IMS Bulletin



March 2014

CONTENTS

- 1 New Researchers Conference
- 2-3 Members' News: Susan Holmes; C R Rao; Klaus Krickeberg; Jim Pitman; Peter Hall
 - 4 Robert Adler: TOPOS, and why you should care about it
 - 6 Brazilian Journal of **Probability and Statistics**; **Child care**
 - 7 Student Puzzle Corner
 - 9 Vlada's Point: The Introduction
- 10 Project Euclid website
- 11 Recent Papers: Bernoulli, **Statistics Surveys**
- 12 Recent Papers: Electronic Journal of Probability; Electronic Communications in **Probability**
- 13 Terence's Stuff: Give Industry a Chance
- 14 **Obituary:** Marc Yor
- 15 IMS meetings
- 20 Other meetings
- **26 Employment Opportunities**
- 28 International Calendar
- 31 Information for Advertisers

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

New Researchers Conference

The 16th IMS New Researchers Conference is an annual meeting organized under the auspices of the IMS, and jointly sponsored this year by the National Science Foundation (NSF), the Office of Naval Research (ONR), and other federal agencies and industry sponsors. This year the conference is hosted by the Department of Statistics at Harvard University in Cambridge, Massachusetts, and will be held July 31-August 2. As is customary, the New Researchers Conference will take place immediately before, and in the vicinity of, the Joint Statistical Meetings, which this year is in downtown Boston, a few miles away, from August 2-7.

The purpose of the New Researchers Conference is to promote interaction and networking among new researchers in probability and statistics. Any young researcher who has received a PhD on or after 2009, or expects to defend his or her thesis by the end of 2014, is eligible to attend. Due to limited space, participation is by invitation only.

Confirmed participants include Edo Airoldi, Stephen Fienberg, Peter Hall, Michael Jordan, Alan Karr, Jun Liu, Xiao-Li Meng, Susan Murphy, Giovanni Parmigiani, Donald Rubin, Steven Scott and Bin Yu.

More information may be found at the NRC website, http://www.stat.harvard.edu/ NRC2014/ including a link to the application information page. The application deadline is March 24, 2014. Applicants who are accepted will receive information on meeting location and housing. Higher priority will be given to first-time applicants. Women and minorities are encouraged to apply. Contingent on the availability of funds, financial support for travel and accommodation may be provided. However, participants are strongly encouraged to seek partial funding from other sources.

If you have questions about the NRC, please visit the website or contact the organizers e symposia@stat.harvard.edu

The 2014 Joint Statistical Meetings (http://www.amstat.org/meetings/jsm/2014/) will be held August 2-7,

2014, at the Boston Convention and Exhibition Center, 415 Summer Street, Boston, MA 02210.

If you have submitted an abstract for JSM, you will be able to edit it online between March 31 and April 17.

JSM registration and housing reservations open May 1.



Volume 43 • Issue 2 March 2014 ISSN 1544-1881

Contact information

IMS Bulletin Editor: Anirban DasGupta

Assistant Editor: Tati Howell

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

Contact the IMS Bulletin by email:

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

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

- IMS Dues and Subscriptions Office 9650 Rockville Pike, Suite L3503A Bethesda, MD 20814-3998 USA
- **t** 877-557-4674 [toll-free in USA]
- **t** +1 216 295 5661[international]
- f +1 301 634 7099
- e staff@imstat.org

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

- Executive Director, Elyse Gustafson IMS Business Office
 PO Box 22718, Beachwood
 OH 44122, USA
- **t** 877-557-4674 [toll-free in USA]
- t +1 216 295 5661[international]
- f +1 216 295 5661
- e erg@imstat.org

Executive Committee

President: Bin Yu

president@imstat.org

President-Elect: Erwin Bolthausen

president-elect@imstat.org

Past President: Hans R. Künsch

president-past@imstat.org

Treasurer: Jean Opsomer

jopsomer@stat.colostate.edu

Program Secretary: Judith Rousseau

rousseau@ceremade.dauphine.fr

Executive Secretary: Aurore Delaigle

a.delaigle@ms.unimelb.edu.au

2 · IMS Bulletin Volume 43 · Issue 2

IMS Members' News

Susan Holmes receives \$6.2M NIH Transformative Research Award

Susan Holmes, Professor of Statistics at Stanford University and director of the Mathematical and Computational Science Program, has received a substantial NIH award. Together with David Relman, MD, she received a Transformative Research Award from the US National Institutes of Health on September 30, 2013. "These awards recognize and support the kind of creative thinking that has put Stanford on the map as the epicenter of innovation," said Lloyd Minor, MD, dean of the School of Medicine. The team will use their



Susan Holme

\$6.2 million in funding to examine the effects of perturbations in humans' microbial ecology.

Using novel statistical approaches that incorporate sparse multi-table data, this project aims to integrate the metabolic, transcriptomic and ecological community information to predict resilience in the human microbiome.

Humans have co-evolved with complex, dynamic internal microbial communities that play essential roles in nutrition, metabolism, immunity and numerous other aspects of our physiology. Exposure to antibiotics or other chemicals, as well as dietary shifts, can disturb or destabilize the microbial communities that dwell in the gut, with potentially severe and sustained negative impacts on health, including allergic disease, pathogen invasion, obesity and various chronic inflammatory disorders.

The investigators will monitor the microbial ecosystems of healthy humans before, during and after several types of planned disturbance, such as changes in diet or antibiotic administration. They will apply novel mathematical methods to the data generated from these clinical experiments and identify features associated with future stability or recovery from these disturbances, with the goal of predicting disease and restoring health. For more information, see http://med.stanford.edu/ism/2013/september/pioneer-0930.html#sthash.2OvorfPV.dpuf.

C R Rao Gallery opened in Hyderabad

The CRRao Gallery, depicting the life in statistics of C.R. Rao over a period of 65 years (40 years at the Indian Statistical Institute and 25 years in the USA, at Penn State and University of Pittsburgh) was inaugurated by Dr. V. Ramakrishnan, Nobel Laureate, FRS, Kt., at the end of the International Year of Statistics on 22 December 2013, in the C.R.Rao Advanced Institute of Mathematics, Statistics and Computer Science at Hyderabad, India. The gallery is open to the public, and aims to encourage students to do research in statistics to meet the increasing demand for statisticians for wise decision making under uncertainty in all areas of human endeavor.

Jim Pitman honored with birthday conference

David Aldous is organising a conference in celebration of former IMS President Jim Pitman's 65th birthday: Combinatorial Stochastic Processes (June 20–21, 2014, at UC San Diego, California.)

See the full announcement on page 20 or read details at the meeting's website, http://www.stat.berkeley.edu/~aldous/Pitman_Conference/

Klaus Krickeberg

IMS Fellow Klaus
Krickeberg has
been awarded an
Honorary Doctorate
by the Vietnam
National University
Ho Chi Minh-City
for contributions
to the statistical
sciences and public
health in Vietnam.



Klaus Krickeberg

 $March \cdot 2014$ IMS Bulletin · 3

IMS Members' News

Peter Hall becomes Doctor Honoris Causa in the University of Cantabria, Spain

The University of Cantabria, Spain, organized a series of events throughout 2013 to commemorate the International Year of Statistics, including a lecture series in the fall, a forthcoming book dedicated to the dissemination of statistics and its applications, and the elaboration of a series of video clips for the Spanish Statistical and Operational Research Society, SEIO.

To culminate these events, the University of Cantabria decided to award an honorary doctorate to Professor Peter Hall, University of Melbourne. Peter is well known within our community. Many of his more than 600 publications are among the most cited in the field. In addition, Peter was listed among the ten most cited scientists in Mathematics (in all reports by in-cites, http://in-cites.com/scientists/, until they stopped running in 2008). Peter Hall, an IMS Fellow and former President, has received honorary doctorates from the universities of Leuven, Glasgow and Sydney. Last year he was elected a foreign associate of the US National Academy of Sciences and an Officer of the Order of Australia. The investiture ceremony took place January 27. During his stay at the University of Cantabria, Peter gave two talks that can be viewed at http://youtu.be/TLoxdL2XRBo and http://youtu.be/1r6lGiAnf60.

University of Tampere releases newly rediscovered conference videos

The University of Tampere (in Tampere, Finland) hosted two conferences in statistics (and related matrix theory) in 1987 and 1990. The videos of these conferences have now been published on the University's YouTube channel http://www.youtube.com/playlist?list=PLqhVp oDMmrLlere4lqqEp26_MdboWUGv- (or type this shortened URL, http://goo.gl/dsUCU6)

These videos were originally recorded on VHS tapes which were "found" two years ago during a move. After that a decision was made to digitize, edit (by Jarmo Niemelä and Reijo Sund) and publish them. The programs of the conferences are available at http://people.uta. fi/~simo.puntanen/Program-1987-conference-Tampere.pdf and http://www.sis.uta.fi/tilasto/iwms/program-IWMS-1990-Tampere.pdf

This was the time before high-tech tools and it is interesting to see how well many people (George Box in particular with his magic transparencies) managed without pdf. In the videos are the following: T.W. Anderson, Elja Arjas, Anthony C. Atkinson, Jerzy K. Baksalary, George E.P. Box [below], Tadeusz Calinski, R. Dennis Cook, Knut Conradsen, Yadolah Dodge, Norman R. Draper, Johan Fellman, Stanislaw Gnot, Shanti S. Gupta, E.J. Hannan,



J.A. John, Takeaki Kariya, C.G. Khatri, Stratis Kounias, Erkki Liski, Sujit Kumar Mitra, Seppo Mustonen, Heinz Neudecker, Hannu Niemi, Leif Nordberg, Ingram Olkin, Michael Perlman, John W. Pratt, Daryl Pregibon, Friedrich Pukelsheim, Tarmo Pukkila, Simo Puntanen, C.R. Rao, Jorma Rissanen, Alastair J. Scott, Kirti R. Shah, Bimal K. Sinha, Terry Speed, J.N. Srivastava, George P.H. Styan, Timo Teräsvirta, Tue Tjur, Jarmo Visakorpi, and Mati Wax.

George E. P. Box, filmed in 1987 speaking on "Some aspects of statistical design in quality improvement," at The Second International Tampere Conference in Statistics

□ = access published papers online

IMS Journals and Publications

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

mhttp://projecteuclid.org/aos

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

mhttp://projecteuclid.org/aoas

Annals of Probability: Krzysztof Burdzy http://imstat.org/aop

nttp://projecteuclid.org/aop

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

nhttp://projecteuclid.org/aoap

Statistical Science: Peter Green

http://imstat.org/sts

http://projecteuclid.org/ss

IMS Collections

http://imstat.org/publications/imscollections.htm thtp://projecteuclid.org/imsc

OPDATED

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

IMS Co-sponsored Journals and Publications

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

mhttp://projecteuclid.org/ejs

Electronic Journal of Probability: Michel Ledoux Mhttp://ejp.ejpecp.org

Electronic Communications in Probability:
Anton Bovier

mhttp://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
© log into members' area at imstat.org

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

Probability Surveys: Laurent Saloff-Coste http://imstat.org/ps @http://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/
nttp://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
Mhttp://www.math.uni.wroc.pl/~pms

I TOPOS, and why you should care about it

Robert Adler writes in the first of a new series of columns:



To pure mathematicians, a topos is a type of category that behaves like the category of sheaves on a topological space. (I'll bet that this definition didn't help many IMS members very much. It certainly doesn't 'do it' for me!) To literary buffs, topos describes a traditional theme or motif, or a literary convention. In both cases, the source is the

Greek τοποζ, meaning 'place' although in the literary setting the term comes from κοινοζ τοποζ, literally, 'common place'. In Hebrew, the root is υσο, related to climbing or ascension.

However, in this and three more columns to come, *TOPOS* is simply an acronym for *Topology, Probability and Statistics*, and the aim of the columns will be to convince you that by exploiting the theme of TOPOS we are going to be able to ascend to a place where three disciplines are today combining to produce elegant mathematics, powerful statistical tools, and challenges galore.

For some motivational background, let's go back to the 1970s when a topologist by the name of John Tukey (yes! He was trained as a topologist, not as a statistician) introduced and fought for a statistical methodology he called *EDA* (Exploratory Data Analysis). In Tukey's own words, a short description of EDA is that

- 1. It is an attitude and
- 2. A flexibility and
- 3. Some graph paper (or transparencies, or both).

Although it seems hard to believe today, I am old enough to remember that EDA involved a serious challenge to the dominant statistical paradigms of the time, which were based almost solely on hypothesis testing and parameter estimation. The idea that one should play with data first seemed outlandish. Times have changed, and today EDA is not only an established practice, but, backed up by some very nice probability, it enjoys a solid scientific foundation and has provided grist to the mills of theoreticians of many kinds.

Times continue to change, and while Tukey's 'attitude' and 'flexibility' are as relevant today as they ever were, graph paper is hard to find, and transparencies have long since yielded to online presentations. Moreso, even if we had them on our desks, they would be next to useless for EDA-ing the large data sets that are so common today. What is arising as an EDA-like tool, however, is something known as TDA: Topological Data Analysis. Perhaps not surprisingly, given the precedent set by Tukey, TDA comes out of the world of topologists rather than the classical analysers of data, statisticians

The appearance of topology—and especially algebraic topology—as a tool for understanding real world problems is actually not

surprising. With data arriving in greater and greater numbers and, in particular, in higher and higher dimensions, we need number crunchers for the numbers and understanding for the dimensions. The people who have invested most effort over the last half century or so thinking about the structure of high-dimensional objects are algebraic topologists, and some of the braver ones have been stepping outside their homological ivory towers at the peak of pure mathematics to turn their insight and the powerful tools they have developed to non-mathematical uses.

Indeed, there has been such a significant expansion of activity in applying algebraic topology that the term *Applied Algebraic Topology* is no longer the oxymoron that it would have been a decade ago. Real applications of the techniques of algebraic topology are already appearing (in part, thanks to the enormous success of the programs *Topological Data Analysis* and *Sensor Topology of Minimalist Planning [SToMP]* funded by the US Defense Advanced Research Projects Agency (DARPA) as well as similar, but smaller, European programs).

Many of the applications in TDA are of the dimension reduction

and manifold learning type. These problems are far from new, and both statistics and computer science are awash with algorithms for doing this well and efficiently. Many of these, such as projection pursuit and principal component analysis, have lead to deep mathematical problems demanding serious statistical and probabilistic analyses, so IMS members have had a lot to do here. However, TDA adds a very novel approach to these problems. While statisticians and their friends typically like to find estimated subspaces and manifolds that are close to the truth in some standard, quantifiable distance, the proponents of TDA look for ways to construct estimates that have the right topology. An underlying theme is to get the qualitative topology does the data live on a sphere, or torus, or maybe Klein bottle (and yes, there is data that lives on a Klein bottle, but that is for a later col-

umn)—right before starting quantitative analysis. Indeed, this is very

close to Tukey's plan for EDA, but today's TDA can call on tools of computational topology that were mere pipe dreams in Tukey's day.

In cosmology and astrostatistics, the ideas of TDA have been used for both quantifying the structures behind galactic density data, and for smoothing the data itself. As in manifold learning, the ideas behind TDA-based data smoothing are quite different to the usual ones. Instead of aiming at minimising some quantifiable measure of smoothness such as the L_p norm of a gradient, the aim now becomes

to free the data of 'spurious, low level, topology', whatever this might mean.

I plan to devote three more columns to *TOPOS*, developing most of the above thoughts as well as explaining unfamiliar terms and concepts. *En passant*, I will write about my currently favourite figure (right) in which the barcodes at the bottom are highly effective EDA/TDA descriptors of the three dimensional structures at the top.

One column will be devoted to each of the topology, probability, and statistics involved in TDA.

Today, however, let me

conclude by telling you a story, which might help explain why I think statisticians and probabilists should care about TDA.

In 2010 I went to my first Applied Topology workshop. I think I was invited because of work I had done on topology and random fields, but I—like many of you might have been—was very much a statistical—probabilistic fish out of water, gasping in the air of topology, full of terms and ideas that had me floundering. I had a problem. But I am a reasonably quick learner, and it turns out that understanding the basics of algebraic topology—as opposed to breaking new ground in the area—is not all that hard (a point I want to bring home in the next column). So it was not that long until I realized that much of the problem was due not solely to my ignorance, but rather to a community of mathematicians who, to my disbelief, were analyzing data with powerful mathematical tools but with absolutely no use of modern, or even classical statistical methodology to help them. To make matters worse, very few of the speakers had absorbed the most basic statistical concepts that data is often based on a random sample

from a larger population, or contains measurement or other errors, so that intrinsic stochastic elements in what they are analyzing could have a major impact on their results.

Although this was less than four years ago, times are a'changing, and a recent IMA workshop on TDA (apparently the best-attended workshop in the IMA's history!) was preceded by a three day tutorial on probability and statistics for topologists. In addition, SAMSI has just run a workshop on TDA as part of its 2013-14 program on

Low-dimensional Structure in High Dimensional Systems, so not only is the word getting out to applied topologists that they need to think stochastically, the word is reaching statisticians that there is a new application out there that both needs their contribution and is also likely to provide them with new tools that might be the twenty-first century version of EDA.

Topologists and probabilists have also met at an AIM (American Institute of Mathematics) workshop.

So TOPOS is starting to grow. There is no question that the T needs P and S, but there is also no question that the T has

H₀
H₁
H₂
3
2
1
0
-1
-2
-3

Robert Adler likes this figure, in which the barcodes at the bottom are "highly effective EDA/TDA descriptors of the three-dimensional structures at the top". He will be writing more about this in his next columns.

tools for the *S*, and both have lots of beautiful problems for the *P*'s like me.

More next time. For those who do not want to wait, or who want something more serious than two-page machinations, here are three useful sources that will also direct you further.

- R.J. Adler, O. Bobrowski, M.S. Borman, E. Subag and S.
 Weinberger, Persistent homology for random fields and complexes. In *Borrowing Strength: Theory Powering Applications, A Festschrift for Lawrence D. Brown*, IMS Collections 6, 124–143,
- G. Carlsson. Topology and data. Bull. Am. Math. Soc. (N.S.), 46(2): 255-308, 2009.
- R. Ghrist. Barcodes: the persistent topology of data. *Bull. Am. Math. Soc.* (*N.S.*), 45(1): 61–75, 2008.

Brazilian Journal: Call for Papers

During the 17th edition of the Brazilian School of Probability (EBP), the organizers announced their wish to have a special volume of the Brazilian Journal of Probability and Statistics related to this meeting. They are now making an official announcement and call for papers.

A few words about the volume and its relation to the school:

The XVII EBP celebrated the longstanding friendship and scientific interaction between the group of mathematical physics and probability of Roma and L'Aquila and our probability group in Brazil. Since the beginning, a central role in this interaction has been played by Errico Presutti, whose leadership, determination, and generosity in promoting the discussion of various ideas has been crucial for the scientific lives of many of us, and for the development of these groups. It is for us reason of big joy and happiness that he has accepted to have this volume in his honor. We shall do our best to correspond.

The special volume will be published by the *Brazilian Journal of Probability and Statistics*, with Enza Orlandi (Roma Tre), Glauco Valle (UFRJ), and Maria E. Vares (UFRJ) as guest editors. The guest editors thank the collaboration and support of Nancy Garcia (Unicamp), editor-in-chief of BJPS.

Guidelines for authors can be found at http://imstat.org/bjps/mansub.html

The deadline for submission of papers is March 10, 2014.

Papers should be submitted by the electronic journal management system (EJMS), under the

'special volume' flag (to be created shortly). The indication of the special volume is needed to have your paper considered for this specific number of the journal. To be sure, you might also send an email message to the guest editors (e orlandi@mat.uniroma3.it, eulalia@im.ufrj.br, glauco. valle@im.ufrj.br) informing them about your submission.

The articles should be of the highest quality, and all texts will be peer refereed.

The *Brazilian Journal of Probability and Statistics* is an official publication of the Brazilian Statistical Association and is supported by the IMS. Since 2012, the journal published four issues a year, in February, May, August and December. BJPS publishes papers in applied probability, applied statistics, computational statistics, mathematical statistics, probability theory and stochastic processes. The Editor in Chief is Nancy Lopes Garcia, with Maria Eulalia Vares as Theory and Methods Editor, and Alexandra M. Schmidt as Applications Editor.

IMS Child Care Initiative: apply by June 1

The purpose of the IMS Child Care Initiative is to encourage and support the participation at IMS Annual Meetings of IMS members who have child care responsibilities. This year's meeting is in conjunction with the Australian Statistical Conference in Sydney, July 7–10.

The IMS will reimburse members 80% of the costs of privately arranged child care* (for a dependent under the age of 13) at the IMS Annual Meeting, up to a maximum of US\$250 per family. Priority will be given to those presenting papers or posters at the meeting. Not more than 40 grants may be awarded. For details, see http://imstat.org/meetings/childcare.htm

A letter requesting funds must be submitted to IMS Executive Director, Elyse Gustafson, at the IMS office (see panel on page 2 for address) by June 1. The letter should include the following:

- The member's name and email address,
- · Copy of registration, and copy of receipt for abstract submission (if applicable), and
- Projected amount of child care expenses for the time of the meeting.

After the meeting, please submit a complete receipt showing total amount of child care expenses, dates of care and names and birth dates of dependents, together with the claiming member's name and address.

*If, instead of hiring a child care provider, the member choses to bring an unpaid family member or friend to the JSM to provide child care, the IMS can reimburse 80% of the cost of their travel, up to \$250.





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"). Deadline March 1, 2014.

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

Student Puzzle Corner

The Student Puzzle for this issue is adapted from a problem by the famous mathematician George Pólya. Email us your solution.

In a house, there are six cuckoo clocks. They are showing these times 9:44, 9:46, 9:34, 9:45, 8:57 and 9:44. We want to guess the correct time μ . We have to model the problem. Here is how the six data values were generated. A subset of the six observations were generated from a normal distribution with mean μ and standard deviation $\frac{1}{30}$ (meaning 2 minutes); the rest of the six observations were generated from a Cauchy distribution with parameters μ and 1. Thus, we think that a subset of the cuckoo clocks have become a bit inaccurate, and the others have gone completely erratic. You are not told how many and which data values came from the normal distribution. Can you guess μ ? Give your answer in hours and minutes; e.g., 10.5 will mean 10:30.

We will publish the names and affiliations of the first 10 respondents who match the true μ exactly.

Last issue's correct answer

Anirban DasGupta, IMS Bulletin Editor, writes:

A correct numerical answer to the Puzzle Corner problem in the January/February issue was sent by Rico Blaser, London School of Economics. The solution uses the elegant technique of *Poissonization*. Suppose p_n is the probability that each child gets 2 or more cookies when the number of cookies to be distributed is a fixed number n. If the number of cookies to be distributed is random, having a Poisson distribution with mean λ , then X_1, X_2, \ldots, X_{10} , the number of cookies received by the ten children, become iid Poisson with mean $\frac{\lambda}{10}$. This technique of Poissonization turns the dependent multinomial cell frequencies into independent Poissons. So the probability that each child receives 2 cookies or more after Poissonization is $(1 - e^{-\lambda \lambda_{10}} - \frac{\lambda}{10} e^{-\lambda \lambda_{10}})^{10}$. On the other hand, this probability also equals $\sum_{n=0}^{\infty} \frac{e^{-\lambda} \lambda^n}{n!} p_n.$

Since two convergent power series must have identical coefficients in order to coincide on a non-empty interval, we recover p_{43} as 43! times the coefficient of λ^{43} in $e^{\lambda} \left[1 - e^{-\lambda/10} - \frac{\lambda}{10} e^{-\lambda/10}\right]^{10}$; this gives the needed probability as

Poissonization is a blessing for the applied statistician or the data miner trying to cope with seemingly impossible multinomial problems. It is clever, yet graceful. I would recommend Feller and also Sydney Port's lovely book *Theoretical Probability for Applications*. You can see a few relatively simple applications of Poissonization in Springer's *Probability for Statistics and Machine Learning*. Poissonization has been used in developing Stein approximations in complex multinomial problems; the by now classic Barbour, Holst, and Janson (Oxford, 1992), will give you a first glimpse. You can see later advances in the works of many researchers, too many to list here.



New in 2014 from Annual Reviews:

Annual Review of Statistics and Its Application

Volume 1 • Online January 2014 • http://statistics.annualreviews.org

Editor: Stephen E. Fienberg, Carnegie Mellon University

Associate Editors: Nancy Reid, University of Toronto and Stephen M. Stigler, University of Chicago

The Annual Review of Statistics and Its Application aims to inform statisticians, quantitative methodologists, and users of statistics about major methodological advances and the computational tools that allow for their implementation. It will include developments in the field of statistics, including theoretical statistical underpinnings of new methodology, as well as developments in specific application domains such as biostatistics and bioinformatics, economics, machine learning, psychology, sociology, and aspects of the physical sciences.

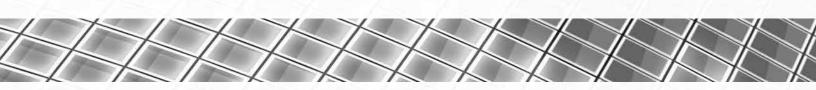
Complimentary online access to the first volume will be available for the first year.

Access this and all other Annual Reviews journals via your institution at www.annualreviews.org.

TABLE OF CONTENTS:

- What Is Statistics? Stephen E. Fienberg
- A Systematic Statistical Approach to Evaluating Evidence from Observational Studies, David Madigan, Paul E. Stang, Jesse A. Berlin, Martijn Schuemie, J. Marc Overhage, Marc A. Suchard, Bill Dumouchel, Abraham G. Hartzema, Patrick B. Ryan
- The Role of Statistics in the Discovery of a Higgs Boson, David A. van Dyk
- Brain Imaging Analysis, F. DuBois Bowman
- · Statistics and Climate, Peter Guttorp
- Climate Simulators and Climate Projections, Jonathan Rougier, Michael Goldstein
- Probabilistic Forecasting, Tilmann Gneiting, Matthias Katzfuss
- Bayesian Computational Tools, Christian P. Robert
- Bayesian Computation Via Markov Chain Monte Carlo, Radu V. Craiu, Jeffrey S. Rosenthal
- Build, Compute, Critique, Repeat: Data Analysis with Latent Variable Models, David M. Blei
- Structured Regularizers for High-Dimensional Problems: Statistical and Computational Issues, Martin J. Wainwright
- High-Dimensional Statistics with a View Toward Applications in Biology, Peter Bühlmann, Markus Kalisch, Lukas Meier

- Next-Generation Statistical Genetics: Modeling, Penalization, and Optimization in High-Dimensional Data, Kenneth Lange, Jeanette C. Papp, Janet S. Sinsheimer, Eric M. Sobel
- Breaking Bad: Two Decades of Life-Course Data Analysis in Criminology, Developmental Psychology, and Beyond, Elena A. Erosheva, Ross L. Matsueda, Donatello Telesca
- · Event History Analysis, Niels Keiding
- Statistical Evaluation of Forensic DNA Profile Evidence, Christopher D. Steele, David J. Balding
- Using League Table Rankings in Public Policy Formation: Statistical Issues, Harvey Goldstein
- Statistical Ecology, Ruth King
- Estimating the Number of Species in Microbial Diversity Studies, John Bunge, Amy Willis, Fiona Walsh
- Dynamic Treatment Regimes, Bibhas Chakraborty, Susan A. Murphy
- Statistics and Related Topics in Single-Molecule Biophysics, Hong Qian, S.C. Kou
- Statistics and Quantitative Risk Management for Banking and Insurance, Paul Embrechts, Marius Hofert







Vlada's Point: The Introduction

Another of our new Contributing Editors is Vlada Limic, Centre national de la recherche scientifique, Paris. She introduces her new column series, Vlada's Point:

ost of my contributions here will be devoted to topics in communication. More precisely, I am interested in criticizing several aspects of our scientific communication, and especially those that could be much improved with a little (or perhaps with a bit more) joint effort.

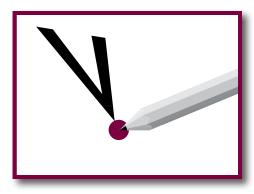
As the name of the column suggests, it is my point of view that will be predominantly given. Due to numerous sporadic yet frank discussions with colleagues of varying age and stature, I am convinced that my opinions are typically shared, admittedly not always by the majority. Your feedback (preferably in writing) will be always much appreciated, regardless of your standpoint, and I intend to repeatedly remind you of this fact. Moreover, I will happily include in my column any of your constructive remarks (either verbatim or altered in the way we would both find acceptable) on any of my preferred topics, and possibly even on a related topic that I would not otherwise address.

Before presenting my first case, I wish to introduce (or recall) a communication tool, which is not widely known in our community but seems quite useful. I learned of it only recently, from a group of elementary and high schools teachers that work in the big city nearby. They were concerned about an increase of (various forms of) violence in their respective schools, and advocated the use of Nonviolent Communication (popularly abbreviated by NVC, or by CNV in French) in and out of classroom. The four components or steps of NVC are very simple to remember, especially with body cues that I am about to share, and also quite simple to put in practice. If you wish to read more

about it, Wikipedia is a good place to start. The order of the four steps is apparently not important, however it is important to include them all as part of one's NVC statement. The reader will likely note that these are quite natural, and undoubtedly frequently implemented in conflicts (of opinions, interests etc.). However, presenting all the components to the opposing side in a unified statement is an essential part of the NVC, and possibly the main reason why it is advocated as a good tool for conflict resolution.

In short, an NVC statement consists of: describing the present situation in a *pure facts* (body cue: *head*) format, then separately expressing one's own *feelings* (body cue: *chest*) resulting from this state or condition, then again separately expressing one's *needs* (body cue: *stomach*) that are not being satisfied, thus leading to the current discord. The final step is possibly the most demanding on the maker of the NVC statement. They need to propose an *action* or a chain of *actions* (body cue: *legs*) that would make them happy (i.e. resolve the discord).

So far so good, but what happens if the other side is not listening, or if they simply hear things differently? Here is a variation of the technique that should accommodate this possibility. Suppose for simplicity that there are two people (person A and person B) in strong disagreement over something. One of them, say person A, starts with their NVC statement. Ideally they should be able to finish it without being interrupted. Then the listener (the opponent, person B) repeats what person A just said. It is important that this repeating is done as closely as possible to the original statement—rewording may lead to additional misunderstanding or manipulation—regardless of B's thoughts or feelings on the matter. Person B will anyhow shortly be given an opportunity to describe the same situation in their own words from



their own perspective. It may be easier to do this exchange (from person A to person B) for each of the four components separately, meaning for example that person A states the facts, and person B repeats this statement, then person A describes their feelings, and person B repeats this description, and so on. After this is completed, person B is offered to make their own NVC statement on this issue, and now person A takes the active listener role, committed to repeat what they hear.

Provided sanity, honesty and basic good will exist on both sides, by practicing over and over if necessary these two people are bound to reach an agreement that improves their joint situation. Try it yourselves, and you shall see! Our professional and private lives are undoubtedly filled with various opportunities for practicing NVC.

My space here is running out. At least I have room to announce my next topic of interest: the Workshop. The typeface is modified on purpose to indicate the way in which I critically view it as an institution.

Next time I intend to explain in detail my profound disappointment with a typical representative (unfortunately, typical = overwhelming majority here) of this scientific meeting format. Then I will present (possibly in the subsequent issue) an idea of how the Workshop could be organized. The latter point is more than an idea! In fact, it concerns a project that I have strongly wished to make happen for some time...

I Project Euclid launches new website

One of the key benefits of IMS membership is free electronic access to all IMS journals, via Project Euclid (http://projecteuclid. org/). David Ruddy, Director of Scholarly Communications Services at Cornell University Library, describes the great new features in the redesigned Project Euclid website:

Project Euclid launched a new website in early January. Planning, design, and development of the site took place over 18 months, and included discussions with numerous researchers, publishers, and librarians. The new site maintains what people liked about the previous site, its performance and clean appearance, while incorporating many new tools and features.

Project Euclid is a not-for-profit, academically owned and operated initiative that provides electronic hosting, marketing, and sales services to publishers of mathematics and statistics literature. The IMS has partnered with Project Euclid since 2000 to host many of its own publications as well as those of allied societies. Project Euclid has been jointly operated by Cornell University Library and Duke University Press since 2008. It currently hosts some 80 international publications, most of which are journals but with a growing book and conference series component.

What are the new features of the redesigned Project Euclid website?

A new search and discovery tool. With this version of the website, Project Euclid has introduced "faceted searching." This search technology will be familiar to many users of commercial websites and can be characterized as a blend of search and browse. By applying or removing filters to search results, users can progressively refine their searches, focusing on the content most related to their interests. This technology is increasingly being implemented in academic libraries, and its use in Project Euclid represents a powerful new tool for navigating over 1.7 million pages of scholarship.

Table of contents (TOC) alerts. Project Euclid has offered RSS alerting services for several years, but users can now register to receive an email with the table of contents of a journal issue when that issue appears on the website. Users manage their TOC alerts through personal MyEuclid accounts, easily created by anyone.

Citation export. On TOC and search results pages, users may select one or more articles and export citation information in BibTeX, RIS, or a printer-ready format. RIS is a bibliographic format that many citation management tools are capable of importing (e.g., EndNote, Ref Works, Zotero, and others).

Mobile interface. The new website implements responsive design, which automatically optimizes the site appropriately for a variety of mobile devices. This allows users to read and work on Project Euclid

more comfortably and effectively as they access content from multiple devices.

Top downloads. We now display a list of top downloaded documents on a number of Project Euclid pages. The lists are calculated in the same manner throughout the site: the top five downloaded articles or chapters over the previous seven days. These lists attempt to give some sense of user download trends and are recalculated every day. Any particular list displayed is appropriate for the viewer's context within the website. On a journal home page, the top downloads are all from that journal. On a publisher's page, they could be from any publication of that publisher. On the Project Euclid home page, the top downloads are measured across all content in the system.

"More like this." When a user views an article or chapter page, Project Euclid presents a list of similar documents, using the viewed item as the basis for evaluating similarity.

Other changes and added features to the new Project Euclid website include: wider implementation of MathJax (a display technology for mathematical expressions); branded publisher landing pages; links to social media; access indicators for all content; extended print-on-demand offerings; and remote login (via Shibboleth), for off-campus access.

Project Euclid welcomes your feedback on the new site and suggestions for further improvement. All pages have a "site feedback" link in the lower right.

The Institute of Mathematical Statistics

Publications

Arms of Agend Statistics and proteolity. The Institute ourselfly has about 4,000 membrors in all parts of the word.

Publications

Arms of Agend Statistics

Arms of Producting Publications

Arms of Producting

Contracts Surveys

Arms of Producting

Arms of Producting

Arms of Producting

Contracts Surveys

Arms of Producting

Arms of Producting

Arms of Producting

Contracts Surveys

Arms of Producting

Arms of Producting

Contracts Surveys

Contracts Surveys

Arms of Surveys

Contracts Surveys

Contracts Surveys

Contracts Surveys

Contracts Surveys

Contracts Surveys

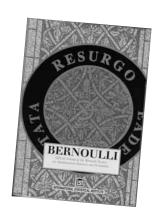
Contracts Sur

A screenshot of the new Project Euclid website's publisher page for IMS publications

I Recent papers

Bernoulli Volume 20, issue 1: February 2014

Bernoulli is published by the Bernoulli Society for Mathematical Statistics and Probability and disseminated by the Institute of Mathematical Statistics on behalf of the Bernoulli Society. The journal provides a comprehensive account of important developments in the fields of statistics and probability, offering an international forum for both theoretical and applied work.



Access papers at http://projecteuclid.org/bj

On the local approximation of mean densities of random closed sets	
Gaussian semiparametric estimates on the unit sphere	. CLAUDIO DURASTANTI, XIAOHONG LAN AND DOMENICO MARINUCCI; 28-77
Nonparametric specification for non-stationary time series regression	ZHOU ZHOU; 78-108
Calibration of self-decomposable Lévy models	MATHIAS TRABS; 109-140
Efficient semiparametric estimation in generalized partially linear additive models for longitudinal/clustered data	
Estimating spatial quantile regression with functional coefficients: A robust semiparametric framework	
Bridges of Lévy processes conditioned to stay positive	GERÓNIMO URIBE BRAVO; 190-206
Uniform convergence rates for a class of martingales with application in non-linear cointegrating regression	QIYING WANG AND NIGEL CHAN; 207-230
Chernoff's density is log-concave.	
Strengthened Chernoff-type variance bounds	
Small noise asymptotics and first passage times of integrated Ornstein—Uhlenbeck processes driven by α-stable Lévy	y processes ROBERT HINTZE AND ILYA PAVLYUKEVICH; 265–281
Noisy low-rank matrix completion with general sampling distribution	OLGA KLOPP; 282-303
Testing over a continuum of null hypotheses with False Discovery Rate control	GILLES BLANCHARD, SYLVAIN DELATTRE AND ETIENNE ROQUAIN; 304-333
Estimating the scaling function of multifractal measures and multifractal random walks using ratios	
Small value probabilities for supercritical branching processes with immigration	

Statistics Surveys Volume 7, 2013

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

Access papers at http://projecteuclid.org/ssu

I Recent Papers

Electronic Journal of Probability Volume 19, 2013

The Electronic Journal of Probability (EJP) publishes full-length research articles in probability theory. Short papers, those less than 12 pages, should be submitted first to its sister journal, the Electronic Communications in Probability (ECP—see below). EJP and ECP share the same editorial board, but with different Editors in Chief. EJP and ECP are free access official journals of IMS and the Bernoulli Society. Access papers at http://ejp.ejpecp.org/

2. Local limits of conditioned Galton-Watson trees: the infinite spine caseROMAIN ABRAHAM, JEAN-FRANÇOIS DELMAS3. A Gaussian limit process for optimal FIND algorithmsHENNING SULZBACH, RALPH NEININGER, MICHAEL DRMOTA4. Tricolor percolation and random paths in 3DSCOTT SHEFFIELD, ARIEL YADIN5. Stochastic domination and comb percolationALEXANDER E HOLROYD, JAMES B MARTIN6. On the Eve property for CSBPTHOMAS DUQUESNE, CYRIL LABBÉ7. Markov chain approximations for transition densities of Lévy processesALEKSANDAR MIJATOVIC, MATIJA VIDMAR, SAUL JACKA8. A forest-fire model on the upper half-planeROBERT GRAF9. Strong approximation of the empirical distribution function for absolutely regular sequences in RdJÉRÔME DEDECKER, EMMANUEL RIO, FLORENCE MERLEVÈDE10. Integral and local limit theorems for level crossings of diffusions and the Skorohod problemRAFAŁ MARCIN ŁOCHOWSKI, RAOUF GHOMRASNI11. Second quantisation for skew convolution products of measures in Banach spacesDAVID APPLEBAUM, JAN VAN NEERVEN12. Stochastic flows on metric graphsHATEM HAJRI, OLIVIER RAIMOND13. Bootstrap percolation on Galton-Watson treesBÉLA BOLLOBÁS, KAREN GUNDERSON, CECILIA HOLMGREN, SVANTE JANSON, MICHAŁ PRZYKUCKI14. Synchronization for discrete mean-field rotatorsBENEDIKT JAHNEL, CHRISTOF KÜLSKE15. Scale-invariant random spatial networksDAVID ALDOUS16. Comparing Fréchet and positive stable lawsTHOMAS SIMON17. A lower bound for disconnection by random interlacementsXINYI LI, ALAIN-SOL SZNITMAN18. The extremal process of two-speed branching Brownian motionANTON BOVIER, LISA BÄRBEL HARTUNG
4. Tricolor percolation and random paths in 3D
5. Stochastic domination and comb percolation 6. On the Eve property for CSBP 7. Markov chain approximations for transition densities of Lévy processes 7. Markov chain approximations for transition densities of Lévy processes 8. A forest-fire model on the upper half-plane 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd 9. Strong approximation of the empirica
6. On the Eve property for CSBP. 7. Markov chain approximations for transition densities of Lévy processes. 8. A forest-fire model on the upper half-plane. 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd. 9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd. 10. Integral and local limit theorems for level crossings of diffusions and the Skorohod problem. 11. Second quantisation for skew convolution products of measures in Banach spaces. 12. Stochastic flows on metric graphs. 13. Bootstrap percolation on Galton-Watson trees. 14. Synchronization for discrete mean-field rotators. 15. Scale-invariant random spatial networks. 16. Comparing Fréchet and positive stable laws. 17. A lower bound for disconnection by random interlacements. 18. The extremal process of two-speed branching Brownian motion. ANTON BOVIER, LISA BÄRBEL HARTUNG
7. Markov chain approximations for transition densities of Lévy processes
8. A forest-fire model on the upper half-plane
9. Strong approximation of the empirical distribution function for absolutely regular sequences in Rd JÉRÔME DEDECKER, EMMANUEL RIO, FLORENCE MERLEVÈDE 10. Integral and local limit theorems for level crossings of diffusions and the Skorohod problem RAFAŁ MARCIN ŁOCHOWSKI, RAOUF GHOMRASNI 11. Second quantisation for skew convolution products of measures in Banach spaces DAVID APPLEBAUM, JAN VAN NEERVEN 12. Stochastic flows on metric graphs
10. Integral and local limit theorems for level crossings of diffusions and the Skorohod problemRAFAŁ MARCIN ŁOCHOWSKI, RAOUF GHOMRASNI11. Second quantisation for skew convolution products of measures in Banach spacesDAVID APPLEBAUM, JAN VAN NEERVEN12. Stochastic flows on metric graphs HATEM HAJRI, OLIVIER RAIMOND13. Bootstrap percolation on Galton-Watson treesBÉLA BOLLOBÁS, KAREN GUNDERSON, CECILIA HOLMGREN, SVANTE JANSON, MICHAŁ PRZYKUCKI14. Synchronization for discrete mean-field rotatorsBENEDIKT JAHNEL, CHRISTOF KÜLSKE15. Scale-invariant random spatial networks DAVID ALDOUS16. Comparing Fréchet and positive stable laws THOMAS SIMON17. A lower bound for disconnection by random interlacements XINYI LI, ALAIN-SOL SZNITMAN18. The extremal process of two-speed branching Brownian motionANTON BOVIER, LISA BÄRBEL HARTUNG
11. Second quantisation for skew convolution products of measures in Banach spacesDAVID APPLEBAUM, JAN VAN NEERVEN12. Stochastic flows on metric graphs
12. Stochastic flows on metric graphs
13. Bootstrap percolation on Galton-Watson treesBÉLA BOLLOBÁS, KAREN GUNDERSON, CECILIA HOLMGREN, SVANTE JANSON, MICHAŁ PRZYKUCKI14. Synchronization for discrete mean-field rotatorsBENEDIKT JAHNEL, CHRISTOF KÜLSKE15. Scale-invariant random spatial networksDAVID ALDOUS16. Comparing Fréchet and positive stable lawsTHOMAS SIMON17. A lower bound for disconnection by random interlacementsXINYI LI, ALAIN-SOL SZNITMAN18. The extremal process of two-speed branching Brownian motionANTON BOVIER, LISA BÄRBEL HARTUNG
14. Synchronization for discrete mean-field rotatorsBENEDIKT JAHNEL, CHRISTOF KÜLSKE15. Scale-invariant random spatial networksDAVID ALDOUS16. Comparing Fréchet and positive stable lawsTHOMAS SIMON17. A lower bound for disconnection by random interlacementsXINYI LI, ALAIN-SOL SZNITMAN18. The extremal process of two-speed branching Brownian motionANTON BOVIER, LISA BÄRBEL HARTUNG
15. Scale-invariant random spatial networks.DAVID ALDOUS16. Comparing Fréchet and positive stable laws.THOMAS SIMON17. A lower bound for disconnection by random interlacements.XINYI LI, ALAIN-SOL SZNITMAN18. The extremal process of two-speed branching Brownian motion.ANTON BOVIER, LISA BÄRBEL HARTUNG
16. Comparing Fréchet and positive stable lawsTHOMAS SIMON17. A lower bound for disconnection by random interlacementsXINYI LI, ALAIN-SOL SZNITMAN18. The extremal process of two-speed branching Brownian motionANTON BOVIER, LISA BÄRBEL HARTUNG
17. A lower bound for disconnection by random interlacementsXINYI LI, ALAIN-SOL SZNITMAN18. The extremal process of two-speed branching Brownian motionANTON BOVIER, LISA BÄRBEL HARTUNG
18. The extremal process of two-speed branching Brownian motion
10 Further results on consensus formation in the Deffuant model OLLE HÄGGSTRÖM, TIMO HIRSCHER
Type different constraints of constraints of the second of
20. Extinction probability and total progeny of predator-prey dynamics on infinite trees

Electronic Communications in Probability Volume 19, 2013

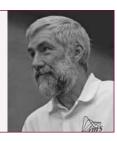
The *Electronic Communications in Probability (ECP)* publishes short research articles in probability theory. Its sister journal, the *Electronic Journal of Probability* (see above), publishes full-length articles in probability theory.

Access papers at http://ecp.ejpecp.org/

1. On uniform positivity of transition densities of small noise constrained diffusions	
2. On the large deviations for Engel's, Sylvester's series and Cantor's products	LINGJIONG ZHU
3. A quenched functional central limit theorem for planar random walks in random sceneries	NADINE GUILLOTIN-PLANTARD, JULIEN POISAT, RENATO SOARES DOS SANTOS
4. Largest eigenvalues and eigenvectors of band or sparse random matrices	FLORENT BENAYCH-GEORGES, SANDRINE PÉCHÉ
5. Asymptotics of the probability distributions of the first hitting times of Bessel processes	
6. Protected nodes and fringe subtrees in some random trees	LUC DEVROYE, SVANTE JANSON
7. On the spectral properties of a class of H-selfadjoint random matrices and the underlying combinatorics	MICHAL WOJTYLAK, PATRYK PAGACZ

I Terence's Stuff: Give Industry a Chance

All Terry Speed is saying is, "Give industry a chance"... If you are in academia, as most IMS members are, have you considered alternative careers?



hat do people promoting data science and big data want that we statisticians do not seem to have? Why do so few PhD candidates build their theses around a specific application? Why do so many of our PhD grads want to be professors? Why don't more PhD students in statistics do internships with industry over their summers? Nothing is simple with questions like these, so my initial answers to these questions are bound to be simplistic, probably wrong-headed, and definitely tendentious, but let me give them anyway.

One thing I notice about discussions of data science and big data is that they are invariably in the context of specific application areas. Global change, brain signals, earthquake signals, supernovae, social unrest, traffic accidents and smart thermostats are all named on the website of the Berkeley Institute of Data Sciences, part of a three campus \$38M initiative launched by the White House in November last year, to be housed in the University Library at Berkeley. One thing I notice about discussions of mathematical statistics is that they are rarely in the context of a specific application area.

Recently I talked to participants in a Mathematics in Industry Study Group (MISG) and to students at an Industry Doctoral Training Centre (IDTC), both in Australia; to postdocs at a US academic institution who are struggling to maintain—not to mention further—their careers there; and to a scientist from a small, successful US company keen to employ statisticians or statistics interns. I found some common themes in our discussions, including the

perennial "applied"-vs-applied, and academiavs-industry divisions. There was also a general feeling that these issues do not get as fully discussed as they should in academia, where most of us reside.

When writing about factors motivating the first Australian Mathematics in Industry Study Group, 30 years ago, one of the organizers remarked that he had attended an applied mathematics conference at which just two or three of the 120 delegates were from industry, and only about 20 out of 56 talks had specific applications in mind, i.e. were really *applied*. In part, the MISG was started to change this, and it has been very successful. I wonder what proportion of the statistics talks at a typical IMS conference are *applied*, in the preceding sense, and whether we need an initiative to change this? My feeling is: possibly.

How would they like a job, I asked them, which didn't require applying for

grants, which permitted them to work

reasonable hours, paid well, and was

enjoyable, challenging and fulfilling?

Sounds good, was the response.

The Industry
Doctoral Training
Centre seeks to bring
together an industrial problem and
an industry sponsor
with a PhD student
and an academic

advisor. This seemed a wonderful program: industry gets problems solved, while the students not only get something with direct real-world value to work on for their PhD, they develop communication, teamwork and leadership skills, as well as immersing themselves in the subject matter of their problem. I heard that finding industrial problems and students wanting to work on them was not as hard as finding suitable academic advisors.

Chatting with people, some of whom were on their second or third postdoc, about the difficulty of getting research grants or tenure-track academic jobs, I couldn't resist asking them how seriously they had considered other careers. How would they like a job, I asked them, which didn't require

applying for grants, which permitted them to work reasonable hours, paid well, and was enjoyable, challenging and fulfilling? Sounds good, was the response. There are plenty of such jobs outside academia, I told them. They freely conceded their value system had probably been skewed by their long sojourn in academia, and by their respect and admiration for their advisors, and that their belief that academic jobs were the best by far was not necessarily based on complete information. It's my impression, I told them, that professors are very good at helping students develop into people like themselves, often many more than could reasonably have a career like them, even if that was desirable, but less good at pointing to or promoting alternative careers. That, I said was up to them to explore. In a better world, their advisors would be well informed and be able

to discuss a broader range of futures with them.

What should be done? Stat department chairs could establish or strengthen existing

links with industry, strongly encourage all grad students to take summer internships, ensure that they all know about careers outside academia, arrange adjunct appointments for interested and suitably qualified people from industry, and encourage their faculty to become involved with industry as well, for example via sabbaticals or summer internships. Then we might hope to see more grad students working on statistical problems from industry for their PhD research, something which would serve the triple purpose of solving an applied problem of real interest and perhaps importance, familiarizing themselves with a field other than statistics, and broadening their career opportunities.

Win, win, win.

OBITUARY: Marc Yor

1949-2014

MARC YOR, one of the most distinguished probabilists in the world in recent decades, died suddenly on January 9, 2014, near his home in St. Chéron, France, at the age of 64. He was born on 24 July 1949, in Brétigny-sur-Orge, France. After studying at the École normale supérieure de Cachan, with thesis work under the supervision of Pierre Priouret, he quickly became a researcher at the French Centre National de la Recherche Scientifique (CNRS), then, in 1981, a professor at the Université Pierre et Marie Curie, where he remained until his retirement on January 1, 2014.

Marc Yor is world-renowned as a prolific researcher in the theory of probability and stochastic processes. He wrote over 400 research articles and ten research monographs. Most of the research articles and several of the monographs were written jointly with one or more coauthors from a list of over 100 collaborators from all over the world (see zbmath.org/authors) including many of the most prominent probabilists of the era. During the 1980s and 1990s, Marc Yor largely took over from Paul-André Meyer the mantle of responsibility for development of research in probability in France. He was an influential editor of the Séminaire de Probabilités, founded by Meyer in 1967, over a span of 25 years. In this capacity he set a new tone for the Séminaire as a diverse compendium of contemporary research in probability, with a focus on work done in France, but also welcoming contributions from abroad. He also did extensive editorial work for several major probability journals, including the Annals of Probability and Probability Surveys. He played an irreplacable role in welcoming the best mathematics students interested in probability and engaging them in research, advising over 30 theses during his career as university professor. A large number of these students went on to be researchers at the CNRS or professors in France and other countries. Without him, the recent successes of the French probability school, most notably the Fields Medal of his 'grandstudent' Wendelin Werner in 2006, would most likely never have been achieved.

Marc Yor's research covered many aspects of the modern theory of probability, but he became most celebrated internationally for his applications of stochastic calculus. Stochastic calculus was born from the work of the great Japanese mathematician Kiyoshi Itô in the 1940s. It was developed by other mathematicians in the 1960s, most notably in France under the influence of Meyer, in what has become known as the Strasbourg School. But it was the work of Marc Yor which most fully demonstrated the potential of this mathematical tool. In his hands, stochastic calculus became a power tool for computing features of the probability laws associated with all kinds of stochastic processes. Marc Yor became acknowledged internationally

as an extraordinarily talented user of stochastic calculus in combination with other powerful tools of analysis including Fourier and Laplace transforms, which he deployed in virtuoso



Marc Yor speaking at a self-similarity conference in 2009

displays of computational technique.

Among stochastic processes, the one he cherished the most was Brownian motion. Following the works of Paul Lévy, whom he greatly admired, Marc Yor wrote a number of famous articles about Brownian motion, which have inspired and continue to inspire generations of researchers. His deep study of local time processes of Brownian motion and continuous semimartingales, the Ray–Knight theorems and related properties of Bessel processes, and the windings of planar Brownian motion, stand out in this respect. His work on these topics made him well known in all corners of the world, where he was always eager to travel, both for short meetings and for longer stays, to share his ideas and mathematical discoveries. Other topics which he developed extensively include enlargement of filtrations, intersection local times, exponential functionals of Brownian motion and Lévy processes, and penalizations.

In addition to his hundreds of articles, Marc Yor was the author of a number of research monographs. Amongst these, his monograph with Daniel Revuz, *Continuous martingales and Brownian motion*, based on the DEA courses given by Marc Yor in the early 1980s, is by far the most well known. This work has been phenomenally successful for a mathematical research monograph. It provided great exercises for training the next generation of probabilists, in France and many other countries, as well as a basis for applications in financial mathematics. In the last part of his career, Marc Yor was interested in this domain, not because of any particular attraction to finance (he was later concerned about the responsibility of mathematicians in the financial crisis) but because he saw a vast field of application for the techniques of stochastic calculus which he had mastered so well.

Throughout his career, Marc Yor's work exemplified the highest standards of scholarship and respect for the history of probability and related fields. He wrote extensively and organized meetings around the history of probability, especially the work of Bachelier, Kolmogorov, Doeblin, Doob, Lévy, Itô and Meyer.

Marc Yor received a number of scientific distinctions: the Humboldt Prize, the Montyon Prize of the French Academy of Sciences in 1986, and the Ordre National du Mérite by the French Republic. He was elected correspondent to the French Academy of Sciences in 1997, then member in 2003. He was also a senior member of the Institut Universitaire de France since 2004.

I IMS-ASC 2014 meeting: Sydney, Australia

Australian Statistical Conference in Conjunction with the IMS Annual Meeting July 7–10, 2014, Sydney, Australia

w http://www.ims-asc2014.com/

On behalf of the **Statistical Society of Australia** and the **Institute of Mathematical Statistics**, the organising committee invite you to attend the joint Australian Statistical Conference & IMS Annual Meeting, to be held 7–10 July, 2014, at the Australian Technology Park in Sydney, Australia.

Early Bird Registration ends 28 February 2014: save A\$125!

Don't miss out on this valuable opportunity to network with colleagues and learn from the impressive line-up of international and Australian experts. Register your attendance now, before you miss out on this generous early bird rate.

IMS Keynote Speakers:

Wald Lecturer: Thomas G. Kurtz, University of Wisconsin-Madison

Neyman Lecturer: Peter Donnelly, University of Oxford **Schramm Lecturer:** Terry Lyons, University of Oxford

Medallion Lecturers: Nina Gantert, Technische Universität München; Martin Hairer, University of Warwick; Timo Seppäläinen, University of Wisconsin–Madison; Matthew Stephens, University of Chicago; Harrison Zhou, Yale University

ASC Keynote Speakers: James Brown, University of Technology; Adrian Baddeley, CSIRO/University of Western Australia; Sheila Bird, Cambridge University; Terry Speed, University of California/Walter & Eliza Hall Institute of Medical Research

Preliminary Program

Since abstract submission closed late last year the program committee have been eagerly put-

ting together an exciting line up of papers and speakers. The preliminary program outlines the key themes that will be addressed and a broad structure for the 4 day conference.

You can view the Preliminary Program at http://www.ims-asc2014.com/program/ Please note this is work in progress and subject to change, the full program will be available in the next few weeks.

Satellite Events

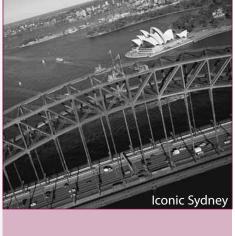
A series of pre- and post-conference workshops will support the conference. Early booking is recommended. See http://www.ims-asc2014.com/asc-2014-satellite-events/ for more information.

Why come to Sydney?

Sydney, Australia's gateway city and the capital of New South Wales is built around one of the largest, most beautiful harbours in the world with plenty to see and do during your time here. Sydney is a vigorous, cosmopolitan city, a major industrial, business and commercial centre and is endlessly fascinating in its variety and its beauty.

Marc Yor, 1949–2014 *continued from previous page*

Two words which best describe Marc Yor's scientific personality are, without doubt, enthusiasm and generosity. Enthusiasm, because he knew so well how to communicate his taste for research and to share the joy of discovery of new theorems and formulas. Generosity, because he helped so many young researchers, publishing with them numerous research articles which everyone knew he had essentially written himself, but for which he was always happy to share the credit.



Early-bird registration February 28

You can register now for the meeting (the early bird registration deadline is February 28) with or without lunches. As an IMS member you receive a discount on registration rates: see

www.ims-asc2014.com/ registration-page/

Beyond mathematics, Marc Yor was a talented soccer player, who played competitively for many years, then coached youth teams in his community with the same dedication he showed in training of mathematicians. He was devoted to his family, and is survived by his wife Carmel, son Serge and two daughters Kathleen and Geraldine.

Written by Jean-François Le Gall and Jim Pitman, with thanks to Jean Bertoin for his advice.

I IMS meetings around the world

IMS co-sponsored meeting

Frontiers of Hierarchical Modeling in Observational Studies, Complex Surveys and Big Data Conference Honoring Professor Malay Ghosh

May 29-31, 2014

University of Maryland, College Park, USA

w http://www.jpsm.umd.edu/ghosh

IMS Representative on Program Committees: Gauri S. Datta
Invited speakers: William R. Bell, Jim Berger, Nikolay Bliznyuk, Sudip Bose, Brad Carlin,
Sanjay Chaudhuri, Ming-Hui Chen, Cynthia Clark, Bertrand Clarke, Mike Daniels, Anirban
DasGupta, Dipak Dey, Hani Doss, Robert E. Fay, Ralph Folsom, D.A.S. Fraser, Edward
George, Jayanta Ghosh, Peter Hall, Jim Hobert, Myron Katzoff, Kshitij Khare, Rod Little,
Thomas Louis, Bani Mallick, Glen Meeden, Isabel Molina, Domingo Morales, Carl Morris,
Rahul Mukherjee, Nitis Mukhopadhyay, Ralf Munnich, Danny Pfeffermann, J.N.K. Rao,
Nancy Reid, Christian P. Robert, Judith Rousseau, Sanat Sarkar, Nathaniel Schenker, Joseph
Sedransk, Pranab Sen, Thomas Severini, Bimal Sinha, Bikas Sinha, Cidambi Srinivasan, Muni
S. Srivastava, Dongchu Sun, Changboo Wu, Zhihua Xu, James Zidek

IMS co-sponsored meeting

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

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.

At a glance:

forthcoming IMS Annual Meeting and JSM dates

2014

IMS Annual Meeting:

Sydney, Australia, July 7–10, 2014 ims-asc2014.com

JSM: Boston, MA, August 2-7, 2014

2015

IMS Annual Meeting

@ JSM: Seattle, WA, August 8–13, 2015

2016

IMS Annual Meeting:

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

IMS sponsored meeting

JSM 2014: August 2-7, 2014, Boston, USA

w http://amstat.org/meetings/jsm/2014/

JSM Program Chair: Jean Opsomer, Colorado State University. IMS Invited Program chair: Nancy Reid, University of Toronto. IMS Contributed Program chair: Bertrand Clark, University of Nebraska–Lincoln.

Abstract submission opens December 3 (see key dates below).

Key dates:

December 3, 2013–February 3, 2014: Online submission of abstracts, invited posters, introductory overview lectures, topic and regular contributed abstracts

March 31-April 17, 2014: Online Abstract Editing Open

May 1, 2014: Registration & Housing Open (early-bird registration deadline May 29; housing deadline July 2)

Joint Statistical Meetings dates, 2015–2018

IMS sponsored meeting

IMS Annual Meeting @ JSM 2015: August 8–13, 2015 Seattle, WA, USA

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

IMS sponsored meeting

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

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

IMS sponsored meeting

IMS Annual Meeting @ JSM 2017: July 29—August 3, 2017 Baltimore, MD, USA

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

IMS sponsored meeting

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

IMS sponsored meeting

IMS Annual Meeting @ JSM 2019: July 27–August 1, 2019, Denver, CO

IMS sponsored meeting

JSM 2020 August 1–6, 2020 Philadelphia, PA

IMS co-sponsored meeting

16th IMS New Researchers Conference Harvard University, Cambridge, Massachusetts July 31–August 2, 2014

UPDATED

w http://www.stat.harvard.edu/NRC2014/

The 16th IMS New Researchers Conference is an annual meeting organized under the auspices of the IMS, and jointly sponsored this year by the National Science Foundation (NSF), the Office of Naval Research (ONR), and other federal agencies and industry sponsors. The conference is hosted by the Department of Statistics at Harvard and will be held just prior to the 2014 Joint Statistical Meetings in Boston.

The purpose of the conference is to promote interaction and networking among new researchers in probability and statistics. Any young researcher who has received a Ph.D. on or after 2009, or expects to defend his or her thesis by the end of 2014, is eligible to attend. Due to limited space, participation is by invitation only.

Confirmed participants include Edo Airoldi, Stephen Fienberg, Peter Hall, Michael Jordan, Alan Karr, Jun Liu, Xiao-Li Meng, Susan Murphy, Giovanni Parmigiani, Donald Rubin, Steven Scott and Bin Yu.

More information may be found at http://www.stat.harvard.edu/NRC2014/, including a link to the application information page. Application deadline is March 24, 2014.

Applicants who are accepted will receive information on meeting location and housing.

Higher priority will be given to first-time applicants. Women and minorities are encouraged to apply. Contingent on the availability of funds, financial support for travel and accommodation may be provided. However, participants are strongly encouraged to seek partial funding from other sources.

Contact e symposia@stat.harvard.edu

IMS co-sponsored meeting

XIII CLAPEM: Congreso Latino-americano de Probabilidad y Estadística Matemática September 22–26, 2014 Cartagena de Indias, Colombia

w http://www.clapem.unal.edu.co/

IMS Rep: David Aldous, Berkeley.

The Latin American Congress on Probability and Mathematical Statistics (CLAPEM, by its initials in Spanish) will be holding its 13th edition in Cartagena de Indias, Colombia, September 22–26, 2014. CLAPEM is the largest event in Probability and Statistics of the Latin American region and has been held every two/three years in different countries of the region since 1980.

The XIII CLAPEM will include three short courses, six plenary conferences, eighteen thematic sessions, contributed talk sessions and poster sessions.

Short courses by Bin Yu, Department of Statistics, University of California, Berkeley, USA; Alison Etheridge, Department of Statistics, University of Oxford, UK; and Paul Embrechts, Department of Mathematics, ETH Zurich, Switzerland.

Plenary speakers: Gerard Biau, Université Pierre et Marie Curie, France; Sourav Chatterjee, Courant Institute of Mathematical Sciences, USA; Carenne Ludeña, Universidad Central de Venezuela; Thomas Mikosch, University of Copenhagen, Denmark; Roberto Imbuzeiro Oliveira, IMPA, Brazil; and Victor Rivero, CIMAT, Mexico.

The Invited thematic session titles can be found at www.clapem.unal.edu.co

Abstract Submission: The deadline for abstract submission for the contributed talk and poster sessions is March 13, 2014. All contributing authors will be notified by May 1st, 2014, whether their abstract has been accepted.

Financial support: There will be a limited number of partial supports for students who wish to attend the congress. The deadline for both registration and application for support is March 13, 2014. For more information, please visit: www.clapem.unal.edu.co

IMS sponsored meeting

2015 IMS-China International 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
We are pleased to announce that the fifth
IMS-China International Conference on
Statistics and Probability will be held in
Kunming, China, from 1–4 July, 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.

The conference website contains updated information and contact details.

IMS co-sponsored meeting

The 3rd Workshop on Biostatistics and Bioinformatics

May 9-11, 2014, Atlanta, GA

w http://www2.gsu.edu/~matyiz/2014 workshop/

IMS Rep on Program Committee: Yichuan Zhao. Keynote speaker: Xihong Lin.

More IMS meetings around the world

IMS co-sponsored meeting

International Symposium in Statistics (ISS) 2015

Parametric and Semi-parametric Inferences for Spatial-temporal, and Multi-dimensional Familial-longitudinal Data
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

Third IMS Asia Pacific Rim Meetings June 30–July 3, 2014 Taipei, Taiwan

NEW website http://ims-aprm2014.ntu.edu.tw/

The third IMS Asia Pacific Rim Meetings will take place in Howard International House (http://intl-house.howard-hotels.com/), Taipei, Taiwan, during the period Monday, June 30–Thursday, July 3, 2014. This meeting series provides an excellent forum for scientific communications and collaborations for researchers in Asia and the Pacific Rim. It also promotes communications and collaborations between the researchers in this area and those from other parts of the world.

The program covers a wide range of topics in statistics and probability, presenting recent developments and the state of the art in a variety of modern research topics and in applications. For more information, you may contact the program chairs: Byeong U. Park (bupark@stats.snu.ac.kr) and Feifang Hu (fh6e@virginia.edu).

The conference website has been recently changed to http://ims-aprm2014.ntu.edu.tw/

IMS co-sponsored meeting

10th Cornell Probability Summer School July 20–August 1, 2014 Cornell University, Ithaca, NY

w http://www.math.cornell.edu/~cpss/

Registration is expected to open in January with a tentative deadline of April 7, 2014. Funding is available to support local expenses of some advanced graduate students and young researchers. Applications for funding will be accepted during the registration process.

Main Lecturers

Three main lecturers will each give six 75-minute lectures: Gerard Ben Arous (New York University)

Eyal Lubetzky (Microsoft Research, Theory Group), *Time-space* information percolation for the stochastic Ising model

Jeremy Quastel (University of Toronto), *The Kardar-Parisi-Zhang* equation and universality class

Other speakers will be invited to give short talks.

IMS co-sponsored meeting

Workshop on Finance, Probability and Statistics (FPS) July 2–5, 2014

University of Technology, Sydney (UTS)

w http://www.qfrc.uts.edu.au/IMS-FPS-2014

IMS Representative(s) on Program Committees: X. Guo, T. L. Lai This, the Fourth IMS-FPS workshop, is a satellite workshop to the joint Australian Statistical Conference & IMS Annual Meeting, which will be held in Sydney from 7–10 July. The previous IMS-FPS workshops were held in 2011 at Columbia University, in 2012 at the University of California at Berkeley and in 2013 at the National University of Singapore. The goal of the workshop is to bring together leading academic experts, practitioners and junior researchers, which will highlight important contributions to mathematical and computational finance made through the use of statistics and probability.

The workshop topics include, but are not limited to:

- Computational and simulation methods in finance and risk management
- Credit and liquidity risk
- Energy and weather derivatives
- Financial time series and econometrics
- High frequency trading: data, models and strategies
- Volatility models

Please see the website for details.

IMS co-sponsored meeting

37th Conference on Stochastic Processes and their Applications July 28–August 1, 2014

Buenos Aires, Argentina

w http://mate.dm.uba.ar/~probab/spa2014/

SPA 2014: Call for Contributed Sessions

The 37th Conference on Stochastic Processes and their Applications will take place at the University of Buenos Aires, Argentina, from July 28 to August 1, 2014. The meeting will consist of Plenary Lectures, Invited Sessions and Contributed Sessions conducted in parallel.

Plenary speakers: Anton Bovier, Ivan Corwin, Laszlo Erdös, Antonio Galves, Christophe Garban, Martin Hairer (Lévy Lecture), Milton Jara, Gady Kozma, Eyal Lubetzky, Sylvie Méléard, David Nualart (IMS Medallion Lecture), Felix Otto, Tomohiro Sasamoto, Scott Sheffield, Fabio Toninelli, and Balint Tóth, and a Doeblin Prize Lecture to be announced.

The Invited Sessions can be found at http://mate.dm.uba.ar/~probab/spa2014/program. html#invitedsessions

Organizing Committee: Inés Armendáriz, Pablo A. Ferrari, Pablo Groisman, Matthieu Jonckheere, Nora Muler, Leonardo T. Rolla. Contact **e** spa.conference.2014@gmail.com

IMS co-sponsored meeting

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

w TBC

IMS co-sponsored meeting

Second Conference of the International Society of Nonparametric Statistics (II ISNPS) June 12–16, 2014 Cadiz, Spain

w www.isnpstat.org

IMS Representative on Program Committees: Juan Romo

Following the successful I ISNPS (International Society of NonParametric Statistics) conference in 2012 in Greece, Ricardo Cao, Wenceslao Gonzalez-Manteiga and Juan Romo are organizing the II ISNPS Conference in Cadiz, southern Spain, from June 12–16, 2014.

The conference hotel is located 60 km (40 miles) from Jerez de la Frontera airport. The province of Cadiz is an exceptional and unique area, with high quality cultural, ecologic and gastronomic values, including villages, landscapes and 138 km of first class beaches with coves, inlets and long stretches of sand. Jerez de la Frontera has an international airport with direct connections to many European cities.

The IMS co-sponsored conference will put together recent advances and trends in several areas of nonparametric statistics in order to facilitate the exchange of research ideas, promote collaboration among researchers from all over the world and contribute to the further development of the field. The program (scheduled on June 12, 13, 15 & 16; June 14 will be a free day) will include plenary talks, special invited talks, invited talks and contributed talks on all areas of nonparametric statistics. Deadline for submission of contributed talks is February 15, 2014.

For any questions, please email isnps2014@adcommcentury.com and see the webpage.

ENAR, 2014-2016

IMS sponsored meeting

2014 ENAR/IMS Spring Meeting March 16–19, 2014 Baltimore, Maryland, USA

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

IMS sponsored meeting

2015 ENAR/IMS Spring Meeting March 15–18, 2015 Miami, Florida, USA

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

.....

IMS sponsored meeting

2016 ENAR/IMS Spring Meeting March 6–9, 2016 Austin, Texas

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

IMS co-sponsored meeting

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

IMS sponsored meeting

2014 WNAR/IMS Annual Meeting June 15–18, 2014 Honolulu, Hawaii, USA

w http://www.wnar.org/

The 2014 WNAR/IMS meeting will be June 15-18, in Hawaii. It will be held at the Conference Center of the University of Hawaii at Manoa, in Honolulu, HI.

IMS co-sponsored meeting

Frontier Probability Days May 18–20, 2014 University of Arizona, Tucson, AZ

w http://math.arizona.edu/~fpd/ (DATE)
IMS Representatives on Program
Committees: Tom Alberts, Davar
Koshnevisan, Firas Rassoul-Agha, Sundar
Sethuraman, Edward Waymire
Web page under construction; details to follow.

I Other meetings around the world

Combinatorial Stochastic Processes:

A conference in celebration of Jim Pitman's 65th birthday June 20–21, 2014

San Diego, California, USA

w http://www.stat.berkeley.edu/~aldous/Pitman_Conference/ David Aldous **e** aldous@stat.berkeley.edu

Jim Pitman's career research has encompassed many topics within Probability Theory: Markov chains, Brownian motion and related diffusions (in extensive joint work with Marc Yor) and the field of Combinatorial Stochastic Processes initiated in his 2002 St Flour lectures. This meeting celebrates his work with invited talks by Jean Bertoin, Chris Burdzy, Alexander Gnedin, Christina Goldschmidt, Priscilla Greenwood, Lancelot James, Gregory Miermont, Soumik Pal, and Jim himself. See website for details.

Computational methods for survey and census data in the social sciences June 20–21, 2014 CRM, Montréal, Canada

w http://www.crm.math.ca/Survey14/

A CANSSI-SAMSI workshop entitled "Computational methods for survey and census data in the social sciences" is being organized by the Canadian Statistical Sciences Institute (CANSSI) as an offshoot of the SAMSI 2013-2014 theme year on Computational Methods in the Social Sciences (CMSS). It will take place at the Centre de recherches mathématiques in Montréal, Canada, on June 20 and 21, 2014.

The workshop will bring together statisticians working in survey and census methodology and population studies with social scientists involved in collaborating disciplines. The topics of the workshop are expected to include combining data from multiple sources for social and health science investigations; record linkage; network sampling designs; new developments in survey weighting for descriptive and analytical uses of survey data; and survey data exploration and visualization.

Posters are invited, and some **support for student travel** is available. See the website for details.

22nd Meeting of PhD students in Stochastics May 12-14, 2014

Hilversum, The Netherlands

w http://www.ewi.tudelft.nl/over-de-faculteit/afdelingen/toegepaste-wiskunde/statistiek/aio-netwerk/next-meeting/

The 22nd Meeting of PhD students (AiOs) in Stochastics will be held in the "De Hoorneboeg" Conference Center, Hilversum, The Netherlands May 12-14, 2014.

This year, the courses will be given by Bálint Tóth (TU Budapest and University of Bristol) on "Scaling limits for random walks and diffusions with long memory—resolvent methods" and Marloes Maathuis (ETH Zürich) on "Graphical models and causality"

For more information and registration for the meeting, please see the website above.

2014 Mid-Atlantic Genetic Epidemiology and Statistics: Integrated Systems Biology Analytical Methods for Epidemiological Studies of Complex Traits

May 30, 2014

NEW

Philadelphia, PA

w http://www.med.upenn.edu/magesconference/

Advances in genomic technology and significant decrease in the associated costs are driving progress in genetic studies for disease gene identification. Studies of whole exome and genome sequences of complex traits in large samples will become increasingly common. Other sources of high-dimensional information, including expression, epigenetic, metabolic and microbiomic data, are also being commonly collected in disease and control samples. To fully understand the complex bases of human disease, all of these factors should be properly considered in a unified analytical framework, together with epidemiological data on environmental exposures and other risk factors. To discuss how to address the analytical challenges presented by these sources of data, the Center for Genetics and Complex Traits of the Perelman School of Medicine at the University of Pennsylvania is organizing the 2014 Mid-Atlantic Genetic Epidemiology and Statistics (MAGES) conference: Integrated systems biology analytical methods for epidemiological studies of complex traits.

The 2014 MAGES Conference is organized by the Center for Genetics and Complex Traits of the Perelman School of Medicine at the University of Pennsylvania.

Registration is free but mandatory, and will include lunch and coffee breaks.

Conference on Experimental Designs and Analysis (CEDA) 2014 July 4–5, 2014

Taipei, Taiwan

w http://www3.stat.sinica.edu.tw/ceda2014/

Experimentation is one of the most common activities in scientific researches and industrial processes. An experiment is cost-efficient only when it is carefully designed and its results are correctly analyzed. The CEDA 2014 will highlight the most recent advances in the design and analysis of experiments and demonstrate their applicability to practitioners in scientific and industrial communities. In addition, it provides an excellent platform to share research ideas among senior mentors, junior researchers and PhD students/graduates.

The conference will be held at Howard International House in Downtown Taipei. The registration opened January 15, 2014.

Contributed posters are welcome and the deadline for submission is on April 30, 2014.

ISBA George Box Research Workshop on Frontiers of Statistics May 20–22, 2014

Washington, DC

w http://business.gwu.edu/decisionsciences/i2sds/conferences.cfm Contact Refik Soyer **e** soyer@gwu.edu

This two-day ISBA meeting will feature presentations and discussions of topical, frontier research in the methodology and applications of Bayesian statistics, and related areas. The focus areas are among those pioneered by George Box through his career as a path-breaking innovator in concepts, theory, methods and applications across a broad sweep of areas. The workshop is an opportunity to participate in reflecting on Box's legacy, coupled with the vibrancy of our discipline—especially in its interfaces with challenging areas of application.

50th Anniversary SRC June 1–4, 2014 Galveston, Texas, USA

w http://srcos2014.rice.edu/

2014 marks the 50th Anniversary of the Southern Regional Council on Statistics Summer Research Conference. SRC 2014 brings together leading researchers, faculty and students in a dynamic, interactive and learning format. Featured meeting highlights include plenary speakers Butch Tsiatis and Peter Mueller. Invited senior speakers include Simon Sheather, Elizabeth Slate, Marie Davidian (current ASA President), Deb Sinha and Jianhu Huang. In celebration of 50 years of SRCOS and SRCs we will hear from Bob Taylor, Joe Padgett and Mike Kutner to mark this historic and important event.

ICAAM 2014 Second International Conference on Analysis and Applied Mathematics



M. Auezov South Kazakhstan State, Shymkent, Kazakhstan

w http://www.icaam-online.org/index/

Contact Zafer Cakir e zafer@gumushane.edu.tr

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

Stochastic Processes and Differential Equations in Infinite Dimensional Spaces



March 31-April 3, 2014

London, UK

w http://www.kcl.ac.uk/nms/depts/mathematics/events/ eventsrecords/stochasticprocesses.aspx

Contact Markus Riedle e markus.riedle@kcl.ac.uk

The workshop brings together leading international researchers in various fields of stochastic analysis in infinite dimensional spaces. This workshop is supported by the EPSRC project Cylindrical Levy Processes and Their Applications (Markus Riedle) and the London Mathematical Society.

International Symposium on Financial Engineering and Risk Management 2014 (FERM 2014)



June 27–28, 2014

Beijing, China

NEW

w http://www.stat.wisc.edu/~zjz/FERM2014/index.html

This International Symposium will feature several keynote speakers, including Lars Peter Hansen, a 2013 Nobel laureate in economics and David Rockefeller Distinguished Service Professor of Economics at the University of Chicago; Jin-chuan Duan, Professor and Director at National University of Singapore; Weiying Zhang, Professor of Economics in Guanghua Management School at Peking University. In addition, twenty invited sessions and ten contributed sessions are planned. More detailed information are available on the FERM2014 website.

Deadline for paper submission: March 15, 2014

Decision of acceptance: March 31, 2014

FERM2014 is hosted by Central University of Finance and

Economics (CUFE).

More meetings around the world

XXXII International Seminar on Stability Problems for Stochastic Models June 16–21, 2014

Trondheim, Norway

w http://www.ipiran.ru/conference/ stabil2014/

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

XXXII International Seminar on Stability Problems for Stochastic Models will be held on 16-21 June, 2014 in Trondheim, Norway, under the auspices of Norwegian University of Science and Technology, Lomonosov Moscow State University, and Institute for Informatics Problems of the Russian Academy of Sciences.

Main Topics of the XXXII Seminar:
Limit theorems and stability problems;
Asymptotic theory of stochastic processes;
Stable distributions and processes;
Asymptotic statistics; Risk theory; Discrete probability models; Characterization of probability distributions; Insurance and financial mathematics; Applied statistics;
Queueing theory and modeling information systems.; Statistical calculation and simulation (including MCMC); Reliability;
Spatial statistics; Bio and medical statistics;
Stochastic dynamics; Extreme value statistics;
Analysis of rounded data; Nonparametric estimation; Goodness-of-fit testing

Important dates

March 1: abstract submission deadline March 10: confirmation of participation March 15: early bird registration

Algebraic and Discrete Biological Models for Undergraduate Courses June 18–20, 2014

Knoxville, Tennessee, USA

w http://nimbios.org/tutorials/TT_mathbio

The National Institute for Mathematical and Biological Synthesis (NIMBioS) is now accepting applications for its Tutorial, "Algebraic and Discrete Biological Models for Undergraduate Courses," to be held June 18-20, 2014, at NIMBioS. This workshop will bring together faculty from both mathematics and biology to learn algebraic and discrete approaches to problems from modern biology including gene regulation, gene identification, RNA folding, phylogenetics, and metabolic pathway analysis. The objectives are three-fold:

- (i) Participants will be introduced to the importance of algebraic and discrete methods and models in modern biology, as an alternative to classical continuous methods based on calculus and differential equations. They will learn how to use such methods and/or build and analyze models in the context of the tutorial's topics and will work in small groups to experience how to use the methodology to describe, simulate, and analyze the relevant biological systems.
- (ii) Participants will be exposed to software that implements the mathematical methods, aids visualization, and facilitates the computations and analyses.
- (iii) Participants will learn of existing curricular resources related to the tutorial's topics, including exercises, projects, solution guidelines, and/or computer code and data. They will receive guidance on how the tutorial materials may fit into mathematics and biology courses or be used as an introduction to independent studies or undergraduate research.

Interactive lectures with quick exercises on each topic will be followed by structured hands-on activities. In addition, participants will be able to customize their tutorial experience by opting for lectures and activities at two different levels: introductory and advanced.

Location: NIMBioS at the University of Tennessee, Knoxville

Co-Organizers: Raina Robeva, Mathematical Sciences, Sweet Briar College; Robin Davies, Biology, Sweet Briar College; Terrell Hodge, Mathematics, Western Michigan Univ.; and Matthew Macauley, Mathematical Sciences, Clemson Univ.

For more information about the tutorial and a link to the online application form, go to http://nimbios.org/tutorials/TT_mathbio

There are no fees associated with this tutorial. Tutorial participation in the tutorial is by application only. Individuals with a strong interest in the topic, including post-docs and graduate students, are encouraged to apply, and successful applicants will be notified within two weeks of the application deadline. If needed, financial support for travel, meals, and lodging is available for tutorial attendees.

Application deadline: February 28, 2014

The National Institute for Mathematical and Biological Synthesis (NIMBioS) (http://www.nimbios.org) brings together researchers from around the world to collaborate across disciplinary boundaries to investigate solutions to basic and applied problems in the life sciences. NIMBioS is sponsored by the National Science Foundation, the U.S. Department of Homeland Security, and the U.S. Department of Agriculture with additional support from The University of Tennessee, Knoxville.



12th World Meeting of the International Society for Bayesian Analysis (ISBA2014) July 14–18, 2014 Cancun, Mexico

The ISBA 2014 world meeting is the continuation of the Valencia/ ISBA meetings regularly held since 1979 and the preeminent conference of the Bayesian community. The meeting will feature keynote, invited, contributed and poster presentations, as well as Bayesian foundational lectures by J. Berger, S. Fruehwirth-Schnatter, P. Müller and G. Roberts. Short courses are planned and begin on July 13th. e program-council@bayesian.org

w (under construction) www.isba2014.eventos.cimat.mx

12th International Conference on Statistical Sciences (ICSS) March 24–26, 2014 Karachi, Pakistan

w http://www.isoss.net/conferences

The aim of the Conference is to highlight the role of statistics in modern day world. The conference will focus on "Application of Statistics in Policy Development and Monitoring of Health, Finance, Education, Information Technology and Economics".

2014 SERB School on Matrix Methods& Fractional Calculus April 28—May 23, 2014 CMSS, Peechi, Kerala

w http://cmsintl.org/

Organized by the Centre for Mathematical and Statistical Sciences (CMSS) in collaboration with the Kerala State Council for Science, Technology and Environment (KSCSTE), and Kerala Forest Research Institute (KFRI), Peechi, Kerala.

Applications are invited to the all-India SERB School on Matrix Methods and Fractional Calculus; 30 seats; all expenses met by SERB (DST); closing date of applications: 26th February 2014

ELIGIBILITY: Young faculty below 35 years of age, post-doctoral fellows, research scholars, M.Phil students, and if seats are available then a few M.Sc graduates and final year M.Sc students will be admitted.

Topics to be covered: Vector-Matrix differential operators, Jacobians of matrix transformations, functions of matrix argument, multivariate analysis; fractional calculus, fractional differential equations and applications; generalized inverses and patterned matrices; systems of equations, linear and non-linear analysis.

LINSTAT2014

August 24–28, 2014 Linköping, Sweden

w http://www.mai.liu.se/LinStat2014/

The purpose of the conference is to bring together researchers sharing an interest in a variety of aspects of statistics and its applications and offer them a possibility to discuss current developments in these subjects. We have an international list of very distinguished speakers within the area of mathematical Statistics and linear statistical infer-

ence, and hope to attract, in particular participants from the US/Canada. The LINSTAT series has

NEW



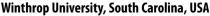
a long history (this is the 14th and it started 1977). Mostly it has been hosted by Polish Statisticians but 2010 it took place in Portugal and now this year in Linköping, Sweden.

The title this year is International Conference on Trends and Perspectives in Linear Statistical Inference, LinStat 2014

LinStat 2014 is the 14th conference in a series which started 1977. The purpose of the meeting is to bring together researchers sharing an interest in a variety of aspects of statistics and its applications, and offer them a possibility to discuss current developments in these subjects. The conference will mainly focus on a number of topics. The topics that have been selected so far include estimation, prediction and testing in linear models, robustness of relevant statistical methods, estimation of variance components appearing in linear models, generalizations to nonlinear models, design and analysis of experiments, including optimality and comparison of linear experiments, applications of matrix methods in statistics, multivariate and multilinear statistical analysis and high dimensional analysis.

The work of young scientists is highly appreciated. The list of Invited Speakers is opened by the winners of the Young Scientists Awards of Linstat'2012. The Scientific Committee will award the best presentation and best poster. The awarded will be Invited Speakers at the next edition of LinStat.

NSF-CBMS Mathematical Phylogeny Conference June 28-July 2, 2014



w www.birdnest.org/phylogeny/

The National Science Foundation is funding eight NSF-CBMS Regional Research Conferences to be held during 2014. Among them is this one featuring Mike Steel (University of Canterbury, New Zealand) as lecturer. The organizers are Joe Rusinko and Trent Kull.



More meetings around the world

2014 International Indian Statistical Association Conference Research Innovations in Statistics for Health, Education, Technology, and Society July 11-13, 2014 Riverside, CA

w http://2014iisa.intindstat.org

e 2014iisa@gmail.com

The 2014 International Indian Statistical Association (IISA) conference will address advancements in the fields of Statistics, Biostatistics, Probability, and their application areas by bringing together national and international researchers, professionals, educators and students from academia, industries, government, and research institutes to discuss the major issues and challenges by sharing the latest developments. This conference is co-sponsored by the American Statistical Association.

IISA Student Paper Competition



Students are invited to submit a paper to be presented in a Student Paper Competition at the 2014 IISA Conference in Riverside California [see left]. Up to 20 student papers will be selected for presentation in five special student competition sessions of four students each. If a student paper is selected for the competition, the student's registration fee will be waived. Papers need to be sent to Mouli Banerjee e moulib@umich.edu on or before May 1, 2014 in pdf format. They should be at most 20 pages in length (including references) in 11 point (or a larger) font and double-spaced.



Eighth International Workshop on Simulation September 21–25, 2015 Vienna, Austria

w http://iws.boku.ac.at/index.php

This international conference is devoted to statistical techniques in stochastic simulation, data collection and analysis of scientific experiments and studies representing broad areas of interest. The 8th International Workshop on Simulation will be held in memory of Luidmila Kopylova-Melas, the wife of Viatcheslav Melas. She passed away on September 21, 2013, and was a shadow secretary of the whole series of our simulation workshops. The conference will be organized by Institute of Applied Statistics and Computation of the University of Life Sciences Vienna in collaboration with the Department of Statistics of the Alpen-Adria University Klagenfurt, the Department of Statistical Modelling of Saint Petersburg State University and INFORMS Simulation Society (USA).

The keynote speakers are Aleksander Bulinsky (Russia) and Ingram Olkin (USA).

The first six workshops took place in St. Petersburg (Russia) in 1994, 1996, 1998, 2001, 2005 and 2009. The seventh International Workshop on Simulation was in Rimini (Italy) in 2013.

Workshop Topics:

- Methodology/algorithms for stochastic simulation
- Monte Carlo and quasi Monte Carlo methods
- Experimental design, Spatial statistics
- · Stochastic modelling in economics and finance
- · Stochastic modelling in physics, chemistry and medicine
- Environmental Statistics, Extremes of random processes
- Nonparametric inference
- Queues and other discrete-event systems

Session organizers are requested to arrange 3-4 talks (about 15-20 min + 5 min discussion) in their sessions while collecting titles and abstracts from the contributors. Suggestions for organizing sessions should be sent to Viatcheslav Melas **e** viatcheslav.melas@gmx.de. Abstracts should be sent to Dieter Rasch **e** d_rasch@t-online.de until January 31, 2015. Financial and other details will appear at the conference website above.

Employment Opportunities around the world

Canada

Canadian Statistical Sciences Institute

Scientific Director

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16300001

China: Shanghai

Institute of Natural Sciences, Shanghai Jiao Tong University

INS Faculty Recruitment Program in Statistics http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=11553330

Germany: Heidelberg

Heidelberg University, Faculty of Mathematics and Informatics

Two Professor positions

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=15978062

Kazakhstan: Astana, Aqmola

Nazarbayev University

Faculty-Science-Mathematics: Assistant/Associate/Full Professor http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=15921573

Singapore

Nanyang Technological University, Singapore

Faculty positions in Mathematics http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16464944

United Kingdom: London

University College London (UCL)

Chair in Statistical Science

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16269423

United States: Davis, CA

University of California, Davis, Department of Statistics

Abraham Wald Visiting Assistant Professor http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16116963

United States: Los Angeles, CA

UCLA, Department of Biostatistics

Professor and Chair of Biostatistics http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16305740

Hong Kong



THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Department of Mathematics Faculty Position

The Department of Mathematics invites applications for a faculty position at all ranks in the area of statistics.

Applicants should have a PhD degree, strong experience in teaching and an exceptionally strong research record in statistics.

Salary will be competitive and commensurate with qualifications and experience. Fringe benefits include medical/dental benefits and annual leave. Housing will also be provided where applicable.

Applicants should send their curriculum vitae together with the names of at least three research referees to the **Human Resources Office**, **HKUST**, **Clear Water Bay**, **Kowloon**, **Hong Kong**. Review of applications will continue until the position is filled.

More information about the University is available at http://www.ust.hk.

(Information provided by applicants will be used for recruitment and other employment-related purposes.)

Qatar: Education City, Doha

Carnegie Mellon Qatar Teaching Position

Applications are invited for a teaching-track faculty position at Carnegie Mellon Qatar in Education City, Doha. This position emphasizes undergraduate teaching primarily, but also involves a combination of course development and/or research. All areas of statistics are welcome.

See http://www.stat.cmu.edu (email: hiring@stat.cmu.edu).

Send CV, relevant transcripts, teaching statement, and three recommendation letters to: Search Committee, Statistics, Carnegie Mellon University, Pittsburgh, PA 15213 or hiring@stat.cmu.edu.

Women and minorities are encouraged to apply. AA/EOE.

United States: Dunwoody, GA

State Farm Mutual Automobile Insurance Company

Credit Card Modeler - Statistician http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=14484113

United States: Grayslake, IL

College of Lake County

Dean, Engineering, Math and Physical Sciences http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=15979246

United States: Baltimore, MD

Johns Hopkins University

Bloomberg Distinguished Professor - Mathematics & Applied Mathematics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16101447

United States: Ann Arbor, MI

University of Michigan

Professor, Assistant Professor in Computational and Statistical Genetics and Genomics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=9448584

United States: East Lansing, MI

Michigan State University, Department of Statistics & Probability

Associate or Full Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16431985

United States: Research Triangle Park, NC

National Institute of Environmental Health Sciences, NIH

Biostatistician, Bioinformatician, Computational Biologist http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16166876

United States: Princeton, NJ

Princeton University

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16098841

United States: Cleveland, OH

Case Western Reserve University

Tenure-Track Assistant Professor in Statistics http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16204816

United States: Pittsburgh, PA

Carnegie Mellon University

Possible Tenure-track and Visiting positions

Applications are invited for possible tenure-track and visiting positions. Carnegie Mellon offers a collegial faculty environment, emphasizing a combination of disciplinary and cross-disciplinary research and teaching. All areas of statistics are welcome, and joint appointments with other units in the Pittsburgh area are possible. We especially encourage women and minorities to apply. Details at http://www.stat.cmu.edu (e hiring@stat.cmu.edu). Application screening begins immediately and continues until positions closed. Send CV, research papers, relevant transcripts and three letters of recommendation to: Chair, Faculty Search Committee, Department of Statistics, Carnegie Mellon University, Pittsburgh, PA 15213, USA. AA/EOE.

United States: Pittsburgh, PA

Carnegie Mellon University: Teaching Professor Position

Applications are invited for the position of Teaching Professor, rank (Assistant, Associate or Full) to be determined. The Department of Statistics, Carnegie Mellon University is seeking a passionate, master teacher to contribute to our thriving, modern undergraduate and graduate programs. The successful candidate will be expected to have a strong and successful teaching record, demonstrate excellence in statistical pedagogy, and an active research agenda. This position emphasizes teaching, student advising, curriculum development, and supervising collaborative research projects. PhD in statistics, biostatistics or related area required. See http://www.stat.cmu.edu or email hiring@stat.cmu.edu for more details. Send CV, relevant transcripts, teaching and research statements, and three recommendation letters to: Teaching Faculty Search Committee, Statistics, Carnegie Mellon University, Pittsburgh, PA 15213, USA or hiring@stat.cmu.edu. Application screening begins immediately, continues until positions closed. Women and minorities are encouraged to apply. AA/EOE.

United States: Marshfield, WI

Marshfield Clinic Research Foundation (MCRF)

Research Programmer/Analyst http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=16261846

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

March 2014

March 4–7: Ulm, Germany. 11th German Probability and Statistics Days w http://www.gpsd-ulm2014.de/

March 6–8: NIMBioS at the University of Tennessee, Knoxville. NIMBioS Investigative Workshop: Animal Social Networks w http://nimbios.org/workshops/WS_socialnet

March 6–8: Ulm, Germany. Conference on Modelling, Analysis and Simulation in Economathematics w http://graduiertenkolleg.gpsd-ulm2014.de/

March 7–9: Dallas, Texas, USA. **Ordered Data Analysis, Models and Health Research Methods:** An International Conference in Honor of H.N. Nagaraja for his 60th Birthday **w** http://faculty.smu.edu/ngh/hnnconf.html

 $\label{lem:march_11-13} March_{11-13}: NIMBioS, Knoxville, TN. \ \textbf{Interface Disease Models. w} \\ \text{http://www.nimbios.org/workshops/WS_interface.html}$

March 16–19: Baltimore, Maryland. 2014 ENAR/IMS Spring Meeting. w http://www.enar.org/meetings.cfm

March 17–19: Knoxville, Tennessee, USA. **NIMBioS Investigative Workshop: Vectored Plant Viruses w** http://www.nimbios.org/
workshops/WS_plantviruses

March 24–26: Karachi, Pakistan. 12th International Conference on Statistical Sciences (ICSS) w http://www.isoss.net/conferences

March 31–April 3: London, UK. Stochastic Processes and Differential Equations in Infinite Dimensional Spaces w http://www.kcl.ac.uk/nms/depts/mathematics/events/eventsrecords/stochasticprocesses.aspx

April 2014

April 6–8: NIMBioS, Knoxville, TN. Computing in the Cloud w http://www.nimbios.org/tutorials/TT_cloud

April 24–25: NIMBioS at the University of Tennessee, Knoxville. NIMBioS Investigative Workshop: Modeling Contamination of Fresh Produce w http://www.nimbios.org/workshops/WS_produce. html

April 28–30: NIMBioS at the University of Tennessee, Knoxville. NIMBioS Investigative Workshop: Predictive Models for Ecological Risk Assessment w http://www.nimbios.org/workshops/WS_era.html

April 28–May 23: CMSS, Peechi, Kerala. 2014 SERB School on Matrix Methods & Fractional Calculus w http://cmsintl.org/

May 2014

May 9–11: Atlanta, GA. 3rd Workshop on Biostatistics & Bioinformatics w http://www2.gsu.edu/~matyiz/2014 workshop/

May 12-14: Hilversum, The Netherlands. 22nd Meeting of PhD students in Stochastics w http://www.ewi.tudelft.nl/over-defaculteit/afdelingen/toegepaste-wiskunde/statistiek/aio-netwerk/next-meeting/

May 18–20: University of Arizona, Tucson, AZ. Frontier Probability Days w http://math.arizona.edu/~fpd/

May 19–21: NIMBioS, Knoxville, TN. **Parameter Estimation for Dynamic Biological Models w** http://www.nimbios.org/tutorials/TT_data.html

May 20–22: Washington, DC. ISBA George Box Research Workshop on Frontiers of Statistics w http://business.gwu.edu/decisionsciences/i2sds/conferences.cfm

May 26–28: Paris, France. PLS 2014: 8th International Conference on Partial Least Squares and Related Methods w http://www.pls14.org/

May 29–31: University of Maryland, College Park, USA.
Frontiers of Hierarchical Modeling in Observational Studies,
Complex Surveys and Big Data: Conference Honoring Professor
Malay Ghosh w http://www.jpsm.umd.edu/ghosh

May 30: Philadelphia, PA. 2014 Mid-Atlantic Genetic Epidemiology and Statistics (MAGES) Conference: Integrated Systems Biology Analytical Methods for Epidemiological Studies of Complex Traits w http://www.med.upenn.edu/magesconference/index.shtml

June 2014

June 1–4: Galveston, Texas, USA 50th Anniversary SRC w http://srcos2014.rice.edu/

International Calendar continued

June 2014 continued

June 2–6: Institute of Computational and Experimental Research in Mathematics, Brown University, Providence, RI. Computational Nonlinear Algebra w http://icerm.brown.edu/tw-14-3-cna

June 2–6: Będlewo, Poland. 11th International Conference on Ordered Statistical Data w http://bcc.impan.pl/14OrderStat/

June 2–27: University of British Columbia, Vancouver, Canada. **PIMS Summer School in Probability w** http://www.math.ubc.ca/Links/ssprob14/

June 3–5: NIMBioS, Knoxville, TN. **Leptospirosis Modeling w** http://www.nimbios.org/workshops/WS_leptospirosis

June 7–10: Lisbon, Portugal. 7th Chaotic Modeling and Simulation International Conference (CHAOS2014) w http://www.cmsim.org

June 8–12: Ljubljana, Slovenia. 23rd International Workshop on Matrices and Statistics (IWMS) w www.law05.si/iwms

June 11–13: Pau, France. ALT'2014 (reliability testing and analysis) w http://alt2014.sciencesconf.org/

June 11–14: Lisbon, Portugal. 3rd Stochastic Modeling Techniques and Data Analysis Conference w http://www.smtda.net/

June 12–16: Cadiz, Spain. Second Conference of the International Society of Nonparametric Statistics (II ISNPS) w www.isnpstat.org

June 15–18: Honolulu, Hawaii. 2014 WNAR/IMS Annual Meeting w TBC

June 15–18: Portland, OR, USA. 2014 ICSA and KISS Joint Applied Statistics Symposium w http://www.statkiss.org/icsakiss2014

June 16–21: Trondheim, Norway. XXXII International Seminar on Stability Problems for Stochastic Models w http://www.ipiran.ru/conference/stabil2014/

June 16–26: Búzios, Brazil. Pan-American Advanced Study Institute on Spatial Statistics w http://www.stat.washington.edu/peter/PASI/PASI_2014.html

June 17–20: Bogotá, Colombia. First International Congress on Actuarial Science and Quantitative Finance w http://www.matematicas.unal.edu.co/icasqf/

June 18–20: Knoxville, Tennessee, USA. Algebraic and Discrete Biological Models for Undergraduate Courses w http://nimbios.org/tutorials/TT_mathbio

June 20–21: San Diego, CA, USA. Combinatorial Stochastic Processes: in celebration of Jim Pitman's 65th birthday w http://www.stat.berkeley.edu/~aldous/Pitman_Conference/

June 23–25: Center for Mathematical Sciences, University of Cambridge, UK. Probability and Statistics in High and Infinite Dimensions: Conference on the occasion of Evarist Giné's 70th Birthday w http://www.statslab.cam.ac.uk/~nickl/Site/2014.html

June 27–28: Beijing, China. International Symposium on Financial Engineering and Risk Management 2014 (FERM 2014) w http://www.stat.wisc.edu/~zjz/FERM2014/index.html

June 28–July 2: Winthrop University, SC, USA. NSF–CBMS Mathematical Phylogeny Conference w www.birdnest.org/phylogeny/

June 29–July 2: Rotterdam, The Netherlands. 34th International Symposium on Forecasting w http://forecasters.org/isf/

June 30–July 3: Taipei, Taiwan. Third IMS Asia Pacific Rim Meetings w http://ims-aprm2014.ntu.edu.tw/

June 30–July 3: Athens, Greece. 8th Annual International Conference on Mathematics Education & Statistics Education w http://www.atiner.gr/edumatsta.htm

July 2014

July 1–4: Montpellier, France. **International Statistical Ecology Conference w** http://isec2014.sciencesconf.org/

July 2–5: University of Technology, Sydney. Workshop on Finance, Probability and Statistics w http://www.qfrc.uts.edu.au/IMS-FPS-2014

July 4–5: Taipei, Taiwan. Conference on Experimental Designs and Analysis (CEDA) 2014 w http://www3.stat.sinica.edu. tw/ceda2014/

July 6–11: Florence, Italy. XXVII International Biometric Conference (IBC) 2014 w http://www.ibs-italy.info/ibc-2014.html



July 7–9: Huquan Hotel, Mile, Yunnan, China. Building Statistical Methodology and Theory 2014: In honor of Jeff Wu's 65th birthday w http://www.stat.purdue.edu/~sunz/Jeff_2014/index.html

July 7–9: Coventry, UK. Computational Methods for Jump Processes w http://www2.warwick.ac.uk/fac/sci/statistics/crism/workshops/jumps/

July 7–10: Sydney, Australia. 2014 IMS Annual Meeting with Australian Statistical Conference w http://www.asc-ims2014.com/

July 11–13: Riverside, CA. 2014 International Indian
Statistical Association Conference w http://2014iisa.intindstat.org

July 14–18: Cancun, Mexico. 12th World Meeting of ISBA (ISBA2014) w http://www.isba2014.eventos.cimat.mx/

July 20-August 1: Cornell University, Ithaca, NY. 10th Cornell Probability Summer School w http://www.math.cornell.edu/~cpss/

July 28 – August 1: Buenos Aires, Argentina. 37th Conference on Stochastic Processes and Applications
w http://mate.dm.uba.ar/~probab/spa2014/

New July 31 – August 2: Harvard, Cambridge, MA. 16th New Researchers Conference w http://www.stat.harvard.edu/NRC2014/

August 2014

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

August 6–11: Seoul, Korea. 7th International Conference on Stochastic Analysis and its Applications 2014 (Satellite to ICM2014) w http://www.icm2014.org/en/program/satellite/satellites

August 12 & 14: Seoul, Korea. International Congress of Women Mathematicians 2014 w http://www.kwms.or.kr/icwm2014

August 13–21: Seoul, Korea. International Congress of Mathematicians: ICM2014 w http://www.icm2014.org

August 24–28: Linköping, Sweden. LINSTAT 2014 w http://www.mai.liu.se/LinStat2014/

August 25–27: Kermanshah, Iran. 12th Iranian Statistical
Conference w http://isc12.razi.ac.ir/index.php?slc_lang=en&sid=1

August 25–29: Kansai University, Osaka, Japan. **Stochastic Processes**, Analysis and Mathematical Physics **w** http://stoc-proc.com/sympo/2014/SPAMP2014.htm

September 2014

September 11–13: Shymkent, Kazakhstan. ICAAM 2014
Second International Conference on Analysis and Applied
Mathematics w http://www.icaam-online.org/index/

September 22–26: Cartagena de Indias, Colombia XIII CLAPEM: Congreso Latino-americano de Probabilidad y Estadística Matemática w http://www.clapem.unal.edu.co/

December 2014

December 18–21: Bogor, Indonesia. 13th Islamic Countries Conference on Statistical Sciences (ICCS-13) w http://www.iccs13. isoss.net

March 2015

March 15–18: Miami, Florida. 2015 ENAR/IMS Spring
Meeting. w http://www.enar.org/meetings.cfm

International Calendar continued

June 2015

June (exact dates TBC): Location TBC. 2015 WNAR/IMS
Annual Meeting w TBC

July 2015

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

July 5–8: Istanbul, Turkey. INFORMS Applied Probability Society Conference 2015 w TBC

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 13–17: Oxford, UK. 38th Conference on Stochastic Processes and Applications w TBC

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

August 2015

August 8–13: Seattle, WA. IMS Annual Meeting at JSM2015. w http://amstat.org/meetings/jsm/

September 2015

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

March 2016

March 6–9: Austin, Texas. 2016 ENAR/IMS Spring Meeting w http://www.enar.org/meetings.cfm

June 2016

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

July 2016

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

World Congress in Probability and Statistics w TBC

July 2017

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

July 2018

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

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, and on the IMS website too, at www.imstat.org/meetings

Membership and Subscription Information

Journals

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

Individual and Organizational Memberships

Each individual member receives the *IMS Bulletin* (print and/or electronic) and may elect to receive one or more of the five scientific journals. Members pay annual dues of \$115. An additional \$65 is added to the dues of members for each scientific journal selected (\$40 for *Stat Sci*). **Reduced membership** dues are available to full-time students, new graduates, permanent residents of countries designated by the IMS Council, and retired members. **Organizational memberships** are available to departments, corporations, government agencies and other similar research institutions at \$169 per year.

Individual and General Subscriptions

Subscriptions are available on a calendar-year basis. Individual subscriptions are for the personal use of the subscriber and must be in the name of, paid directly by, and mailed to an individual. Individual subscriptions for 2014 are available to The Annals of Applied Probability (\$190), The Annals of Applied Statistics (\$190), The Annals of Probability (\$190), The Annals of Statistics (\$190), Statistical Science (\$165), and IMS Bulletin (\$125). General subscriptions are for libraries, institutions, and any multiple-readership use. Institutional subscriptions for 2014 are available to The Annals of Applied Probability (\$435), The Annals of Applied Statistics (\$435), The Annals of Probability (\$435), The Annals of Statistics (\$450), Statistical Science (\$247), and IMS Bulletin (\$107). Airmail rates for delivery outside North America are \$130 per title.

IMS Bulletin

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

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

Copyright © 2014 by the Institute of Mathematical Statistics.

Printed by The Sheridan Press, 450 Fame Avenue, Hanover, PA 17331, USA.

Information for Advertisers

General information: The *IMS Bulletin* and webpages are the official news organs of the Institute of Mathematical Statistics. The *IMS Bulletin*, established in 1972, is published 8 times per year. Print circulation is around 2,000 paper copies, and it is also free online in PDF format at http://bulletin.imstat.org, posted online about two weeks before mailout (average downloads over 8,000). Subscription to the *IMS Bulletin* costs \$107. To subscribe, call 877-557-4674 (US toll-free) or +1 216 295 2340 (international), or email staff@imstat. org. The IMS website, http://imstat.org, established in 1996, receives over 30,000 visits per month. Public access is free.

Advertising job vacancies

A single 60-day online job posting costs just \$250.00. We will also include the basic information about your job ad (position title, location, company name, job function and a link to the full ad) in the *IMS Bulletin* at no extra charge. See http://jobs.imstat.org

Advertising meetings, workshops and conferences

Meeting announcements in the *Bulletin* and on the IMS website at http://imstat.org/meetings are free. Send them to Elyse Gustafson; see http://www.imstat.org/program/prog_announce.htm

Rates and requirements for display advertising

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

	Dimensions: width x height	
1/3 page	4.93" x 4" (125.2 x 102 mm)	\$240
1/2 page	7.5" x 4" (190 x 102 mm)	\$295
2/3 page	4.93" x 8" (125.2 x 203 mm)	\$350
Full page (to edge, including 1/8" bleed)	8.75" x 11.25" (222 mm x 285.8 mm)	\$400
Full page (within usual <i>Bulletin</i> margins)	7.5" x 9.42" (190 mm x 239.3 mm)	\$400

Deadlines and Mail Dates for IMS Bulletin

	Issu	ıe	Deadline	Online by	Mailed
13340			- Cuu	······································	
	1:	January/February	December 1	December 15	January 1
	2:	March	February 1	February 15	March 1
	3:	April/May	March 15	April 1	April 15
	4:	June/July	May 1	May 15	June 1
	5:	August	June 15*	July 15	August 1
	6:	September	August 15	September 1	September 15
	7:	Oct/Nov	September 15	October 1	October 15
	8:	December	November 1	November 15	December 1

^{*} Note that the August 2014 issue has an early deadline of June 15



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

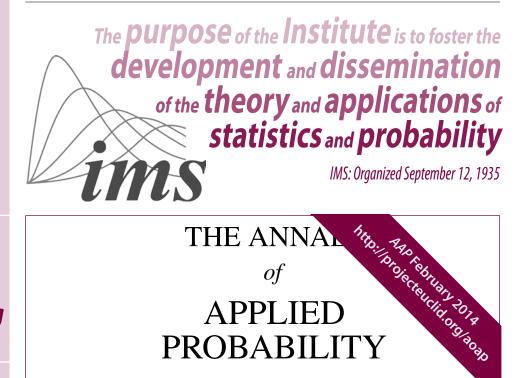
DEADLINES sübmissions March 15,

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

then May 1

Journal

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



PROBABII

AN OFFICIAL JOURNAL OF THE INSTITUTE OF MATHEMATICAL STATISTICS

Articles

Killed Brownian motion with a prescribed lifetime distribution and models of default BORIS ETTINGER, STEVEN N. EVANS AND ALEXANDRU HENING	1
The Wang–Landau algorithm reaches the flat histogram criterion in finite time PIERRE E. JACOB AND ROBIN J. RYDER	34
The fundamental theorem of asset pricing, the hedging problem and maximal claims in financial markets with short sales prohibitions	54
Qualitative properties of α -fair policies in bandwidth-sharing networks D. Shah, J. N. Tsitsiklis and Y. Zhong	76
A Gibbs sampler on the <i>n</i> -simplex	114
Minimising MCMC variance via diffusion limits, with an application to simulated temperingGARETH O. ROBERTS AND JEFFREY S. ROSENTHAL	131
A complete convergence theorem for voter model perturbations J. Theodore Cox and Edwin A. Perkins	150
Long-range last-passage percolation on the line SERGEY FOSS, JAMES B. MARTIN AND PHILIPP SCHMIDT	198
Deviation inequalities, moderate deviations and some limit theorems for bifurcating Markov chains with application S. VALÈRE BITSEKI PENDA, HACÈNE DJELLOUT AND ARNAUD GUILLIN	235
On the stability of planar randomly switched systems	292
A stochastic control approach to no-arbitrage bounds given marginals, with an application to lookback options A. GALICHON, P. HENRY-LABORDERE AND N. TOUZI	312
Error bounds for Metropolis-Hastings algorithms applied to perturbations of Gaussian measures in high dimensions	337
Many-server heavy-traffic limit for queues with time-varying parameters Y UNAN LIU AND WARD WHITT	378
Loss of memory of hidden Markov models and Lyapunov exponents PIERRE COLLET AND FLORENCIA LEONARDI	422
A note on "Bayesian nonparametric estimators derived from conditional Gibbs structures"Antonio Lijoi, Igor Prünster and Stephen G. Walker	447

Vol. 24, No. 1—February 2014