, communications, and undergraduate mathematics education.

Co-Organizers: Midge Cozzens, DIMACS, Rutgers University; Suzanne Lenhart, NIMBioS, University of Tennessee; Fred Roberts, DIMACS, Rutgers University; Kelly Sturner, NIMBioS, University of Tennessee

Funds exist for partial financial support to attend the workshop. Priority will be given to early career participants. Applications for financial support received by June 15, 2015, will receive full consideration.

Pre-registration deadline: September 23, 2015



## 2015 Modern Math Workshop (MMW) October 28–29, 2015 Washington DC

w http://www.msri.org/workshops/789

Call for Applications: Modern Math Workshop

As part of the Mathematical Sciences Collaborative Diversity Initiatives, nine mathematics institutes are pleased to host their annual pre-conference event, the 2015 Modern Math Workshop (MMW), on October 28–29, 2015, in Washington, DC. The Workshop immediately precedes the 2015 Society for Advancement of Chicanos and Native Americans in Science (SACNAS) annual meeting, October 29–31.

The Modern Math Workshop is intended to encourage minority undergraduates to pursue careers in the mathematical sciences and to assist undergraduates, graduate students and recent PhDs in building their research networks. The MMW presents two mini-courses for undergraduates and talks related to the research programs at the math institutes that would be of interest to graduate students and early career researchers.

Most participants attending this workshop are supported by SACNAS as part of the SACNAS National Conference. To apply for funding from SACNAS, please go to www. tinyurl.com/SACNAS-travel-scholarships. If you receive a notice from SACNAS that you are expected to attend the Modern Math Workshop (MMW), you will also be receiving a notice from us with a link for registration for MMW.

There is funding available directly from MMW to fund attendance at MMW and SACNAS. Priority for these funds will be given to minority graduate students and early career researchers. Applications will be via MathProgram.org. The application process ends July 31.



### MissData 2015 June 18–19, 2015

### Agrocampus Ouest, Rennes, France

w http://missdata2015.agrocampus-ouest.fr Twitter @MissData2015

MissData is an international conference on missing values and matrix completion The program comprises R tutorials, invited lectures, a lightning talk session and a lively poster session during the reception.

The invited speakers are: Mouna
Akacha (Novartis, Switzerland), Christophe
Biernacki (Lille 1, France), Stefan van Buuren
(Utrecht), John W. Graham (Penn State),
David Haziza, (Montreal), Olga Klopp (Paris
Ouest), Roderick Little (Michigan), Patrick
Perez (Technicolor, France), Sandrine Pires
(CEA Saclay, France), Joseph L. Schafer
(Census Bureau), Shaun Seaman (Medical
Research Council Biostatistics Unit, UK),
Pierre Vandergheynst (EPFL, Switzerland),
Recai Yucel (University Albany, US).

### SAMSI Workshops at Research Triangle Park, NC. For details see www.samsi.info/activities



### Uncertainties in Computational Hemodynamics: June 1–3, 2015

During this workshop, bio-engineers, mathematicians, medical doctors, physiologists and statisticians will work collaboratively toward the resolution of significant challenges in the context of computational hemodynamics.

### Bayesian Nonparametrics: Synergies between Statistics, Probability and Mathematics: June 29–July 2, 2015

The goal of this four-day workshop is to bring together a group of leading researchers having different perspectives on BNP including "outsiders" working on related areas relevant to BNP, such as optimization and probability. The program will follow and involve a subset of participants from the 10th Conference on Bayesian Nonparametrics to be held in Raleigh, June 22-26, 2015 but will be a standalone event.

### 2015 Industrial Math/Stat Modeling Workshop for Graduate Students: July 12–22, 2015 (in Raleigh, NC)

Graduate students in mathematics, engineering, and statistics will be exposed to challenging and exciting real-world problems arising in industrial and government laboratory research. Students will also experience the team approach to problem solving.

### SAMSI Challenges in Computational Neuroscience Summer School: July 27–31, 2015

This workshop will focus on: neural spike train analysis and compressed sensing, functional data analysis, big data integration and analysis and shape analysis and diffeomorphisms, and shape analysis and diffeomorphisms and big data integration and analysis.

### SAMSI Challenges in Computational Neuroscience Opening Workshop: August 17–21, 2015

The workshop will provide an overview of the core topics relevant to the CCNS program, which is devoted to the development of methodological, theoretical, and computational treatments of high-dimensional mathematical and statistical models with applications in computational neuroscience.

### SAMSI Forensics Opening Workshop: August 31–September 4, 2015

Much of forensic science is based upon statistical comparisons of the characteristics of a material left at a crime scene to characteristics of a source or suspect. These comparisons are often acknowledged by forensic scientists to be highly subjective.

### I More meetings around the world

CRiSM Workshop: Models and Inference in Population Genetics September 14–16, 2015

University of Warwick, UK

**w** http://www2.warwick.ac.uk/fac/sci/statistics/crism/workshops/populationgenetics **REGISTRATION NOW OPEN** 

The aims of this workshop are to bring together researchers at the frontiers of probability and statistical inference in population genetics. The workshop is an expanded 2nd edition of a successful one-day event organised in 2012.

Population genetics has a long history, and has been the motivation behind many well known advances in probability and statistics. It is currently being further revolutionized by progress in DNA sequencing technologies. There is an enticement to develop ever more sophisticated stochastic models in order to make more refined predictions and to apply them to more complex datasets, raising many new challenges in maintaining statistical and computational efficiency.

Invited speakers who have already accepted our invitation include: Ellen Baake (Bielefeld); Mark Beaumont (Bristol); Matthias Birkner (Johannes-Gutenberg, Mainz); Jochen Blath (TU Berlin); Maria De Iorio (UCL); Steve Evans (University of California, Berkeley); Bob Griffiths (Oxford); Asger Hobolth (Aarhus); Carolin Kosiol (University of Veterinary Medicine, Vienna); Noemi Kurt (TU Berlin); Gerton Lunter (Oxford); Simon Myers (Oxford); Yun Song (University of California, Berkeley / Pennsylvania) [TBC]; and Yee Whye Teh (Oxford)

To participate, please complete the application form which can be found at the website above, where you can also submit a title and an abstract for a contributed poster. The deadline for registering is September 4, 2015. The organizers are Bob Griffihs (Oxford), Paul Jenkins (Warwick) and Dario Spanò (Warwick).

Research Workshop and Conference on Statistical Methods in Finance
July 13–17, 2015
Chennai, India

w www.isichennai.res.in/~rsen/StatFin.htm
This research workshop and conference, organized by the Chennai Mathematical Institute (CMI) and Indian Statistical Institute (ISI), aims to expose participants to some new and active areas of research and to form working groups of researchers. There will be two mini-courses by two experts in the field. In addition there will be 10–12 invited lectures. The workshop will have ample open hours for discussion.

Participants are encouraged to submit abstracts for poster presentation. The best poster will be given an award.

Applications for participation will be accepted until May 31. Abstracts for poster presentation will be accepted until June 7. Selected participants/presenters will be notified and registration will open on June 14. Registration closes on June 28.

### I Employment Opportunities around the world

#### **Mexico: Guanajuato**

### Centro de Investigacion en Matematicas, A.C.

Tenure-track researcher http://jobs.imstat.org/jobseeker/job/23281660

#### **Norway: Oslo**

### University of Oslo, Norway

Two Professor or Associate Professors in Biostatistics http://jobs.imstat.org/jobseeker/job/23298300

#### **United States: Moscow, Idaho**

### **University of Idaho**

Collaborative Postdocs http://jobs.imstat.org/jobseeker/job/23566222



http://jobs.imstat.org/

### **International Calendar of Statistical Events**

IMS meetings are highlighted in maroon with the lims logo, and new or updated entries have the very or very symbol. t means telephone, f fax, e email and w website. Please submit your meeting details and any corrections to Elyse Gustafson at erg@imstat.org

### **June 2015**

June 1–3: SAMSI, NC. Uncertainties in Computational Hemodynamics w http://www.samsi.info/workshop/summer-2015-uncertainties-computational-hemodynamics-june-1-3-2015

June 7–10: Oslo, Norway. Colloquium of the International Actuarial Association w http://www.actuaries.org/oslo2015

June 8–12: Villa del Grumello, Como, Italy. ABS15 - 2015 Applied Bayesian Statistics School on Modern Bayesian Methods and Computing for the Social Sciences w http://www.mi.imati.cnr.it/conferences/abs15.html

June 8–12: Castro Urdiales, Spain Methodological advances in Statistics related to BIG DATA w http://www.imuva.uva.es/workshopbigdata/

June 11–12: Microsoft Research New England, Cambridge, MA. IMS-Microsoft Research Workshop: Foundations of Data Science w http://research.microsoft.com/en-us/events/imsdata-science-2015/

June 13–14: Toronto, Canada. Closing Conference [Fields Big Data program] at AARMS of Dalhousie University. **w** www.fields.utoronto. ca/programs/scientific/14-15/bigdata

June 14–16: Istanbul, Turkey. BISP9: Ninth Workshop on Bayesian Inference in Stochastic Processes w http://www.maoner.com/bisp9. htm

June 14–17 [NOTE NEW DATES]: Boise State University, ID, USA. 2015 WNAR/IMS Annual Meeting w http://math.boisestate.edu/wnar2015/ [new website address]

June 15–19: Aarhus, Denmark. **Aarhus Conference on Probability, Statistics and Their Applications w** http://thiele.au.dk/events/conferences/2015/aarhus/

June 15–19: Ann Arbor, Michigan. 9th International Conference on Extreme Value Analysis: EVA 2015 w http://sites.lsa.umich.edu/eva2015

June 16–18: Alicante, Spain. Third Euro Congress and Expo on Dental & Oral Health w http://dentalcongress.com/europe/

June 17–19: Istanbul, Turkey. GDRR 2015: Fourth Symposium on Games and Decisions in Reliability and Risk w http://www.maoner.com/GDRR-2015.htm

June 18–19: Agrocampus Ouest, Rennes, France. MissData 2015 w http://missdata2015.agrocampus-ouest.fr

June 22–24: Columbia University, New York, NY. Fifth International Workshop in Sequential Methodologies w TBC

June 22–25: NIMBioS, Knoxville, TN. Research Collaboration Workshop for Women in Mathematical Biology w http://www.nimbios.org/education/WS\_wwmb.html

June 22–26: Raleigh, NC, USA. 10th Conference on Bayesian Nonparametrics w https://stat.duke.edu/bnp10/

Workshop on Finance, Insurance, Probability and Statistics (FIPS 2015) w http://www.fsrm.rutgers.edu/fips2015

June 29–July 2: SAMSI, NC. Bayesian Nonparametrics: Synergies between Statistics, Probability and Mathematics w http://www.samsi.info/workshop/bayesian-nonparametrics-synergies-between-statistics-probability-and-mathematics-bnp-sspm-j

June 29–July 2: Athens, Greece. 9th Annual International Conference on Statistics w http://www.atiner.gr/statistics.htm

June 29–July 2: Athens, Greece. 1st Annual International Conference on Formal Sciences w http://athensformal.com

June 30–July 2: Leeds, UK Leeds Annual Statistical Research Workshop w http://www1.maths.leeds.ac.uk/statistics/workshop/lasr2015/

June 30–July 4: Piraeus, Greece. 16th Applied Stochastic Models and Data Analysis International Conference (ASMDA) w http://www.asmda2015.com

### **International Calendar** continued

### **July 2015**

July 1–3: Aalborg, Denmark. useR! 2015 w http://user2015. math.aau.dk

July 1–4: Kunming, Yunnan, P. R. China. 2015 IMS-China International Conference on Statistics and Probability w http://www.2015imschina.com

Probability Society Conference 2015 [new website address] w http://home.ku.edu.tr/~aps2015/

July 5–10: Oxford, UK. LMS-CMI Research School:

Developments in Modern Probability w http://www.stats.ox.ac.uk/
events/lms-cmi\_research\_school

Meeting organizer's to-do list

To do

Set date

Sort venue

Book speakers

Advertise in

IMS Bulletin!

www.imstat.org/submit-meeting.html

July 6–8: Memorial University, St John's, Canada. International Symposium in Statistics (ISS 2015): Parametric and Semi-parametric Inferences for Spatial-temporal, and Multi-dimensional Familial-longitudinal Data. w http://www.iss-2015-stjohns.ca

July 6–10: Amsterdam, The Netherlands. 2015 European Meeting of Statisticians w http://ems2015.nl/

July 6–10: Columbus, OH, USA Spatially-varying stochastic differential equations, with application to the biological sciences w http://mbi.osu.edu/event/?id=904

July 7–9: Knoxville, TN, USA. **NIMBioS Investigative**Workshop: Many-cell System Modeling w http://www.nimbios.org/workshops/WS\_manycell.html

July 11–13: Chania, Crete. Greek Stochastics Meeting w http://www.stochastics.gr/meetings/eta/index.html

July 12–22: Raleigh, NC. 2015 Industrial Math/Stat Modeling Workshop for Graduate Students w http://www.samsi.info/workshop/2015-industrial-mathstat-modeling-workshop-graduate-students-july-12-22-2015

July 12–15: Graz, Austria. Biosciences, Medicine and Novel Non-parametric Methods w www.medunigraz.at/imi/isnps2015/

July 13–17: Oxford, UK. 38th Conference on Stochastic Processes and Applications w [please note new website address] http://spa2015.oxford-man.ox.ac.uk

July 13–17: Chennai, India. Research Workshop and Conference on Statistical Methods in Finance w www.isichennai.res. in/~rsen/StatFin.htm

July 20–24: Pescara, Italy. ISIPTA'15 (9th International Symposium on Imprecise Probability: Theories and Applications)
w http://www.sipta.org/isipta15

July 26–31: Rio de Janeiro, Brazil. 2015 ISI World Statistics Congress w http://www.isi2015.ibge.gov.br/

July 27–31: UAB, Birmingham, AL. 5th Annual NIGMS-funded Short Course on Statistical Genetics and Genomics w http://www.soph.uab.edu/ssg/nigmsstatgen/fifth

July 27-31: SAMSI, NC. SAMSI Challenges in

Computational Neuroscience Summer School w http://www.samsi. info/workshop/summer-2015-ccns-computational-neurosciencesummer-school-july-27-31-2015

### August 2015

August 3–5: Honolulu, HI. Statistics and Exoplanets w http://exostats.org

August 4–9: Knoxville, TN, USA. NIMBioS Tutorial: Evolutionary Quantitative Genetics w http://www.nimbios.org/tutorials/TT\_eqg

August 5–8: Washington DC MAA MathFest **w** http://www.maa. org/100

August 6–8: Seattle, WA. 17th IMS New Researchers
Meeting w http://depts.washington.edu/imsnrc17/

August 8–13: Seattle, WA. IMS Annual Meeting at JSM 2015. w http://amstat.org/meetings/jsm/2015

August 10–14: Beijing, China. 8th International Congress of Industrial and Applied Mathematics w http://www.iciam2015.cn/

August 17–21: SAMSI, NC. SAMSI Challenges in Computational Neuroscience Opening Workshop w http://www.samsi.info/workshop/2015-16-ccns-opening-workshopaugust-17-21-2015

August 23–27: Utrecht, The Netherlands 36th Annual Conference of the International Society for Clinical Biostatistics w http://www.iscb2015.info/

August 31–September 4: SAMSI, NC. SAMSI Forensics Opening Workshop w http://www.samsi.info/workshop/2015-16-forensics-opening-workshop-august-31-september-4-2015

### September 2015

September 2–5: Hyderabad, India IXth International Multiple Comparisons Procedures (MCP) Conference w http://www.

mcp-conference.org/hp/2015/

September 14–16: University of Warwick, UK. CRiSM Workshop: Models and Inference in Population Genetics w http://www2.warwick.ac.uk/fac/sci/statistics/crism/workshops/populationgenetics

September 20–23: Ribno (Bled), Slovenia. Applied Statistics 2015 (AS2015) w http://conferences.nib.si/AS2015/

September 21–25: Vienna, Austria. 8th International Workshop on Simulation w http://iws.boku.ac.at/index.php

September 24–25: NCAR Mesa lab, Boulder, CO. 5th International Workshop on Climate Informatics w https://www2.cisl.ucar.edu/events/Cl2015

September 26: Harvard University, Cambridge, MA, USA 2015 New England Symposium on Statistics in Sports w http://www.nessis.org/

September 30-October 2: NIMBioS, Knoxville, TN.

Mathematics of Planet Earth 2013+ Workshop on Education for the Planet Earth of Tomorrow w http://www.nimbios.org/education/WS\_mpe2015

### October 2015

October 5–7: Dubai, UAE. Seventh Global Summit on Cancer Therapy w http://cancer.global-summit.com/middleeast/

October 28–29: Washington DC. 2015 Modern Math Workshop w http://www.msri.org/workshops/789

### **November 2015**

November 10–13: Prague, Czech Republic. AMISTAT 2015 (Analytical Methods in Statistics) w http://www.karlin.mff.cuni.cz/~amistat2015/

### **International Calendar** continued

### **December 2015**

December 6–11: Atlantic City, NJ, USA. 71st Annual Deming Conference on Applied Statistics w www.demingconference.com

### January 2016

January 5–7: Lenzerheide, Switzerland. Sixth IMS-ISBA joint meeting: BayesComp at MCMSki. w http://www.pages.drexel.edu/~mwl25/mcmskiV/program.html

### **March 2016**

Whitp://www.enar.org/meetings.cfm

### **June 2016**

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://www.math.ucsd.edu/~williams/confer/stochnet2016.html

Pacific Rim Meeting w http://ims-aprm2016.sta.cuhk.edu.hk/

### **July 2016**

July 11–15: Toronto, ON, Canada. IMS Annual Meeting at 9th World Congress in Probability and Statistics w http://www.fields.utoronto.ca/programs/scientific/16-17/WC2016/

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

### **July 2017**

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 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

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

Are we missing something? If you know of any statistics or probability meetings which aren't listed here, please let us know.

You can email the details to Elyse Gustafson at erg@imstat.org, or you can submit the details yourself at http://www.imstat.org/submit-meeting.html

We'll list them here in the Bulletin,

We'll list them here in the Bulletin, and on the IMS website too, at www.imstat.org/meetings

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3:	April/May	March 15	April 1	April 15
4:	June/July	Мау 1	May 15	June 1
5:	August	July 1	July 15	August 1
6:	September	August 15	September 1	September 15
7:	Oct/Nov	September 15	October 1	October 15
8:	December	November 1	November 15	December 1



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### **DEADLINES** submissions July 1, then August 15

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# hrpo://projecteuclid.org/aos THE ANNALS **STATISTICS**

AN OFFICIAL JOURNAL OF THE INSTITUTE OF MATHEMATICAL STATISTICS

GOURAB MUKHERJEE AND IAIN M. JOHNSTONE	937
Role of normalization in spectral clustering for stochastic blockmodels PURNAMRITA SARKAR AND PETER J. BICKEL	962
Asymptotic normality and optimalities in estimation of large Gaussian graphical models Zhao Ren, Tingni Sun, Cun-Hui Zhang and Harrison H. Zhou	991
Robust and computationally feasible community detection in the presence of arbitrary outlier nodes T. TONY CAI AND XIAODONG LI	1027
A generalized back-door criterion MARLOES H. MAATHUIS AND DIEGO COLOMBO	1060
Computational barriers in minimax submatrix detection	
ZONGMING MA AND YIHONG WU	1089
Covariance matrix estimation and linear process bootstrap for multivariate time series of possibly increasing dimension CARSTEN JENTSCH AND DIMITRIS N. POLITIS	1117
New procedures controlling the false discovery proportion via Romano–Wolf's heuristic Sylvain Delattre and Etienne Roquain	1141
Adaptive estimation over anisotropic functional classes via oracle approach	1178
Innovated interaction screening for high-dimensional nonlinear classification YINGYING FAN, YINFEI KONG, DAOJI LI AND ZEMIN ZHENG	1243
Sparse high-dimensional varying coefficient model: Nonasymptotic minimax study OLGA KLOPP AND MARIANNA PENSKY	1273
Do semidefinite relaxations solve sparse PCA up to the information limit?  ROBERT KRAUTHGAMER, BOAZ NADLER AND DAN VILENCHIK	1300
Higher criticism: p-values and criticism JIAN LI AND DAVID SIEGMUND	
Joint asymptotics for semi-nonparametric regression models with partially linear structure GUANG CHENG AND ZUOFENG SHANG	

Vol. 43, No. 3—June 2015