



June/July 2013

## CONTENTS

- 1 **INGenIOuS Idea**
- 2 **Members' News:** Peter Hall, Gregory Lawler; Larry Shepp; Gareth Roberts, Terry Speed; Larry Brown, Bin Yu; Eyal Lubetsky; T.N. Sriram; Vincenzo Capasso; Peter Bickel
- 4 **Other News**
- 5 **X-L Files:** Statistical Classics and Classical Statistics
- 6 **Obituaries:** Donald Burkholder; Martin Wilk
- 9 **Medallion Lecture Previews:** Judea Pearl, Ya'acov Ritov
- 11 **Anirban's Angle:** Top Inequalities for a PhD Student
- 12 **Debate:** Are pseudo-academic journals worrying?
- 14 **Recent papers:** *Annales de l'Institut Henri Poincaré (B)*
- 15 **Terence's Stuff:** A Rant
- 16 **Treasurer's Report:** Fiscal Year 2012
- 24 **IMS meetings**
- 30 **Other meetings**
- 34 **Employment Opportunities**
- 35 **International Calendar of Statistical Events**
- 39 **Information for Advertisers**

## INGenIOuS Idea

**INGenIOuS: Strategies for advancing the mathematics and statistics workforce**

**Deb Nolan** writes: The Institute of Mathematical Statistics has joined the INGenIOuS community (Investing in the Next Generation through Innovative and Outstanding Strategies), along with the American Statistical Association, US National Science Foundation, Mathematical Association of America, American Mathematical Society, and Society for Industrial and Applied Mathematicians. INGenIOuS will host a series of online and in-person events to develop strategies for investing in the training of the next generation of undergraduate and graduate students. The aim is to engage the mathematical sciences community in thinking strategically about enhancing recruitment, retention, and job placement in our community. The discussion has been divided into the following six sections (descriptions from the INGenIOuS website):

*Recruitment & Retention* – Helping to make the mathematical and statistical sciences a vibrant choice for a broad segment of the population (including the issue of broadening participation of women and minorities).

*Technology & MOOCs* - The expanding role of technology and its uses across STEM fields (the new opportunities it is bringing about in terms of new science; alternate forms of course delivery like MOOCs (massive open online courses) or flipped classrooms, how the introduction of new technology presents new challenges in terms of training).

*Internships* - Fostering and enhancing internships, co-ops, and industrial training opportunities for students at all levels.

*Job Placement* - Current best practices for connecting mathematical and statistical sciences students to jobs in all sectors

*Measurement & Evaluation* - Measures and mechanisms to assess the efficacy of, and return on investment in, the variety of successful training activities that departments are offering. How do we know we know that any particular program made a difference?

*Documentation & Dissemination* - The documentation and dissemination of effective training practices. How does the community avoid re-inventing the wheel without being too prescriptive?

The IMS would like to encourage its members to add their voice to these important discussions. Your participation is essential to the success of this effort. To be part of this project and to participate in the online discussions and panels please join the INGenIOuS community at [www.ingeniousmathstat.org](http://www.ingeniousmathstat.org) and consider participating in the following opportunities:

- Complete a survey at <http://fs24.formsite.com/ingenious/form2/index.html>
- Attend an online panel (if you read this in time): Internships (May 1), Job Placement (May 9), Measurement and Evaluation (May 17), Technology and MOOCs (May 30), Documentation & Dissemination (May 31), Recruitment & Retention (June 7).
- Joining a brief online open discussion following each panel.
- Apply to attend the final three-day workshop July 14–16.

For more information on each of these activities, visit <http://www.ingeniousmathstat.org/>

## Contact information

IMS Bulletin Editor: Dimitris Politis

Assistant Editor: Tati Howell

Contributing Editors:

Peter Bickel, Anirban DasGupta,

Nicole Lazar, Xiao-Li Meng, Terry Speed

Contact the IMS Bulletin by email:

**e** [bulletin@imstat.org](mailto: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](mailto: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](mailto:erg@imstat.org)

## Executive Committee

President: Hans R. Künsch  
[president@imstat.org](mailto:president@imstat.org)

President-Elect: Bin Yu  
[president-elect@imstat.org](mailto:president-elect@imstat.org)

Past President: Ruth Williams  
[president-past@imstat.org](mailto:president-past@imstat.org)

Treasurer: Jean Opsomer  
[jopsomer@stat.colostate.edu](mailto:jopsomer@stat.colostate.edu)

Program Secretary: Judith Rousseau  
[rousseau@ceremade.dauphine.fr](mailto:rousseau@ceremade.dauphine.fr)

Executive Secretary: Aurore Delaigle  
[a.delaigle@ms.unimelb.edu.au](mailto:a.delaigle@ms.unimelb.edu.au)

## IMS Members' News

### US National Academy of Sciences elects Peter Hall and Greg Lawler

The US National Academy of Sciences has elected 84 new members and 21 foreign associates from 14 countries in recognition of their distinguished and continuing achievements in original research.

Among them are two familiar names: former IMS President **Peter Hall**, and IMS Fellow **Gregory F. Lawler**.

Peter Hall is Australian Laureate Fellow in the Department of Mathematics and Statistics at the University of Melbourne, Australia, and Distinguished Professor at UC Davis. He was elected a Foreign Associate. Greg Lawler is professor in the Departments of Mathematics and Statistics at the University of Chicago.

Members are elected to the National Academy of Sciences in recognition of their distinguished and continuing achievements in original research. National Academy membership is considered one of the highest American honors that a scientist can receive.



Peter Hall



Greg Lawler

### Larry Shepp, 1936–2013

On April 23 Larry Shepp, the Patrick T. Harker Professor in the Statistics Department at the Wharton School of the University of Pennsylvania, passed away at the age of 76, having been unable to recover from a fall several months ago. Larry was loved by many and had friends all over the world. Internationally recognized as a distinguished mathematician and probabilist of the highest caliber, Larry was an elected member of the National Academy of Sciences, the National Institute of Medicine, and the American Academy of Arts and Sciences.

### Professors Gareth Roberts and Terry Speed named Fellows of the Royal Society

The UK's Royal Society is a Fellowship of the world's most eminent scientists and is the oldest scientific academy in continuous existence. Each year it elects new Fellows from the UK and Commonwealth, and Foreign Members; they are elected on the basis of excellence in science. There are approximately 1,450 Fellows and Foreign Members, including more than 80 Nobel Laureates. Among those elected this year are **Gareth Roberts** and **Terry Speed**.

Gareth Roberts, University of Warwick, UK: according to <http://royalsociety.org/people/gareth-roberts/> his work spans "applied probability, Bayesian statistics and computational statistics. He has made fundamental contributions to the theory, methodology and application of Markov Chain Monte Carlo and related methods in statistics. He has developed crucial convergence and stability theory, constructed a theory of optimal scaling for Metropolis-Hastings algorithms, and has introduced and explored the theory of adaptive MCMC algorithms. He has made pioneering contributions to infinite dimensional simulation problems and inference in stochastic processes." Terry Speed is Senior Principal Research Scientist at the Walter and Eliza Hall Institute of Medical Research. The Royal Society website <http://royalsociety.org/people/terence-speed/> says Terry, "is regarded internationally as *the* expert on the analysis of microarray data. This results partly from the sheer ingenuity of his work, and in part it is due to his commitment to working closely with biomedical scientists, enabling him to appreciate first-hand the biological challenges and the consequent requirements of new methodology ... [He] has made seminal contributions to bioinformatics, statistical genetics, the analysis of designed experiments, graphical models and Bayes networks."

# IMS Members' News

## American Academy of Arts and Sciences elects Larry Brown, Bin Yu

The American Academy of Arts and Sciences has elected **Larry Brown** and **Bin Yu** to its membership. Founded in 1780, the American Academy of Arts and Sciences is an independent policy research center that conducts multidisciplinary studies of complex and emerging problems. The Academy's elected members are leaders in the academic disciplines, the arts, business, and public affairs.

Lawrence David Brown, University of Pennsylvania's Wharton School, lists his research interests at <http://www-stat.wharton.upenn.edu/~lbrown/> as, "statistical decision theory; statistical inference; nonparametric function estimation; foundations of statistics; sampling theory (census data); empirical queueing science."

Bin Yu, Department of Statistics, University of California, Berkeley, is currently IMS President-Elect. According to her department webpage, Bin is "currently working on statistical machine learning theory, methodologies, and algorithms for solving high-dimensional data problems. Current research topics of my group cover sparse modeling (e.g. Lasso), structured sparsity (e.g. hierarchical and group and graph path), analysis and methods for spectral clustering for undirected and directed graphs; and our data problems come from diverse interdisciplinary areas including remote sensing, neuroscience, document summarization, and social networks. My past research areas have also included empirical processes, Markov Chain Monte Carlo, signal processing, the minimum description length principle (MDL), and information theory."

The complete list of new members is at <http://www.amacad.org/news/classlist2013.pdf>

## Eyal Lubetzky receives Rollo Davidson Prize

The Rollo Davidson Trustees have announced the award of the 2013 Rollo Davidson Prize jointly to **Eyal Lubetzky** (Microsoft Research, Redmond) and Allan Sly (University of California, Berkeley) for their work on the dynamics of the Ising model, and especially their remarkable proof of the cut-off phenomenon.

## New IMS Managing Editor

IMS Council has approved the appointment of **T.N. Sriram** as Managing Editor, for the term January 1, 2014 to December 31, 2016. He will take over from Michael Phelan. T.N. Sriram is a professor in the Department of Statistics at the University of Georgia, Athens. <http://www.stat.uga.edu/people/faculty/tn-sriram>

## Vincenzo Capasso awarded "Chair of Excellence"

**Vincenzo Capasso**, who is a member of IMS and an Elected Fellow of ISI, is Full Professor of Probability and Mathematical Statistics at the Department of Mathematics, Milan University, Italy. He has been awarded one of ten Chairs of Excellence for the 2013–14 academic year, in an international competition called by Carlos III University of Madrid, in order to promote excellence in research and attract frontline researchers from the international university and research community. The awardees in all fields of research were selected by an evaluation committee composed of eight senior professors, including five from Carlos III.

## COPSS Fisher Lecture by Peter Bickel

**Peter Bickel** will give the COPSS Fisher lecture at JSM Montreal on August 7th, at 4pm. The title of his talk is *From Fisher to "Big Data": continuities and discontinuities*.

 = access published papers online

## IMS Journals and Publications

*Annals of Statistics*: Peter Hall and Runze Li

<http://imstat.org/aos>

 <http://projecteuclid.org/aos>

*Annals of Applied Statistics*: Stephen Fienberg

<http://imstat.org/aoas>

 <http://projecteuclid.org/aoas>

*Annals of Probability*: Krzysztof Burdzy

<http://imstat.org/aop>

 <http://projecteuclid.org/aop>

*Annals of Applied Probability*: Timo Seppäläinen

<http://imstat.org/aap>

 <http://projecteuclid.org/aoap>

*Statistical Science*: Jon Wellner

<http://imstat.org/sts>

 <http://projecteuclid.org/ss>

## IMS Collections

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

 <http://projecteuclid.org/imsc>

*IMS Monographs and IMS Textbooks*: David Cox

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

## IMS Co-sponsored Journals and Publications

*Electronic Journal of Statistics*: George Michailidis

<http://imstat.org/ejs>

 <http://projecteuclid.org/ejs>

*Electronic Journal of Probability*: Michel Ledoux

 <http://ejp.ejpecp.org>


*Electronic Communications in Probability*:

Anton Bovier

 <http://ecp.ejpecp.org>

*Current Index to Statistics*: George Styan


<http://www.statindex.org>

 log into members' area at [imstat.org](http://imstat.org)

*Journal of Computational and Graphical Statistics*:


Thomas Lee

<http://www.amstat.org/publications/jcgs>

 log into members' area at [imstat.org](http://imstat.org)


*Statistics Surveys*: Lutz Dümbgen

<http://imstat.org/ss>

 <http://projecteuclid.org/ssu>

*Probability Surveys*: Laurent Saloff-Coste

<http://imstat.org/pss>


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

## IMS-Supported Journals

*Annales de l'Institut Henri Poincaré (B)*: Thierry

Bodineau & Lorenzo Zambotti

<http://imstat.org/aihp>

 <http://projecteuclid.org/aihp>

*Bayesian Analysis*: Herbie Lee

 <http://ba.stat.cmu.edu>

*Bernoulli*: Eric Moulines


<http://www.bernoulli-society.org/>

 <http://projecteuclid.org/bj>


*Brazilian Journal of Probability and Statistics*:

Silvia Ferrari

<http://imstat.org/bjps>

 <http://projecteuclid.org/bjps>

*Stochastic Systems*: Peter W Glynn

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

## IMS-Affiliated Journals


*ALEA: Latin American Journal of Probability and*

*Statistics*: Claudio Landim

 <http://alea.impa.br/english>

*Probability and Mathematical Statistics*: K. Bogdan,

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

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

# Other News

## Statistics grad student killed in Boston marathon explosion

Lu Lingzi has been named as the third victim in the Boston Marathon bombings on April 15. She was a graduate student in Boston University's Department of Mathematics and Statistics. BU has endowed a memorial scholarship (<http://www.bu.edu/today/2013/bu-scholarship-will-honor-lu-lingzi/>) in her memory.

At her memorial service Lu Lingzi was remembered as someone who loved statistics, blueberry pancakes and her dog.

## NSF Support for Research in Statistical Sciences: IMS report on members' responses

The IMS and other professional societies were asked last year, by the US National Science Foundation's Directorate for Mathematical and Physical Sciences, for input in response to five questions, which were put to members in an email from the IMS President in January.

The IMS members' responses have now been collated into a report, which is available for download at [http://imstat.org/report\\_on\\_comments.pdf](http://imstat.org/report_on_comments.pdf)



## Foundation for Open Access Statistics

The Foundation for Open Access Statistics is a non-profit public benefit corporation registered in California. We have applied for federal tax-exempt status under Internal Revenue Section 501(c)(3). FOAS has a world-wide mission to promote free software, open access publishing, and reproducible research in statistics.

Currently, the *Journal of Statistical Software* ([www.jstatsoft.org](http://www.jstatsoft.org)) is the only FOAS project. *JSS* has grown rapidly over the 15 years of its existence, in page count, quality, and impact. The journal does not charge fees to authors or to readers. It needs a more stable support structure to guarantee its continued existence and growth.

On the FOAS website ([www.foastat.org](http://www.foastat.org)) you can join, and/or make financial contributions. We invite you to contribute ideas, projects, and materials for the FOAS site.

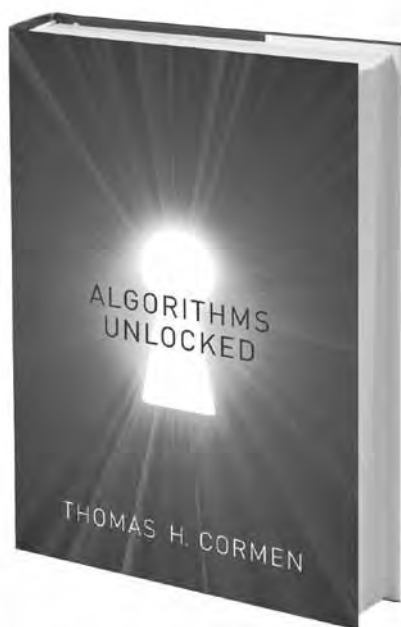
Jan de Leeuw, email: [jan.deleeuw@foastat.org](mailto:jan.deleeuw@foastat.org)

Katharine Mullen, email: [katharine.mullen@foastat.org](mailto:katharine.mullen@foastat.org)

Achim Zeileis, email: [achim.zeileis@foastat.org](mailto:achim.zeileis@foastat.org)



The MIT Press



### ALGORITHMS UNLOCKED

Thomas H. Cormen

For anyone who has ever wondered how computers solve problems, an engagingly written guide for nonexperts to the basics of computer algorithms. 240 pp., \$25 paper

### COMPUTABILITY

Turing, Gödel, Church, and Beyond

edited by B. Jack Copeland, Carl J. Posy, and Oron Shagrir

Computer scientists, mathematicians, and philosophers discuss the conceptual foundations of the notion of computability as well as recent theoretical developments. 376 pp., 1 illus., \$35 cloth

The MIT Press [mitpress.mit.edu](http://mitpress.mit.edu)

## Call for Nominations for Sacks Award:

Deadline June 15, 2013

Nominations are sought for the 2013 National Institute of Statistical Sciences (NISS) Jerome Sacks Award for Outstanding Cross-Disciplinary Research. The prize recognizes *sustained, high-quality* cross-disciplinary research involving the statistical sciences. The prize of \$1,000 will be presented at the NISS/SAMSI JSM Reception on August 5, 2013, in Montreal. Further information about the award can be found at [www.niss.org/news/awards/jerome-sacks-award-outstanding-cross-disciplinary-research](http://www.niss.org/news/awards/jerome-sacks-award-outstanding-cross-disciplinary-research)

To nominate an individual, please submit a nomination letter (maximum two pages, including the names of at least two other individuals who have consented to write letters of support) and a CV, to [sacksaward2013@niss.org](mailto:sacksaward2013@niss.org)



# The XL-Files: *Statistical Classics and Classical Statistics*

Contributing Editor Xiao-Li Meng writes:

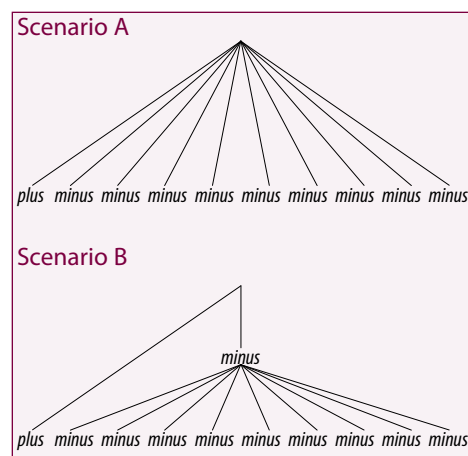
“How do you like your new job?” I keep getting asked. Like most jobs, mine has seen days I wished to forget before sunset and evenings I wanted to remember after sunrise. One of these evenings was a talk at our graduate student center, given by Professor Richard Tarrant, on “Editing Classical Latin Texts: Reflections of a Survivor.”

I attended it because I desperately need my General Education. Trained as a pure mathematician in college with the only “impure” elective course being “Mathematical Equations for Physics,” I have constantly embarrassed myself, especially during 57 admissions meetings, by not knowing which language goes with which country or which holy text belongs to which religion. I have become a living example of the importance of providing a T-shaped education, emphasizing deep scholarship and expertise as well as broad knowledge and skills.

Richard started by asking why there are so many editions of classical texts, such as *Satyricon* or *Metamorphoses*. The answer turns out to be one that we statisticians appreciate: *uncertainty*! The surviving copies of these texts may contain missing words, lost sections, scribal errors, misplaced segmentations, etc. These imperfections have left much for classicists to impute, infer, and interpret, and each edition may generate its own ambiguities for even more scholars to contemplate.

The problem truly belongs to *statistical classics* when one needs to infer an *estimand*, say a particular phrase in the original text, using *data*, the corresponding phrases given in various editions. Richard used a figure to illustrate “a critical method” for classicists to accomplish such a task. In both scenarios, one manuscript shows the phrase being “plus,” but nine other manuscripts show “minus”. Obviously the odds of the original phrase being “minus” versus “plus” depend critically on whether the nine “minus”

instances were independent interpretations (Scenario A) or they actually were all copies of an even earlier manuscript (Scenario B). A critical step for classicists is to establish which scenario occurred by often painstaking work, for example, demonstrating that any communications or collaborations among the nine scribes were inconceivable during their time.



As it happens, another memorable evening in recent months reminded me of the importance of studying *classical statistics*. My student, Alex Blocker, and I have been working on building a theoretical foundation for preprocessing, which includes recalibration, normalization, compression, etc.; that is, anything done to the *raw* data before they are presented to the analyst. As the quality of such processing obviously matters, any statistical theory that ignores preprocessing is insufficient for addressing big data, where preprocessing is the norm rather than the exception.

Building such a theory turns out to be challenging. Consider a simple but realistic setting, where our *scientific model* is  $P(X|\theta)$ , but we do not observe  $X$  (e.g., the true gene expression). The raw data are  $Y$  (e.g., intensity measurements for probes), which are subject to noise captured by an *observation model*  $P(Y|X)$ , free of  $\theta$ . Often a preprocessor only has a guess of the scientific model  $P(X|\theta)$ , denoted by  $Q(X|\eta)$ . Any complete theory of

lossless compression then requires that we determine when a sufficient statistic  $T(Y)$  for the  $Y$ -margin of the preprocessing model  $P(Y|X)Q(X|\eta)$  will also be sufficient for the  $Y$ -margin of the (joint) scientific model  $P(Y, X|\theta) = P(Y|X)P(X|\theta)$ .

During our investigation, the following question extended an hour-long meeting from 5pm until midnight. Let  $T=T(Y)$  and  $S=S(X)$  be sufficient statistics respectively for  $P(Y|\theta)$  and  $P(X|\theta)$ , the two margins of  $P(Y, X|\theta) = P(Y|X)P(X|\theta)$ . Clearly  $S(X)$  is also sufficient for  $P(Y, X|\theta)$ , and hence  $P(Y|S, \theta) = P(Y|S)$ . As  $S$  can be viewed as the parameter in this conditional model, we can ask when  $T$  is also sufficient for  $S$ , that is,  $P(Y|T, S) = P(Y|T)$ ? Evidently this is not true in general (e.g., when  $S(X)=X$ ), and it is clearly true if  $S$  is complete. But what if  $S$  is *minimally sufficient* but not complete? (Completeness is often too strong a condition for our settings.)

Some have argued that the notion of completeness is out of date (though it is important for our investigation), but the concept of sufficiency must lie at the core of statistics or any branch of “Data Science”, even though the language may differ (e.g., lossless compression). We serve our students—and science—well when we teach both the contemporary variations and developments of (judiciously selected) classical concepts, and their well-established theoretical foundations. I therefore submit that a complete T-shaped PhD education in Statistics must require enough depth to activate students’ desires to “treasure hunt” classical statistics for contemporary benefit, as well as adequate breadth to enable them to connect seemingly unrelated subjects such as statistical classics. Given IMS has unique advantages for this educational endeavor, may I suggest it as one of IMS’s emphases during this International Year of Statistics, and beyond?

# OBITUARY: Donald L. Burkholder

## 1927–2013

DONALD LYMAN BURKHOLDER died in his sleep on April 14, 2013, in Urbana, Illinois. He was born January 19, 1927, in Octavia, Nebraska, the fourth of five children of Elmer and Susan (Rothrock) Burkholder. His mother had been a schoolteacher, and his father was a farmer who served on the community school board for many years. Education became the family business: of the four boys, the oldest was a superintendent of schools, the three youngest were college professors, and many in the next generation are educators.

In 1945, Don graduated from high school, where he was captain of the basketball team and senior class president, an honor (as he loved to relate) that came his way because his three classmates had already been president. He was drafted and entered the Civilian Public Service (CPS) as a conscientious objector, serving as a cook at a camp for fighting forest fires in Oregon and as an orderly at a mental hospital in New Jersey.

Following his discharge in December 1946, he acted on the recommendation of a friend and enrolled at Earlham College, a predominantly Quaker college in Richmond, Indiana. There he met his wife-to-be, Jean Annette Fox, and they were both drawn to the field of sociology by the vision and intellectual rigor of a new faculty member who had also served in the CPS, Bill Fuson.

After their wedding in June 1950, Don and Jean attended the University of Wisconsin in Madison as graduate students in sociology. In 1953, they went to the University of North Carolina at Chapel Hill, where Don had a fellowship to study sociological statistics. He soon discovered that his real interest lay in mathematics, and he completed a PhD in mathematical statistics in 1955 under the guidance of Professor Wassily Hoeffding.

That summer, Don joined the Mathematics Department at the University of Illinois, Urbana-Champaign. In 1978, he was appointed professor in the Center for Advanced Study, allowing him to devote more time to research. He retired as professor emeritus in 1998.

Soon after he came to Illinois, Don, influenced by his eminent colleague Joseph Doob, turned to the study of martingales. It is now apparent that the two mathematicians who most advanced martingale theory in the last seventy years were Joseph Doob and Donald Burkholder. Martingales as a remarkably flexible tool are used throughout probability and its applications to other areas of mathematics. They are central to modern stochastic analysis. And martingales, which can be defined in terms of fair games, lie at the core of mathematical finance. Burkholder's research profoundly advanced not only martingale theory but also, via martingale connections, harmonic and functional analysis.

In their 1970 *Acta Mathematica* paper, which followed Burkholder's seminal 1966 paper "Martingale Transforms" in the *Annals of Mathematical Statistics*, Burkholder and Gundy introduced a remarkable technique which shows how certain integral inequalities between two nonnegative functions on a measure space follow from inequalities involving only parts of their distribution. This seemingly simple but incredibly elegant technique, now referred to simply as "the good- $\lambda$  method", revolutionized the way probabilists and analysts think of norm comparison problems. It is now widely used in areas of mathematics which involve integrals and operators. Burkholder's outstanding work in the geometry of Banach spaces arose from his extension of martingale inequalities to settings beyond Hilbert spaces where the square function approach used in his earlier



Donald Burkholder

work fails. His work in the eighties and nineties on martingale inequalities with emphasis on identifying best constants has become of great importance in recent years in the investigations of two well known open problems, one concerning optimal  $L^p$  bounds of certain singular integrals operators and their ramifications in quasiconformal mappings and the other related to a longstanding conjecture in the calculus of variations dealing with rank-one convex and quasiconvex functions. These problems come from fields which on the surface are far removed from martingales.

The paper of Burkholder and Gundy mentioned above and the 1971 *Transactions of the American Mathematical Society* paper of Burkholder, Gundy, and Silverstein, are exceptionally important. The first paper includes, in addition to the good- $\lambda$  inequalities, fundamental integral inequalities comparing the maximal function and the square function of martingales. The second paper strikingly improved, and completed, work of Hardy and Littlewood on the characterization of the Hardy  $H^p$  spaces via the integrability of certain maximal functions. While probabilistic techniques had already gained the respect of many analysts studying harmonic functions and potential theory, due to earlier work of Doob, Kakutani, Wiener and others, this landmark paper had a profound influence in harmonic analysis and

**Obituary: Don Burkholder, 1927–2013***Continued from page 6*

propelled many analysts to learn probability.

In his five-decade career, Don gave hundreds of invited lectures and lecture series at universities all over the world. He lectured in England, France, Germany, Switzerland, Israel, Denmark, Sweden, Poland, Hungary, Japan, Singapore, Italy, Scotland, Spain, and Canada and at universities across the United States. He was editor of the *Annals of Mathematical Statistics* (1964–67), president of the Institute of Mathematical Statistics (1975–76), and a member of many councils, advisory committees, and governing boards. He was a dedicated teacher and mentored 19 PhD students. He was elected to the National Academy of Sciences in 1992, and was a Fellow of the American Academy of

Arts and Sciences, the Society for Industrial and Applied Mathematics, and the American Association for the Advancement of Science. In December 2012, he was among the first class named as Fellows of the American Mathematical Society.

Don will be remembered not only for his profound contributions to mathematics, but also for the kind and decent ways in which he interacted with everyone he met, and for his encouragement and support to so many young mathematicians who had the great fortune of crossing paths with him.

Don was predeceased by his brothers Robert and Wendell Burkholder and his daughter Kathleen Linda Burkholder; and is survived by his wife of almost 63 years, Jean Annette (Fox) Burkholder; his son J.

Peter Burkholder and son-in-law P. Douglas McKinney of Bloomington, Indiana; his son William F. Burkholder, daughter-in-law Joanne (McLean) Burkholder, and granddaughter Sylvie Kathleen Burkholder of Singapore; his sister Helen Dale and brother-in-law Ernie Dale of Auburn, Washington; his brother and sister-in-law John and Donna Burkholder of McPherson, Kansas; his sisters-in-law Anne Burkholder of McPherson, Kansas, and Leona Burkholder of Madison, Wisconsin, and 17 nieces and nephews

*Peter Burkholder, Indiana University; William Burkholder, Institute of Molecular and Cell Biology, Singapore; Rodrigo Bañuelos, Purdue University; Burgess Davis, Purdue University; and Renming Song, University of Illinois at Urbana-Champaign*

**OBITUARY: Martin B. Wilk****1922–2013**

Martin B. Wilk, OC, died in Yorba Linda, California, on February 19, 2013; he was 90.

Throughout his career, Martin demonstrated that a statistician can successfully span academia, industry and government. For over half a century, he made important contributions, and occupied senior positions, in each of these domains. While his name may be best known within the profession for the Shapiro–Wilk test for normality, his influence on statistical methods and practice has been much broader. He was, among others, Assistant Vice President and Director of Corporate Planning at AT&T and Chief Statistician of Canada. In 1999, he was made an Officer of the Order of Canada (OC) for providing “insightful guidance on important matters related to our country’s national statistical system.”

Born and raised in Montréal, Martin Wilk attended McGill University, where he

completed his Bachelor’s degree in Chemical Engineering in 1945. After graduation he joined Canada’s National Research Council atomic energy project at Chalk River, Ontario, where he soon recognized the critical role of variability in data analysis. At first he developed his own techniques to handle this variability. It was only after his move in 1950 to Iowa State College as a Laboratory Research Assistant that he discovered the discipline of statistics. He was soon enrolled in statistical courses and underwent his conversion from engineer to statistician. At Iowa he completed a Master’s degree in 1953 and a PhD in 1955 in the area of experimental design under the supervision of Oscar Kempthorne.

Martin’s postdoctoral year was spent at Princeton University under John Tukey during which he was introduced to the research work of Bell Labs on a part-time



*Martin B. Wilk*

basis. Attracted by the research environment of Bell Labs, he chose to continue there after his postdoctoral year. During the 1960s he took on progressively more senior positions in the statistical methods and research groups of Bell Labs. Between 1959 and 1963 he was also Professor of Statistics at Rutgers University, New Jersey, while maintaining a part-time consulting relationship with Bell Labs.

The contributions to statistical methodology for which Martin Wilk is renowned stem

*Continues on page 8*

## Obituary: Martin Wilk, 1922–2013

*Continued from page 7*

largely from this period at Bell Labs. With primary collaborators, Ram Gnanadesikan and Samuel Shapiro, he published a series of papers dealing with probability plotting for multivariate data, and diagnostic procedures for classical distributions, including the well-known Shapiro–Wilk test statistic for normality.

By the end of the 1960s, Martin had developed an interest in the broader managerial and organizational issues of the American Telephone and Telegraph Company (AT&T), the parent company of Bell Labs. Beginning with the issue of rate setting for telephone services, and as preparation for hearings by the Federal Communications Commission, he became involved in the assessment and improvement of the models being used to value various business lines. This involvement led to a recognition by AT&T's management of the broader value of management science and Martin was to be an in-house leader in this respect. During the 1970s he directed staffs involved in corporate modeling, research and planning, becoming Assistant Vice President and Director of Corporate Planning in 1976.

In 1980, Martin was approached by the Government of Canada for the position of head of Statistics Canada. At that time, the agency had been experiencing some serious difficulties. Independent reviews of both management and of methods, commissioned by the Government, had identified a range of issues that needed to be addressed, not least of which was a loss of staff morale following a period of adverse publicity. Martin accepted this challenge and became Chief Statistician of Canada late in 1980, the first mathematical statistician to occupy this post.

Between 1981 and 1985, Martin refocused Statistics Canada by, for example, introducing a more integrated and cohesive organizational structure, strengthening the Agency's contacts with Ministries and other

important data users, putting in place a disciplined planning system, rationalizing its program of publications, and establishing a stronger analytical capacity. He gave the organization a sense of purpose again. During this period he also had to deal with a sudden Cabinet decision to cancel the 1986 census, a decision that he managed to have reversed after some persuasive lobbying and innovative funding proposals. Martin's short tenure as Chief Statistician of Canada set the stage for Statistics Canada to flourish and become recognized as a world-class statistical agency over the following two decades.

After his retirement from Statistics Canada in 1985, Martin remained in Ottawa and undertook several important consultancies for the Canadian Government. In particular, he headed the National Task Force on Health Information that led to the creation of the Canadian Institute of Health Information. He also conducted a review for Revenue Canada of their data management and holdings with emphasis on strengthening the statistical use of these data. He served for many years on the National Statistics Council of Canada as well as on Statistics Canada's Advisory Committee on Statistical Methods. Finally, approaching 80, he retired to the West Coast of the United States, where he was able to enjoy his later years with his second wife, Dorothy, his children and grandchildren.

Martin was a Vice President of the American Statistical Association in 1980–82, having previously served as President of his local chapter. He was also President of the Statistical Society of Canada for 1986–87, promoting the strengthening of ties between academic statisticians and statisticians in industry and government. He was made an Honorary Member of the SSC in 1988 “for seminal contributions to the fields of analysis of variance, multivariate analysis, model fitting and validation, for enormous contributions

to Statistics Canada as the Chief Statistician and for insightful guidance of the Society while serving on its Board and as its President.”

Martin Wilk's contributions to the statistical profession were recognized by many other honors throughout his career. He was, among others, a fellow of the ASA (1962), the IMS (1968), and the American Association for the Advancement of Science (1969). He received the Jack Youden Prize in 1972 and a Distinguished Alumni Award from Iowa State University in 1997.

Those who worked with Martin recall his formidable ability to argue a case, extemporaneously and sometimes at length, his penetrating questions often from unexpected angles, his ability to analyze complex issues quickly and focus on the crux of the matter, and his unending supply of aphorisms exactly suitable for the issue at hand. Many of his pronouncements continued to be quoted at Statistics Canada long after he retired.

The profession has lost a great statistician whose contributions to theory and practice will long be influential. For additional information about Martin Wilk's life and career, see, among others:

D.R. Brillinger & J.F. Gentleman (1989). Martin Bradbury Wilk: a new honorary member of the Statistical Society of Canada. *Liaison*, 4 (1), 27–29. Also at [www.ssc.ca/en/about/history-ssc/martin-bradbury-wilk](http://www.ssc.ca/en/about/history-ssc/martin-bradbury-wilk)

C. Genest & G.J. Brackstone (2010). A conversation with Martin Bradbury Wilk. *Statistical Science*, 25, 258–272.

M. Lennick (2013). Martin Wilk remembered as ‘the best statistician in Canada's history’. *The Globe and Mail*, Toronto, April 13. Also at <http://www.theglobeandmail.com/news/national/martin-wil-remembered-as-the-best-statistician-in-canadas-history/article11040353/?cmpid=rss1>

Christian Genest, McGill University, and  
Gordon J. Brackstone, Statistics Canada



# Medallion Lecture: Judea Pearl

Judea Pearl is a professor of computer science and statistics at UCLA. He is a graduate of the Technion, Israel, and joined the faculty of UCLA in 1970, where he currently directs the Cognitive Systems Laboratory and conducts research in artificial intelligence, causal inference and philosophy of science. Pearl has authored several hundred research papers and three books: *Heuristics* (1984), *Probabilistic Reasoning* (1988), and *Causality* (2000; 2009). He is a member of the National Academy of Engineering, the American Academy of Arts and Sciences, and a Fellow of the IEEE, AAAI and the Cognitive Science Society. Pearl received the 2008 Benjamin Franklin Medal for Computer and Cognitive Science and the 2011 David Rumelhart Prize from the Cognitive Science Society. In 2012, he received the Technion's Harvey Prize and the ACM A.M. Turing Award for the development of a calculus for probabilistic and causal reasoning. His Medallion Lecture will be at JSM on Tuesday August 6 at 2pm.



## The Mathematics of Causal Inference

Recent developments in graphical models and the logic of counterfactuals have had a marked effect on the way scientists treat problems involving cause–effect relationships. Paradoxes and controversies have been resolved, slippery concepts have been demystified, and practical problems requiring causal information, which long were regarded as either metaphysical or unmanageable, can now be solved using elementary mathematics.

I will review concepts, principles, and mathematical tools that were found useful in this transformation, and will demonstrate their applications in several data-intensive sciences. These include questions of confounding control, policy analysis, misspecification tests, mediation, heterogeneity, selection bias, missing data and the integration of data from diverse studies.

These advances owe their development to two methodological principles. First, a commitment to understanding what reality should be like for a statistical routine to succeed and, second, a commitment to express the understanding of reality in terms of data-generating models, rather than distributions of observed variables.

Data generation models, encoded as nonparametric structural equations, have led to a fruitful symbiosis between graphs and counterfactuals that has unified the potential outcome framework of Neyman, Rubin and Robins. with the econometric tradition of Haavelmo, Marschak and Heckman.

In this symbiosis, counterfactuals emerge as natural byproducts of structural equations and serve to formally articulate research questions of interest. Graphical models, on the other hand, are used to encode scientific assumptions in a qualitative (i.e., nonparametric) language, identify their testable implications, and determine the estimability of interventional and counterfactual research questions.

One of the major results along this development has been a complete solution to the problem of non-parametric causal effects identification. Given data from observational studies and qualitative assumptions of how variables relate to each other causally, it is now possible to decide algorithmically whether the assumptions are sufficient for identifying causal effects of interest, what covariates should be measured (or enter into a propensity score routine) and what the

testable implications are of the model assumptions. “Completeness” proofs that accompany these results further assure investigators that no method can do better without resorting to stronger assumptions.

Another triumph of the symbiotic analysis has been the emergence of active research in nonparametric mediation problems, aiming to estimate the extent to which an effect is mediated by various pathways or mechanisms (e.g., Robins and Greenland, Pearl, Petersen and Van der Laan, VanderWeele, Imai). The importance of this analysis, aside from telling us “how nature works,” lies in policy evaluation, especially in deciding what nuances of a given policy are likely to be most effective. Mediation-related questions were asked decades ago by Fisher and Cochran but, lacking the tools of graphs and counterfactuals they could not be addressed until quite recently.

Recent works further show that causal analysis is necessary in applications previously thought to be the sole province of statistical estimation. Two such applications are meta-analysis and missing data.

The talk will focus on the following questions:

1. *What every student should know about causal inference, and why it is not taught in Statistics 101.* [http://ftp.cs.ucla.edu/pub/stat\\_ser/r350.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r350.pdf)
2. *The Mediation Formula, and what it tells us about “How nature works”* [http://ftp.cs.ucla.edu/pub/stat\\_ser/r379.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r379.pdf)
3. *What mathematics can tell us about “external validity” or “generalizing across populations”* [http://ftp.cs.ucla.edu/pub/stat\\_ser/r372.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r372.pdf) [http://ftp.cs.ucla.edu/pub/stat\\_ser/r387.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r387.pdf)
4. *When and how can sample-selection bias be circumvented* [http://ftp.cs.ucla.edu/pub/stat\\_ser/r381.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r381.pdf), [http://ftp.cs.ucla.edu/pub/stat\\_ser/r405.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r405.pdf)
5. *What population data can tell us about unsuspected heterogeneity* [http://ftp.cs.ucla.edu/pub/stat\\_ser/r406.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r406.pdf)
6. *Why missing data is a causal problem, when parameters are estimable from partially observed data, and how* [http://ftp.cs.ucla.edu/pub/stat\\_ser/r406.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r406.pdf)

Reference: J. Pearl, *Causality* (Cambridge University Press, 2000, 2009) Working papers: [http://bayes.cs.ucla.edu/csl\\_papers.html](http://bayes.cs.ucla.edu/csl_papers.html)

# Medallion Lecture: Ya'acov Ritov

Ya'acov Ritov is professor in the Department of Statistics at the Hebrew University of Jerusalem. He received his PhD from the Hebrew University in 1983, and is a fellow of the IMS. Ya'acov's (statistical) research interests include complex and large dimensional model, empirical Bayes procedures, semi- and non-parametric models. His Medallion Lecture is also at JSM, on Thursday August 8, at 8:30am (see below for the times and locations of other Medallion Lectures, as well as the Wald Lectures, the Rietz Lecture and the Presidential Address.)



## *A Priori Analysis of Complex Models*

We (P.J. Bickel, A.C. Gamst, B.J.K. Kleijn, and Y. Ritov) study a few examples of Bayesian procedures on complex, high-dimensional parameter spaces. The Bayesian procedures we consider are those that adhere to the following paradigm. The prior distribution is announced *prior* to observing the data. At least we are restricted to priors that do not depend on details of the experimental design or on knowing the specific functions of the parameters that may turn out to be of interest. In this paradigm, it would not, for example, be reasonable for a statistician to use one prior for estimating one function, and another to estimate a different function. We shouldn't be reminded of Groucho Marx's quote, "Those are my principles, and if you don't like them... well, I have others."

Bayesian procedures can be considered from different points of view. Their closure is the set of admissible procedures, and they are known to generate asymptotic minimax procedures in regular parametric models. However, these claims are valid when the priors are selected to fit frequentist ad-hoc considerations.

Most early discussions of Bayesian analysis presented simple examples, e.g.,  $X \sim N(\vartheta, 1)$ . In this case, a statistician might have clear *a priori* ideas about  $\vartheta$ , and might well understand the implications of using his prior. Regardless, the data will eventually overwhelm the prior, and typically frequentist and Bayesian inference will coincide. The classical Bernstein–von Mises Theorem encapsulates this observation. Currently, Bayesian procedures are being applied

to complex, high-dimensional models, e.g., those used in medical imaging. With a very high-dimensional parameter space (where, for example, laws of large numbers appear in surprising places), it is very difficult to understand the implications of using a particular prior. It is very difficult, if not impossible, to express subjective information about the model in a robust prior, and it is difficult to express this knowledge in a way that would support the data analysis and not dominate it.

We use several examples to illustrate a number of issues. This includes the partial linear model of Engle, Granger, Rice and Weiss (1986), and different models in the very convenient lab of white noise series. We show that in situations where the nonparametric part of the model is smooth enough, the Bernstein–von Mises phenomenon holds and Bayesian estimators are efficient, but the Bayesian estimator is going to fail in extreme situations where simple frequentist estimation can still work. Then, it may argue that in a given white noise model, the any Bayesian prior would fail in estimation of some linear functional, while trivial frequentist estimator would not.

We also give an example in which Bayesian procedures which ignore the stopping time associated with the data generating process fail, while simple frequentist procedures continue to work. This demonstrates the danger of the classical principle that Bayesians need not pay attention to stopping times.

**Come to the  
IMS's Special  
Lectures  
at JSM 2013**

**Montréal Canada  
JSM2013**

<i>Medallion Lecture I</i>	Gady Kozma	Sunday Aug 4	4:00–5:50pm, 710b
<i>Medallion Lecture II</i>	Jeremy Quastel	Monday Aug 5	8:30–10:20am, 710b
<i>Medallion Lecture III</i>	Martin Wainwright	Monday Aug 5	2:00–3:50pm, 710b
<i>IMS Presidential Address &amp; Awards</i>	Hans Rudolf Künsch	Monday Aug 5	8:00–9:30pm, 517ab
<i>Medallion Lecture IV</i>	Lutz Duembgen	Tuesday Aug 6	8:30–10:20am, 710b
<i>Medallion Lecture V</i>	Peter Guttorp	Tuesday Aug 6	10:30am–12:20pm, 710b
<i>Medallion Lecture VI</i>	Judea Pearl	Tuesday Aug 6	2:00–3:50pm, 710b
<i>Wald Lecture I</i>	Piet Groeneboom	Tuesday Aug 6	4:00–5:50pm, 710a
<i>Wald Lecture II</i>	Piet Groeneboom	Wednesday Aug 7	8:30–10:20am, 710b
<i>Public Lecture</i>	David Spiegelhalter	Wednesday Aug 7	2:00–3:50pm, Hyatt
<i>Rietz Lecture</i>	Larry Wasserman	Wednesday Aug 7	10:30am–12:20pm, 710b
<i>Medallion Lecture VII</i>	Ya'acov Ritov	Thursday Aug 8	8:30–10:20am, 710b

# Anirban's Angle: Top Inequalities for a PhD student

Contributing Editor Anirban DasGupta writes:

It is the mark of an instructed mind, said Aristotle, not to seek exactness when only an approximation of the truth is possible. Delicate and classy, still, the nature of mathematics is such that quantities of intrinsic importance often cannot be evaluated in a simple or explicit form. So one opts for the next best thing. Bound it from above or below by something simpler and explicit.

Inequalities form an integral part of the theory and practice of mathematical sciences. One we see in high school is that the irrational number  $\pi < \frac{22}{7}$ , as  $\frac{22}{7} - \pi = \int_0^1 \frac{x^4(1-x)^4}{1+x^2} dx > 0$ . For statisticians, that  $P(\cup_{i=1}^n A_i) \leq \sum_{i=1}^n P(A_i) - \frac{2}{n} \sum_{i < j} P(A_i \cap A_j)$ . There are countless inequalities; some are beautiful, some highly useful, some both. Which ones should a PhD student in mathematical statistics know?

To get a finger on my colleagues' pulse, I took a small poll. I asked Saugata Basu, Rabi Bhattacharya, Burgess Davis, Peter Hall, Iain Johnstone, B.V. Rao, Yosi Rinott, Philip Stark, Sara van de Geer, and Jon Wellner. Of course, the choices differed. As an experiment in innocuous merriment, I chose my favorites. My collection is embarrassingly biased by at least three factors: inequalities that I at least know, those I have personally seen being applied, and liked—either the application or the inequality itself.

My one-page limit keeps me from stating all the inequalities, and so I only mention them by name or descriptively. Perhaps it would be useful to have them precisely stated, proved, each illustrated with one good application, and made publicly available in some platform.

Here then, celebrating, is a list of inequalities I would wish to know, if I were a graduate student working on statistical theory today. They are generally grouped by topics; analysis, matrices, probability, moments, limit theorems, statistics.

- 1 Cauchy–Schwarz
- 2 Jensen
- 3 Hölder and triangular
- 4 Fatou
- 5 Bessel
- 6 Hausdorff–Young
- 7 Basic Sobolev inequality in three dimensions only
- 8 Frobenius
- 9 Sylvestre
- 10 Determinant bounds, e.g., Hadamard
- 11 Kantorovich
- 12 Courant–Fischer
- 13 Boole's inequality, from both directions
- 14 Chebyshev and Markov
- 15 Bernstein
- 16 Hoeffding in the Rademacher case, 1963

- 17 Bounds on Mills ratio from both directions
- 18 Upper tail of Binomial and Poisson
- 19 Slepian's lemma, 1962
- 20 Anderson's inequality on probabilities of symmetric convex sets, 1955
- 21 Rosenthal, 1970
- 22 Kolmogorov's basic maximal inequality
- 23 Basic Berry-Esseen in one dimension
- 24 Le Cam's bound on Poisson approximations (Le Cam, 1960)
- 25 DKW with a mention of Massart's constant (Massart, 1990)
- 26 Bounds on expectation of normal maximum from both directions
- 27 Comparison lemma on multinormal CDFs (Leadbetter, Lindgren, and Rootzén, 1983)
- 28 Talagrand (as in 1995, Springer)
- 29 Inequality between Hellinger and Kullback–Leibler distance
- 30 Cramér–Rao
- 31 Rao–Blackwell (which is an inequality)
- 32 Wald's SPRT inequalities.

Truly going back to my student days, I recall how useful matrix inequalities were in that period, when linear inference was such an elephant in the room. Inequalities on CLTs and metrics played pivotal roles in the sixties, and then again, as the bootstrap and later, MCMC, emerged. Concentration inequalities came to the forefront with the advent of empirical process theory, and then as high dimensional problems became important. It seems as though the potential of analytic inequalities in solving statistical and probabilistic problems hasn't yet been efficiently tapped. The recent book by Peter Bühlmann and Sara van de Geer (2011) has many modern powerful inequalities. There are of course new editions of the classics, e.g., Hardy, Littlewood and Pólya (1988), Marshall, Olkin and Arnold (2011).

Quite possibly, on another day I would include some other phenomenal inequalities, and drop some that I chose today. Can anyone vouch that Efron–Stein (1981), Gauss (for unimodal distributions), FKG (Fortuin, Kasteleyn, Ginibre, 1971), Chernoff's variance inequality (1981), or a basic prophet or log-Sobolev inequality, or even a basic Poincaré, need not be in the essential list? Defining what is the most useful or the most beautiful is about the most hopeless task one can have. Beauty and use are such indubitably personal choices. We have, in front of us, an ocean of remarkable inequalities. *You can't cross the sea*, said Nobel Laureate Poet Tagore, *merely by standing and staring at the water*. I figure I need to jump!



# Debate: Are pseudo-academic journals worrying?

Jean Opsomer highlights the rise in dubious journals and conferences, and asks whether we—particularly new researchers—should be concerned:

Many of us regularly receive email invitations to submit articles to journals we have never heard of, to join editorial boards for those same journals (often in the same email!), or to attend conferences in exotic locales organized by societies with names that are close to—but not quite the same as—those we are familiar with. I have been considering this a minor annoyance, part of the spam flotsam encountered while navigating the internet. But as a recent article in the *New York Times* (<http://www.nytimes.com/2013/04/08/health/for-scientists-an-exploding-world-of-pseudo-academia.html>) makes clear, these email solicitations are actually the activities of aggressive and growing industries, often but not always located in India and China, which are trying to “monetize” academic research output.

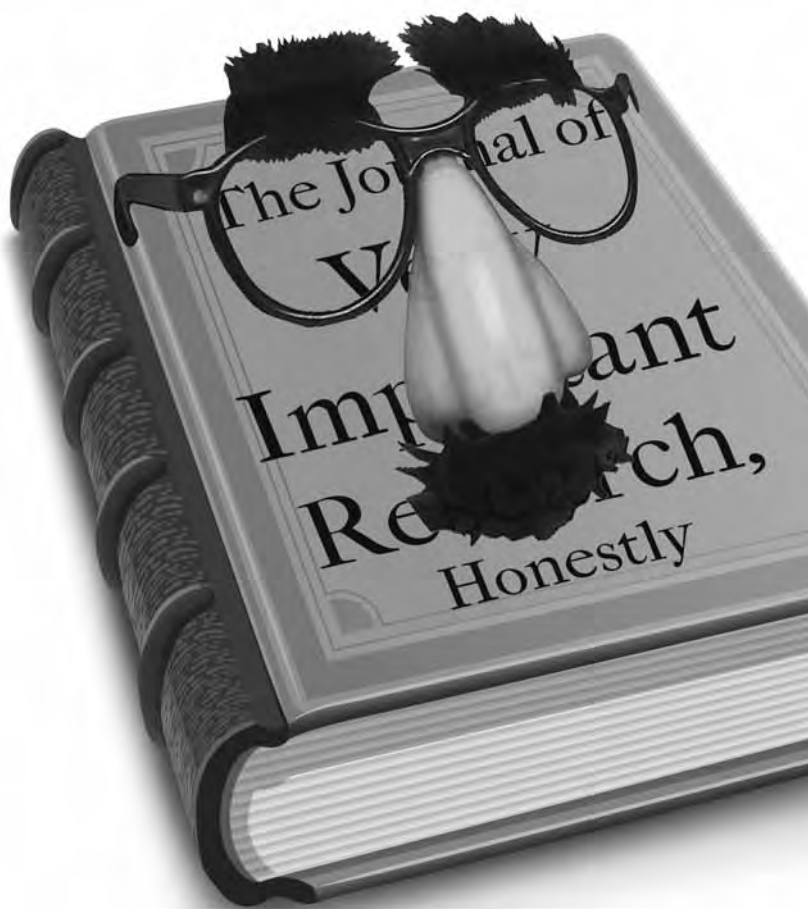
At best, these are upstart companies attempting to break into the publishing and conference industries, by taking advantage of the online and open-source model. At worst, these are fraudulent sham operations trying to con unwary researchers out of article “publishing fees” and conference “registrations.” Regardless of which of those two extremes is closest to the truth, the rapid growth of this phenomenon has repercussions for anyone involved in academic research. Ignoring the most extreme cases in which people get swindled out of money by these practices (a law-enforcement rather than academic issue), I am concerned about the potential dilution of research into so many outlets with poor refereeing processes, making it ultimately difficult for authors, readers and university administrators to discern the quality of published results.

One particular vulnerable group, in my opinion, is people just starting their research career. They are often less savvy and under more pressure to publish or present their work, and might therefore be tempted by some of these solicitations, especially if they come with a veneer of respectability. In the short term, this problem can be greatly alleviated through careful mentoring of junior researchers by their more senior colleagues, which is something the IMS should encourage.

As researchers, it also behooves us to refuse to lend our reputations to these organizations. As the *New York Times* article noted, there is a steady stream of invitations to join “editorial boards,” which might seem like a fairly harmless way to add an appointment to one’s resume. I also know of at least one case in which a well-regarded researcher was invited to write a “peer-reviewed” paper for one such journal, and was offered a \$1,000 fee for this. This was for a journal that normally charges hefty publishing fees, so the goal was clearly to try to jump-start the journal’s credibility and fend off criticisms of

the level of articles it publishes. The “peer-review” consisted of a few sentences stating that the submission was very well-written and that it was accepted for publication. While an editorial board appointment with no or minimal workload or a publishing fee might seem like good deals, I have no doubt that in the long run, we are harmed as a discipline if we allow the line between legitimate and “pretend” peer-reviewed research to blur.

Publishing high quality journals and hosting top-level scientific conferences are two core activities of the IMS. Institutions such as IMS but also universities and libraries should become more engaged in pushing back against this rapid growth of alternative outlets with loose standards of quality. Some suggestions in that direction are the coordinated development of white- and blacklists, a common policy of refusal to link to materials from clearly predatory organizations and a clearer articulation of standards for what it means for articles to be peer-reviewed. No small tasks for sure, and in the meantime, I’ll continue adjusting my spam filters to be on the lookout for key words such as “Hindawi,” “Mehta Press” and “iisconferences.org.”





Krzysztof Burdzy feels that this is not something for IMS members to worry about. He responds:

I applaud the *New York Times* article because it provides a public record of a significant social issue—predatory pseudo-scientific journals, conferences and related practices. I do not think that “predatory” journals are much of a problem for researchers. They are a problem for administrators and, therefore, they are of limited interest to IMS members.

Science was created at different quality levels long before the advent of the Web and globalization. Second- (and third-) tier scientific journals existed when I first visited an academic library in the 70's. I bet that they existed much earlier than that. Second-tier journals played, and still play, a useful role. There are a lot of people who “do science” for a living, and not everybody was born an Einstein. All scientists should have a chance to publish their articles, as long as the articles conform to the formal standards of the given field (for example, mathematical papers must be based on rigorous logic). Articles which are not very exciting will naturally end up in second-tier journals.

I do not know and I have not heard about any scientist who published a paper in a second-rate journal by mistake. There are very few people, if any, who have a PhD but cannot tell the difference between journals such as the *Annals of Probability* and *Annals of Statistics* on the one hand, and second-rate publications—printed or electronic—on the other hand. If you go to a restaurant or buy a car, do you believe that all restaurants serve food of the same quality, or that all cars are equally reliable? Why would you expect all scientific journals to be of the same quality?

Science is a component of the general culture. There are “predatory” services, which charge money to record songs for aspiring composers, and there are publishers, which publish (fiction) books for a fee paid by the author. The trend now extends to science.


Predatory and, more generally, second-tier journals, pose a real problem for science administrators. Some administrators used to evaluate researchers by counting their publications. In response, some researchers learned how to inflate their publication lists with low quality papers published in second-rate journals. Then some administrators tried to improve their evaluation methods by not only counting papers but also taking into account the “impact factor” of the journals. In response, second-tier journals learned how to inflate their citation rates in an artificial way. I do not have any good advice for administrators. Personally, I doubt that one can automate the

evaluation process of researchers, but I will let administrators worry about that.

In conclusion, I am not worried. The probability that junior (or senior) members of the IMS will publish their significant results in second rate journals by mistake is close to zero.

**What do you think?** Continue the debate at <http://bulletin.imstat.org>

Cartoon from *Flea Snobbery* by Andrés Diploiti: <http://fleasnobbery.blogspot.com>


**FLEA SNOBBERY**
Andrés Diploiti

## Positive results in a qualitative meta-analysis of complementary and alternative medicine

Dr. Karl Heiligenschein, M.D.

**Abstract**

Traditional scientific lore in academia holds that complementary and alternative medicine (CAM) has no proven clinical effectiveness beyond placebo. The present paper examines the available sources of information and arrives to the conclusion that such claims have no basis in reality.

**References**

- ◆ Dude with a cat, Some (2010). “Placebo doesn’t work on animals, silly”. Overheard.
- ◆ Grandfather, My (1956). “They ain’t gunna stick that needle on me!”. Measless vaccination campaign.
- ◆ Guy my sister dated, A (ca. 1999). “Big Pharma is out to get me!”. My house’s dining room.
- ◆ Heiligenschein, Karl (2005). A survey of the frequency of speeding tickets, conjugal infidelity and use of curse words among allopathic doctors.
- ◆ Next door, Neighbor (2010). “My uncle took allopathic cold medicine and almost died”. True story.
- ◆ Waitress, The (2009). “I use homeopathy and was never to a hospital”. Bar around the corner.

# Recent papers

## *Annales de l'Institut Henri Poincaré (B)*

Volume 49, issue 2

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

Access papers at <http://projecteuclid.org/aihpa>

- Random hysteresis loops ..... GIOIA CARINCI; 307-339
- The Brownian cactus I. Scaling limits of discrete cactuses ..... NICOLAS CURIEN, JEAN-FRANÇOIS LE GALL AND GRÉGORIE MIERMONT; 340-373
- Large scale behaviour of the spatial  $\lambda$ -Fleming–Viot process ..... N. BERESTYCKI, A. M. ETHERIDGE AND A. VÉBER; 374-401
- Hydrodynamical behavior of symmetric exclusion with slow bonds ..... TERTULIANO FRANCO, PATRÍCIA GONÇALVES AND ADRIANA NEUMANN; 402-427
- The number of absorbed individuals in branching Brownian motion with a barrier ..... PASCAL MAILLARD; 428-455
- On quenched and annealed critical curves of random pinning model with finite range correlations ..... JULIEN POISAT; 456-482
- The scaling limits of a heavy tailed Markov renewal process ..... JULIEN SOHIER; 483-505
- Limit theorems for one and two-dimensional random walks  
in random scenery ..... FABIENNE CASTELL, NADINE GUILLOTIN-PLANTARD AND FRANÇOISE PÈNE; 506-528
- Stein's method in high dimensions with applications ..... ADRIAN RÖLLIN; 529-549
- Almost everywhere convergence of convolution powers on compact Abelian groups ..... JEAN-PIERRE CONZE AND MICHAEL LIN; 550-568
- Anisotropic adaptive kernel deconvolution ..... F. COMTE AND C. LACOUR; 569-609



## LINEAR ALGEBRA AND ITS APPLICATIONS

### CALL FOR PAPERS

#### Special Issue on Statistics

We are pleased to announce a special issue on Statistics in *Linear Algebra and Its Applications* (LAA). This commemorates the 30th Anniversary of the very first such special issue edited by Ingram Olkin, C.R. Rao, and George Styan.

Traditionally linear algebra has seen applications in a wide variety of problems in multivariate statistics but the last decade has generated a number of new settings in which such techniques are being applied in statistics. We also see statistical and probabilistic techniques being applied back to linear algebra to obtain exciting breakthroughs. Examples include the sparse and low-rank recovery methods in compressive sensing and matrix completion, the exciting advances in random matrix theory, the newfound popularity of concentration inequalities as a powerful tool in computational linear algebra, among many other recent developments. It is the goal of this special issue to showcase results in some of these new areas as well as progress in more traditional areas at the intersection of linear algebra and statistics.

We welcome submissions concerning all areas of statistics. Submitted papers will be expected to present significant new results, in which linear and multilinear algebraic techniques come to bear in an important way. Papers developing new mathematical tools may also be suitable. Papers must meet the publication standards of *Linear Algebra and Its Applications* and will be refereed in the usual way.

The deadline for submission is **September 30, 2013**, and the special issue is expected to be published in 2014. Papers should be submitted through the electronic submission system of LAA at: <http://ees.elsevier.com/laa> choosing the special issue "Statistics" and the responsible editor-in-chief P. Semrl. Authors will have the opportunity to suggest one of the following special editors to handle their submission:

**Mathias Drton**, Department of Statistics, University of Washington, e-mail: [md5@uw.edu](mailto:md5@uw.edu)

**Lek-Heng Lim**, Department of Statistics, University of Chicago, e-mail: [lekheng@galton.uchicago.edu](mailto:lekheng@galton.uchicago.edu)

**Wei-Biao Wu**, Department of Statistics, University of Chicago, e-mail: [wbwu@galton.uchicago.edu](mailto:wbwu@galton.uchicago.edu)

# Terence's Stuff: A Rant

Terry Speed is mad as hell that we are still struggling for gender equity after all these years. Are you doing something about it?



Does ranting help? Would the threat of an in-column suicide galvanize people into action? Would it help if we all shouted out of our windows: *I'm as mad as hell, and I'm not going to take this anymore!* Should we take a leaf out of Aristophanes' playbook, and withhold some privileges from men until they see sense? To paraphrase:

LYSISTRATA: *Calonice, it's more than I can bear, I am hot all over with blushes for our sex. Men say we're inferior.*

CALONICE: *And aren't they right?*

What has got me going again, in this seemingly never-ending battle for gender equity? Nothing unusual really, just a few things we've all come to accept without comment. But on this occasion they happened in the same month, and the combined message struck me forcefully. First, I opened the brochure we all received enticing us to the JSM in Montreal. Scanning the page headed "Keynote Speakers", my heart sank. I saw no fewer than 15 faces, and just one woman: the ASA President. Apparently the IMS—our IMS—can nominate seven Medallion Lecturers, one Rietz Lecturer, and one Wald Lecturer, to join our President, who will give his Address, and not notice or not care that there isn't a single woman among them. I thought back to the Barcelona meeting ten years ago, where we fought hard to include a statement of principle preventing this from happening (<http://imstat.org/program/propose.htm>), and I re-learned the lesson that fine words are not enough. We have no enforcers of our resolutions, and no matter what we agree upon, it can and will be ignored when we want to ignore it. Women

notice, have no doubts about that. Should it pass without comment by men? For the record, there were no women at all in the line-up of keynote speakers at the San Diego JSM in 2012, and I didn't notice until it was pointed out to me—by a woman.

But wait, aren't things supposed to be getting better? Haven't people been banging on about gender equity for a couple of decades now? Well, yes and no. This year the US National Academy of Sciences elected 84 new Members, including 21 women, while the Royal Society of London elected 44 new Fellows, and among them nine women. But my learned society, the Australian Academy of Sciences, elected 20 new Fellows this year, and every one of them was male.

What are we to conclude? That the IMS is a society with so few capable women members that it could not find one worthy of joining its male President in giving a keynote lecture at its annual meeting? That women in Australian science are so weak relative to men, in comparison with their counterparts in the US and the UK, that there is not one woman scientist in that nation whose case was as strong as those of the 20 men who were elected? Can't we do better?

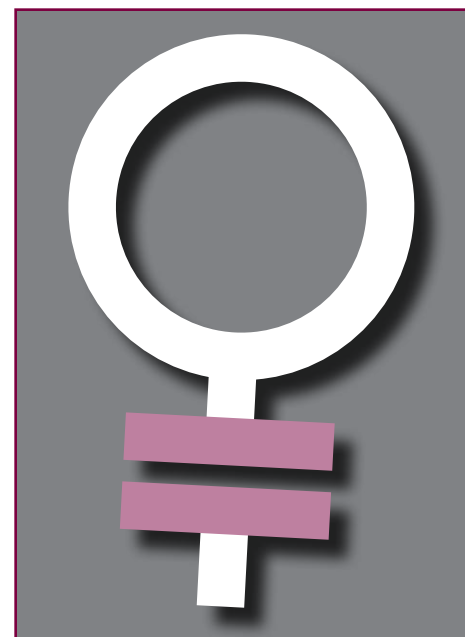
My third and fourth incidents for the month came from a post-workshop dinner, where I was lucky enough to sit with two outstanding women scientists, both active on the gender equity front. One was from a prominent US college of medicine. She had made inquiries concerning the appointment levels and pay of women and men at her institution. Following her request, someone had kindly provided this information, and it was dynamite. The pay disparities were dramatic. She complained, but nothing has been done. Equal pay for equal work in the academy in 2013: forget it!

My other dinner companion was a senior professor in a medical centre in the Netherlands, and chair of her centre's gender

equity committee. Her story was all too familiar. No significant recommendations from her committee ever got acted upon, because the dean of her centre was unsupportive. Her committee was a sham.

In many places around the world, including my own institute, gender equity is in the hands of the powerful men who run the show. If they are supportive, great strides can be made. Please don't get me wrong: I like this! What I don't like is the fact that when these men don't agree, nothing happens. There is as yet no groundswell from the large body of men receiving inequitable, but favorable, treatment in their professions, towards redressing these gender-related imbalances. Most men, in my institute and my dinner companion's centre in the Netherlands, in the IMS, and elsewhere, are content to leave the matter to their directors, deans or presidents. If these senior men don't care about gender equity, nothing happens.

This started as a rant, but ends with a call to arms. When will *you*—all you men out there—join the battle for gender equity? Don't just leave it to women to challenge the men who rule their lives.





# Treasurer's Report: Fiscal Year 2012

## Introduction

This report details membership and subscription data for calendar year end 2012. In addition, it reviews the fiscal year 2012 (FY2012: July 1, 2011–June 30, 2012) financial statements.

In 2012, the total number of IMS members experienced an increase in paid members and a decrease in total members. Subscriptions by institutions experienced an increase this past year. The financial status of the Institute continues to be stable, and actions have been taken to ensure its long-term stability. Details of the events of the past year, membership and subscription data, sales data, and a detailed analysis of the financial statement for FY2012 are given below.

## Publications

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

### IMS Core Print/Electronic Publications

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

### Co-sponsored Print/Electronic Publications

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

### Supported Publications

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

### Affiliated Publications

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

## Membership Data

Total individual paid membership in the Institute as of December 31, 2012 increased 11.00% from December 31, 2011. Table 1 (below) presents the membership data back to 2005.

TABLE 1: Membership, by Calendar Year

	2005	2006	2007	2008	2009	2010	2011	2012	% change
<b>Regular</b>	2247	2256	2266	2179	2045	1970	1863	2142	15.0%
<b>Life/Retired Life</b>	205	264	327	402	455	475	475	486	2.3%
<b>Reduced Country/Retired</b>	435	428	430	453	433	399	401	417	4.0%
<b>New Graduate</b>	187	144	129	122	158	149	113	117	3.5%
<b>IMS China</b>	n/a	n/a	n/a	180	173	2	20	26	30.0%
<b>Student</b>	1224	1295	1160	1328	1368	1160	1116	781	-30.0%
<b>Total</b>	4298	4387	4312	4664	4632	4155	3988	3969	-0.5%
<b>Total excluding free members (students, and in 2008–9 IMS China)</b>	3074	3092	3152	3156	3091	2995	2872	3188	11.0%
<b>Organizational*</b>	100	111	45*	20	11	12	5	5	0%

\* Organizational Membership was reconstructed in 2007 and libraries were no longer included. This change reclassified these previous "members" to institutional subscriptions

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

**Selection of Journals by Members:** Print subscriptions by members continued to decrease in 2012, as expected, because members are opting to reduce their use of print while enjoying free electronic access to all journals. Electronic access by individual members has increased this year. Members are charged actual cost for print copies of journals, so there is no net loss or gain to the bottom line from changes in print subscriptions by members. Table 2 (opposite) shows the current selection of journals by members.

Revenue from all member dues and member journal subscriptions increased 1.5%, to \$330,229 for the fiscal year ending June 30, 2012, up from \$325,341 in FY2011. This is attributed to the increase in paying members and decreased member print subscriptions.

The IMS offers joint membership opportunities with the following societies: Bernoulli Society (BS); International Statistical Institute/Bernoulli Society (ISI/BS); International Society for Bayesian Analysis (ISBA); Applied Probability Society/INFORMS (APS/INFORMS); Sociedad Latino Americana de Probabilidad y Estadística Matemática (SLAPEM). In 2012, we processed 623 memberships to other societies (up from 604 in 2011).

**IMS China:** In 2008 IMS introduced IMS China. IMS China promotes the participation of Chinese scholars in activities of the Institute of Mathematical Statistics. It allows the IMS an opportunity to introduce our organization to a constituency that may not have had easy access to our offerings in the past. The program has been moderately successful to date, and in 2012 there was an increase in IMS China membership to 26 members (from 20 in 2011).

## Institutional Subscription Data

Table 3 (opposite) presents comparative subscription data for institutions to each of our scientific journals for 2012 and previous years. There were subscription increases to all journals in 2012. Overall institutional subscriptions increased by 3.6%. Revenue from all non-member subscriptions was \$1,558,045 for FY2012, up from \$1,514,857 for the FY2011. The increase is due to increased subscription fees and increased subscriptions. We are seeing large increases in



our bundled offerings, which are discounted on the whole. Approximately 60% of the non-member subscribers to IMS journals are in USA and Canada, with the remaining subscribers distributed throughout the world.

### Book Sales Data

Table 4 presents sales data for all IMS book series. In 2010 the IMS published its first volumes in a cooperative arrangement with Cambridge University Press to publish two series, *IMS Monographs* and *IMS Textbooks*. Sales of these volumes are going very well. The *CBMS-NSF Regional Conference Series* has not published a volume since 2004, but one is to be published in 2013. The *IMS Collections* series has seen very low sales, and the series has been formulated in order for the IMS to have minimal loss on these volumes. The *IMS Lecture Notes–Monograph Series* ceased publication in 2010. Overall, total revenue for all books decreased to \$12,200 in FY2012 from \$16,500 in FY2011.

TABLE 4: Total sales from the NSF-CBMS Regional Conference Series, the Lecture Notes–Monograph Series, and IMS Collections, Monographs and Textbooks [Fiscal Year Data (July 1–June 30)]

	to 2005	2006	2007	2008	2009	2010	2011	2012	TOTAL
<b>Total NSF-CBMS sales (8 volumes)</b>	5,467	258	129	108	57	108	57	13	<b>6,197</b>
<b>Total LNMS sales (58 volumes)</b>	25,875	1,084	628	454	235	297	124	40	<b>28,737</b>
<b>Total IMS Collections sales (9 volumes)</b>	n/a	n/a	n/a	n/a	9	3	5	3	<b>20</b>
<b>IMS Monographs sales (2 volumes)</b>	n/a	n/a	n/a	n/a	n/a	660	586	789	<b>2,035</b>
<b>IMS Textbooks sales (1 volume)</b>	n/a	n/a	n/a	n/a	n/a	639	491	326	<b>1,456</b>

## Financial Overview

The following is a detailed analysis of the Financial Statement for FY2012, which is presented on pages 20–23, following this Treasurer's Report. Comparisons are always made with FY2011. The overall financial status of the Institute continues to be stable.

Per the auditor's report, in FY2012 we experienced an increase in net assets of \$496,711. The IMS Council approved a FY2012 operational budget that included net operational gains of \$247,315. Due to tight fiscal controls and better than expected revenues, the actual net revenue is \$455,398 from operations in FY2012. In FY2011 the gain on operations was \$233,822. Please see Figures 1 and 2 (overleaf) for the history of our net assets and net operating revenue.

The Council and Executive Committee made it a high priority to have an operational balanced budget in FY2010 and beyond and to increase net assets back to the levels appropriate for our revenue and expense stream. Net revenues are currently being invested annually

TABLE 2: Member\*\* Subscriptions, by Calendar Year

PRINT (paid)	2005	2006	2007	2008	2009	2010	2011	2012	% change
AAP	670	619	497	428	382	280	197	126	-36.0%
AOP	677	616	534	481	416	298	218	184	-15.6%
AOAS	n/a	n/a	n/a	1,160	1,089	714	480	379	-21.0%
AOS	1,853	1,723	1,608	1,323	1,109	763	555	447	-19.5%
STS	2,565	2,412	2,146	1,880	1,680	1,310	1,035	869	-16.0%
<b>Total</b>	<b>5,765</b>	<b>5,370</b>	<b>4,785</b>	<b>5,272</b>	<b>4,676</b>	<b>3,365</b>	<b>2,485</b>	<b>2,005</b>	<b>-19.3%</b>
<b>ELECTRONIC (free access): members setting up individual electronic access to IMS journals</b>									
<b>Total</b>	<b>1,262</b>	<b>1,409</b>	<b>1,660</b>	<b>1,681</b>	<b>1,711</b>	<b>1,761</b>	<b>2,026</b>	<b>2,010</b>	<b>-0.8%</b>

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

TABLE 3: Institutional Paid Subscriptions, by Calendar Year

PRINT	2005	2006	2007	2008	2009	2010	2011	2012	% change
AAP	659	659	700	636	680	684	645	687	6.5%
AOP	974	911	977	900	948	967	901	908	0.8%
AOAS	n/a	n/a	n/a	174	247	320	331	380	14.8%
AOS	1,233	1,171	1,227	1,118	1,154	1,158	1,127	1,132	0.5%
STS	949	922	976	865	890	899	861	865	0.5%
<i>Bulletin</i>	207	201	275	174	176	166	142	128	-9.9%
CIS	n/a	n/a	n/a	295	297	267	273	249	8.9%
AIHP <sup>s</sup>	n/a	n/a	[174]	228	271	286	289	326	16.4%
Bernoulli <sup>s</sup>	n/a	[199]	199	198	264	278	280	321	11.1%
BJPS <sup>s</sup>	n/a	n/a	n/a	n/a	64	78	88	117	33.0%
<b>Total</b>	<b>4,022</b>	<b>3,864</b>	<b>4,528</b>	<b>4,577</b>	<b>5,009</b>	<b>5,129</b>	<b>4,937</b>	<b>5,113</b>	<b>3.6%</b>

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

into long term reserves. The IMS currently has 1.5 years of expenses in long term reserve. Based on the current publishing climate, the IMS aims to have strong long term reserves.

### Revenue

- Membership dues and subscription revenues were adjusted to prorate calendar-year revenues to fit with the Institute's fiscal year reporting, as was done in the past. Revenues from membership are up in FY2012 as compared to FY2011 due to increased dues. Print subscription income from members is down as more members opt to use the online access included with membership. Print journal prices for members are set at our variable cost to print.
- Revenues from institutional subscribers are up due to increases in subscription fees and total subscriptions.
- Sales of printed back issues are down in FY2012 from FY2011. In

# Treasurer's Report continued

general, all publishers are experiencing a shift from print to online orders.

- Page charges are up in FY2012. Due to its voluntary nature, page charge contributions tend to fluctuate greatly from year to year.
- Revenue from sales of books is down. The IMS is selling fewer books in its self-published series. The series co-published with Cambridge University Press is going very well, however the income the IMS receives from these volumes is relatively lower.
- Meeting income is down in FY2012. The income shown is a result of our contractual arranged income from the Joint Statistical Meetings. There was no income from another meeting last year.
- The financial report also shows a new line item called "Managed Meetings": this includes those meetings for which the IMS processes the revenue and pays the expenses for the meeting as a service to the community. This item is down significantly as fewer meetings were managed. IMS covers its expenses for managing these meetings; in turn the expense for this line item is down.
- Advertising revenues are up due to more ads placed.
- Offprints, royalty and other showed an increase, as royalties from IMS's interest in JSTOR increased.
- Net profits of joint publication ventures is \$0 because IMS ceased its joint venture on December 31, 2011.
- Contributions are up as campaigns for the Blackwell and Schramm lecture took place in FY2012.
- The realized and unrealized gains on investments shows the decreased value we experienced on our mutual funds due to a slight dip in the markets for June 30, 2011 as compared to June 30, 2012.
- Interest and Dividends are up in FY2012.
- Net assets released from restrictions are those funds paid out from restricted funds.

## Expenses

The IMS makes a distinction between Program and General Administrative expenses in its audited reports. This is appropriate reporting for a non-profit organization and gives members a better idea of how much is being spent on actual programming (journals, meetings, etc) versus what is spent purely on administration of the Institute. We are happy to report that 92.3% (vs. 92.9% last year) of your dues dollars goes directly into the program functions of the IMS. More on expenses can be found in the Discussion of Note 8 and 9 sections below.

### Discussion of Note 8 in Financial Statements for FY2012

Here you will see the allocation for expenses for Program and General Administrative Expenses. Production and Editorial expenses will be

Figure 1: Net Operating Gain (Loss)

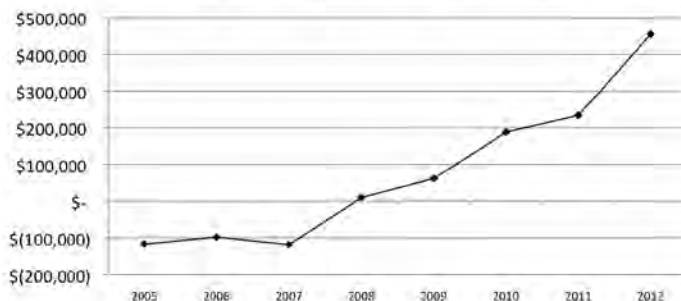
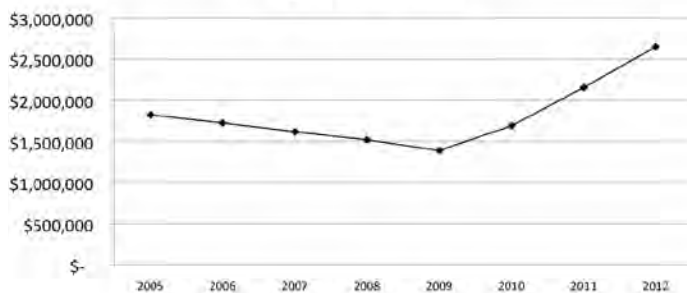


Figure 2: Net Assets



discussed below in the "Discussion of Note 9."

- Mailing and shipping at the press is down in FY2012 due to decreases in total issues mailed as members and institutions opt to use electronic access for journals.
- Salaries are up in FY2012 reflecting wage increases.
- The management fee shows the expenses paid to FASEB for the dues, subscriptions and web services they provide for IMS. This is down in FY2012 as slightly fewer services were needed in FY2012.
- Scientific meeting expenses were down slightly in FY2012 due to the meeting venue and slightly lower expenses.
- Managed meetings are down as fewer meetings were managed.
- The supported journal royalty is the contractual amount paid to supported journals for our agreement to assist them with publishing. The royalty is a percentage of net income for each publication. This is down in FY2012 as one publication (CIS) no longer has payments to be made.
- Postage and shipping from the office includes mailing of all dues and subscription paper renewal forms and catalogs. It also includes shipment of all IMS book orders. It is down in FY2012 as more members renew online, thereby saving us mailing expenses. In addition, book sales are down so less shipping was required.
- Insurance fees are stable. This includes liability insurance for all

officers and editors, publications and business equipment.

- Credit card fees include all processing fees for credit cards. This is decreased as bundling payments with FASEB allowed us a fee break.
- Professional fees includes fees paid to accountants and lawyers. These are down in FY2012 as we changed to new accountants.
- Business meeting expenses are stable.
- Membership drives and publicity includes advertising of journals and IMS membership.
- Information technology services represent the hiring of contractors to provide needed services. This is stable in FY2012.
- Storage fees are stable as we are now storing only two years of back issues.
- Contributions to other organizations includes all dues and subscriptions to several organizations by the IMS and the Executive Director. These include Conference Board of Mathematical Statistics, Association for Women in Math, the Council for Engineering and Scientific Society Executive, the Society for Scholarly Publishing, and the American Mathematical Society annual salary survey. These are down as one more expensive membership was dropped and the involvement by the IMS in the AMS annual survey was scaled back.
- Rent and utilities is for the Executive Director's office.
- Administrative Services includes assistance with data entry for the Executive Director.
- Printing includes all non-journal printing, including annual invoices and catalogs. This is down as fewer copies are printed.
- Computer equipment and software includes equipment for the Executive Director, the Production Manager and the *Bulletin* Assistant Editor.
- Supplies include all needed office supplies for Executive Director's office.
- Office and other expenses includes bank fees and other miscellaneous expenses.
- Telephone is for both the Executive Director's phone and an allocation of calls to FASEB on IMS dues and subscription inquiries.
- Presidential funds are allocated to each president to use as needed during his/her tenure.
- Bad Debt expense are those invoices written off for non-payment.

#### Discussion of Note 9 in Financial Statement for FY2011

#### Production Expenses:

- Production expenses for *Annals of Applied Statistics* is down as less color was printed in FY2012.
- Production expenses for *Annals of Applied Probability* and *Annals of Statistics* are down as fewer pages were published in FY2012.

- Production expenses for *Annals of Probability* and *Statistical Science* are up as the total page count for all these journals was up in FY2012.
- The *IMS Bulletin* expenses are down due to a decrease from 10 issues to 8 per year and an option for members to receive the publication electronically rather than in print.
- *IMS Collections* printed one issue in FY2011.
- Some *LNMS* volumes can now be ordered in print copy from Euclid. To set this up, it costs a couple hundred dollars for a volume. Only those higher sales volumes are moved to this option when back print stock is no longer available.
- The Web Page production expenses were stable in FY2011.
- *AIHP*, *Bernoulli*, and *Bernoulli News* were stable in FY2012.
- *Brazilian Journal of Probability and Statistics* printed fewer pages in FY2012.
- Expenses for *Probability Surveys*, *Statistics Surveys* and *Electronic Journal of Statistics* are minimal and shared with the other co-sponsoring societies.
- *Current Index to Statistics* had hosting expenses in FY2012. In addition, some development funds were allocated in FY2012.
- Electronic operations include expenses for placement and hosting of our journals on Project Euclid and ArXiv, and expenses associated with our Electronic Journal Management System. We experienced increased rates in FY2012 as more articles are available in the platforms and using the EJMS.

#### Editorial Expenses:

- Editorial expenses for all journals are minimal in FY2012 as all journals have moved into the central editorial office. All editors are within their budgets for the length of their term.
- *Current Index to Statistics* expenses are stable.
- The *IMS Bulletin* assistant editor expenses increased due to changes in the exchange rate as she is located in the UK.
- The Web editor expenses are down. In FY2009 work on a new content management system for the web page was approved. The final phase of this project was completed in FY2011.
- Managing and production editorial expenses are up slightly.
- The Central Editorial Office handles all secretarial support for the IMS core, supported and electronic based journals.

#### Discussion of Note 10 in Financial Statement for FY2012

Note 10 shows distribution of funds in restricted accounts.

- Dorweiller, Hotelling, New Researchers and Development Funds experienced no changes.
- The Laha Fund decreased as grants were awarded in FY2012.
- The Tweedie Fund decreased as an award was made in FY2012.
- The Open Access Fund increased due to donations.

# Treasurer's Report

Continued from page 19

- The Le Cam Fund increased due to return on investment for the endowment.
- The Blackwell and Schramm Funds are both new to IMS in FY2012.

## Recommendation

The Executive Committee recommended an institutional subscription fee increase of approximately 5% for 2013. Dues rates for members are increased by US\$4 to US\$112. Subscription rates to members are adjusted to the variable cost. Members are given a 10% discount off dues if they renew by December 31.



The 2012 IMS Council approved these recommendations in June and August 2012.

*Jean Opsomer, Treasurer*



1

## Independent Auditor's Report

The Council  
Institute of Mathematical Statistics

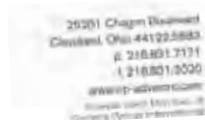
We have audited the accompanying statement of financial position of the Institute of Mathematical Statistics (the "Institute", a nonprofit organization) as of June 30, 2012, and the related statements of activities and cash flows for the year then ended. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audit. The prior year summarized comparative information has been derived from the Institute's 2011 financial statements and, in our report dated November 28, 2011, we expressed an unqualified opinion on those financial statements.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Institute of Mathematical Statistics as of June 30, 2012, and the changes in its net assets and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

*Ciuni & Panichi, Inc.*

Cleveland, Ohio  
November 5, 2012



2

## Institute of Mathematical Statistics

### Statement of Financial Position

June 30, 2012 (with comparative totals for 2011)

	<u>Assets</u>	
	2012	2011
Cash and cash equivalents	\$ 566,350	\$ 392,986
Investments, at fair market value	2,161,332	1,892,790
Certificates of deposit	1,212,566	1,124,478
Accounts receivable	18,310	3,625
Interest receivable	1,917	1,088
Prepaid expenses	44,216	28,000
Assets restricted for endowment	80,481	37,746
<b>Total assets</b>	<b>\$ 4,085,172</b>	<b>\$ 3,480,713</b>
	<u>Liabilities and Net Assets</u>	
<b>Liabilities:</b>		
Accounts payable and accrued liabilities	\$ 179,597	\$ 132,080
Unearned memberships, subscriptions, and meeting revenues	1,252,460	1,192,229
<b>Total liabilities</b>	<b>1,432,057</b>	<b>1,324,309</b>
<b>Net assets:</b>		
Unrestricted:		
Undesignated	2,466,496	2,020,541
Council-designated	72,219	79,494
<b>Total unrestricted</b>	<b>2,538,715</b>	<b>2,100,035</b>
Temporarily restricted	39,320	23,949
Permanently restricted	75,080	32,420
<b>Total net assets</b>	<b>2,653,115</b>	<b>2,156,404</b>
<b>Total liabilities and net assets</b>	<b>\$ 4,085,172</b>	<b>\$ 3,480,713</b>

3

## Institute of Mathematical Statistics

### Statement of Activities

For the year ended June 30, 2012 (with comparative totals for 2011)

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total 2012	Total 2011
<b>Revenues, gains, and support:</b>					
Membership dues and journal subscriptions	\$ 330,229	\$ -	\$ -	\$ 330,229	\$ 325,341
Non-member subscriptions	1,558,045	-	-	1,558,045	1,514,857
Sales of back issues	5,841	-	-	5,841	12,559
Page charges	48,537	-	-	48,537	41,763
Sales of books	3,719	-	-	3,719	12,360
Scientific meetings	12,200	-	-	12,200	16,500
Managed meetings	16,670	-	-	16,670	151,019
Advertising	38,786	-	-	38,786	35,500
Offprints, royalties, and other	93,234	-	-	93,234	90,422
Net profit of joint venture publications	-	-	-	-	5,659
Contributions	300	16,835	42,660	59,795	1,694
Realized and unrealized (losses) gains	(18,482)	-	-	(18,482)	229,320
Interest and dividends	56,616	224	-	56,840	37,974
Net assets released from restrictions	1,688	(1,688)	-	-	-
<b>Total revenues, gains, and support</b>	<b>2,147,383</b>	<b>15,371</b>	<b>42,660</b>	<b>2,205,414</b>	<b>2,474,968</b>
<b>Expenses:</b>					
Program	1,577,513	-	-	1,577,513	1,867,088
General and administrative	131,190	-	-	131,190	143,044
<b>Total expenses</b>	<b>1,708,703</b>	<b>-</b>	<b>-</b>	<b>1,708,703</b>	<b>2,010,132</b>
<b>Changes in net assets</b>	<b>438,680</b>	<b>15,371</b>	<b>42,660</b>	<b>496,711</b>	<b>464,836</b>
<b>Net assets, beginning of year</b>	<b>2,100,035</b>	<b>23,949</b>	<b>32,420</b>	<b>2,156,404</b>	<b>1,691,568</b>
<b>Net assets, end of year</b>	<b>\$ 2,538,715</b>	<b>\$ 39,320</b>	<b>\$ 75,080</b>	<b>\$ 2,653,115</b>	<b>\$ 2,156,404</b>



# Statement of Cash Flows

For the year ended June 30, 2012 (with comparative totals for 2011)

4

	2012	2011
Cash flows from operating activities:		
Changes in net assets	\$ 496,711	\$ 464,836
Adjustments to reconcile changes in net assets to net cash provided by operating activities:		
Write-off of uncollectible accounts receivable	271	8,856
Net profit of joint venture publications	-	(5,659)
Realized and unrealized losses (gains)	18,482	(229,320)
Contributions restricted for long-term purposes	(42,660)	-
Changes in operating assets and liabilities:		
Accounts receivable	(14,956)	(3,525)
Interest receivable	(829)	673
Prepaid expenses	(16,216)	9,696
Deposits	-	11,000
Accounts payable and accrued liabilities	47,517	211
Unearned memberships, subscriptions, and meeting revenues	60,231	32,307
Net cash provided by operating activities	548,551	289,075
Cash flows from investing activities:		
Purchases of investments and certificates of deposit, net of proceeds from sales	(417,682)	(468,076)
Restricted cash for endowment	(165)	(132)
Proceeds from dissolution of joint venture	-	55,621
Net cash used by investing activities	(417,847)	(412,587)
Cash flows from financing activities:		
Proceeds from contributions restricted for long-term purposes	42,660	-
Net cash provided by financing activities	42,660	-
Increase (decrease) in cash and cash equivalents	173,364	(123,512)
Cash and cash equivalents, beginning of year	392,986	516,498
Cash and cash equivalents, end of year	\$ 566,350	\$ 392,986

The accompanying notes are an integral part of these financial statements

## Notes to the Financial Statements

June 30, 2012

6

### Note 2: Summary of Significant Accounting Policies (continued)

#### Basis of Presentation (continued)

*Permanently Restricted Net Assets* – Net assets subject to donor-imposed stipulations that they be maintained by the Institute in perpetuity. Generally, the donors of these assets permit the Institute to use all or part of the income earned on any related investments for general or specific purposes.

#### Functional Allocation of Expenses

The costs of providing the program and supporting activities of the Institute have been summarized on a functional basis in the statement of activities. Accordingly, certain costs have been allocated to the appropriate programs and supporting activities.

#### Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

#### Cash and Cash Equivalents

The Institute considers all unrestricted cash and highly liquid investments with initial maturities of three months or less to be cash equivalents.

#### Investments

Investments in marketable securities with readily determinable fair values and all investments in debt securities are reported at their fair values in the accompanying statement of financial position. Interest and dividend income, and realized and unrealized gains and losses are included in the change in unrestricted net assets in the accompanying statement of activities, unless donor-imposed restrictions over specific investment earnings exist, in which case, the investment earnings are classified as either changes in temporarily or permanently restricted net assets in accordance with such donor-imposed restrictions. Temporarily restricted investment income is reported as unrestricted if such restrictions are met in the same fiscal year as the investment income is generated.

#### Receivables and Credit Policies

Accounts receivable includes uncollateralized obligations due primarily from the Institute's customers. Payments of receivables are allocated to the specific invoices identified on the remittance advice or, if unspecified, are applied to the earliest unpaid invoices.

The carrying amount of accounts receivable is reduced by a valuation allowance that reflects management's best estimate of the amounts that will not be collected. Management individually reviews all receivable balances that exceed 90 days from invoice date and estimates the portion, if any, of the balance that will not be collected. Additionally, management estimates an allowance for the aggregate remaining receivables based on historical collectability. At June 30, 2012, the allowance for doubtful accounts was \$-0-

# Notes to the Financial Statements

June 30, 2012

5

### Note 1: Description of Organization

The Institute of Mathematical Statistics (the "Institute") is an international professional and scholarly society devoted to the development and dissemination of the theory and applications of statistics and probability. Its activities include sponsorship of journals and other scientific publications, organization of scientific meetings, and cooperation with other scientific organizations.

The scientific journals are The Annals of Applied Probability, The Annals of Applied Statistics, The Annals of Probability, The Annals of Statistics, and Statistical Science. The IMS Bulletin is the news organ of the Institute. In addition, the Institute publishes The IMS Lecture Notes – Monograph Series and IMS Collections. Jointly with other organizations, the Institute publishes the Electronic Journal of Probability, Electronic Communications in Probability, Electronic Journal of Statistics, IMS Monographs, IMS Textbooks, Journal of Computational and Graphical Statistics, Probability Surveys, Statistics Surveys, Current Index to Statistics, and NSF-CBMS Regional Conference Series in Probability and Statistics. On behalf of other organizations, the Institute produces Annales de l'Institut Henri Poincaré (B) Probabilités et Statistiques, Bernoulli, Bernoulli News, Brazilian Journal of Probability and Statistics, and Stochastic Systems.

The Institute is an international organization of approximately 4,000 statisticians, probabilists, epidemiologists, and econometricians from industry, academia, and government.

### Note 2: Summary of Significant Accounting Policies

#### Basis of Presentation

The Institute follows authoritative guidance issued by the Financial Accounting Standards Board ("FASB") which established the FASB Accounting Standards Codification ("ASC") as the single source of authoritative accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared on the accrual basis of accounting. Net assets and revenues, expenses, gains, and losses are classified based on the existence or absence of donor-imposed restrictions. Accordingly, net assets of the Institute and changes therein are classified and reported as follows:

*Unrestricted Net Assets* – Net assets that are not subject to donor-imposed stipulations. Unrestricted net assets are expendable resources used to support the Institute's core activities. These net assets may be designated for specific purposes by action of the governing body of the Institute (the "Council") to be used for future periods (Council-designated).

*Temporarily Restricted Net Assets* – Net assets subject to donor-imposed stipulations that may or will be met, either by actions of the Institute and/or the passage of time. When a restriction expires, temporarily restricted net assets are reclassified to unrestricted net assets and reported in the statement of activities as net assets released from restrictions. If donor-imposed restrictions are met in the same year as they are imposed, the net assets are reported as unrestricted.

## Notes to the Financial Statements

June 30, 2012

7

### Note 2: Summary of Significant Accounting Policies (continued)

#### Revenue and Support Recognition

Membership dues and subscription fees are recognized as revenue on a straight-line basis over the term of the applicable membership and subscription period. Membership and subscription periods run from January 1 to December 31. Any time a member or non-member subscribes, he/she is entitled to all issues of the journal(s) published during the subscription period. The unearned portion of the revenue is recorded as a liability under the unearned memberships, subscription, and meeting revenues in the statement of financial position.

Lifetime membership fees are recognized as revenue over an amortization period of 12 to 15 years. Membership and subscriptions periods for lifetime members run from the first day of the calendar year a member subscribes through the member's death. The unearned portion of the revenue is recorded as a liability under the unearned memberships, subscription, and meeting revenues in the statement of financial position.

#### Contributions

Contributions received are recorded as unrestricted, temporarily restricted, or permanently restricted support depending on the existence and/or nature of any donor restrictions. Unconditional promises to give are recognized as revenues in the period the promise is received. Conditional promises to give are recognized when the conditions upon which they depend are substantially met. The promises are initially recorded at their estimated fair value.

#### Concentrations of Credit Risk

Financial instruments which potentially subject the Institute to concentrations of credit risk consist of cash and cash equivalents and investments.

The Institute has significant investments in equity and debt securities and is, therefore, subject to concentrations of credit risk. Though the market value of investments is subject to fluctuations on a year to year basis, the Institute believes that the investment policy is prudent for its long-term welfare.

At various times during the year ended June 30, 2012, the Institute's cash in bank balances may have exceeded federally insured limits.

#### Production Costs of Publications

The Institute's policy is to expense the production costs of its publications as incurred rather than capitalize these costs as inventory. The Institute follows this policy as there is no discernible market for the publications after the initial distribution.

June 30, 2012

8

**Note 2: Summary of Significant Accounting Policies (continued)**Shipping and Handling Costs

Shipping and handling costs are recorded as incurred. These expenses are included in the functional expenses in Note 8.

Income Taxes

The Institute is a Section 501(c)(3) organization exempt from income taxes on activities related to its exempt purpose under Section 501(a) of the Internal Revenue Code and Section 23701d of the California Revenue and Taxation Code. No provision for federal or state income taxes has been reported in its financial statements.

Income taxes are accounted for under the provisions of the "Income Taxes" topic of the FASB ASC. Uncertain income tax positions are evaluated at least annually by management. The Institute classifies interest and penalties related to income tax matters as income tax expense in the accompanying financial statements. As of June 30, 2012 and 2011, the Institute has identified no uncertain income tax positions and has incurred no amounts for income tax penalties and interest for the years then ended.

The Organization files its Federal Form 990 in the U.S. federal jurisdiction and a state registration at the office of the state's attorney general for the states of Ohio and California. The Institute is generally no longer subject to examination by the Internal Revenue Service for fiscal years before 2009.

Advertising

Advertising costs are expenses as incurred. Advertising expense amounted to \$8,190 and \$10,585 for the years ended June 30, 2012 and 2011, respectively.

Subsequent Events

In preparing these financial statements, the Institute has evaluated events and transactions for potential recognition or disclosure through November 5, 2012, the date the financial statements were available to be issued.

**Note 3: Investments**

The Institute is committed to a policy of low-cost long-term indexed investing with minimal intervention. The Institute's investment funds (that is, the funds other than the operating funds or the operating reserve) are to be invested as follows:

- 70% in domestic and international equities
- 30% in fixed-income instruments

## Notes to the Financial Statements

June 30, 2012

10

**Note 5: Unearned Memberships, Subscriptions, and Meeting Revenues**

Unearned memberships, subscriptions, and meeting revenues consist of the following for the years ended June 30:

	2012	2011
Member dues and subscription fees	\$ 195,288	\$ 144,636
Non-member subscription fees	785,077	771,963
Lifetime and lifetime retired membership dues and subscription fees	260,475	275,630
Meeting fees	11,620	-
Total unearned memberships, subscriptions, and meeting revenues	<u>\$ 1,252,460</u>	<u>\$ 1,192,229</u>

**Note 6: Net Asset Classification of Endowment Funds**

The Institute's endowment consists of two donor-restricted endowment funds, the Le Cam Endowment and the Blackwell Lecture Endowment (see Note 10), established in order to fund professional lectures. As required by GAAP, net assets associated with endowment funds are classified and reported based on the existence or absence of donor-imposed restrictions.

The Institute has interpreted the State Prudent Management of Institutional Fund Act ("SPMIFA") as requiring the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, the Institute classifies as permanently restricted net assets (a) the original value of gifts donated, (b) the original value of subsequent gifts, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated for expenditure by the Institute in a manner consistent with the standard prudence prescribed by SPMIFA. In accordance with SPMIFA, the Institute considers the following factors in making a determination to appropriate or accumulate donor restricted endowment funds:

- 1) the duration and preservation of the fund;
- 2) the purposes of the donor-restricted endowment fund;
- 3) general economic conditions; and
- 4) the expected total return.

Endowment net asset composition by type of fund as of June 30, 2012:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment	\$ -	\$ 6,734	\$ 75,080	<u>\$ 81,814</u>

June 30, 2012

9

**Note 3: Investments (continued)**

The allocation of funds held within the investment portfolio is reviewed quarterly and is rebalanced if the actual allocations differ from the targets stated above by more than five percent.

The Institute's investments are stated at fair value and are summarized as follows at June 30, 2012:

	2012		
	Cost	Fair Value	Unrealized Appreciation
Mutual funds – equities	\$ 1,508,157	\$ 1,537,327	\$ 29,170
Mutual funds – fixed income	<u>595,293</u>	<u>624,005</u>	<u>28,712</u>
Total investments	<u>\$ 2,103,450</u>	<u>\$ 2,161,332</u>	<u>\$ 57,882</u>

**Note 4: Fair Value Measurements**

In accordance with the "Fair Value Measurements" topic of the FASB ASC, the Institute uses a three-level fair value hierarchy that categorizes assets and liabilities measured at fair value based on the observability of the inputs utilized in the valuation. This hierarchy prioritizes the inputs into three broad levels as follows: Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities; Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly; and Level 3 inputs are unobservable inputs for which little or no market data exists, therefore, requiring an entity to develop its own valuation assumptions. These inputs reflect management's judgment about the assumptions that a market participant would use in pricing the asset and are based on the best available information, which has been internally developed.

Financial assets (liabilities) consisted of the following at June 30, 2012:

	Level 1	Level 2	Level 3	Total
Cash and cash equivalents:				
Money market funds (\$37,911 included in assets restricted for endowment)	\$ 237,058	\$ -	\$ -	\$ 237,058
Certificates of deposit (\$42,570 included in assets restricted for endowment)	1,255,136	-	-	1,255,136
Investments:				
Mutual funds – equities	1,537,327	-	-	1,537,327
Mutual funds – fixed income	<u>624,005</u>	<u>-</u>	<u>-</u>	<u>624,005</u>
	<u>\$ 3,653,526</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 3,653,526</u>

The Institute maintains an account with Vanguard Group for operating, operating reserve and reserve funds. Financial assets include a money market fund and several mutual funds carried at their fair market value and certificates of deposit maturing at various dates. The certificates of deposit are immediately convertible to cash with maturities ranging from three months to nine months.

## Notes to the Financial Statements

June 30, 2012

11

**Note 6: Net Asset Classification of Endowment Funds (continued)**

Changes in endowment net assets for the year ended June 30, 2012:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, June 30, 2011	\$ -	\$ 6,569	\$ 32,420	\$ 38,989
Investment return:				
Interest income	-	165	-	165
Total investment return	-	165	-	165
Contributions to perpetual endowment	-	-	42,660	42,660
Endowment net assets, June 30, 2012	<u>\$ -</u>	<u>\$ 6,734</u>	<u>\$ 75,080</u>	<u>\$ 81,814</u>

Permanently restricted net assets:

The portion of perpetual endowment funds that is required to be retained permanently either by explicit donor stipulation or by SPMIFA \$ 75,080

Total endowment funds classified as permanently restricted net assets \$ 75,080

Return Objectives and Risk Parameters

While no formal investment or spending policy existed at June 30, 2012, the goal of the Institute was to invest in low-risk vehicles that provide a predictable stream of funding. Endowment assets include those assets of donor-restricted funds that the Institute must hold in perpetuity. Currently, the endowment assets are invested in certificates of deposit.

Strategies Employed for Achieving Objectives

To satisfy its long-term rate-of-return objectives, the Institute relies on a total return strategy in which investment returns are achieved through current yield (interest income). The Organization targets low-risk investments to achieve its long-term return objectives within prudent risk constraints.

Spending Policy

While there was no formal spending policy established at June 30, 2012, any investment income earned on endowment assets is temporarily restricted to be appropriated for expenditure to fund the cost of a lecturer once every three years for the Le Cam Endowment and once every three to four years for the Blackwell Lecture Endowment.

June 30, 2012

12

**Note 7: Retirement Plan**

The Institute participates in an employer matching 403(b) retirement annuity plan. The Institute matches 200% of the contributions of eligible employees up to 10% of the employee's gross salary. Employees who have completed three years of service are eligible to participate. The Institute contributed \$11,075 and \$10,557 for the years ended June 30, 2012 and 2011, respectively.

**Note 8: Functional Expenses**

Program and general and administrative expenses for the year ended June 30, 2012 were as follows:

	Program	General and Administrative	Total
Production expenses (see Note 9)	\$ 850,431	\$ -	\$ 850,431
Editorial expenses (see Note 9)	251,715	-	251,715
Mailing and shipping at press	97,099	-	97,099
Salaries, payroll taxes, and employee benefits	70,385	70,385	140,770
Management fee	93,882	31,294	125,176
Scientific meetings	55,488	-	55,488
Managed meetings	15,479	-	15,479
Supported journal royalty	68,577	-	68,577
Postage and shipping from office	8,056	3,453	11,509
Insurance	14,688	6,295	20,983
Credit card fees and refunds	14,201	-	14,201
Professional fees	-	12,673	12,673
Business meetings	1,726	-	1,726
Membership drives and publicity	8,190	-	8,190
Information technology service	8,804	-	8,804
Storage	7,395	-	7,395
Contributions to other organizations	3,001	-	3,001
Rent and utilities	1,650	1,650	3,300
Administrative services	-	2,685	2,685
Printing, non-journal	901	-	901
Computer equipment and software	2,075	889	2,964
Supplies	543	543	1,086
Office expense and other	2,012	862	2,874
Telephone	442	190	632
Presidential fund	773	-	773
Bad debt expense	-	271	271
	<u>\$ 1,577,513</u>	<u>\$ 131,190</u>	<u>\$ 1,708,703</u>

June 30, 2012

13

**Note 8: Functional Expenses (continued)**

Program and general and administrative expenses for the year ended June 30, 2011 were as follows:

	Program	General and Administrative	Total
Production expenses (see Note 9)	\$ 896,210	\$ -	\$ 896,210
Editorial expenses (see Note 9)	299,269	-	299,269
Mailing and shipping at press	113,970	-	113,970
Salaries, payroll taxes, and employee benefits	67,304	67,304	134,608
Management fee	95,317	31,773	127,090
Scientific meetings	60,189	-	60,189
Managed meetings	164,169	-	164,169
Supported journal royalty	84,377	-	84,377
Postage and shipping from office	8,512	3,648	12,160
Insurance	14,685	6,294	20,979
Credit card fees and refunds	19,264	-	19,264
Professional fees	-	19,000	19,000
Business meetings	1,184	-	1,184
Membership drives and publicity	10,585	-	10,585
Information technology service	7,890	-	7,890
Storage	7,566	-	7,566
Contributions to other organizations	7,158	-	7,158
Rent and utilities	1,650	1,650	3,300
Administrative services	-	2,476	2,476
Printing, non-journal	3,812	-	3,812
Computer equipment and software	1,786	766	2,552
Supplies	591	591	1,182
Office expense and other	1,104	473	1,577
Telephone	496	213	709
Presidential fund	-	-	-
Bad debt expense	-	8,856	8,856
	<u>\$ 1,867,088</u>	<u>\$ 143,044</u>	<u>\$ 2,010,132</u>

## Notes to the Financial Statements

June 30, 2012

14

**Note 9: Production and Editorial Expenses**

Production and editorial expenses incurred were as follows:

	2012	2011
Production expenses:		
Core publications:		
The Annals of Applied Probability	\$ 110,369	\$ 115,490
The Annals of Applied Statistics	115,932	164,968
The Annals of Probability	118,221	105,200
The Annals of Statistics	187,130	204,817
Statistical Science	62,675	53,542
IMS Bulletin	20,162	27,951
IMS Collections	-	5,662
IMS Lecture Notes-Monograph Series	223	-
Web page	<u>12,462</u>	<u>11,576</u>
Total core publications	627,174	689,206
Supported publications:		
Annales de l'Institut Henri Poincaré	56,434	57,320
Bernoulli	60,242	58,555
Bernoulli News	3,026	3,209
Brazilian Journal of Probability and Statistics	<u>11,649</u>	<u>19,057</u>
Total supported publications	131,351	138,141
Co-sponsored publications:		
Probability Surveys	2,236	348
Statistics Surveys	618	193
Current Index to Statistics	10,802	10,721
Electronic Journal of Statistics	<u>6,615</u>	<u>579</u>
Total co-sponsored publications	20,271	11,841
General publication expenses:		
Electronic operations for all publications	<u>71,635</u>	<u>57,022</u>
Total general publication expenses	<u>71,635</u>	<u>57,022</u>
Total production expenses	<u>\$ 850,431</u>	<u>\$ 896,210</u>

## Notes to the Financial Statements

June 30, 2012

15

**Note 9: Production and Editorial Expenses (continued)**

	2012	2011
Editorial expenses:		
The Annals of Applied Statistics	\$ -	\$ 215
Current Index to Statistics	32,137	30,000
IMS Bulletin	72,329	69,074
WWW editor	28,546	81,979
Managing and production editors	97,703	95,501
Central editorial office	<u>21,000</u>	<u>22,500</u>
Total editorial expenses	<u>\$ 251,715</u>	<u>\$ 299,269</u>

**Note 10: Net assets**

	2012	2011
The following are net assets available at June 30:		
Unrestricted:		
Undesignated	\$ 2,466,496	\$ 2,020,541
Council-designated:		
Dorweiler Fund	3,600	3,600
Hotelling Fund	1,600	1,600
New Researchers Meeting Fund	31,533	31,533
Development Fund	25,000	25,000
Laha Fund	<u>10,486</u>	<u>17,761</u>
Total Council-designated	<u>72,219</u>	<u>79,494</u>
Total unrestricted	2,538,715	2,100,035
Temporarily restricted:		
Schramm Lecture Fund	15,265	-
Tweedie Memorial Fund	12,985	13,642
Open Access Fund	4,336	3,738
Le Cam Earnings Fund	<u>6,734</u>	<u>6,569</u>
Total temporarily restricted	39,320	23,949
Permanently restricted:		
Blackwell Lecture Endowment	42,570	-
Le Cam Endowment	<u>32,510</u>	<u>32,420</u>
Total permanently restricted	<u>75,080</u>	<u>32,420</u>
Total net assets	<u>\$ 2,653,115</u>	<u>\$ 2,156,404</u>

# IMS meetings around the world

## IMS Annual Meetings, 2013 & 2014

IMS sponsored meeting

**IMS Annual Meeting @ JSM 2013**

**August 3–8, 2013: Montréal, Canada**

<http://amstat.org/meetings/jsm/2013/>

JSM Program Chair: Bhramar Mukherjee

The meeting will be held at the Palais de congrès de Montréal, in Montreal, Quebec, Canada. The theme for JSM 2013 is “*Celebrating the International Year of Statistics*.” Leading statistical societies have joined forces to declare 2013 the International Year of Statistics (<http://statistics2013.org/>) in order to promote the importance of our discipline to the broader scientific community, business and government data users, media, policymakers, employers, students, and the general public. As the largest gathering of statisticians in the world, the JSM embodies the spirit of the International Year, showcasing both fundamental contributions of statistical research and applications of statistics. The theme emphasizes the unique opportunity presented by the JSM program to highlight the power and impact of statistics on all aspects of science and society worldwide.

The IMS invited program includes two Wald Lectures (Piet Groeneboom), a Rietz Lecture (Larry Wasserman), seven Medallion Lectures (Gady Kozma, Jeremy Quastel, Martin Wainwright, Lutz Duembgen, Peter Guttorp, Judea Pearl and Ya'acov Ritov), and the IMS Presidential Address from Hans Rudolf Künsch. 2013 also marks the 300th anniversary of the publication of Jacob Bernoulli's *Ars Conjectandi* in 1713. In recognition of this, IMS and the Bernoulli Society are jointly sponsoring the *Ars Conjectandi* lecture; the speaker will be David Spiegelhalter.

All IMS members are welcome to attend the IMS Business Meeting, on Tuesday, August 6, at 2:30pm in the Westin Hotel, Ramezay room.

New researchers are particularly invited to attend a panel on “Building a Research Career” organised by the Committee of Presidents of Statistical Societies, featuring six former COPSS Presidents Award winners. See the announcement on page 30, and at <http://nisl05.niss.org/copss/>. There is also a COPSS Anniversary Reception on Monday, August 5, from 6–8pm in the Westin, room Ville-Marie.

Registration and housing reservations are available now. See <http://amstat.org/meetings/jsm/2013/> for details.

MontréalCanada  
JSM2013

Register  
and book hotels  
now!

### At a glance:

forthcoming  
IMS Annual  
Meeting and  
JSM dates

### 2013

**IMS Annual Meeting  
@ JSM:** Montréal,  
Canada, August  
3–8, 2013

### 2014

**IMS Annual Meeting:**  
Sydney, Australia,  
July 7–11, 2014

**JSM:** Boston, MA,  
August 2–7, 2014

### 2015

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

### 2016

**IMS Annual Meeting:**  
TBD

**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

## Joint Statistical Meetings dates, 2013–2018

IMS sponsored meeting

**JSM 2013: August 3–8, 2013, Montreal, Canada**

<http://amstat.org/meetings/jsm/2013>

IMS sponsored meeting

**JSM 2014: August 2–7, 2014, Boston, USA**

<http://amstat.org/meetings/jsm/>

IMS sponsored meeting

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

<http://amstat.org/meetings/jsm/>

IMS sponsored meeting

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

<http://amstat.org/meetings/jsm/>

IMS sponsored meeting

**IMS Annual Meeting @ JSM 2017: July 29 – August 3, 2017,  
Baltimore, USA**

<http://amstat.org/meetings/jsm/>

IMS sponsored meeting

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

<http://amstat.org/meetings/jsm/>



# IMS-ASC 2014 meeting: Sydney, Australia

## 2014 IMS Annual Meeting & Australian Statistical Conference

July 7–11, 2014, Sydney, Australia

<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 register your interest in attending the joint Australian Statistical Conference/IMS Annual Meeting, to be held 7–10 July, 2014, in Sydney, Australia.

Delegates from all areas of statistics will join with world class Australian and International statisticians and mathematicians to develop, network and share their knowledge and expertise. In 2014 the Statistical Society of Australia will hold its bi-annual ASC in conjunction with the IMS Annual meeting. The Conference will provide opportunities for presentations on a wide range of topics and recognizes the role that statistics plays in all aspects of modern life.

The conference objectives are to:

- attract world class statisticians to share their knowledge and expertise,
- inform delegates about new work and developments in statistics, probability and mathematical statistics,
- provide an opportunity for professionals from all of these areas to network, present and discuss ideas.

Topics of interest include spatial statistics, Bayesian statistics, computational and asymptotic statistics, sample surveys/methodology, stochastic/statistical modelling, biostatistics, multivariate statistics, probability, mathematical statistics, econometrics and financial statistics

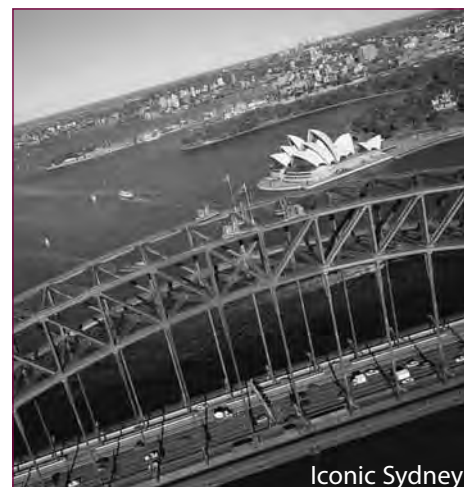
The venue for this meeting is the Australian Technology Park in Sydney.

## Local Organising Committee

Richard Gerlach (Co-Conference Convenor), University of Sydney; Geoff Lee (Co-Conference Convenor), Former President of SSAI; Jennifer Chan, University of Sydney; Boris Choy, University of Sydney; Edward Szoldra, Australian Bureau of Statistics; Celina Quizon, Australian Bureau of Statistics; Eric Beh, University of Newcastle; Paul Sutcliffe, President SA Branch of SSAI; Qiying Wang, University of Sydney

## IMS Program Committee

Jianqing Fan (Chair), Princeton; Martin Barlow, University of British Columbia  
Andrew Barbour, University of Zurich; Jim Berger, Duke University; Peter Bickel, Berkley Research, University of California; Tony Cai, Wharton University of Pennsylvania; Aurore Delaigle, University of Melbourne; Stephen Fienberg, Carnegie Mellon University; Peter Hall, University of Melbourne; Jiashun Jin, Carnegie Mellon University; Iain Johnstone, Stanford University; Emmanuel Candes, Stanford University; Sara van de Geer, ETH Zurich; Terry Speed, Walter and Eliza Hall, Institute of Medical Research; Scott A. Sisson, University of New South Wales; Rene A Carmona, Princeton University; Zhen-Qing Chen, University of Washington; Steve Evans, Berkeley University; Steve Lalley, University of Chicago; Alain-Sol Sznitman, ETH, Zurich; Ruth Williams, UC San Diego; Ma Zhiming, Institute of Applied Mathematics, AMSS, CAS



Iconic Sydney

## Abstract submission: IMS-ASC 2014

You are invited to submit an abstract for consideration for a contributed oral or poster presentation, invited session or keynote presentation. Abstract submission will open soon.

As this conference is a joint meeting between the Statistical Society of Australia Inc. (SSAI) and the Institute of Mathematical Statistics, an extensive and wide-ranging program will be available. As benefiting an event of this size, with approximately 12 Keynote presentations and six parallel streams, a large portion of the program will be by invitation. However, a substantial part of the program will be set aside for contributed presentations, both oral and poster. While there is no restriction on the topic or number of contributed presentations, the number of oral presentations is by nature limited.

Abstracts must be of a high scientific quality, contain original research, and must acknowledge all authors contributing to the research.

[www.ims-asc2014.com/program/](http://www.ims-asc2014.com/program/)

# More IMS meetings around the world

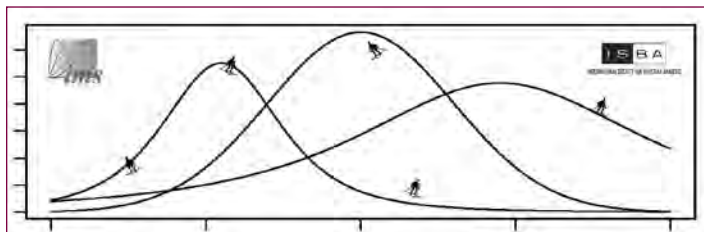
## IMS co-sponsored meeting

### MCMSki IV

January 6–8, 2014

Chamonix Mont-Blanc, France

<http://www.pages.drexel.edu/~mw125/mcmski/>



The fourth MCMSki meeting will take place in Chamonix Mont-Blanc, France. It is jointly supported by the IMS and ISBA, as is the first meeting of the newly created BayesComp section of ISBA. Chairing the Scientific Committee are Gersende Fort (Telecom Paristech) and Dawn Woodard (Cornell University).

The conference will focus on all aspects of MCMC theory and methodology, including related fields like sequential Monte Carlo, approximate Bayesian computation, Hamiltonian Monte Carlo. In contrast with the earlier meetings, it will merge the satellite Adap'ski workshop into the main meeting by having parallel (invited and contributed) sessions on those different themes. There will be evening poster sessions open to all.

The three keynote speakers are Andrew Gelman, Chris Holmes, and Michele Parrinello. A round-table on MCMC softwares will also take place during MCMSki IV.

## IMS co-sponsored meeting

### Third IMS Asia Pacific Rim Meetings

June 30–July 3, 2014

Taipei, Taiwan

<http://www.ims-aprm2014.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](mailto:bupark@stats.snu.ac.kr)) and Feifang Hu ([fh6e@virginia.edu](mailto:fh6e@virginia.edu)).

## IMS co-sponsored meeting

### Fourth International Workshop in Sequential Methodologies (IWSM)

July 17–21, 2013. Athens, Georgia, USA,

<http://www.stat.uga.edu/IWSM2013>

IMS Reps: T. N. Sriram and Nitis Mukhopadhyay

The Fourth International Workshop in Sequential Methodologies (IWSM) will be held at the Georgia Center for Continuing Education, University of Georgia. The IWSM is organized every two years. The workshop covers all aspects of sequential methodologies in mathematical statistics and information theory from theoretical developments in optimal stopping, sequential analysis, change detection to different applications in mathematical finance, quality control, clinical trials, signal and image processing, among others.

## IMS co-sponsored meeting

### Advances in Statistical Methods for the Analysis of Observational and Experimental Data:

#### A Symposium in Honor of Anastasios (Butch) Tsiatis

July 12–13, 2013

North Carolina State University, NC, USA

[http://www.stat.ncsu.edu/events/2013\\_tsiatis\\_symposium/index.php](http://www.stat.ncsu.edu/events/2013_tsiatis_symposium/index.php)

IMS Rep on Program Committees: Dennis Boos

The Department of Statistics at North Carolina State University is delighted to sponsor this one-day conference on July 13 (with an opening reception on the evening of July 12), which will provide a forum for discussion of present and future advances in statistical methods for the analysis of both observational and experimental data. Butch Tsiatis has made many contributions to these important areas, and this event will recognize his many accomplishments. The program will a lunchtime poster session ([http://www.stat.ncsu.edu/events/2013\\_tsiatis\\_symposium/posters.php](http://www.stat.ncsu.edu/events/2013_tsiatis_symposium/posters.php)), and a dinner/dance on the evening of July 13. See the website for program details.

## IMS sponsored meeting

### 2013 WNAR/IMS Annual Meeting

June 16–19, 2013

UCLA, Los Angeles, USA

<https://wnar2013.biostat.ucla.edu/>

The conference will be held June 16–19, 2013, at Covell Commons, a conference facility located in the northern part of the UCLA campus. Lunches, the Sunday mixer and the Tuesday evening banquet will be held on Covell Commons' lovely outdoor terrace with a panoramic view of the campus. This year we will have a contributed poster session during the Sunday evening mixer, with an award for best poster. See the website for details.

**IMS co-sponsored meeting****Graybill 2013: Modern Survey Statistics****June 9–12, 2013****Fort Collins, Colorado, USA****w** <http://www.stat.colostate.edu/graybillconference/>

The Department of Statistics at Colorado State University will host Graybill 2013: Modern Survey Statistics in Fort Collins, CO, from June 9–12, 2013. The focus of the conference is on new developments in survey statistics. The program consists of a short course, invited plenary talks and a contributed poster session. It is the aim of the conference to bring together a wide range of researchers, practitioners, and graduate students whose work is related to survey statistics in a wide sense. Keynote speakers are Ray Chambers, Wayne Fuller, Danny Pfeiffermann, Jon Rao, Chris Skinner and Steve Thompson.

The conference is co-sponsored by the Department of Statistics at Colorado State University, the ASA Survey Research Methods Section and the IMS. For more information on the program, accommodations and registration, visit the website.

The conference is co-organized by Jay Breidt and Jean Opsomer.

**IMS co-sponsored meeting****4th IMS-China International Conference on Statistics and Probability****June 30 – July 4, 2013****Chengdu, China****w** <http://imscn2013.swufe.edu.cn>

The IMS-China International Conferences promote communication and collaboration between researchers in China and those from other parts of the world. The previous three conferences in this series were successfully held in Hangzhou, Weihai and Xi'an, China, respectively. We are pleased to announce the 4th IMS-China International Conference on Statistics and Probability 2013. The scientific program of this conference will cover a wide range of topics in probability, statistics and their related areas, focusing on recent developments and the state of the art in a variety of modern research topics and in applications. It will provide an excellent forum for scientific communication and collaboration for researchers. For more information, you may contact the scientific program chair: Runze Li [rli@stat.psu.edu](mailto:rli@stat.psu.edu). Please check the conference website for updated information.

**IMS co-sponsored meeting****International Conference on Recent Advances in Experimental Designs****December 12–16, 2013****Guangzhou, China**

IMS Representative(s) on Program Committees: Jianqing Fan

**w** <http://maths.gzhu.edu.cn/siced2013/>

Topics of the conference include, but are not limited to: designs for non-linear models; factorial designs; mixture designs; optimal designs; response surface designs; uniform designs.

Conference registration and abstract submission deadline: **5 October 2013**.

**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****2013 ICSA International Conference****December 20–23, 2013****Hong Kong, China****w** TBA

IMS Rep: Elizaveta Levina, Department of Statistics, University of Michigan

**IMS co-sponsored meeting****9th Cornell Probability Summer School****July 15–26, 2013****Cornell University, Ithaca, NY, USA****w** <http://www.math.cornell.edu/Colloquia/colloquia.html>

IMS Rep: Laurent Saloff-Coste. The main lecturers are Alexei Borodin, MIT (*Integrable Probability*), Ronald Meester, Vrije Universiteit Amsterdam (*The Combinatorial Approach to the Ising Model*) and Elchanan Mossel, Berkeley (*Probability Models of Information Exchange on Networks*).

The scientific organizers are Laurent Saloff-Coste and Lionel Levine. Please contact conference secretary Anastasia Raymer [araymer@math.cornell.edu](mailto:araymer@math.cornell.edu) with any questions regarding the summer school.

# More IMS meetings around the world

## IMS co-sponsored meeting

### Ninth Conference on Bayesian Nonparametrics

June 10–14, 2013

Amsterdam, The Netherlands

**w** <http://www.bnp9.win.tue.nl/>

**e** [bnp9info@gmail.com](mailto:bnp9info@gmail.com)

IMS Representative(s) on Program

Committees: Subhashis Ghosal

The 9th Conference on Bayesian

Nonparametrics will be held June 10–14,

2013, in Amsterdam, The Netherlands. The

Bayesian Nonparametrics (BNP) conference

is a biannual international meeting bringing

together leading experts and talented young

researchers working on applications and

theory of nonparametric Bayesian statistics. It

is an official section meeting of the Bayesian

nonparametrics section of the International

Society for Bayesian Analysis (ISBA) and is

co-sponsored by the IMS.

The program committee of BNP9 invites submissions for contributed talks and posters from any area of Bayesian nonparametrics and related topics. See the abstract submission page. Deadline for submission: **October 15, 2012**.

Several speakers have been invited and have accepted to give a talk at BNP9, including four distinguished plenary lectures, from: David Dunson (Duke), Michael Jordan (Berkeley), Gareth Roberts (Warwick), and Judith Rousseau (Paris Dauphine). Other invited speakers so far include: Eduard Belitser (Eindhoven); Emily Fox (Pennsylvania); Sasha Gnedin (London); Peter Green (Bristol); Jim Griffin (Kent); Lancelot James (Hong Kong); Bartek Knapik (VU Amsterdam); Luis Nieto-Barjas (Mexico); Sonia Petrone (Milano); Silke Rolles (TU Munich); Botond Szabo (Eindhoven); and Stephen Walker (Kent).

## IMS co-sponsored meeting

### 36th Conference on Stochastic Processes and their Applications

July 29 – August 2, 2013

University of Colorado, Boulder, USA

**w** <http://math.colorado.edu/spa2013/>

The week of SPA is especially busy in Boulder, and we **strongly recommend reserving rooms as early as possible**. Rooms are already being held under “SPA2013” at a number of hotels, details can be found at [http://math.colorado.edu/spa2013/?page\\_id=21](http://math.colorado.edu/spa2013/?page_id=21).

SPA2013 will feature the inaugural **Schramm Lecture** by Itai Benjamini; and an IMS **Medallion Lecture** from Bálint Virág (University of Toronto). There will also be a Lévy Lecture by Gérard Ben Arous (Courant) and a Doob Lecture from Neil O’Connell (Warwick).

Other invited lecturers are Zhen-Qing Chen (Washington); Ron Doney (Manchester); Hugo Duminil-Copin (Genève); Pablo Ferarri (Buenos Aires); József Fritz (Budapest); Tadahisa Funaki (Tokyo); Niels Jacob (Swansea); Vadim Kaimanovich (Ottawa); Jeremy Quastel (Toronto); Kavita Ramanan (Brown); Qi-Man Shao (Hong Kong); Amandine Veber (École Polytechnique); and Ofer Zeitouni (Minnesota & Weizmann).

## 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/>

The location has been announced for the 37th Conference on Stochastic Processes and Applications (SPA), which will take place in Buenos Aires during the week July 28 to August 1, 2014.

## IMS co-sponsored meeting

### International Conference

*Ars Conjectandi* 1713–2013

October 15–16, 2013, Basel, Switzerland

**w** <http://www.statoo.ch/bernoulli13/>

2013 marks the 300th anniversary of the publication of Jacob Bernoulli’s book, *Ars Conjectandi*, in 1713. A meeting has been organized to celebrate this: the “International Conference *Ars Conjectandi* 1713–2013” will be held October 15–16, 2013, in Basel, Switzerland.

IMS Reps on the program committee are Hans Künsch and Lutz Dümbgen.

## IMS co-sponsored meeting

### The 20th Annual ASA/IMS Spring Research Conference (SRC) on Statistics in Industry and Technology

June 20–22, 2013

Los Angeles, CA

**w** <http://www.stat.ucla.edu/src2013/>

Hongquan Xu **e** [hqxu@stat.ucla.edu](mailto:hqxu@stat.ucla.edu)

The aim of the SRC is to promote cross-disciplinary research in statistical methods in engineering, science and technology. This is to be interpreted broadly to cover a wide range of application areas including biotechnology, information, manufacturing sciences and environment. The conference is intended to stimulate interactions among statisticians, researchers in the application areas, and industrial practitioners. A number of **student scholarships** will be provided to selected graduate students who submit contributed papers.

## 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

**15th IMS New Researchers Conference,  
jointly sponsored by the IMS and the SSC  
August 1–3, 2013**
**Centre de recherches mathématiques, Montréal, Québec, Canada**
**w** <http://www.math.mcgill.ca/nrc2013/>

The 15th IMS New Researchers Conference is an annual meeting organized under the auspices of the Institute of Mathematical Statistics, and jointly sponsored this year by the Statistical Society of Canada. It will be held just prior to the 2013 Joint Statistical Meetings in Montréal.

The purpose of the conference is to promote interaction and networking among new researchers in probability and statistics. The participants will have the opportunity to present their research via a short expository talk and a poster, in addition to mingling throughout the day. The contributed talks will be complemented by longer talks by four plenary speakers: **Aurore Delaigle** (University of Melbourne), **Stephen E. Fienberg** (Carnegie Mellon University), **Jeffrey Rosenthal** (University of Toronto) and **Terry Speed** (University of California at Berkeley), as well as the IMS President **Hans Rudolf Künsch** (ETH Zürich), and the winner of the **2013 Tweedie Award**. Panels on teaching, mentoring of graduate students, publishing and funding will take place during the last day of the conference.

The deadline for receipt of applications has passed.

Montreal, Canada



## IMS co-sponsored meeting

**Australian New Zealand Applied Probability Workshop  
July 8–11, 2013  
Brisbane, Australia**
**w** <http://www.smp.uq.edu.au/people/YoniNazarathy/AUSTNZworkshop/2013/main.html>

IMS Rep: Ilze Ziedins. The scope includes stochastic financial models, queueing theory, actuarial science, stochastic biological models, Monte-Carlo methods, inference for stochastic models, general applied probability and related fields and applications.

## IMS co-sponsored meeting

**2013 IMS Workshop on Finance, Probability and Statistics  
June 19–21, 2013**
**National University of Singapore (NUS), Singapore**
**w** <http://cqf.nus.edu.sg/IMSworkshop-FPS2013>

IMS Representative on Program Committees: Tze-Leung Lai

The 2013 IMS Workshop on Finance: Probability and Statistics (FPS) will be held at the National University of Singapore (NUS) on June 19–21, 2013.

This is the third IMS FPS Workshop; the previous two were held in 2011 and 2012 at Columbia University and the University of California at Berkeley, respectively. The focus of the workshop is on the use of probabilistic and statistical analysis and models for problems arising in finance. By bringing together both leading experts and junior researchers, the workshop will highlight important contributions made through the use of statistics and probability, and identify emerging issues where statistics and probability promise to play an important role in the future.

The plenary speakers include F. Delbaen (ETH), J.C. Duan (NUS), P. Forsyth (U. Waterloo), X. Guo (UC Berkeley), A. Novikov (UTS), S. Peng (Shandong U.), Philip Protter (Columbia U.), H. Xing (SBU). In addition, there are invited sessions and contributed sessions.

Registration is open until June 3. Registration after 3 June will be carried out on-site and with payment in cash (Singapore currency).

This workshop is part of the program on *Nonlinear Expectations, Stochastic Calculus under Knightian Uncertainty, and Related Topics*, which runs from June 3 to July 12, 2013, and is jointly organized by the Institute for Mathematical Sciences and the newly established Centre for Quantitative Finance at the National University of Singapore: see <http://www2.ims.nus.edu.sg/Programs/013wnlinear/index.php>.

## IMS co-sponsored meeting

**Approximate Bayesian Computation in Rome  
May 30–31, 2013, Rome, Italy**
**w** <https://sites.google.com/site/approxbayescompinrome/>

IMS Reps: Brunero Liseo and Christian P. Robert

Speakers: Gerard Biau (Université Pierre et Marie Curie/Paris VI, France); Nicolas Chopin (Ensaie, Paris, France); Richard Everitt (Oxford, UK); Sarah Filippi (Imperial College, London UK); Anthony Lee (Warwick, UK); Gael Martin (Monash, Australia); Kerrie Mengersen (QUT, Brisbane, Australia); Dennis Prangle (Lancaster University, UK); Judith Rousseau (Ensaie, Paris, France); Daniel Wegmann (EPF Lausanne, Switzerland). Topics include: ABC for model selection; Computational advances in ABC; Theoretical justifications of ABC; ABC for real-world problems.

# Other meetings around the world

## 2013 NISS/ASA Writing Workshop for Junior Researchers

NEW

**Sunday 4 August & Wednesday 7 August, 2013, at JSM Montreal**

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

The mentors will be former journal editors and program officers, who will critique (a portion of) the submitted material. Individual feedback will be provided as part of the opening session, and participants will be expected to prepare a revision in response. The workshop will open with a one-day session of general instruction in effective writing techniques and will close with discussion and debriefing at a follow-up lunch.

The full-day session is scheduled for Sunday, August 4, in Montreal, Quebec, Canada. At the close of the formal activities, mentors will meet individually with participants to go over the writing samples they submitted. Each participant will then prepare a revision of a critiqued portion of the paper and return this to the mentor by Tuesday evening, August 6. Mentors and participants will meet again in conjunction with a lunch on Wednesday, August 7, to discuss the success of the revisions. The lunch program will also include general feedback to participants, mentors, and organizers.

Attendance will be limited and will depend on the number of mentors available. To apply, go to <http://www.amstat.org/meetings/wwjr/registration/>. Applications are due by **June 1, 2013**, and successful applicants will be notified by June 30. Applications received after June 1 will be considered if space is available. There is no fee for participation. Participants will receive lunch on Sunday, August 4, and Wednesday, August 7. Participants must agree to attend both the full Sunday session and the Wednesday lunch. We have requested funding for partial travel support.

This workshop is designed for researchers with a recent Ph.D. in either statistics or biostatistics. Top priority will go to those who have held the Ph.D. for 0–3 years. The limited available funding will be used to support attendance by researchers at US institutions. Current Ph.D. students who are completing their degree before the end of the summer and who will be at US institutions in the fall will also be considered. If space is available, researchers at institutions outside the US will be admitted to the workshop, but will not be provided with travel support.

MontréalCanada  
**JSM2013**

## COPSS Junior Researchers' Workshop on "Building a Research Career"

NEW

**Sunday, August 4, at JSM Montreal**

**9:00–11:30am, Room CC-517d**

**W** <http://nisl05.niss.org/copss/>

Are you a new researcher who is attending the JSM in Montreal? If so, you might be interested in attending the following special event: *Building a Research Career - Advice and Discussion*

A panel with six former COPSS Presidents Award winners, organized on the occasion of the 50th anniversary of COPSS. The panelists are:

James Berger, Duke University  
Tony Cai, University of Pennsylvania  
Xihong Lin, Harvard University  
Xiao-Li Meng, Harvard University  
Kathryn Roeder, Carnegie Mellon University  
Robert Tibshirani, Stanford University

This is a unique opportunity to hear first-hand from leaders of the field about what is important at the beginning of a research career, to ask questions, and—last, but not least—to socialize with them and other new researchers. Refreshments will be served.

Everybody is welcome, and there is no charge, but we ask you to register in advance at <http://nisl05.niss.org/copss/>

There is also a **COPSS Anniversary Reception** on Monday, August 5, from 6–8pm in the Westin, room Ville-Marie

### UAB's Third Annual NIGMS-funded Short Course on Statistical Genetics & Genomics July 8-12, 2013 Birmingham, AL

**NEW**

**W** <http://www.soph.uab.edu/ssg/nigmsstatgen/third>

The University of Alabama at Birmingham's Section on Statistical Genetics is pleased to announce the 3rd Annual NIGMS-funded Short Course on Statistical Genetics & Genomics in Birmingham, AL on July 8 - 12, 2013. Focusing on the state-of-art methodology to analyze complex traits, this five-day course will offer an interactive program to enhance researchers' ability to understand & use statistical genetic methods, as well as implement & interpret sophisticated genetic analyses. Limited number of Travel Fellowships & Bursary Service Awards available, see website for details. Only participants residing in the US are eligible for Travel Fellowships.

Topics to include: Intro (Biostatistics; Genetics & Genomics); GWAS Design/Analysis/Imputation/Interpretation; Non-Mendelian Disorders Analysis; Pharmacogenetics/Pharmacogenomics; ELSI; Rare Variants & Exome Sequencing; Whole Genome Prediction; Analysis of DNA Methylation Microarray Data; Variant Calling from NGS Data; RNAseq; Experimental Design and Data Analysis; Analysis of ChIP-seq Data; Statistical Methods for NGS Data; Discovering new drugs & diagnostics from 300 billion points of data.

Software demos: Intro to R & Bioconductor; PLINK; IMPUTE; MaCH/Thunder/Minimac; Plink/Seq; CpGassoc; Bowtie/TopHat; SAMTools; IGV; R packages for RNA-seq & ChIP-seq.

To insure the depth and practicality of the training program, we will provide 10 laptops to students or student pairs in the classroom. Each computer will be loaded with the required statistical software. Participants are encouraged to bring their laptop. Many of the faculty have substantial expertise with the use of software for statistical genetics and have even authored some.

Guest speakers: Atul Butte, MD/PhD, Stanford Univ.; Ellen Clayton, MD/JD, Vanderbilt Univ.; Karen Conneely, PhD, Emory Univ.; Warren Ewens, PhD, Univ. of Pennsylvania; Eleanor Finegold, PhD, Univ. of Pittsburgh; Carl Langefeld, PhD, Wake Forest Univ.; Suzanne M. Leal, PhD, Baylor College; Alison Motsinger-Reif, PhD, NC State Univ.; Hao Wu, PhD, Emory University.

UAB speakers: Gustavo de los Campos, PhD; Xiangqin Cui, PhD; Hemant Tiwari, PhD; Degui Zhi PhD.

For more details & registration, please see the website.

Funded by the National Institute of General Medical Sciences (NIGMS).

### Socio-economic Challenges and Sustainable Solutions December 28-30, 2013, Hyderabad, India

**W** <http://statistics2013-conference.org.in>

Two of the plenary talks during the conference on "Socio-economic challenges and sustainable solutions" to be held in Hyderabad during 28-30 December 2013, are: "Statistics and Innovation for Nation Building" by Dr. Sam Pitroda, the world famous technologist and innovator, and "Socio-economic challenges of climate change" by Dr. Rajendra K. Pachauri, Chairman of the Intergovernmental Panel on Climate Change, which won the Nobel Peace Prize. The topics are of global importance. There is a possibility of these talks being video transmitted to other countries if desired.

### NIMBioS Investigative Workshop: Multidisciplinary Approaches to Analyzing Animal Vocal Communication Sequences October 21-23, 2013 Knoxville, TN

**NEW**

**W** [http://www.nimbios.org/workshops/WS\\_vocal](http://www.nimbios.org/workshops/WS_vocal)

The National Institute for Mathematical and Biological Synthesis (NIMBioS) is now accepting applications for its Investigative Workshop, "Multidisciplinary Approaches to Analyzing Animal Vocal Communication Sequences," to be held October 21-23, 2013, at NIMBioS.

The aim of this workshop is to bridge the gap between mathematical and biological researchers with an interest in the quantitative analysis of animal vocal sequences. Recent developments in the mathematical analysis of complex animal communication have generated opportunities to understand the functional aspects of animal vocalizations, their role in social organization, and ultimately to explore the origins and evolution of human language. Until now, however, the collaboration between mathematicians/computer scientists and biologists/zoologists in this field has been very limited. We aim to define the state of the art in this field, explore new horizons for collaboration, and provide new techniques through a synthesis of the mathematical and biological approaches to communication analysis. We will also use this unique gathering to define some of the key questions that need to be posed to address ultimate and proximate hypotheses about behavior, in the context of animal vocal communication systems.

More information about the workshop and a link to the online application form, at [http://www.nimbios.org/workshops/WS\\_vocal](http://www.nimbios.org/workshops/WS_vocal)

Participation in the workshop is by application only. Individuals with a strong interest in the topic 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 workshop attendees. Application deadline: June 24, 2013

# More meetings around the world

## 11th German Probability and Statistics

Days

March 4–7, 2014

Ulm, Germany

<http://www.gpsd-ulm2014.de/>

Contributed talks will be given in 17 sections devoted to specific topics; the highlight of each section will be one invited main talk. Over the last years, the “Stochastik-Tage,” organized biannually, have been attracting also an increasing number of participants from abroad.

The plenary speakers of the conference will be: Jianqing Fan (Princeton); Geoffrey Grimmett (Cambridge); Jean-François Le Gall (Paris); Alexandre Tsybakov (Paris); and DFG RTG 1100 Plenary Speaker [see *satellite conference announcement below*]: Christoph Schwab (Zurich).

Registration and abstract submission will be starting on June 01, 2013.

The conference language is English.

### Satellite conference:

#### Conference on Modeling, Analysis and Simulation in Economathematics

Commemorating the end of the successful DFG-funded research training group “Modeling, Analysis and Simulation in Economathematics” a conference is organised at Ulm University from Thursday, March 6th to Saturday March 8th, 2014.

The conference is a satellite meeting to the 11th German Probability and Statistics Days (above).

A plenary talk by Christoph Schwab (ETH Zurich) is organised jointly with the 11th German Probability and Statistics Days. Furthermore, there are going to be a number of invited talks and on Saturday morning a public panel discussion (in German) on „Ist die Wirtschaftsmathematik Schuld an der Finanzkrise oder kann sie in

**11th GPSD**  
Ulm | March 4-7, 2014

**11th German Probability and Statistics Days**  
[www.gpsd-ulm2014.de](http://www.gpsd-ulm2014.de)

**Sections | Invited Speakers:**

- 1 Stochastic Analysis  
Massimiliano Gubinelli (France)
- 2 Limit Theorems, Large Deviations and Extremes  
Sourav Chatterjee (USA)
- 3 Stochastic Geometry, Spatial Statistics and Image Analysis  
Ezra Miller (USA)
- 4 Random Discrete Structures and Analysis of Algorithms  
Itai Benjamini (Israel)
- 5 Stochastic Processes: Theory and Applications  
Omer Angel (Canada)
- 6 Stochastics in Life Sciences  
Niko Beerenwinkel (Switzerland)
- 7 Stochastic Models in Science  
Rongling Sun (Singapore)
- 8 Stochastic Models in Engineering  
Bruno Siliari (Switzerland)
- 9 Computational Statistics and Data Analysis  
Andrew Gelman (USA)
- 10 Statistical Methodology  
Peter Bühlmann (Switzerland)
- 11 Nonparametric Statistics and Functional Data Analysis  
Harrison Huibin Zhou (USA)
- 12 Statistics of Processes and Time Series  
Wei Biao Wu (USA)
- 13 Numerical and Simulation Methods  
Andrew Stuart (UK)
- 14 Stochastic Optimization and Operations Research  
Halil Mete Soxer (Switzerland)
- 15 Finance, Insurance, Risk: Modeling  
Christian Genest (Canada)
- 16 Finance, Insurance, Risk: Statistics  
Viktor Todorov (USA)
- 17 Stochastics at School  
Peter Eiselebacher (Germany)  
Wolfgang Kirschy (Germany)

**Plenary Speakers:**

Jianqing Fan  
(Princeton University, USA)

Geoffrey Grimmett  
(University of Cambridge, UK)

Jean-François Le Gall  
(Université Paris-Sud Orsay, France)

Alexandre Tsybakov  
(Université Paris 6, France)

**Satellite Conference:**  
Modelling, analysis and simulation in economathematics

Conference of the Research Training Group (RTG) 1100

**Plenary Speaker:**  
Christoph Schwab  
(ETH Zurich, Switzerland)

event lab, GmbH | Dübenerstraße 35 | D-04107 Leipzig | Phone: +49 (0) 341 24 05 96 75 | Fax: +49 (0) 341 24 05 96 55

*Zukunft helfen, Finanzkrisen zu verhindern?*“ is going to be held in the city centre of Ulm.

Participants from academia and business, as well as administration and industry, are welcome.

Registration for the satellite meeting is only possible via the website of the 11th German Probability and Statistics Days (<http://www.gpsd-ulm2014.de/>), where travel information can also be found.



**10th International Conference on  
“Computer Data Analysis and Modeling: Theoretical and Applied Stochastics”  
September 10–14, 2013  
Belarusian State University, Minsk, Belarus.**

<http://www.cdam.bsu.by>

In the International Year of Statistics, this Conference will provide a forum for researchers and a discussion of the latest results in theory and software of data analysis, statistical modeling and computer simulation, stressing on Theoretical and Applied Stochastics, and define ways for further developments in this field. Young researchers will have the possibility to present their results and to get in contact with experienced scientists. The conference is organized by the Belarusian State University, Research Institute for Applied Problems of Mathematics and Informatics, the Institute of Mathematics of the National Academy of Sciences of Belarus, the United Institute of Informatics Problems of the National Academy of Sciences of Belarus, the Belarusian Statistical Association, and the Vienna University of Technology, Institute of Statistics and Probability Theory.

The main topics of the Conference are: Robust and Nonparametric Data Analysis; Multivariate Analysis and Design of Experiments; Statistical Analysis of Time Series and Random Fields; Probabilistic and Statistical Analysis of Discrete Data; Asymptotic Methods in Stochastics; Statistical Methods of Signal and Image Processing; Econometric Modeling and Financial Mathematics; Survey Analysis and Official Statistics; Computer Simulation of Stochastic Systems; Computer Intensive Methods, Algorithms and Statistical Software; Computer Data Analysis in Applications.

Minsk is the capital of the Republic of Belarus. It is located in a picturesque place on the river Svisloch, which was in ancient times one of the busiest trade-route connecting the Baltic Sea and the Black Sea. Minsk is the city where one can find the best pieces of the Belarusian cultural heritage: museums and exhibitions, theatres, world famous Belarusian ballet, folklore dancing ensembles and choirs. Numerous scientific centers and leading institutions of higher education, located in Minsk, are famous abroad for their fundamental and applied research. Minsk is a cross-road of the most popular European tours. It is connected by motorways, railways and airlines with all the European capitals and also with the main cities of the world.

**NEW**

**Structural Inference in Statistics  
September 17–19, 2013  
Potsdam, Germany**

[www.mathematik.hu-berlin.de/~for1735/potsdam/](http://www.mathematik.hu-berlin.de/~for1735/potsdam/)

The aim of the conference is to bring together and foster exchanges between experts of mathematical statistics and of different neighboring fields relevant to structural inference. Keynote mini-lecture series by S. Dasgupta and S. Mallat. Invited talks by A. Juditsky, G. Kerkycharian, G. Lecué, M. Low, A. Munk, A. Nobel, A. Tsybakov, M. Wegkamp. Supported by DFG research group 1735 “Structural Inference in Statistics—Adaptation and Efficiency”  
Abstract submission deadline: May 24, 2013  
Registration: June 30, 2013

**USQ International Year of Statistics Celebration: “Statistics for Everyone”  
June 20, 2013**

**University of Southern Queensland, Toowoomba, Australia**

The University of Southern Queensland (USQ) in Toowoomba, Australia is joining the 2013 International Year of Statistics celebration with an event on 20 June 2013 with a theme of “Statistics for Everyone.” Professor Shahjahan Khan of USQ will deliver an opening speech highlighting the significance of the celebration. Professor Louise Ryan of the University Technology Sydney, former Head of Biostatistics, Harvard University, and Chief of CSIRO, Mathematical and Information Sciences, Australia, will give a public presentation on the crucial role of statistics in modern medical technologies for diagnosis of diseases and checking effectiveness of treatments. Professor Kerrie Mengersen, of Queensland University of Technology and President of Statistical Society of Australia Inc, will speak on the dominant and diverse role of statistics in research. Associate Professor Anthony Leicht, James Cook University, Australia, will focus on statistics in everyday physical activities such as heart variability, physiology and exercise. The program also includes an evening session of High School students as part of the Mathematics Enrichment program offered by the Department of Mathematics and Computing at USQ. The main focus of this session is statistics in sport.

The Department of Mathematics and Computing is planning another event to mark Mathematics of the Planet Earth in November 2013.

USQ attracts students from all over the world for its external and online Bachelor and Masters programs in Mathematics and Statistics. Students from Faculties of Arts, Business, Education, Engineering, and Sciences take varieties of statistics courses as part of their degree programs at USQ. Statistical Consulting Unit, funded by the Office of Research and Higher Degrees, provide statistical support to research students and staff across the university.

**NEW**

# Employment Opportunities around the world

## Hong Kong



THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

### Department of Mathematics

#### Faculty Position

The Department of Mathematics invites applications for a senior faculty position in the area of statistics. Applicants should have a PhD, 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 be provided where applicable.

Applications will be accepted until the position is filled. 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, [Fax: (852) 2358 0700].

More information about the University is available on the University's homepage at <http://www.ust.hk>.

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

## USA: Santa Barbara, CA

### University of California, Santa Barbara

Visiting Assistant Professor

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=12863296](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=12863296)

## USA: Stanford, CA

### Stanford University, Department of Biostatistics

Post Doc

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=12780501](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=12780501)

## USA: Chicago, IL

### University of Chicago, Department of Statistics

William H. Kruskal Instructor

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=13271028](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=13271028)

## Kazakhstan

### Nazarbayev University

Multiple full-time positions in Statistics

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=13128750](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=13128750)

## Singapore

### Nanyang Technological University, Singapore

Faculty positions in Analytics

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=13242827](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=13242827)

## UK: London

### University College London

Lecturer in Statistics and Risk Analysis

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=13133682](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=13133682)

## USA: Belmont, CA

### Cengage Learning

Content Writer - Statistics

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=13296942](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=13296942)

## USA: Chicago, IL

### University of Chicago, Department of Statistics

Associate Professor

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=12973698](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=12973698)

## USA: Urbana-Champaign, IL

### University of Illinois at Urbana-Champaign

Visiting Assistant Professor - Statistics (F1300039)

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=13407821](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=13407821)

## USA: Hoboken NJ

### Stevens Institute of Technology

Financial Engineering (Tenure & Non-Tenure Track) Faculty Positions Open

[http://jobs.imstat.org/c/job.cfm?site\\_id=1847&jb=13240381](http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=13240381)

# International Calendar of Statistical Events

IMS meetings are highlighted in maroon with the  logo, and new or updated entries have the  or  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](mailto:erg@imstat.org)

## June 2013

**June 2–5:** Montgomery Bell State Park, near Nashville, TN. **49th SRCOS Summer Research Conference** **w** <http://louisville.edu/sphis/bb/srcos-2013>

**June 4–14:** SAMSI, Research Triangle Park, NC. **SAMSI Neuroimaging Data Analysis Summer Program** **w** [www.samsi.info](http://www.samsi.info)

**June 5–7:** Rome, Italy. **Probabilistic and Statistical Techniques for Cosmological Applications** **w** <http://www.mat.uniroma2.it/~marinucc/Workshop/Home.html>

**June 5–7:** Paris, France. **WIPFOR13: Modeling and Stochastic Learning for Forecasting in High Dimension** **w** <http://conferences-osisir.org/wipfor>

**June 6–8:** Milano, Italy. **8th Bayesian Inference in Stochastic Processes** **w** <http://www.mi.imati.cnr.it/conferences/BISP8/>

**June 6–9:** Toruń, Poland. **German-Polish conference on Probability Theory and Mathematical Statistics** **w** <http://www.gpps.umk.pl/>

 **June 10–12:** Fort Collins, CO. **Graybill 2013 Conference on Survey Statistics** **w** [www.stat.colostate.edu/graybillconference/](http://www.stat.colostate.edu/graybillconference/)

**June 10–12:** Stockholm, Sweden. **4th Nordic-Baltic Biometric Conference (NBBC13)** **w** <http://nbbs13.org/>

 **June 10–14:** Amsterdam, The Netherlands. **9th Conference on Bayesian Nonparametrics** **w** <http://www.bnp9.win.tue.nl/>

**June 10–14:** Marseille, France. **Branching diffusions and Gaussian free fields in physics, probability and number theory** **w** <http://www.jean-morlet-2013.org/conference---general-informations.html>

**June 11–14:** Yeditepe University, Istanbul, Turkey. **6th Chaotic Modeling and Simulation International Conference and Special Workshop** **w** <http://www.cmsim.org>

**June 11–14:** Stockholm, Sweden. **International Cramér Symposium on Insurance Mathematics** **w** [www2.math.su.se/icsim](http://www2.math.su.se/icsim)

 **June 16–19:** UCLA, Los Angeles, USA. **2013 WNAR/IMS Annual Meeting** **w** <https://wnar2013.biostat.ucla.edu/>


**June 17–20:** Athens, Greece. **Mini Conference on Probability Theory and its Application** **w** <http://www.atiner.gr/probability.htm>

**June 17–20:** Athens, Greece. **7th Annual International Conference on Mathematics Education and Statistics Education** **w** <http://www.atiner.gr/edumatsta.htm>

[atiner.gr/edumatsta.htm](http://www.atiner.gr/edumatsta.htm)

**June 17–28:** Princeton University, NJ, USA. **Summer School in Financial Mathematics** **w** <http://orfe.princeton.edu/rtg/fmsummer/>

 **June 19–21:** NUS, Singapore. **2013 IMS Workshop on Finance, Probability and Statistics** **w** <http://cqf.nus.edu.sg/IMSworkshop-FPS2013>

 **June 20:** University of Southern Queensland, Toowoomba, Australia. **USQ International Year of Statistics Celebration: "Statistics for Everyone"** **w** TBC

 **June 20–22:** Los Angeles, CA. **20th Annual ASA/IMS Spring Research Conference (SRC) on Statistics in Industry and Technology** **w** <http://www.stat.ucla.edu/src2013/>

**June 23–26:** Seoul, Korea. **33rd International Symposium on Forecasting** **w** <http://forecasters.org/isf/>

**June 25–28:** Barcelona, Spain. **15th Applied Stochastic Models and Data Analysis International Conference (ASMDA 2013)** **w** <http://www.asmda.es>

 **June 30 – July 4:** Chengdu, China. **4th IMS-China International Conference on Statistics and Probability**. Runze Li **e** [rli@stat.psu.edu](mailto:rli@stat.psu.edu) **w** <http://imscn2013.swufe.edu.cn>

## July 2013

**July 2–4:** Leeds, UK. **32nd Leeds Annual Statistical Research (LASR) Workshop** **w** <http://www1.maths.leeds.ac.uk/statistics/workshop/lasr2013/>

**July 6–8:** Kalamata, Greece. **Greek Stochastics  $\epsilon$  (epsilon)** **w** <http://www.stochastics.gr/meetings/epsilon/>

**July 8–9:** Rennes, France. **Model Selection and Nonparametric and Dependence Modeling** **w** <http://atms.ensai.fr/>

**July 8–10:** Leuven, Belgium. **Advances in Regularization, Optimization, Kernel methods and Support vector machines: theory and applications** **w** <http://www.esat.kuleuven.be/sista/ROKS2013>

 **July 8–11:** Brisbane, Australia. **Australian New Zealand Applied Probability Workshop** **w** <http://www.smp.uq.edu.au/people/YoniNazarathy/AUSTNZworkshop/2013/main.html>

# International Calendar *continued*

## July 2013 *continued*

**NEW** July 8–12: Birmingham, AL. UAB's Third Annual NIGMS-funded Short Course on Statistical Genetics & Genomics **w** <http://www.soph.uab.edu/ssg/nigmsstatgen/third>

July 8–12: Palermo, Italy. 28th IWSM (International Workshop on Statistical Modelling) **w** <http://iws2013.unipa.it/>

July 8–12: ShangHai, China. 2013 Extreme Value Analysis conference **w** <http://eva.fudan.edu.cn>

**ims** July 12–13: North Carolina State University, NC, USA. Advances in Statistical Methods for the Analysis of Observational and Experimental Data: A Symposium in Honor of Anastasios (Butch) Tsiatis **w** [www.stat.ncsu.edu/events/2013\\_tsiatis\\_symposium/index.php](http://www.stat.ncsu.edu/events/2013_tsiatis_symposium/index.php)

July 15–19: Wrocław, Poland. 7th International Conference on Lévy Processes: Theory and Applications **w** <http://bcc.impan.pl/13Levy/>

**ims** July 15–26: Cornell University, Ithaca, NY. 9th Cornell Probability Summer School **w** <http://www.math.cornell.edu/Colloquia/colloquia.html>

**ims** July 18–21: Athens, Georgia, USA. Fourth International Workshop in Sequential Methodologies (IWSM) **w** <http://www.stat.uga.edu/IWSM2013>

July 20–25: Budapest, Hungary. 29th European Meeting of Statisticians (EMS2013) **w** <http://www.ems2013.eu>

**ims** July 29 – August 2: University of Colorado, Boulder, USA. 36th Conference on Stochastic Processes and their Applications **w** <http://math.colorado.edu/spa2013/>

## August 2013

**ims** August 1–3, 2013: CRM Montréal, Canada. 15th IMS New Researchers Conference, jointly sponsored by the IMS and the SSC **w** <http://www.math.mcgill.ca/nrc2013/>

**ims** August 3–8: Montréal, Canada. IMS Annual Meeting at JSM2013. **w** <http://amstat.org/meetings/jsm/>

August 4–10: XVII Brazilian School of Probability (XVII EBP), Mambucaba, RJ, Brazil **w** <http://www.im.ufrj.br/ebp17/>

August 5–9: Guanajuato, Mexico. Mathematics Congress of the Americas **w** <http://www.mca2013.org/>

August 11–16: Beijing, China. 8th International Workshop on Statistical Seismology (Statsei8) **w** <http://geophy.pku.edu.cn/statsei8/>

August 12–15: Toronto, ON, Canada. 22nd International Workshop on Matrices and Statistics **w** <http://www.fields.utoronto.ca/programs/scientific/13-14/IWMS/>

August 13–16: Braunschweig, Germany. Building Bridges: Probability, Statistics and Applications **w** <https://www.tu-braunschweig.de/stochastik/tagungen/building-bridges>

August 19–21: Boston, MA, USA. Measurement, Design, and Analysis Methods for Health Outcomes Research **w** <https://ecpe.sph.harvard.edu/Outcomes-Research>

August 22 – December 20: Berkeley, California, USA. Theoretical Foundations of Big Data Analysis **w** [http://simons.berkeley.edu/program\\_bigdata2013.html](http://simons.berkeley.edu/program_bigdata2013.html)

August 24–31: Hong Kong. 59th ISI World Statistics Congress **w** [www.isi2013.hk](http://www.isi2013.hk)

### Meeting organizer's to-do list





**August 25–30:** Hong Kong, China. The 59th World Statistics Congress (WSC) **w** <http://www.isi2013.hk/en/index.php>

## September 2013

**September 8–12:** Radisson Hotel, Research Triangle Park, NC. SAMSI Program on Low-dimensional Structure in High-dimensional Systems (LDHD): Opening Workshop **w** <http://samsi.info/LDHD>

**NEW** **September 10–14:** Belarusian State University, Minsk, Belarus. 10th International Conference on “Computer Data Analysis and Modeling: Theoretical and Applied Stochastics” **w** <http://www.cdam.bsu.by>

**September 12:** Milan, Italy. BarCamp S.Co.2013 **w** [http://mox.polimi.it/barcamp\\_sco2013/](http://mox.polimi.it/barcamp_sco2013/)

**NEW** **September 17–19:** Potsdam, Germany. Structural Inference in Statistics **w** [www.mathematik.hu-berlin.de/~for1735/potsdam/](http://www.mathematik.hu-berlin.de/~for1735/potsdam/)

**September 19–21:** Istanbul, Turkey. y-BIS 2013, Joint Meeting of Young Business and Industrial Statisticians **w** <http://ybis13.msgsu.edu.tr/>

**September 21 (please note date change):** Harvard University Science Center, Cambridge, MA. New England Symposium on Statistics in Sports **w** <http://www.nessis.org/>

**September 26–27:** Boulder, CO, USA. Third International Workshop on Climate Informatics **w** <https://www2.image.ucar.edu/event/ci2013>

## October 2013

**October 10–12:** Mt Pleasant, MI, USA. International Conference on Statistical Distributions and Applications **w** <http://people.cst.cmich.edu/lee1c/icosda/>

**ims** **October 15–16:** Basel, Switzerland. International Conference *Ars Conjectandi* 1713–2013 **w** <http://www.statoo.ch/bernoulli13/>

**NEW** **October 21–23:** Knoxville, TN. NIMBioS Investigative Workshop: Multidisciplinary Approaches to Analyzing Animal Vocal Communication Sequences **w** [http://www.nimbios.org/workshops/WS\\_vocal](http://www.nimbios.org/workshops/WS_vocal)

**October 28 – November 9:** Tunis, Tunisia. Lévy Processes and Self-similarity 2013 **w** <http://levy-autosimilarity-tunis2013.math.cnrs.fr/index.html>

## November 2013

**November 9–16:** Cochin, Kerala, India. International Conference & Workshop on Fractals and Wavelets **w** [www.icfwrajagiri.in](http://www.icfwrajagiri.in)

## December 2013

**December 2–4:** Oviedo, Spain. EUROFUSE2013 on Imprecision and Uncertainty in Preference Modeling and Decision Making **w** <http://eurofuse2013.uniovi.es/>

**December 8–13:** Atlantic City, NJ, USA. 69th Annual Deming Conference on Applied Statistics **w** <http://www.demingconference.com/>

**ims** **December 12–16:** Guangzhou, China. International Conference on Recent Advances in Experimental Designs **w** <http://maths.gzhu.edu.cn/siced2013/>

**December 16–18:** Pune, Maharashtra, India. International Conference: Role of Statistics in the Advancement of Science and Technology **w** <http://stats.unipune.ac.in/Conf13.html>

**ims** **December 20–23:** Hong Kong, China. 2013 ICOSA International Conference **w** TBC

**December 28–31:** CRRAO AIMSCS, India. Statistics 2013: Socio-Economic Challenges and Sustainable Solutions **w** [www.statistics2013-conference.org.in](http://www.statistics2013-conference.org.in)

## January 2014

**ims** **January 6–8:** Chamonix, France. MCMSki IV **w** <http://www.pages.drexel.edu/~mwl25/mcmski/>

## March 2014

**NEW** **March 4–7:** Ulm, Germany. 11th German Probability and Statistics Days **w** <http://www.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>

**ims** **March 16–19:** Baltimore, Maryland. 2014 ENAR/IMS Spring

# International Calendar *continued*

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

## June 2014

 June (exact dates TBC): Location TBC. 2014 WNAR/IMS Annual Meeting **w** TBC

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

 June 30–July 3: Taipei, Taiwan. Third IMS Asia Pacific Rim Meetings **w** <http://www.ims-aprm2014.tw/>

## July 2014

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

 July 7–11: Sydney, Australia. 2014 IMS Annual Meeting. **w** TBC

 July 28 – August 1: Buenos Aires, Argentina. 37th Conference on Stochastic Processes and Applications **w** TBC

## August 2014

 August 2–7: Boston, MA. JSM2014 and ASA's 175th Anniversary. **w** <http://amstat.org/meetings/jsm/>

August 25–27: Kermanshah, Iran. 12th Iranian Statistical Conference **w** [http://isc12.razi.ac.ir/index.php?slc\\_lang=en&sid=1](http://isc12.razi.ac.ir/index.php?slc_lang=en&sid=1)

## June 2015

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

## July 2015

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

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


## August 2015

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


## March 2016

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

## July 2016

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

## 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/>

Are we missing something? If you know of any statistics or probability meetings which aren't listed here, please let us know. Email the details to Elyse Gustafson at [erg@imstat.org](mailto:erg@imstat.org). We'll list them here in the *Bulletin*, and online too, at [www.imstat.org/meetings](http://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 \$112. An additional \$62 is added to the dues of members for each scientific journal selected (\$37 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 2013 are available to *The Annals of Applied Probability* (\$184), *The Annals of Applied Statistics* (\$184), *The Annals of Probability* (\$184), *The Annals of Statistics* (\$184), *Statistical Science* (\$159), and *IMS Bulletin* (\$122). **General subscriptions** are for libraries, institutions, and any multiple-readership use. Institutional subscriptions for 2013 are available to *The Annals of Applied Probability* (\$410), *The Annals of Applied Statistics* (\$410), *The Annals of Probability* (\$410), *The Annals of Statistics* (\$445), *Statistical Science* (\$235), and *IMS Bulletin* (\$102). Airmail rates for delivery outside North America are \$124 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 © 2013 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 \$90. To subscribe, call 877-557-4674 (US toll-free) or +1 216 295 2340 (international), or email [staff@imstat.org](mailto: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/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](mailto:admin@imstat.org) or see <http://bulletin.imstat.org/advertise>

	Dimensions: width x height	Rate
1/3 page	4.93" x 4" (125.2 x 102 mm)	\$215
1/2 page	7.5" x 4" (190 x 102 mm)	\$270
2/3 page	4.93" x 8" (125.2 x 203 mm)	\$325
Full page (to edge, including 1/8" bleed)	8.75" x 11.25" (222 mm x 285.8 mm)	\$380
Full page (within usual <i>Bulletin</i> margins)	7.5" x 9.42" (190 mm x 239.3 mm)	\$380

### Deadlines and Mail Dates for *IMS Bulletin*

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

the  
**next**  
issue is  
**August**  
**2013**

Read it online at  
our website:  
<http://bulletin.imstat.org>



**DEADLINES**  
for  
**submissions**

**July 1, then**  
**August 15**

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

**Journal**  
**alerts**

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

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

*ims*

IMS: Organized September 12, 1935

THE ANNALS  
of  
APPLIED  
STATISTICS

AN OFFICIAL JOURNAL OF THE  
INSTITUTE OF MATHEMATICAL STATISTICS

Articles

- Variance function estimation in quantitative mass spectrometry with application to iTRAQ labeling ..... MICHA MANDEL, MANOR ASKENAZI, YI ZHANG AND JARROD A. MARTO 1
- Stronger instruments via integer programming in an observational study of late preterm birth outcomes ..... JOSÉ R. ZUBIZARRETA, DYLAN S. SMALL, NEERA K. GOYAL, SCOTT LORCH AND PAUL R. ROSENBAUM 25
- Variable selection and sensitivity analysis using dynamic trees, with an application to computer code performance tuning ..... ROBERT B. GRAMACY, MATT TADDY AND STEFAN M. WILD 51
- Geostatistical modeling in the presence of interaction between the measuring instruments, with an application to the estimation of spatial market potentials ..... FRANCESCO FINAZZI 81
- Varying coefficient model for modeling diffusion tensors along white matter tracts ..... YING YUAN, HONGTU ZHU, MARTIN STYNER, JOHN H. GILMORE AND J. S. MARRON 102
- Bayesian analysis of dynamic item response models in educational testing ..... XIAOJING WANG, JAMES O. BERGER AND DONALD S. BURDICK 126
- Modeling temporal gradients in regionally aggregated California asthma hospitalization data ..... HARRISON QUICK, SUDIPTO BANERJEE AND BRADLEY P. CARLIN 154
- Clustering for multivariate continuous and discrete longitudinal data ..... ARNOŠT KOMÁREK AND LENKA KOMÁRKOVÁ 177
- Local tests for identifying anisotropic diffusion areas in human brain with DTI ..... TAO YU, CHUNMING ZHANG, ANDREW L. ALEXANDER AND RICHARD J. DAVIDSON 201
- Sparse least trimmed squares regression for analyzing high-dimensional large data sets ..... ANDREAS ALFONS, CHRISTOPHE CROUX AND SARAH GELPER 226
- Robust partial likelihood approach for detecting imprinting and maternal effects using case-control families ..... JINGYUAN YANG AND SHILI LIN 249
- Sparse integrative clustering of multiple omics data sets ..... RONGLAI SHEN, SIJIAN WANG AND QIANXING MO 269
- Agnostic notes on regression adjustments to experimental data: Reexamining Freedman's critique ..... WINSTON LIN 295
- Robust VIF regression with application to variable selection in large data sets ..... DEBBIE J. DUPUIS AND MARIA-PIA VICTORIA-FESER 319
- Incorporating external information in analyses of clinical trials with binary outcomes ..... MINGE XIE, REGINA Y. LIU, C. V. DAMARAJU AND WILLIAM H. OLSON 342
- Efficient computation with a linear mixed model on large-scale data sets with applications to genetic studies ..... MATTI PIRINEN, PETER DONNELLY AND CHRIS C. A. SPENCER 369
- Bootstrap inference for network construction with an application to a breast cancer microarray study ..... SHUANG LI, LI HSU, JIE PENG AND PEI WANG 391

Continued on back cover