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IMS President's Message

Erwin Bolthausen became IMS President in July. He shares his thoughts on the future of the institute:

Erwin Bolthausen

The IMS is extremely successful as a scientific society, mainly as a scientific publisher, and also with its important conferences. The institute is also very cost effective, which results in quite low prices for its top journals. When I was editor of *Probability Theory and Related Fields* (*PTRF*), we were fighting with Springer, its publisher, about lowering the high price of this journal, by arguing that the price per page of *PTRF* surpassed that of the *Annals of Probability* by a factor of 17. This did make Springer knock it down; I think the factor is now about five.

Although at present things in IMS are running perfectly, there may well be some problems in the future, and the Institute will do well to think about and prepare for a number of potential issues ahead. I present here some personal thoughts on topics which in my view are important.

The most severe problems that IMS will probably be faced with in the coming years are to do with the rapid changes in the field of scientific publishing. Already income from subscriptions is slowly decreasing, which, for the moment, can easily be offset by slight increases in our prices. The reason for this decrease in subscriptions seems evident and unavoidable: Formerly, many universities had more than one subscription, one for the central library, and then another, or several more, for individual institutes. That is no longer necessary.

Apart from this rather minor problem, there is a lot of insecurity about the further development of mathematical and statistical publishing, and of course publishing in science, generally. One has also to be aware that our situation considerably differs from that in other fields of science, like in biology, where the relevance of a publication is decaying much faster than in our fields. Therefore, the experience of others is only of rather limited relevance for us. The one big problem we are facing is that, evidently, the journals nowadays are of much less relevance for the reader than they used to be. They are of course still of tremendous importance for young authors who need publications in highly estimated journals for getting a job.

There are many visions around how the system could change. Commercial publishers, like Springer, come up with the idea to get journals financed to a large extent by publication charges, and no longer so much by subscriptions, hoping that science foundations are strict with an open access policy. Another idea is that scientific publishing in its present form could be abandoned completely, and the refereeing process could be replaced by open electronic discussions, for instance in the arXiv. I myself don't believe that this

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Executive Committee

IMS Members' News

Trevor Hastie awarded Parzen Prize

The 2014 Emanuel and Carol Parzen Prize for Statistical Innovation was awarded to Trevor J. Hastie, John A. Overdeck Professor of Mathematical Sciences, Stanford University, on November 6. He presented a lecture titled "Sparse Linear Models." The award was for *"pioneering, influential, and outstanding research in statistical methodology and computational methods for statistics, including principle curves, generalized additive models, object-based computations for statistical models in S and R, least angle regression, graphical lasso, the elastic net for variable selection, and many other contributions to statistical methods; leadership in developing computational methods at the interface of computer science and statistics for the analysis of large data sets and for statistical learning."*

Kathryn Chaloner, 1954–2014

Kathryn Chaloner, professor and head of the University of Iowa Department of Biostatistics, died October 19 after a long battle with cancer. Dean Sue Curry said, "The courage and determination that Kathryn demonstrated throughout her illness also defined her as a distinguished leader, researcher, colleague, mentor, and friend." She added, "Perhaps Kathryn's most lasting legacy ... will be her dedication to the twin principles of mentorship and diversity. Kathryn was a passionate advocate for women, junior faculty, and students."

Read a tribute by Richard Smith and Snehalata Huzurbazar on the SAMSI blog. An obituary will follow soon.

David F. Anderson Awarded Inaugural IMA Prize in Mathematics and its Applications

The Institute for Mathematics and its Applications (IMA) has awarded David F. Anderson, assistant professor in the Department of Mathematics at the University of Wisconsin–Madison, the inaugural IMA Prize in Mathematics and its Applications. The prize was awarded at the opening of the fourth annual Abel Conference on October 31, 2014.

David said on hearing about the award, "I was shocked and happy. It is an honor to be recognized by your peers, and I am truly grateful." David received this recognition for his contributions to numerical methods for stochastic models in biology and to the mathematical theory of biological interaction networks. His work on numerical methods, in particular how to utilize different mathematical representations to construct and analyze numerical schemes, is changing the landscape of computational systems biology.

Read more about David Anderson and the prize at http://www.ima.umn.edu/publications/ima-prize-winner2014.html

ASA awards for IMS members

At the 2014 Joint Statistical Meetings in Boston, the American Statistical Association presented several awards. Among the recipients were Raymond J. Carroll, Frank E. Harrell Jr., Arnab Maity, Christopher S. McMahan, Sastry G. Pantula, Madan L. Puri, and Joshua M. Tebbs.

You can read more about the awards and recipients on page 4.

Editors' terms extended for *IMS Monographs* and *IMS Textbooks*

The IMS Committee to Select Editors has staggered the terms of the *IMS Monographs* and *IMS Textbooks* editorial board as follows: Susan Holmes is now Algorithms Editor until the end of 2015; David Cox is Coordinating Editor through the end of 2016; Ben Hambly is Probability Editor to the end of 2017. Jon Wellner is to become the new Statistics Editor for four years (January 1, 2015–December 31, 2018). See http://imstat.org/cup/default.htm

US National Medals of Science

Peter Bickel writes: Of the nine National Medals of Science awarded by President Obama this year, three were in what I view, ecumenically, as the mathematical, information and data sciences. The medals are awarded to David Blackwell, posthumously, to Alexandre Chorin and to Thomas Kailath. Of these, David Blackwell's is close to the hearts of our community. Blackwell's National Medal of Science is apparently the very first such medal awarded after the recipient's death was known.


David Blackwell

Blackwell died July 8, 2010 at the age of 91. At the time of his death he was Professor Emeritus of Statistics and Mathematics at the University of California, Berkeley. He was one of the foremost statisticians and probability theorists in the world—contributing not only to mathematical statistics and probability theory but also to game theory, information theory and mathematical logic. His work made a significant impact on these disciplines, as well as on economics, engineering, medicine and other sciences.

In statistics he is known for the Rao-Blackwell improvement scheme, for helping lay the foundations of dynamic programming, and, with Arrow and Girshick, for applying the backward induction method to prove the fundamental theorem of sequential analysis. In a final major contribution he asked: when can one statistical experiment be more informative than another? He defined this concept and provided a simple, necessary, and sufficient condition for experiments to satisfy this definition. This beautiful piece of mathematics has become one of the pillars of the decision-theoretic approach to mathematical statistics.

In probability, Blackwell is best known for the Blackwell renewal theorem, a key tool in queueing theory. In information theory, he contributed among other things the Blackwell channel. In game theory, he was among the first to deal with games with imperfect information. This led to his interest in mathematical logic to which he added Blackwell games.

Blackwell's active career, 1941-1988, was recognized with well-deserved honors: election to the National Academy of Sciences [in 1965], the American Academy of Arts and Sciences [in 1968], twelve honorary doctorates and other honors and prizes. His talents were recognized early but, because he was African-American, the beginning of his career was harder than it should have been. To take one example of many, when he was a Fellow at the Institute for Advanced Studies, his thesis advisor, Joe Doob, had to intervene to ensure him privileges at Princeton University that were normally granted to fellows of the Institute.

Blackwell was a marvelous teacher. His lucid expositions made difficult ideas seem simple and clear. His students testified to this in "A Tribute to David Blackwell," *Notices of the AMS* **58** (2011), 912–928. With his students, colleagues, family and friends, he was a man of exceptional kindness, wit, charm and playfulness. Philosophically he viewed himself as a Bayesian, but the variety of his contributions showed that, in practice, he was ecumenical. David Blackwell deserved the National Medal of Science in his lifetime. We celebrate the man himself and his work. We regret that he is not here with us to enjoy the honor.

IMS Fellow Thomas Kailath also received a Medal of Science this year. Kailath is an electrical engineer known for his contributions to the information and system sciences. He is the Hitachi America Professorship of Engineering, Emeritus, at Stanford University.

IMS Members receive ASA awards

Sastry Pantula receives ASA Founders' Award

The American Statistical Association (ASA) presented Sastry G. Pantula, Oregon State University, with its prestigious Founders Award, along with James Cochran and Christine Franklin, at the JSM in Boston in August 2014. The honor, presented annually to ASA members who have rendered distinguished and long-term service to the association, was for *"bold, sustained and visionary leadership of the statistics profession in many different capacities: first, as an architect and steward of the success of the department of statistics at North Carolina State University; second, as the president of the ASA in 2010, with signal achievements in raising the visibility and impact of our field and numerous other contributions to the association; third, as the first statistician to serve as the director of the Division of Mathematical Sciences at the National Science Foundation; and fourth, as a dean at Oregon State University, nurturing a new wave of collaborative interdisciplinary statistical science."*

Madan L. Puri receives Wilks Award

The Samuel S. Wilks Memorial Award honors the memory and distinguished career of Sam Wilks by recognizing outstanding contributions to statistics that carry on the spirit of his work. The 2014 honoree is IMS Fellow Madan L. Puri of Indiana University, who was honored for his contributions to the development and widespread use of nonparametric statistical methods. Puri has published extensively: he is the coauthor of two books on nonparametric methods, both with P.K. Sen; co-editor of 11 volumes; and author of more than 250 papers. He is well-known to statisticians for his highly influential work on rank-based models, and to probabilists for his seminal work on fuzzy systems and fuzzy random variables in which he elevated the subject from what had been largely ad-hoc methods to a rigorous level of mathematical sophistication. His work has been profoundly important and had a substantial impact on current research. He loves to collaborate with others—he has collaborated in research articles with nearly 100 people from 26 countries across five continents.

W.J. Dixon Award for Frank Harrell

This award, for outstanding contributions to the practice of statistical consulting, was given to Frank E. Harrell Jr. of the Vanderbilt University School of Medicine. Harrell has established a distinguished career as a consultative collaborative biostatistician in academics, in the pharmaceutical industry and with medical device companies. He has devoted his career to studying patient outcomes in general and specifically to the development of accurate prognostic and diagnostic statistical models.

Outstanding Statistical Application Award

The 2014 honorees are Christopher Bilder, Univ. Nebraska-Lincoln; Christopher S. McMahan, Clemson Univ.; and Joshua M. Tebbs, Univ. South Carolina, for their seminal work on classification and estimation for multiple infections in group-testing procedures. Their winning paper, "Two-Stage Hierarchical Group Testing for Multiple Infections with Application to the Infertility Prevention Project," was published in *Biometrics* (**69**, 4, 1064–1073, Dec 2013).

Gottfried E. Noether Awards presented to Arnab Maity and Ray Carroll

The two Noether Awards were established in memory of Gottfried Emanuel Noether. The awards recognize distinguished researchers and teachers and support research in nonparametric statistics.

The 2014 Noether Young Researcher Award honoree is Arnab Maity of North Carolina State University, who is honored for outstanding early-career contributions to nonparametric statistics. Maity's main research focus is developing rigorous procedures for statistical estimation and hypothesis testing in nonparametric and semiparametric regression models with applications to a wide variety of scientific fields such as genetics and genomics, nutrition, neurological studies and hydrology. Maity not only developed novel statistical procedures to answer important scientific questions of practical interest, but also investigated the theoretical properties of such procedures. This allows the user of such techniques to determine which method to use in practical situations.

The 2014 Noether Senior Scholar Award honoree is IMS Fellow Raymond J. Carroll, Texas A&M University, for outstanding contributions to the theory, application and teaching of nonparametric statistics. His first nonparametric paper, on estimating variability across individuals, appeared in 1982, and he maintains an active interest in understanding what factors affect variation. His main current application interest revolves around nutrition, working on questions such as what is the percentage of US children who have alarmingly bad overall diets and how does an overall long-term pattern of healthy eating influence the risk of colon cancer? The key statistical issue is that diet is only measured by short-term instruments such as a 24-hour recall, so we have no way to measure long-term patterns of intakes, and only glimpses of them. This gives rise to the measurement error problem, particularly the nonparametric inverse problem called deconvolution. Carroll and colleagues Len Stefanski and Peter Hall developed the first nonparametric ways to answer the basic questions raised previously. Carroll's work in the area has extended over 25 years and two books. His methods are novel, practical and influential.

COPSS Awards 2015: nominations open now

Nominations are Open for the 2015 COPSS Awards

The Committee of Presidents of Statistical Societies (COPSS) invites your nominations for next year's awards. In 2015 the Fisher Lectureship, Presidents' Award, F.N. David Award and Snedecor Award will be presented at the Joint Statistical Meetings in Seattle, Washington.

There are five charter member societies: IMS, ASA, ENAR, WNAR and SSC.

The committee chairs and the nomination deadlines are listed right. Please forward your nominations to the corresponding chair.

See copss.org for more information about these awards.

COPSS Fisher Lectureship

Deadline for receipt of nominations: December 15, 2014
David Dunson (Chair) **e** dunson@stat.duke.edu

COPSS Presidents' Award

Deadline for receipt of nominations: January 15, 2015
Jeremy Taylor (Chair) **e** jmgt@umich.edu

COPSS Florence Nightingale David Award

Deadline for receipt of nominations: January 15, 2015
Jianwen Cai (Chair) **e** cai@bios.unc.edu

COPSS Snedecor Award

Deadline for receipt of nominations: January 15, 2015
Carl Schwarz (Chair) **e** cschwarz@stat.sfu.ca

WHILE YOU ARE CONSIDERING…

Nominations are open for these IMS Awards:

Tweedie: *Dec 1*
http://www.imstat.org/awards/tweedie.html

Fellowship: *Jan 31*
http://www.imstat.org/awards/fellows.htm

Carver: *Feb 1*
http://www.imstat.org/awards/carver.html

President's message: *continued from cover*

would work properly, but one has to admit that within the present refereeing system, many results pass through which contain serious mistakes. So, one may ask what the advantage of the present system is. If nobody reads a paper, then it is irrelevant anyway whether it's correct or not, and if it is read, then possible mistakes would come to the surface maybe more rapidly with the proposed system than they do now.

I believe that the IMS should find a strategy how to face these problems, which has to be flexible, as nobody can foresee precisely how things will develop.

There is a different problem the IMS is faced with, namely to define in future its scientific identity. I am not very familiar with the history of the IMS, but from its name I conclude that, originally, it was thought to cover that part of statistical science which has a mathematical foundation. This foundation, to a large extent, was closely connected to probability, and in fact, big parts of probability theory were at that time closely tied to statistical problems. However, probability theory and statistics have drifted quite apart nowadays. As a probabilist, I don't have a profound knowledge about the situation in statistics, but for probability theory, it is clear that many of the major developments of the past 20 years have now no close connections with statistics, but more so with other branches in mathematics, like complex analysis, differential equations, algebra, number theory, or mathematical physics. As a consequence, a majority of the younger generation in probability is no longer interested in a membership in the IMS, but would rather join mathematical societies. After I became president-elect of the IMS, I did ask many of my friends and younger colleagues why they are not IMS members. Most answered that it makes more sense for them to join a mathematical society.

The visibility of the IMS for theoretical probabilists is essentially reduced to the fact that we are publishing the most important journals in the field. It has the, maybe minor, practical consequence that it becomes more and more difficult to find probabilists to work in committees of the IMS, but I think there is in the long run the more important problem of the identity of our society. An important step for the IMS certainly has to be to open up to new developments which are important for statistics, like machine learning and big data, for which modern mathematical tools are important. I think, it will always be important for the IMS to stress the connections with mathematics, as for "non-mathematical" parts of statistics, there are other societies.

I don't want to give the impression that I feel concerned about the future of the IMS. Quite to the contrary, it is a great society, and it is of utmost importance for the future of our scientific fields, and I am sure that it will find the proper answers for the challenges posed by recent developments.

TOPOS: *Pinsky was wrong, Euler was right*

Robert Adler presents the third in his series of four articles on TOPOS, Topology, Probability and Statistics:

This month, I want to direct most of my words to my fellow probabilists, and, ultimately, to issue them a challenge. Accepting the challenge will, I am certain, benefit all of the three components of TOPOS.

Ross Pinsky, a close friend of mine and probabilist with a strong analytic side, once reacted to my late-in-life love affair with topology by claiming that he could think of no two topics that were further apart than Probability and (especially algebraic) Topology.

On the face of it, it would seem that Ross was right. After all, Topology deals with large scale, global concepts, like 'round', 'holey', and 'wholly' (fortunately avoiding 'holy') while Probability is best at handling local questions, like, 'Is a stochastic process continuous, or differentiable?' Even if you think about the theorems of Probability and Statistics that say global things about large systems, almost all work from the infinitesimal up. Our most basic results, the laws of large numbers and the central limit theorem, work by saying that in a sum of many things, no single term can dominate, and it is this insignificance of the individual that eventually leads to the global phenomena at the core of Probability and Statistics.

Why should this matter? Well, in the first TOPOS column I argued that people who care about analyzing high dimensional data should care about Topology. Data invariably involves randomness, and so, despite what some of my Computer Science friends might claim, its analysis requires statistical thinking. In turn, the theory (and practice!) of Statistics is based on Probability. So, if you buy into this theme, we are going to have to marry Topology and Probability, despite Ross's heartfelt angst.

In the second column I tried to introduce the uninitiated to Homology—the heart of Topology—via the notion of persistence homology and its pictorial representation via barcodes. I also noted that Homology is all about k-dimensional "holes" in n-dimensional sets. The number of such holes is called the k-th Betti number, after the 19th century Italian mathematician, Enrico Betti, and is denoted by β_k. For the rest of this column that is all you need to know about Homology; i.e. That there is a simple numerical variable called a Betti number, and a richer, more informative, and statistically important construct known as a barcode.

Returning to the setting of the first column, there I was, in 2010, a statistical-probabilistic fish out of water, gasping in the dry air of my first Applied Topology conference, when I was accosted by a tumultuous troop of titillated topologists delighted by the belief that "now that we have captured a probabilist, he can tell us about the distributions of Betti numbers for random simplicial complexes".

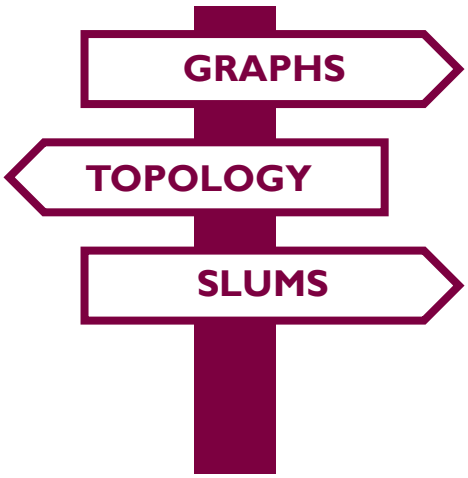
What complex? What is random? What do you expect to be able to discover? Why would you care?

The "why would you care" was the question of the first column of this series, so let's assume that issue is settled. As for "what complex", here is their example:

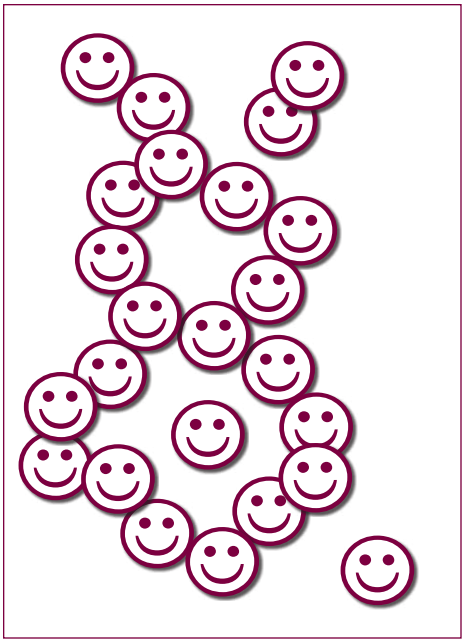
Take a set of points. (The points of a Poisson process, homogeneous or not, or iid observations from a distribution, perhaps a mixture distribution.) Join points that are close, thus obtaining a (very simple) random simplicial complex.

For a first question, they wanted to know what could be said about β_0 of this object. "Ahh," I said wisely, stroking my white beard (it has to be there for something useful beyond saving time shaving) "That's easy. I know all about that." Why so easy? Well, β_0 just counts connected components, and this "random simplicial complex" of theirs was familiar. We cover it when we talk about things like connectivity in random graphs or networks, or percolation, or even graphical models, The truth is that I don't know too much about these things, but my bookshelf is full of books by probabilists and statisticians covering these topics. Since I was representing the rest of you, saying "I" instead of "we" or "they" seemed like something I could get away with.

It turned out that mentioning graphs was a mistake, since their retort was the saying (attributed, apparently incorrectly, to Whitehead) that *"graphs are the slums of Topology"*. So, smirking, they upped the ante, placing a smiley on each of the random points, as in the picture on the next page. "Now tell us about the distribution of the homology of the union of smileys. Of course, the smileys are high dimensional, and so is the homology".



It turns out that this particular model also has a familiar history. Stochastic geometers call it (a special case of) the "Boolean model", and concentrate on finding formulae for expectations of geometric quantities like volume, surface area, etc. Others call it "continuum percolation" and ask for what critical smiley radius will such a structure,



when the number of smileys becomes large, become connected. Like most percolation problems, this one is easy to ask, but very hard to answer.

However, none of this helped me with the topologists. They did not care about geometric measurements. For a topologist, there is no such thing as "large" or "small", only "hole-iness". Simple connectivity, of course, is beneath their contempt.

So, what can we say about the expectations of the Betti numbers of the union of n-dimensional smileys (leaving even the definition of "distribution of homology", let alone results, to a later generation)?

Ross would claim that this problem is hard, and he is right. That, however, is not to say that it is impossible, and a brave cohort of young researchers is attacking these problems and proving some fascinating results. Taking the lead is Matthew Kahle, who stands out from the crowd in a number of ways, not the least of which is that he is the only mathematician I know who is so dedicated to his profession that he has a tattoo of a fractal on his biceps. Kahle and others have analysed the large scale behavior of mean Betti numbers for this and a number of other recipes for generating random simplical complexes. There are now results about expectations, laws of large numbers, and even central limit theorems. (See the recent review by Kahle and Omer Bobrowski at arxiv.1409.4734.)

This is not the place to give details about theorems, other than one. Actually, it is not yet a theorem, but more a collection of observations based on simulation, experience, and real theorems, all pointing in the direction of a universality phenomenon that surprised even seasoned topologists. The phenomenon is the following: In all models of random structure studied so far in which Betti numbers become large, there is always one that is an order of magnitude larger than the others. In other words, if we return to our version of homology that says it is all about gluing together spheres of different dimension, then there is one dimension that dominates all the others. Either we have, in three dimensions, lots of connected components and very few rings and holes, or lots of rings, all in a few connected components with few voids, and so on. It seems that when Nature plays dice to build large random structures, she has a great deal of trouble building complicated ones, but concentrates on building sets with rather uniform homologies.

THEOREM: When Nature plays dice, she generates topological simplicity

All of these results are about large systems, which is when Probability can apply its tools to ignore local structure. Saying something about small systems turns out to be harder, unless we take the lead from Euler.

Among the multitude of mathematical constructs that bear his name, lies the "Euler characteristic" of sets. For a 3D set, this is the number of components minus the numbers of rings plus the number of holes, and in general it is an alternating sum of Betti numbers.

The Euler characteristic (EC) is ubiquitous—it appears just about everywhere the words "topology" or "geometry" do, and it has a multitude of seemingly different definitions. The result is that much about the EC for random systems—both those of the smiley kind and those arising from continuous systems—is known. Indeed, a good part of my own career in random fields has involved the EC, and Jonathan Taylor has achieved mathematical miracles in working this up to a beautiful theory. My sorely missed friend Keith Worsley spent much of his career in Biostatistics developing what he and the British neuroscientist Karl Friston dubbed Toplogical Inference, applying results about the EC to analyze fMRI brain images.

So it turns out that if one wants ready-made results linking Probability and Topology, then one way to go is with the EC. Euler was right. He found something topologically deep, but simple enough for probabilists.

But the big challenge to Probability is still out there. Although results about Betti numbers are coming in, they are still mainly about means and limit theorems, More importantly, almost nothing is known about the distributional properties of barcodes, and these are the main tool of Applied Topology. Probabilistic results about barcodes are going to be crucial to developing a serious statistical theory behind their application.

In summary, we urgently need to develop new tools to attack one of the most challenging, interesting, and ultimately applicable problems around: describing the distributional properties of the algebraic topological structure of random systems. We need, simultaneously, to prove that Ross was wrong, and to move Probability out of the slums of thinking only in the trivial topology of graphs, moving it into a far richer and more promising domain of real topology.

Medallion Lecture Preview: Tilmann Gneiting

Tilmann Gneiting is Group Leader at Heidelberg Institute for Theoretical Studies (HITS) and Professor of Computational Statistics at Karlsruhe Institute of Technology (KIT) in Germany. He obtained his PhD in Mathematics at Bayreuth University, then held faculty positions at the University of Washington, where he remains affiliate faculty, and at the Institute for Applied Mathematics at Heidelberg University. Tilmann's research focuses on the theory and practice of forecasting, and spatial and spatio-temporal statistics, with applications to meteorological, hydrologic, and economic problems, among others. Tilmann also serves as Editor for Physical Science, Computing, Engineering, and the Environment at the *Annals of Applied Statistics* (2011–14).

Uncertainty Quantification in Complex Simulation Models Using Ensemble Copula Coupling

Critical decisions frequently rely on high-dimensional output from complex computer simulation models that show intricate cross-variable, spatial and/or temporal dependence structures, with weather and climate predictions being key examples. There is a strongly increasing recognition of the need for uncertainty quantification in such settings, for which we propose and review a general multi-stage procedure called ensemble copula coupling (ECC), proceeding as follows.

1. Generate a raw ensemble, consisting of multiple runs of the computer model that differ in the inputs or model parameters in suitable ways.
2. Apply statistical postprocessing techniques, such as Bayesian model averaging or nonhomogeneous regression, to correct for systematic errors in the raw ensemble, to obtain calibrated and sharp predictive distributions for each univariate output variable individually.
3. Draw a sample from each postprocessed predictive distribution.
4. Rearrange the sampled values in the rank order structure of the raw ensemble, to obtain the ECC postprocessed ensemble.

The use of ensembles and statistical postprocessing have become routine in weather forecasting over the past decade. We show that seemingly unrelated, recent advances can be interpreted, fused and consolidated within the framework of ECC, the common thread being the adoption of the empirical copula of the raw ensemble. In some settings, the adoption of the empirical copula of historical data offers an attractive alternative. In a case study, the ECC approach is applied to predictions of temperature, pressure, precipitation, and wind over Germany, based on the 50-member European Centre for Medium-Range Weather Forecasts (ECMWF) ensemble. This is joint work with Roman Schefzik and Thordis Thorarinsdottir.

Tilmann Gneiting's IMS Medallion Lecture (above) and David DeMets' address (below) will be delivered at the ENAR/IMS 2015 Spring Meeting in Miami, FL, from March 15–18, 2015. See http://www.enar.org/meetings/spring2015/index.cfm

ENAR President's Invited Speaker: David DeMets

David L. DeMets, the Max Halperin Professor of Biostatistics and former Chair of the Department of Biostatistics and Medical Informatics at the University of Wisconsin–Madison, is the 2015 ENAR Presidential Invited Speaker.

Big Data, Big Opportunities, Big Challenges

Since the 1950s, biostatisticians have been successfully engaged in biomedical research, from laboratory experiments to observational studies to randomized clinical trials. We owe some of that success to the early pioneers, especially those biostatisticians who were present at the National Institutes of Health (NIH). They created a culture of scientific collaboration, working on the methodology as needed to solve the biomedical research problems in design, conduct and analysis.

Over the past five decades, we have experienced a tremendous increase in computational power, data storage capability and multidimensionality of data, or "big data". Some of this expansion has been driven by genomics.

At present, we have the opportunity to contribute to the design and analysis of genomic data, data stored in the electronic health record and continued needs of clinical trials for greater efficiency. However, with these opportunities, we have serious challenges, starting with the fact that we need to develop new methodology to design and analyze the "big data" bases. The demand for quantitative scientists exceeds the supply and there is no strategic national plan to meet these demands.

Federal funding for biomedical research has been flat and likely to remain so for several years, impacting both the ability to train additional quantitative scientists and provide them with research funding for new methodologies. We face new, or more public, scrutiny, demanding that our data and analysis be shared earlier and earlier, even as the data are being gathered such as in clinical trials. Litigation is now part of our research environment. We will examine some of these issues and speculate on ways forward.

Consider a contribution to the IMS

The IMS offers several opportunities for contributions to the society's programs. Please take a moment to consider making a donation to one or more of these funds.

Blackwell Lecture Fund

The Blackwell Lecture Fund will be used to support a lecture in honor of David Blackwell. The purpose of this lecture is to honor Blackwell, to keep his name alive and to inspire young people to emulate his achievements. The inaugural Blackwell lecture was given by Gareth Roberts at the JSM in Boston this year. [*David Blackwell was just awarded a posthumous National Medal of Science: see page 3*]

Gift Memberships

The IMS Gift Membership Program provides IMS memberships and journals for statisticians and probabilists in regions of the world where payments in hard currency would impose a difficult financial burden.

Le Cam Lecture Fund

The Le Cam Lecture Fund is an endowment fund set up by friends of Lucien Le Cam to memorialize his contributions to our field. The Le Cam lecturer should be an individual whose contributions have been or promise to be fundamental to the development of mathematical statistics or probability.

Open Access Fund

The Open Access Fund supports the establishment and ongoing operation of IMS' open access publications, including: Probability Surveys, Statistics Surveys, Electronic Journal of Probability, Electronic Communications in Probability and Electronic Journal of Statistics. Two further IMS open access ventures are the posting of all IMS journal articles to ArXiv and assistance to members in posting to ArXiv.

Schramm Lecture Fund

The Schramm Lecture Fund was created jointly by the IMS and the Bernoulli Society. The lecture, in probability and stochastic processes, is named in honor of Oded Schramm. The lecture will be given annually and will be featured at meetings (co)-sponsored by the IMS or the Bernoulli Society with a strong attendance by researchers in probability and stochastic processes.

Scientific Legacy Fund

The Scientific Legacy Fund supports the development of IMS web pages dedicated to ensuring the preservation of valuable historical information on IMS members and leaders of our fields. The IMS will use funds to cover costs of the development and maintenance of such pages.

Tweedie New Researcher Award Fund

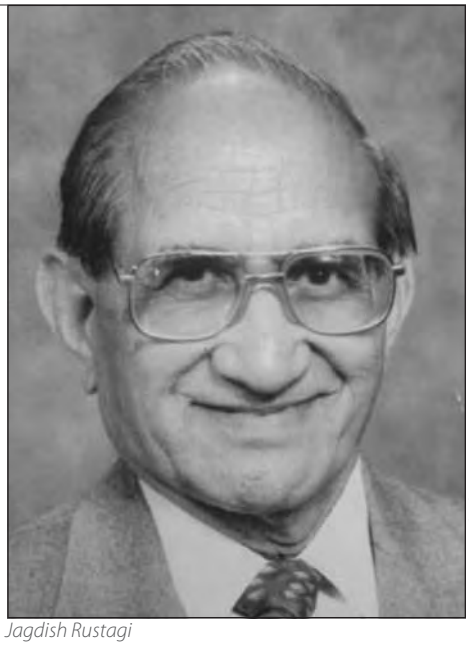
The Tweedie New Researcher Award Fund was originally set up with funds donated by Richard L. Tweedie's friends and family. Funds are used to fund the travel of the Tweedie New Researcher Award recipient to attend the IMS New Researchers Conference and to present the Tweedie New Researcher Invited Lecture.

Great! How do I make a contribution to these funds?

You can make a contribution using credit card or check using the form at https://secure.imstat.org/secure/orders/donations.asp

Obituary: Jagdish Rustagi

1923–2014


www.jagdishrustagi.com

Jagdish Rustagi

Jagdish Sharan Rustagi, an eminent statistician and a fellow of IMS, passed away on September 21, 2014, in Sunnyvale, California.

He was born on August 13, 1923, in the village of Sikri located in the state of Uttar Pradesh in (then) British India. He obtained his BA (1944) and MA (1946) degrees in Mathematics from University of Delhi, and taught at Hindu College in Delhi before moving to Stanford University with a fellowship in 1952. He completed his PhD degree in Statistics under the guidance of Professor Herman Chernoff in 1956. Rustagi served on the faculties of Carnegie Institute of Technology (now Carnegie Mellon University; 1955–57), Michigan State University (1957–58), Aligarh Muslim University (India; 1958–60), and University of Cincinnati College of Medicine (1961–63), before moving to The Ohio State University (1963–88), where he began his career as an Associate Professor of Mathematics. He was instrumental in the evolution of the Division and then the Department of Statistics, and the starting of the Biostatistics PhD program. He was the Chairman of the Department of Statistics (1979–83, and 1984–88), and expanded the faculty to build one of the largest Statistics graduate programs in the country. He retired as Professor and Chairman Emeritus at Ohio State in 1988.

Rustagi was a fellow of IMS, the American Statistical Association, and the Indian Society for Medical Statistics. He was an elected member of the International Statistical Institute. He served several professional organizations, and national and international agencies, in various capacities and was a member of several journal editorial boards. For IMS, he was the managing editor of the *Annals of Statistics* and *Annals of Probability* during 1981–83. Supported by national foundations for his research on optimization, Rustagi organized several national and international conferences on optimization and statistics, and was invited to speak at international statistical conferences and universities all over the world. He was a member of the Review Committee for the National Cancer Institute and reviewed several cancer centers in USA in the 1980s. He was also a member of the United Nations Development Program Project in Statistics in 1989.

Rustagi was well-known for his work on optimization techniques and modeling of biological and medical data. His first publication was on minimizing and maximizing an integral with interesting statistical applications (*Ann. Math. Statist.* Vol. 28, 1957, 309–328). He went on to edit two volumes on *Optimizing Methods in Statistics* (Academic Press, 1971, 1979), and author two monographs entitled *Variational Methods in Statistics* (Academic Press, 1976), and *Optimization Techniques in Statistics* (Academic Press, 1994). He also published *Introductory Statistical Methods* (Vol. I, II, Rowman & Littlefield, 1985). In all he had over 50 publications, four books, and edited or co-edited five volumes. He supervised 14 PhD dissertations in Statistics and Biostatistics, and two masters theses in Statistics.

Rustagi continued his active and vibrant life during his retirement with a visiting faculty position at the University of Philippines, and IBM San Jose, and settled down in the Bay area of California, USA. He wrote on his experience as his life path took him across continents, in *Sikri to Sunnyvale* (2007). He also shared his thoughts on his life experiences in *Reflections of Life* (2007, 2011), a volume consisting of 58 short essays.

Rustagi radiated a high level of enthusiasm and a sense of hope and endless possibilities for all around him. He was involved in community service throughout his life. He was honored by the Federation of India Associations of Central Ohio with a Distinguished Service Award in 1987. Dr. Bertram Price, an alumnus of the Statistics program at Ohio State from the 1960s, once wrote that Jagdish was "an inspiration [who] made anything and everything seem possible". Thus, throughout his life, Rustagi touched many lives of students, colleagues, and community members with his mentorship, volunteer work, and unbounded optimism towards humanity. He established an endowment at Ohio State to honor his parents with an annual lecture series in 1987 that has brought several distinguished researchers to the Department of Statistics over the years. His OSU colleagues and visitors to the Statistics Department cherished the hospitality of the Rustagis at their Worthington home. His mentorship, philanthropic, and community service will be missed by all.

He is survived by his wife Kamla, three children, and their families. The website http://www.jagdishrustagi.com/ contains a guest book and further information about him and the causes he supported.

H. N. Nagaraja, The Ohio State University

Vlada's Point: A *Work*shop

Contributing Editor Vlada Limic is warming to her theme from her March 2014 and June/July 2014 columns: a workshop that enables more (actual) work to be done…

I am eager to continue with the program set in my previous columns. Before this, let me mention that a statistician colleague responded to my last column, and described their experience with running high profile workshops in a mathematics institute in the US. It does not come as a surprise that our frustration is shared. In fact, let me bravely extrapolate: even if our direct experience is tied to probability or statistics workshops only, I doubt that there is a mathematics (or related field) discipline where the phenomenon of a "showcase" type workshop (see my June/July issue column) is not overwhelmingly present. I would be happy to learn of the contrary.

Could the fact that we all keep participating in work***shops***, and that these are likely to be the only kind of workshop we see during our entire careers, imply that the showcase is the only feasible generic format for organized focused research exchanges in mathematics? I am convinced that another kind of reality is possible.

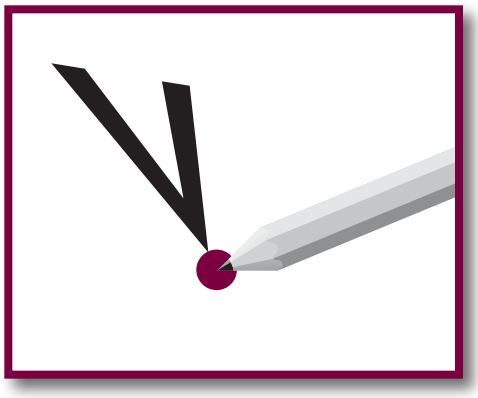
As previously announced, my hope is to soon embark on a project devoted to realizing ***work***shops. It is an ambitious program, since nothing would change in the long run with just one different event, or even several of them—just as nothing will change with respect to the eighth continent (a.k.a. the Pacific Ocean garbage patch) problem if only some people reduce their plastic bag consumption, or even if the entire human population stops using plastic bags but only for a few days.

The following general format seems appropriate to begin with. Between five and ten peers form a group of n participants (denote each person uniquely by $i \in \{1, \dots, n\}$). Each participant contributes an article several months in advance, and it would be best if the article is already published or at least seriously read and appreciated by an independent party before it is contributed. A cyclic permutation π of $\{1, \dots, n\}$ is agreed upon by all the participants. Two cycles in π could be interesting in the case of an interdisciplinary meeting, where about half of the group comes from each of the disciplines.

Fixed points in π, and matches where i and π_i are collaborators for some i, should be avoided as a rule.

In preparing for the **work**shop, each i reads the work contributed by π_i, and prepares a long lecture on it, while π_i cordially helps them along the way (via discussions in person, by email, Skype or phone). The whole group finally meets for a few days or a week-long event, during which each $i \in \{1, \dots, n\}$ gives the mini-course they prepared. All the lectures are given on the blackboard, while technology could be used to present images. Ideally all the peers attend all the lectures. For each lecture a third peer, called the moderator, is set by some algorithm, for example it could be $\pi \circ \pi(i)$ for the lecture of i on the work of π_i. Questions and answers are welcome in real time. With two experts on site (one who wrote and the other who carefully read the article), and the small and motivated audience, any confusion should be quickly and promptly cleared out of the way.

The just described setup seems convenient for getting around various problems[1] of SCALE and FLOW that hinder teaching and learning at work***shops***.



Here, i can be sure to learn very well at least the work contributed by π_i, and likely more from others during the meeting. Also i is encouraged to teach their contributed work to at least $\pi^{-1}(i)$, and the work of π_i to others at the meeting.

In addition, each participant is simultaneously a co-organizer, a speaker, and a contributing author, which could be beneficial to those in need of cv ornaments. The obvious drawback is the amount of work involved. But this time it is not the administrative tasks (managing hotel/travel reservations, assuring coffee breaks) or grant/report writing for each particular instance of ***work***shop that would take up considerable time and energy. The main work would be learning and teaching mathematics (or related field), done carefully, seriously and dare I say, joyfully.

My next contribution will aim to address the practical side of this program, and in particular, various challenges laying ahead that come to mind.

Your thoughts and comments are welcome, as always.

e vlada.limic@math.u-psud.fr

1 To mention a few: disproportion in numbers of participants vs. speakers, and in quantity of material presented vs. the length of time designated for lectures; having most of the time devoted to monologues and very little to questions and discussions; and self-marketing oriented presentations.

Recent papers

Statistical Science: 29(3) August 2014

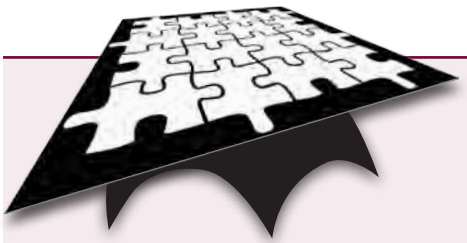
The central purpose of *Statistical Science* is to convey the richness, breadth and unity of the field by presenting the full range of contemporary statistical thought at a moderate technical level, accessible to the wide community of practitioners, researchers and students of statistics and probability. The Editor is Peter Green.

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

Bernoulli Volume 20, issue 4: November 2014

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

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



Student Puzzle Corner 7

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

Current student members of the IMS are invited to submit solutions electronically (to **bulletin@imstat.org with subject "Student Puzzle Corner"**). The deadline is **January 15, 2015**.

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

The Editor's decision is final.

Inspired by real scientific problems in a wide variety of natural sciences, RMT (Random Matrix Theory) has now entered a fantastically flourishing and sophisticated stage. One of the earliest major results was the Marchenko-Pastur law, which described the limiting form of the empirical distribution of the singular values of large order random matrices, with some assumptions on the moments of the entries of the matrix. The Tracy Widom distribution on the edge of the spectrum is another rather early classic result. Nearly unimaginably powerful mathematics has of late been used in RMT in opening up and clearing uncharted paths, dealing with universality, sparsity, perturbation, heavy tails, dependence, discrete entries, and so on. Quite interestingly, deceptively simple problems in RMT can sometimes be extremely difficult. Here is an extremely simple case of such a deceptive but difficult problem.

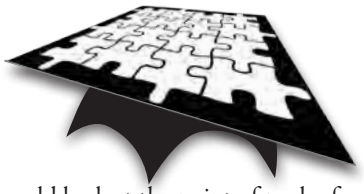
Not THAT Matrix…

Let A be a 3×3 random matrix with iid entries, and suppose each of the nine entries is a two valued random variable with the distribution $P(a_{11} = 1) = p$, $P(a_{11} = -1) = 1 - p$, $0 < p < 1$; here p can be thought of as a parameter. Let $f(p)$ denote the probability that A is singular. Prove that $f(p)$ is a polynomial in p of degree 6, and evaluate exactly $\int_0^1 f(p)dp$ and $f(\frac{1}{2})$. For extra credit, prove that $f(p)$ is minimized at $p = \frac{1}{2}$.

It is conjectured that in the case of a general n, $f(\frac{1}{2}) \to 0$ at the rate $f(\frac{1}{2}) = (\frac{1}{2} + o(1))^n$; but so far, it remains an unsolved problem. A superb reference is Terry Tao's American Mathematical Society text *Topics in Random Matrix Theory*; even more current is the American Mathematical Society monograph *Modern Aspects of Random Matrix Theory,* edited by Van Vu, where you can find four extremely informative survey articles and latest references and techniques. RMT is naturally useful in modern multivariate analysis, smoothing, shrinkage, regularization, clustering, and data compression; among many others, you can search for work of, for example, Z D Bai, Peter Bickel, A. Bose, Tony Cai, Emmanuel Candes, David Donoho, Alan Edelman, N. El-Karoui, V. L. Girko, F. Götze, Alice Guionnet, Len Haff, T. Hastie, J. Huang, Iain Johnstone, P. Krishnaiah, M. Krishnapur, E. Levina, Ingram Olkin, D. Paul, Mark Rudelson, Jack Silverstein, A. Soshnikov, Charles Stein, R. Tibshirani and Ofer Zeitouni on RMT in statistics.

The solution to the last problem is on **page 14**

Solution to Student Puzzle 6



Student Puzzle 6 appeared in the September 2014 issue (see **http://bulletin.imstat.org/2014/09/student-puzzle-corner-6-deadline-now-november-1/**). Anirban DasGupta explains:

The data used were the atomic numbers of the first fifty elements and the true quantum used was $q = 2$; the error distribution was a uniform on $[-1, 1]$. You were not given any of this information. Testing for existence of a quantum or estimating a quantum are awfully challenging, because one doesn't know what multiples of the quantum the observed dimensions are. A similar sort of problem is that of the binomial N, one where both parameters of the binomial distribution are unknown. If you knew N, estimating p is simple; if you knew p, N can be estimated quite well. But they are nearly impossible to estimate when both are unknown. Among others, work of Feldman, Olkin, Petkau and Zidek, Carroll and Lombard, Peter Hall, Herman Rubin (with a coauthor), Wasserman and Lavine, and Raftery have studied the serious difficulties of the binomial N problem.

The best known early work on quantum estimation is by Broadbent (1955, 1956), followed by highly original later work of David Kendall. Kendall introduced the *cosine quantogram* defined as

$$f_n(q) = \frac{1}{\sqrt{n}} \sum_{i=1}^{n} \cos\left(2\pi \frac{x_i}{q}\right),$$

where x_i are the observed data values. At the true quantum, the trajectory of $f_n(q)$ will peak and elsewhere, the quantogram will be small due to cancellations. So you could look at the point of peak of the quantogram and use it to decide if there is really a quantum, and simultaneously, to estimate it. The mathematical difficulty with the quantogram is that computing a P-value for the maximum of the process $f_n(q)$ is difficult, even asymptotically. However, tail probabilities, namely $P(\sup_{q1<q<q2} f_n(q) > y)$ can be upper bounded analytically; extreme value theory tells us how to do that.

Two references I recommend are Simeon Berman's *Sojourns and Extremes of Stochastic Processes*, and Robert Adler's *The Geometry of Random Fields*. Also useful is Theorem 17.8 on pp 578 in *Probability for Statistics and Machine Learning*.

A more data analytic approach is to try omnibus methods, like least squares.

You would now look at a plot of $ss(q) = \sum_{i=1}^{n} (x_i - q\,[\frac{x_i}{q}])^2$ and look both at its oscillation and the global and near global minima; here $[\frac{x_i}{q}]$ denotes the integer part of $\frac{x_i}{q}$— they are proxies for the unobserved n_i's. This is graphical, but the plot is usually very oscillatory and you don't feel confident using its global minimum. However, near the true quantum, there is often a local minimum. Quantum testing and estimation remain a pretty open challenge.

IMS meetings around the world

IMS sponsored meeting

2015 ENAR/IMS Spring Meeting
March 15–18, 2015
Hyatt Regency, Miami, Florida, USA
w http://www.enar.org/meetings/spring2015/index.cfm

ENAR program chair: Mithat Gönen, Memorial Sloan Kettering Cancer Center. ENAR associate program chair: Brisa Sánchez, University of Michigan. IMS program chair: Lurdes Y. T. Inoue, University of Washington.

The 2015 ENAR Spring Meeting will be held at the Hyatt Regency Miami, in Miami, FL, from March 15-18. The meeting brings together researchers and practitioners from academia, industry and government, connected through a common interest in Biometry. There are two workshops immediately before the meeting: for junior biostatistics researchers (http://www.enar.org/meetings/JuniorResearch/index.cfm) and "Fostering Diversity in Biostatistics" workshop (http://www.enar.org/meetings/diversity/index.cfm)

Tilmann Gneiting, Group Leader at the Heidelberg Institute for Theoretical Studies (HITS) and Professor of Computational Statistics at the Karlsruhe Institute of Technology (KIT) in Germany, will present the IMS Medallion Lecture *"Uncertainty Quantification in Complex Simulation Models Using Ensemble Copula Coupling"*. The ENAR President's Invited Address will be given by David L. DeMets on *"Big Data, Big Opportunities, Big Challenges."* See page 8 for previews of these keynote lectures.

Key dates: The online abstract submission deadline has passed; February 16, 2015 is the deadline for room reservations at Hyatt Regency Miami.

For additional hotel and travel information: https://www.enar.org/meetings/spring2015/hotel.cfm

ENAR: 2016–2018

IMS sponsored meeting

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

IMS sponsored meeting

2017 ENAR/IMS Spring Meeting
March 12–15, 2017
Washington DC
w http://www.enar.org/meetings.cfm

IMS sponsored meeting

2018 ENAR/IMS Spring Meeting
March 25–28, 2018, Atlanta, GA
w http://www.enar.org/meetings.cfm

Joint Statistical Meetings dates: 2015–2020

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

Online submission of abstracts, invited posters, introductory overview lectures, topic contributed, and contributed abstracts opens **December 2, 2014**.

IMS sponsored meeting

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

IMS sponsored meeting

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

IMS sponsored meeting

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

IMS sponsored meeting

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

IMS sponsored meeting

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

IMS sponsored meeting

JSM 2020
August 1–6, 2020
Philadelphia, PA

At a glance: forthcoming IMS Annual Meeting and JSM dates

2015

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

2016

IMS Annual Meeting/ 9th World Congress: Toronto, Canada, **July 11–15, 2016**

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

2017

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

2018

IMS Annual Meeting: TBD

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

2019

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

More IMS meetings around the world

IMS co-sponsored meeting

NEW

Probability Theory and Combinatorial Optimization
March 14–15, 2015
Duke University, Durham, NC

w http://sites.duke.edu/steele2015/

Specific areas of coverage include random structures and algorithms, random graphs, probabilistic combinatorial optimization, and concentration inequalities. The conference will provide an opportunity to honor J. Michael Steele's contributions to probability theory and combinatorial optimization on the occasion of his 65th birthday. Invited speakers: David Aldous (Berkeley), Sourav Chatterjee (Stanford), Luc Devroye (McGill), James A. Fill (Johns Hopkins), David Gamarnik (MIT), Gábor Lugosi (Pompeu Fabra), Alexander Sasha Rakhlin (Pennsylvania), Sneha Subramanian (UC Irvine), Ruth J. Williams (UC San Diego), Joseph E. Yukich (Lehigh), J. Michael Steele (Pennsylvania).

Registration is free and opens on December 1, 2014.

IMS co-sponsored meeting

10th Conference on Bayesian Nonparametrics
June 22–26, 2015
Raleigh, NC, USA

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

IMS Representatives on Program Committees: Ismael Castillo, Jaeyong Lee, Antonio Lijoi, Surya Tokdar, Aad van der Vaart

The Bayesian nonparametrics (BNP) conference is a bi-annual 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).

Abstract submission is open; deadlines are December 1, 2014 for contributed talks, February 1, 2015 for invited and keynote talks, and May 1, 2015 or until max capacity reached (whichever is earlier) for posters.

IMS co-sponsored meeting

NEW

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

w http://exostats.org

Statistics and Exoplanets is a Focus Meeting of the XXIX General Assembly of the International Astronomical Union (IAU); you will need to register for the IAU GA meeting in order to attend this meeting: see http://www.astronomy2015.org/. The early registration deadline is December 1.

IMS co-sponsored meeting

NEW

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

w TBC

The Fifth International Workshop in Sequential Methodologies will take place June 22-24, 2015 at Columbia University, New York, NY. Details to follow.

IMS sponsored meeting

WNAR/IMS Annual Meeting
June 21–24, 2015
Boise State University, Boise, Idaho

The Western North American Region of The International Biometric Society announces the 2015 WNAR Annual Meeting in Boise, Idaho.

More information coming soon, but please mark your calendars now.

The Local organizer for the 2015 WNAR meeting is Kyungduk Ko.

IMS co-sponsored meeting

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

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

The ninth international conference on Extreme Value Analysis will take place at the University of Michigan, Ann Arbor. It will feature recent research on the probability and statistics of extreme value phenomena and its important applications to climate and weather, finance, insurance, engineering and computer science.

All students, researchers, practitioners, and scientists with interests in statistics of extremes are welcome to EVA in Ann Arbor!

Abstracts are due February 27, 2015: see http://sites.lsa.umich.edu/eva2015/abstract-submission. Decisions on accepted talks/posters announced (by e-mail) by March 16, 2015.

Details on registration and payment will appear on the conference website shortly.

IMS co-sponsored meeting

UPDATED

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

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

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

A full list of confirmed plenary speakers can be found at http://spa2015.oxford-man.ox.ac.uk/people (it includes two **Medallion lectures**, from Grégory Miermont and Scott Sheffield; a **Schramm Lecture** from Michel Ledoux; and a **Doob Lecture** from Terence Tao).

Registration will open soon; to be notified when it does, fill out the form at http://spa2015.oxford-man.ox.ac.uk/register-interest.

IMS co-sponsored meeting

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

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

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

The main topics of interest of this symposium are:

- Multivariate analysis in a wider non-normal elliptical distribution setup;
- Multivariate analysis for longitudinal categorical data;
- Time series volatility models;
- Spatial-temporal data analysis;
- Familial longitudinal data analysis in semi-parametric setup.

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

IMS co-sponsored meeting

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

w http://www.fields.utoronto.ca/programs/scientific/16-17/WC2016/

This meeting is jointly sponsored by the Bernoulli Society and the IMS. The Scientific Programme Chair is Alison Etheridge. The Local Chair is Tom Salisbury.

IMS co-sponsored meeting

NEW

2015 Workshop on Finance, Insurance, Probability and Statistics (FIPS 2015)
June 25–27, 2015
Rutgers Student Center, New Brunswick, New Jersey

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

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

IMS co-sponsored meeting

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

w TBC

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

IMS sponsored meeting

2015 IMS-China Conference on Statistics and Probability
July 1–4, 2015
Kunming, Yunnan, P. R. China

w http://www.2015imschina.com

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

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

IMS co-sponsored meeting

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

w http://ems2015.nl/

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

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

Other meetings around the world

Limit Theorems in Probability
NEW

March 23–26, 2015, London, UK

w http://wwwf.imperial.ac.uk/~amijatov/IP/LimitTheorems/LTP.html

The conference is in honour of N.H. Bingham's 70th birthday. It will take place at Imperial College, London, organised by Charles Goldie, Alex Mijatovic and Rüdiger Kiesel under the auspices of the Imperial Probability Centre.

It will seize the opportunity afforded by the 70th birthday (on 19th March) of N. H. Bingham to enlist the participation of probabilists in a meeting on a broad topic of central importance in the subject. Associated with the Workshop a Festschrift is planned, to be published as a special volume of *Advances in Applied Probability*.

The meeting will include the following confirmed speakers: David J Aldous, David Applebaum, Søren Asmussen, Nick Bingham, Dan Crisan, Ron Doney, Paul Embrechts, Jean-François Le Gall, Priscilla E Greenwood, Geoffrey R Grimmett, Wilfrid S Kendall, Rüdiger Kiesel, Claudia Klüppelberg, Andreas Kyprianou, Terry Lyons, Aleksandar Mijatovic, Thomas V Mikosch, Adam Ostaszewski, Gareth O Roberts, Ulrich Stadtmüller, Balint Toth.

The conference is open to all, and registration is now open via the website above. PhD students are strongly encouraged to attend; some support is available, and details on how to apply will be displayed on the conference website shortly.

35th International Symposium on Forecasting (ISF)
NEW

June 21–24, 2015

Riverside, California

w http://forecasters.org/isf/

ISF is the premier forecasting conference, attracting the world's leading forecasting researchers, practitioners and students. With a combination of keynote presentations, workshops, and social programs, it provides opportunities for networking, learning, and fun.

ISIPTA'15
NEW

July 20–24, 2015

Pescara, Italy

w http://www.sipta.org/isipta15

ISIPTA is the primary international forum to present and discuss new results related to imprecise probability.

Important dates and registration information are on the website: http://www.sipta.org/isipta15/?pag=importantdates

13th International Conference on Statistical Sciences
NEW

March 16–18, 2015, Islamia College University, Peshawar, Pakistan

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

The conference theme is "Statistics; Future Risks, Challenges and Developments."

Short Course on Next-Generation Sequencing: Technology and Statistical Methods
NEW

December 15–18, 2014

University of Alabama at Birmingham, AL

w http://www.soph.uab.edu/ssg/nhgri_r25/fourthshortcourse

Research Collaboration Workshop for Women in Mathematical Biology
NEW

June 22–25, 2015, at NIMBioS, Knoxville, Tennessee.

w http://www.nimbios.org/education/WS_wwmb.html

Objectives: This collaborative workshop aims to help build a strong collaboration network of women working on problems in mathematical biology, by facilitating the formation of new collaborative research groups and encouraging them to continue to work together after the workshop. Junior women (tenure track faculty, post-docs and advanced graduate students) in biology, mathematics and related fields are encouraged to apply. The format of this workshop is designed to maximize the opportunities to collaborate: There will be four teams. Each team will be led by two senior women researchers and will work collaboratively on a specific project. Team members will be chosen from applicants and will consist of junior researchers from both mathematics and biology. Team members can express their project preference in their application. Each team will work intensely and present their findings at the end of the workshop. Each team is expected to continue their research and obtain results for a joint publication.

Projects: Aerodynamics of spider ballooning; sleep, circadian rhythms and pain; blood flow autoregulation in the kidney; and modeling the effects of antimicrobial therapy on gut microbiota and *C. difficile*.

Participation in the workshop is by application only; 3–4 participants will be selected for each team. 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: March 1, 2015

Aarhus Conference on Probability, Statistics and Their Applications
NEW

June 15–19, 2015, Aarhus, Denmark

w http://thiele.au.dk/events/conferences/2015/aarhus/

The topics covered at the conference include, but are not limited to, limit theory, stochastic analysis, statistical inference for stochastic processes, mathematical finance and turbulence. This event honors the numerous scientific achievements of Ole E. Barndorff-Nielsen on the occasion of his 80th birthday.

Workshop on Statistical Learning of Biological Systems from Perturbations

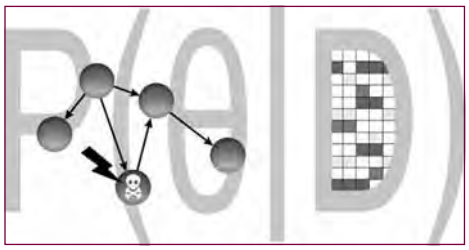
NEW

May 31–June 5, 2015

Centro Stefano Franscini, Monte Verita, Ascona, Switzerland

w http://www.cbg.ethz.ch/news/ascona2015

Advances in biotechnology have made genome-scale measurements routine, including most recent techniques for perturbing individual genes in a targeted manner. These interventional data hold the promise to infer biological networks and to move forward systems biological approaches significantly. A major challenge now is to use the vast amount of data generated from these technologies and to devise appropriate statistical models and computational inference methods. Unlike observational data, interventional data can reveal causal relationships among genes or other biomolecular entities. As such, the statistical analysis and computational integration of perturbation data is an important step towards large-scale biological system identification with abundant applications in biology and medicine.



This workshop will (i) explore recent advances and open problems in statistical learning, data integration, and causal inference of biological systems; (ii) present biomedical applications to recent genome-wide perturbation data, such as RNA interference data, obtained, for example, from cancer cells or cells infected by pathogens; and (iii) facilitate meaningful interaction between biomedical and quantitative researchers.

Important dates: Pre-registration open now, closes Feb 6, 2015. Registration open Feb 23–Apr 17, 2015.

NIMBioS Investigative Workshop: Malaria-Leishmania Co-infection

NEW

May 26–28, 2015

NIMBioS at the University of Tennessee, Knoxville

w http://www.nimbios.org/workshops/WS_coinfection

Organizers: Anuj Mubayi, Mathematical Computational Modeling Science Center and School of Mathematical and Natural Sciences, Arizona State Univ.; Folashade Agusto, Mathematics & Statistics, Austin Peay State Univ., Clarksville, TN; Christopher Kribs-Zaleta, Mathematics, Univ. of Texas, Arlington; Ephantus J. Muturi, Medical Entomology Program, Illinois Natural History Survey, UI Urbana-Champaign; Niyamat Ali Siddiqui, Epidemiology and Biostatistics, Dept. of Health Research, Ministry of Health & Family Welfare, Patna-India

Topic: *Challenges in Modeling Complexity of Malaria-Leishmaniasis Co-Infection in Resource-Limited Regions*

Objectives: Disease-prevention, outbreak-control and health promotion are key functions of public health. Lacking on these fronts within the health system is the major concern for developing countries of controlling infectious diseases. Mathematical and statistical modeling has become an essential tool for the development of control strategies and for the evaluation of mechanisms driving disease dynamics. Key determinants of a given model's potential to aid in such measures are the identifiability of the critical factors specific to a region and the availability of data to parameterize the model. For developing countries in particular, data are often sparse and difficult to collect and the public health infrastructure is largely dilapidated. It is therefore important to understand the public health conditions and challenges facing local populations and types of data that are necessary for a modeling project to be successful. Malaria and leishmaniasis are the two largest parasitic killers in the world. Due to geographic overlap of the diseases, co-infections exist in large populations, but have been poorly investigated. The co-morbidities may result in a poorer prognosis due to the lack of early detection systems or inefficient diagnostic tests for co-infection. The focus of this workshop is to identify challenges for the control of malaria-leishmaniasis co-infections in South Asian and the African continent. The workshop will also model the complexity involved in the propagation of these co-infections in resource limited regions. The types of data needed to analyze co-infection models and associated uncertainty will be assessed. Experts will present field and quantitative challenges with persistence of co-infection cases of malaria and leishmaniasis.

Application deadline: February 1, 2015

Participation in the workshop is by application only (via the website above). 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.

Employment Opportunities around the world

Canada: Mississauga, ON

University of Toronto, Department of Mathematical and Computational Sciences

Actuarial Science - Tenure track or Tenured

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=19992710

Canada: Toronto, ON

University of Toronto, Department of Statistical Sciences

Lecturer In Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20599872

Canada: Waterloo, ON

University of Waterloo

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20866874

Canada: Waterloo, ON

University of Waterloo

Statistics/Biostatistics - Tenure track or Tenured

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=19992811

China: Haidian, Beijing

Tsinghua University, Center for Statistical Science

Multiple Faculty Openings at All Ranks (Assistant, Associate and Full Professor)

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20852617

China: Shanghai

Shanghai University of Finance and Economics

Multiple Open Rank Tenure-track Positions

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20580935

France: Paris

ESSEC Business School, Cergy Pontoise

Associate or Full Professor of Statistics or Econometrics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20550708

Hong Kong

The Hong Kong University of Science and Technology, Department of Information Systems, Business Statistics and Operations Management

Tenure-Track Associate Professor/Assistant Professor in the Department of Statistics and Actuarial Science

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20556988

Hong Kong

The University of Hong Kong

Tenure-track Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20091709

Kazakhstan: Astana

Nazarbayev University

Associate/ Full Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21172220

Hong Kong

THE UNIVERSITY OF HONG KONG

香港大學

Tenure-Track Associate Professor/Assistant Professor in the Department of Statistics and Actuarial Science (Ref.: 201400998)

Applications are invited for a tenure-track appointment as Associate Professor / Assistant Professor in the Department of Statistics and Actuarial Science, to commence on September 1, 2015 or as soon as possible thereafter. The post will initially be made on a three-year term. Appointment with tenure will be considered during the second three-year contract.

Applicants should possess a Ph.D. degree in Statistics or related disciplines such as Applied Probability and Statistics, Statistical Finance or Actuarial Science. Those with demonstrated research ability and teaching experience are preferred. The rank offered will depend on the candidate's years of experience, publications and on-going research. The appointee should be able to demonstrate excellence in research and scholarship; and evidence of leadership in curriculum and pedagogy development, and teaching effectiveness.

A globally competitive remuneration package commensurate with qualifications and experience will be offered. At current rates, salaries tax does not exceed 15% of gross income. The appointment will attract a contract-end gratuity and University contribution to a retirement benefits scheme, totalling up to 15% of basic salary, as well as annual leave, and medical benefits. Housing benefits will be provided as applicable.

For enquiries about the existing research activities of the Department and the specific job requirements, please write to Professor W.K. Li, Head of the Department of Statistics and Actuarial Science (e-mail: hrntlwk@hku.hk). Applicants should send a completed application form, together with an up-to-date C.V, a detailed publication list, a research plan and a statement on teaching philosophy by e-mail to scsaas@hku.hk. Please indicate clearly the reference number and *which* level they wish to be considered for in the subject of the e-mail. Application forms (341/1111) can be downloaded at http://www.hku.hk/apptunit/form-ext.doc. Further particulars can be obtained at http://jobs.hku.hk/. **Closes December 31, 2014**.

The University thanks applicants for their interest, but advises that only shortlisted applicants will be notified of the application result.

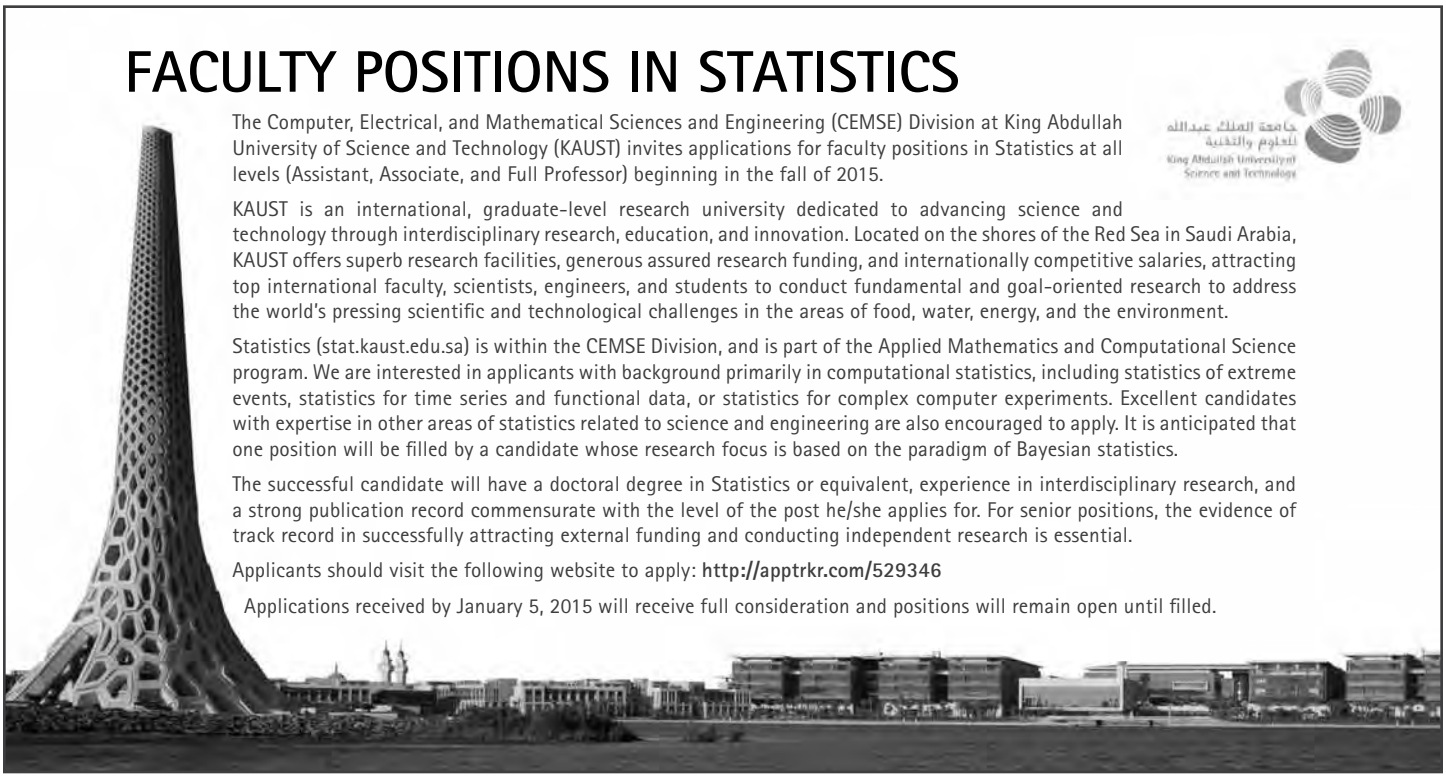
The University is an equal opportunity employer and is committed to a No-Smoking Policy

Employment Opportunities *continued*

Saudi Arabia: Thuwal

KAUST (King Abdullah University of Science and Technology)

Faculty Positions in Statistics [*see display ad below*]. http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20944621



Singapore

National University of Singapore, Department of Statistics and Applied Probability

Faculty Positions

Applications are invited for regular positions in Statistics. A PhD in Statistics or a related field is required. The appointments can be in any area of Statistics at any level. For appointment at Associate Professor or Professor level, the applicant should have an outstanding record in research, and demonstrated leadership in teaching and service. For appointment at Assistant Professor level the applicants should have demonstrated potential for excellence in research, teaching and service. There is no deadline for applications but the search will continue until all positions are filled.

Applicants should send an application letter and a CV and arrange for at least THREE reference letters to be sent directly to the Department.

Applications should be mailed by post or via e-mail to: *Search Committee, Department of Statistics and Applied Probability, National University of Singapore, 6 Science Drive 2, Singapore 117543*. E-mail: stasec@nus.edu.sg

NUS offers internationally competitive remuneration, generous research support and funding, relocation assistance and other benefits. The Department of Statistics and Applied Probability has close to 30 faculty, making us one of the largest Departments in Asia. We provide a stimulating environment for our Faculty to develop professionally.

For more information about the University, Faculty of Science, Department and terms of service, visit our websites:

University: http://www.nus.edu.sg/

Faculty of Science: http://www.science.nus.edu.sg/

Department: http://www.stat.nus.edu.sg/

Terms of Service: http://www.nus.edu.sg/careers/potentialhires/workinginnus/benefits.html

Taiwan: Taipei

Academia Sinica
Institute of Statistical Science

Research Positions

The Institute of Statistical Science, Academia Sinica, is seeking candidates for tenure-track or tenured research positions at the level of assistant or associate research fellow available in 2015. Candidates in all areas of Statistics will be considered. Candidates should have a PhD degree in statistics or areas related to data sciences. Application materials must include (1) a curriculum vitae, (2) three letters of recommendation, and (3) representative publications and/or technical reports. Additional supporting materials such as transcripts for new PhD degree recipients may also be included. Except for the letters of recommendation, electronic submissions are encouraged.

Applications should be submitted to

Dr. Ching-Kang Ing
Chair of the Search Committee
Institute of Statistical Science, Academia Sinica
128 Sec. 2 Academia Road, Taipei 11529, Taiwan, R.O.C.
Fax: +886-2-27831523
E-mail: cking@stat.sinica.edu.tw

Applications should be received by December 31, 2014 for consideration.

For more information, please visit http://www.stat.sinica.edu.tw/statnewsite/?locale=en_US

Switzerland: Lausanne

EPFL

Faculty Positions in Statistics or Computational Applied Mathematics
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=19815986

Switzerland: Lausanne

Swiss Federal Institute of Technology, Lausanne (EPFL)

Postdoctoral/Doctoral Positions in Statistics/Applied Probability at EPFL
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20541092

Taiwan: Taipei

Institute of Statistical Science, Academia Sinica

Regular Research Positions [*see display ad on next page*]
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=19863582

United Kingdom: Edinburgh

University of Edinburgh & BioSS

Principal Researcher in Applied Statistical Methodology, BioSS & Reader/Senior Lecturer in Statistics, University of Edinburgh
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21139999

United States: Fayetteville, AR

University of Arkansas - Department of Mathematical Sciences

Tenure Track Positions
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21031307

United States: Tempe, AZ

Arizona State University

Faculty Positions in Statistics
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20379108

United States: Berkeley, CA

University of California, Berkeley, Statistics Department

Lecturer
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20685929

United States: Berkeley, CA

University of California, Berkeley, Statistics Department

Assistant Professor
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20556599

Employment Opportunities *continued*

United States: Davis, CA

University of California, Davis, Department of Statistics

Faculty Positions: Assistant/Associate/Full

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=19427512

United States: Davis, CA

University of California, Davis, Department of Statistics

Lecturer

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20869251

United States: Fullerton, CA

California State University, Fullerton, Math Dept

Tenure Track Faculty Position - Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20318003

United States: Los Angeles, CA

UCLA, Department of Statistics

Tenure Track Faculty

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20569738

United States: Los Angeles, CA

University of Southern California, Marshall School of Business

Open Rank Professor of Data Sciences & Operations- Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20963699

United States: Los Angeles, CA

University of Southern California

Tenure-Track Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20456651

United States: Riverside, CA

University of California Riverside, Department of Statistics

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20821531

United States: Stanford, CA

Stanford University, Department of Statistics

Assistant Professor (Tenure-track)

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20159915

United States: Chicago, IL

Academic Career Opportunities

THE UNIVERSITY OF CHICAGO

Position Title: Associate Professor

Req # 02362

The Department of Statistics at the University of Chicago invites applications from exceptionally qualified candidates for faculty positions at the rank of Associate Professor. As part of a University of Chicago initiative, we seek individuals with a doctoral degree in statistics, applied mathematics, or related disciplines who are several years beyond the Ph.D. and doing advanced research on the interface between computational neuroscience, statistics and applied mathematics. It is expected that all successful applicants will be recognized leaders in their field and engage in interdisciplinary collaboration.

Appointments may be made jointly with another department in the University's Biological Science Division. A demonstrated research excellence appropriate to the rank is essential. Applicants will also be responsible for conducting graduate and undergraduate courses in statistics and applied mathematics and the academic advising of graduate students as requested.

Applicants must apply online at the University of Chicago's Academic Jobs website, http://tinyurl.com/odfz7wd, and must upload a cover letter and curriculum vitae including a list of publications. You may also upload research and teaching statements as well as up to three relevant research publications, but they are not required. Review of applications will begin December 1, 2014 and will continue until all available positions are filled.

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, protected veteran status or status as an individual with disability.

The University of Chicago is an Affirmative Action / Equal Opportunity / Disabled / Veterans Employer.

http://tinyurl.com/odfz7wd

United States: Chicago, IL

Academic Career Opportunities

THE UNIVERSITY OF CHICAGO

Position Title: William H. Kruskal Instructor

Req # 02361

The Department of Statistics at the University of Chicago invites applications for the William H. Kruskal Instructor. We seek recent or expected Ph.D. graduates doing advanced research with a connection to statistical methodology and computation, preferably in relation with a scientific application. It is expected that all successful applicants will engage in teaching two undergraduate Statistics courses and possibly a graduate-level course in their field of interest. The position is for two years, with the possibility of a renewal.

While not all applicants need be specifically trained in statistics, they must have completed all requirements for the Ph.D. at the time of appointment in statistics or some field of mathematics or science where statistical concepts or methods play an important role. A demonstrated research excellence is essential, and research interests related to those of faculty in the Department of Statistics (www.stat.uchicago.edu/people/faculty) or other faculty involved in the Computational and Applied Mathematics Initiative (www.stat.uchicago.edu/cami) is preferred.

Applicants must apply online at the University of Chicago Academic Jobs website at http://tinyurl.com/k87zgxl. To be considered an applicant, a cover letter, CV, and three letters of reference will be required. Referral letter submission information will be provided during the application process. Optionally, a teaching and/or research statement and up to three relevant research publications may also be uploaded or sent to the Search Committee. Application screening will begin November 15, 2014, and will continue until all positions are filled or the search is closed.

Further inquiry and optional documents may be sent to the Search Committee at search@galton.uchicago.edu or to Search Committee, Department of Statistics, Eckhart 108, University of Chicago, 5734 S. University Avenue, Chicago, IL 60637.

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, protected veteran status or status as an individual with disability.

The University of Chicago is an Affirmative Action / Equal Opportunity / Disabled / Veterans Employer.

http://tinyurl.com/k87zgxl

Position Title: Assistant Professor

Req # 02359

The Department of Statistics at the University of Chicago invites applications from exceptionally qualified candidates for faculty positions at the rank of Assistant Professor. We seek individuals doing advanced research in statistical methodology or theory or in related fields. As part of a University of Chicago initiative, applicants could be working in scientifically focused computation or applied mathematics, but hiring is not limited to that initiative. It is expected that all successful applicants will engage in the direction of doctoral dissertations, as well as teaching at the undergraduate and graduate levels. Interdisciplinary collaboration will be particularly valued.

While applicants do not need to be specifically trained in statistics, they must have completed all requirements for the Ph.D. by the time of hire in statistics or some field of mathematics or science where statistical concepts play an important role. Appointments may be made jointly with another department in the University. A demonstrated research excellence appropriate to the rank is essential; some teaching experience in the mathematical sciences is preferred.

Applicants must apply online at the University of Chicago Academic Jobs website at http://tinyurl.com/lzjhkz9. To be considered an applicant, a cover letter, CV, and three letters of reference are required. Referral letter submission information will be provided during the application process. You may also upload research and teaching statements as well as up to three relevant research publications, but they are not required. Application screening will begin November 1, 2014, and continue until all positions are filled or the search is closed.

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, protected veteran status or status as an individual with disability.

The University of Chicago is an Affirmative Action / Equal Opportunity / Disabled / Veterans Employer.

http://tinyurl.com/lzjhkz9

Employment Opportunities *continued*

United States: Stanford, CA

Stanford University, Department of Statistics

Stein Fellow

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20159907

United States: Washington, DC

Office of Financial Research

Research Principal, Senior Researcher, Researcher

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20556221

United States: Athens, GA

University of Georgia Department of Statistics

Professor and Department Head

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20421688

United States: Ames, IA

Iowa State University

Assistant, Associate, or Full Professor in Statistics and Applied Probability

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20788735

United States: Iowa City, IA

University of Iowa

Assistant Professor of Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20651868

United States: Chicago, IL

The University of Chicago Booth School of Business

Assistant/Associate Professor of Econometrics and Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20652647

United States: Chicago, IL

University of Chicago, Department of Statistics

Associate Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20963730

United States: Chicago, IL

University of Chicago, Department of Statistics

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20963565

United States: Chicago, IL

University of Chicago, Department of Statistics

William H. Kruskal Instructor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20963526

United States: Chicago, IL

University of Illinois at Chicago

Assistant Professor/Associate Professor/Full Professor - Tenure Track/Tenured

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20824344

United States: Chicago, IL

University of Illinois at Chicago

Research Assistant Professor (Postdoc - Non-Tenure Track)

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20824330

United States: DeKalb, IL

Northern Illinois University

Assistant Professor, Statistics (Position 6083)

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20652647

United States: West Lafayette, IN

Department of Statistics, Purdue University

Assistant Professor - Statistical Bioinformatics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20686827

United States: Lawrence, KS

University of Kansas

Bischoff-Stouffer Distinguished Professor of Mathematics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20377671

United States: Boston, MA

Boston University

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20159265

United States: Bridgewater, MA

Bridgewater State University

Department of Mathematics, Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20379307

United States: Cambridge, MA

Massachusetts Institute of Technology (MIT)

Statistics Faculty Position

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21182317

United States: Lowell, MA

University of Massachusetts Lowell

Assistant/Associate Professor - Statistics - Mathematical Science

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20571145

United States: Durham, NC

Duke University

Tenure Track Assistant Professor Position

The Department of Statistical Science at Duke University invites applications for appointments at the level of Assistant Professor to begin in Fall 2015. Preference will be given to candidates whose core statistical science research interests are complemented by collaborative research interests in areas including economics, finance or other areas of the social and policy sciences, computer science, neurosciences, and environmental science. We are particularly interested in applicants with demonstrated experience in complex stochastic modeling and computation for large-scale problems and data sets.

The Department is an internationally recognized center of excellence for research and education in contemporary statistical methodology. With leading strengths in Bayesian analysis, interdisciplinary applications and computationally intensive methods, the Department offers outstanding computational facilities and opportunities for interdisciplinary research. We currently have 18 regular rank faculty, 16 visiting, adjunct, and postdoctoral faculty, and over 75 graduate students. Beyond core research in statistical and computational sciences, we have many collaborative interactions with multiple other Duke departments, institutes and centers, including the Information Initiative at Duke (iiD), Duke Institute for Brain Sciences (DIBS), and Social Science Research Initiative (SSRI). Complementary interactions involve long-standing associations with the Statistical and Applied Mathematical Sciences Institute (SAMSI) and the National Institute of Statistical Science (NISS), located nearby in the Research Triangle Park, as well as many collaborators, institutes and companies around the US and worldwide.

Our internationally recognized PhD program is complemented by our MS in Statistical Science, our MS in Statistical and Economic Modeling, and our Statistical Science undergraduate degree. More information is available at the department website http://stat.duke.edu.

To apply, submit a letter, curriculum vitae, personal statement of research and teaching and names/letters from three references via https://academicjobsonline.org/ajo. Enquiries can be emailed to search@stat.duke.edu. The application pool will remain open until the position is filled; screening will begin on December 1st 2014.

Duke University, located in Durham, North Carolina, is an Affirmative Action/Equal Opportunity Employer committed to providing employment opportunity without regard to an individual's age, color, disability, genetic information, gender, gender identity, national origin, race, religion, sexual orientation, or veteran status. Applications from women and minorities are strongly encouraged. Individuals in dual career couples are encouraged to visit http://provost.duke.edu/faculty/partner/, the website on Duke's Advantages for Faculty, for information on opportunities for dual career couples in the area and how the university can help.

United States: East Lansing, MI

Michigan State University

Teaching Specialist

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21031572

United States: Minneapolis, MN

University of Minnesota

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21152859

United States: Charlotte, NC

UNCC-University of North Carolina at Charlotte

Assistant Professor in Biostatistics #4661

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21070839

United States: South Sioux City, NE

Great West Casualty Company

Predictive Modeler

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20848682

United States: Albuquerque, NM

Ball Aerospace & Technologies Corp.

Senior Research Analyst

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20556772

United States: Las Vegas, NV

University of Nevada, Las Vegas - UNLV

Chair of the Department of Mathematical Sciences

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20877000

Employment Opportunities *continued*

United States: Durham, NC

Duke University
Assistant Professor of the Practice

The Department of Statistical Science at Duke University invites applications for faculty appointment at the level of Assistant Professor of the Practice to begin in Fall 2015. This position is a regular rank faculty with a term renewable appointment. Preference will be given to candidates demonstrating outstanding teaching and strong interests in developing and growing our undergraduate major in Statistical Science and our MS in Statistical Science. We are also interested in applicants with complementary interests in Bayesian statistical science research and collaborative applications.

The Department is an internationally recognized center of excellence for research and education in contemporary statistical methodology. With leading strengths in Bayesian analysis, interdisciplinary applications and computationally intensive methods, the Department offers outstanding teaching support, computational facilities, and opportunities for interdisciplinary statistics teaching and collaboration. We currently have 18 regular rank faculty, 16 visiting, adjunct, and postdoctoral faculty, and over 75 graduate students.

The educational program (graduate and undergraduate) as well as the Department's research agenda benefit from strong connections with many other groups at Duke, with the Statistical and Applied Mathematical Sciences Institute (SAMSI) and the National Institute of Statistical Sciences (NISS) located nearby in the Research Triangle, and with other collaborators, centers, companies and organizations nationwide. Visit http://www.stat.duke.edu for more information.

To apply, submit a letter, curriculum vitae, personal statement of teaching and research, and three reference letters via https://academicjobsonline.org/ajo. For inquiries and e-mail correspondence please write to dalene@stat.duke.edu. The application pool will remain open until the position is filled; screening will begin on 1 December 2014.

Duke University, located in Durham, North Carolina, is an Affirmative Action/Equal Opportunity Employer committed to providing employment opportunity without regard to an individual's age, color, disability, genetic information, gender, gender identity, national origin, race, religion, sexual orientation, or veteran status. Applications from women and minorities are strongly encouraged. Individuals in dual career couples are encouraged to visit http://provost.duke.edu/faculty/partner/, the website on Duke's Advantages for Faculty, for information on opportunities for dual career couples in the area and how the university can help.

United States: New York, NY

Department of Statistics
Columbia University
Limited-term Faculty Position starting Fall 2015

The Department of Statistics invites applications for a three-year term position at the rank of assistant professor to begin July 1, 2015. A PhD in statistics or a related field is required, as is a commitment to high quality research and teaching in statistics and/or probability. Candidates will be expected to sustain an active research and publication agenda and to teach in the departmental undergraduate and graduate programs.

The department currently consists of 25 faculty members, 40 PhD students, and over 200 MA students. The department has been expanding rapidly and, like the University itself, is an extraordinarily vibrant academic community. For further information about the department and our activities, centers, research areas, and curricular programs, please go to our web page at: http://www.stat.columbia.edu

All applications must be submitted through Columbia's online Recruitment of Academic Personnel System (RAPS) and must include the following materials: cover letter, curriculum vitae, statement of teaching philosophy, research statement, evidence of teaching effectiveness, one writing sample or publication, and the names of 3 references into the system. Applicants also should arrange for three letters of recommendation to be uploaded on their behalf. For more information and to apply, please go to: https://academicjobs.columbia.edu/applicants/Central?quickFind=60011

Inquiries may be made to dk@stat.columbia.edu

The application deadline is April 20, 2015.

Columbia University is an Equal Opportunity/Affirmative Action employer.

United States: Ithaca, NY

Faculty Positions
School of Operations Research & Information Engineering (ORIE)

Cornell is a community of scholars, known for intellectual rigor and engaged in deep and broad research, teaching tomorrow's thought leaders to think otherwise, care for others, and create and disseminate knowledge with a public purpose.

Cornell University's School of Operations Research and Information Engineering (ORIE) seeks to fill multiple tenured/tenure-track faculty positions for its Ithaca campus. Applicants with research interests in all areas of operations research and information engineering will be considered, but applicants in areas aligned with the School's current strategic plan will receive primary consideration: the plan seeks to strengthen the School's leading role in advancing the analytical, methodological, and modeling tools of operations research together with the potential of "Big Data" and the information revolution.

Requisite is a strong interest in the broad mission of the School, exceptional potential for leadership in research and education, an ability and willingness to teach at all levels of the program, and a PhD in operations research, mathematics, statistics, or a related field by the start of the appointment. Salary will be appropriate to qualifications and engineering school norms.

Cornell ORIE is a diverse group of high-quality researchers and educators interested in probability, optimization, statistics, simulation, and a wide array of applications such as manufacturing, e-commerce, supply chains, scheduling, transportation systems, health care, financial engineering, service systems and network science. We value mathematical and technical depth and innovation, and experience with applications and practice. Ideal candidates will have correspondingly broad training and interests. Please apply online at **https://academicjobsonline.org/ajo/jobs/4552** with a cover letter, CV, statements of teaching and research interests, sample publications, at least three reference letters and, for junior applicants, a doctoral transcript. Applicants attending INFORMS annual meeting are strongly encouraged to submit all application materials by November 1, 2014. All applications completed by November 15, 2014 will receive full consideration, but candidates are urged to submit all required material as soon as possible. Applications will be accepted until the positions are filled.

ORIE and the College of Engineering at Cornell embrace diversity and seek candidates who can contribute to a welcoming climate for students of all races and genders. Cornell University seeks to meet the needs of dual career couples, has a Dual Career program, and is a member of the Upstate New York Higher Education Recruitment Consortium to assist with dual career searches. Visit **http://www.unyherc.org/home/** to see positions available in higher education in the upstate New York area.

Find us online at http://hr.cornell.edu/jobs or
Facebook.com/CornellCareers

Cornell University is an innovative Ivy League university and a great place to work. Our inclusive community of scholars, students and staff impart an uncommon sense of larger purpose and contribute creative ideas to further the university's mission of teaching, discovery and engagement. Located in Ithaca, NY, Cornell's far-flung global presence includes the medical college's campuses on the Upper East Side of Manhattan and in Doha, Qatar, as well as the new CornellNYC Tech campus to be built on Roosevelt Island in the heart of New York City.

Diversity and inclusion have been and continue to be a part of our heritage. Cornell University is a recognized EEO/AA employer and educator.

United States: Binghamton, NY

Binghamton University, Department of Mathematical Sciences

Tenure-Track Assistant Professor in Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20485076

United States: Ithaca, NY

Cornell University

Two Faculty Positions

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20336322

United States: New York, NY

Statistics Group in the Department of Information, Operations & Management Sciences at the Stern School of Business, New York University

Tenure-Track Faculty Position in Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20669146

United States: Eugene, OR

University of Oregon

Associate or Full Professor, Biostatistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20587328

United States: Philadelphia, PA

University of Pennsylvania, Wharton Department of Statistics

Assistant Professor of Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21030738

United States: Philadelphia, PA

University of Pennsylvania, Wharton Department of Statistics

Postdoctoral Researcher

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21031133

Employment Opportunities *continued*

United States: New York, NY

Department of Statistics
Columbia University
Faculty Position Starting Fall 2015

The Department of Statistics invites applications for a tenure-track Assistant Professor position in applied/interdisciplinary statistics to begin July 1, 2015. A Ph.D. in statistics or a related field and commitment to high quality research and teaching in statistics and/or probability are required. Candidates will be expected to sustain an active research and publication agenda and to teach in the departmental undergraduate and graduate programs. The ideal candidate would be eligible to become a member of the Institute for Data Sciences and Engineering.

The department currently consists of 25 faculty members, 40 PhD students, and over 100 MS students. The department has been expanding rapidly and, like the University itself, is an extraordinarily vibrant academic community. For further information about the department and our activities, centers, research areas, and curricular programs, please go to our web page at: http://www.stat.columbia.edu

Applicants are required to create an applicant profile and upload a CV through Columbia's online Recruitment of Academic Personnel System (RAPS). To begin the application process, please go to https://academicjobs.columbia.edu/applicants/Central?quickFind=60010

Additionally, applicants must submit materials through Head Hunter (https://editorialexpress.com/hhc). The Department of Statistics positions will be visible in Head Hunter by clicking on "Positions" after logging in to the Candidate Application Interface.

In Head Hunter, applicants for this position should submit a cover letter, current Curriculum Vitae, a brief statement of their research plans, one writing sample, and arrange for three letters of reference to be sent on their behalf.

Applications will only be considered for the position once the process is completed both in RAPS and in HEAD HUNTER.

Inquiries may be made to dk@stat.columbia.edu

Review of applications begins on December 2, 2014, and will continue until the position is filled.

Columbia University is an Equal Opportunity/Affirmative Action employer.

United States: New York, NY

Department of Statistics
Columbia University
Lecturer in Discipline Position Starting Fall 2015

The Department of Statistics invites applications for multiple positions at the rank of Lecturer in Discipline to begin July 1, 2015. These are full-time appointments with multi-year renewals contingent on successful reviews. One of these positions is targeted to be the online instructor in the Department's burgeoning MA Hybrid Program.

Lecturers in Discipline are officers in the University who meet a programmatic need for instruction in specialized fields. The selected candidates will be expected to teach 3 courses per semester. A Ph.D. in statistics or a related field and a commitment to high quality teaching at both the undergraduate and MA levels in statistics and/or probability are required. Experience with online education is desirable but not required. Candidates will be expected to participate in the full gamut of statistics education including curriculum improvement, modifying and developing courses, and exploring new strategies for the teaching of statistics.

The department currently consists of 25 faculty members, 40 PhD students, and over 200 MA students. The department has been expanding rapidly and, like the University itself, is an extraordinarily vibrant academic community. For further information about the department and our activities, centers, research areas, and curricular programs, please go to our web page at: http://www.stat.columbia.edu

All applications must be submitted through Columbia's online Recruitment of Academic Personnel System (RAPS) and must include the following materials: cover letter, curriculum vitae, statement of teaching philosophy, research statement, evidence of teaching effectiveness, one writing sample or publication, and the names of 3 references into the system. Applicants also should arrange for three letters of recommendation to be uploaded on their behalf. For more information and to apply, please go to: https://academicjobs.columbia.edu/applicants/Central?quickFind=60012

Inquiries may be made to dk@stat.columbia.edu

Review of applications begins on January 15, 2015 and will continue until the positions are filled.

Columbia University is an Equal Opportunity/Affirmative Action employer.

United States: Pittsburgh, PA
Carnegie Mellon University
Statistics
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=19839207

United States: Clemson, SC
Clemson University
Tenure track faculty position
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20601013

United States: Brookings, SD
South Dakota State University
Assistant or Associate Professor of Statistics
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=19393789

United States: Lubbock, TX
Texas Tech University, Department of Mathematics & Statistics
Tenure-track assistant professors
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20820129

United States: Charlottesville, VA
University of Virginia, Department of Statistics
Open rank Professor of Statistics
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20335467

United States: Norfolk, VA
Old Dominion University
Statistics - Assistant or Associate Professor
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20587208

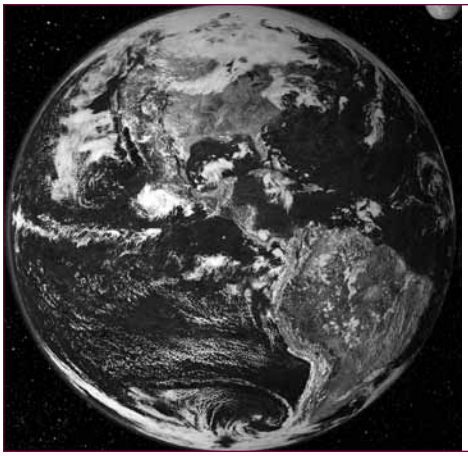
United States: Seattle, WA
Fred Hutchinson Cancer Research Center
Tenure-Track Assistant (0116) or Associate (0102) Professor
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20605358

United States: Seattle, WA
University of Washington, Department of Statistics
Assistant Member Biostatistics and Biomathematics Program
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20658049

United States: Tacoma, WA
UW Tacoma
Assistant Professor of Applied Mathematics or Statistics
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=21077889

United States: Madison, WI
University of Wisconsin–Madison
Assistant/Associate Full prof. of Biostatistics & Biomedical Informatics
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20542563

United States: Madison, WI
University of Wisconsin–Madison, Department of Statistics
Assistant Professor
http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=20219484



We've got jobs all over the world! Check the list at www.imstat.org/jobs

International Calendar of Statistical Events

IMS meetings are highlighted in maroon with the IMS logo, and new or updated entries have the NEW or UPDATED 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

December 2014

December 3–5: NIMBioS, Knoxville, Tennessee. **Heart Rhythm Disorders w** http://www.nimbios.org/workshops/WS_cardiac

December 11–12: Wagga Wagga, NSW, Australia. **Applied Statistics and Public Policy Analysis w** http://csusap.csu.edu.au/~azrahman/ASPPAC2014

NEW December 15–18: University of Alabama at Birmingham, USA. Short Course on Next-Generation Sequencing: Technology and Statistical Methods **w** http://www.soph.uab.edu/ssg/nhgri_r25/fourthshortcourse

December 17: London, UK. **SuSTaIn EdgeCutter one day Workshop on Astrostatistics w** http://www.sustain.bris.ac.uk/ws-astrostatistics/

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

December 20–22: Athens, Greece. **Greek Stochastics ζ w** http://www.stochastics.gr/meetings/zeta/

January 2015

January 4–7: Trident Hyderabad, India. **IX International Multiple Comparisons Procedures (MCP) Conference w** http://www.mcp-conference.org/hp/2015/

January 12–16: Kolkata, India. **International Conference on Robust Statistics 2015 w** http://www.isical.ac.in/~icors2015/

January 15-16: NIMBioS at the University of Tennessee, Knoxville. **Lymphoid Cells in Acute Inflammation w** http://www.nimbios.org/workshops/WS_lymphoid

January 26–28: Lunteren, The Netherlands. **14th Winter School on Mathematical Finance w** https://staff.fnwi.uva.nl/p.j.c.spreij/winterschool/winterschool.html

February 2015

February 16–20: Wrocław University of Technology, Poland. **12th Workshop on Stochastic Models, Statistics and Their Applications w** http://www.smsa2015.rwth-aachen.de

March 2015

NEW IMS March 14–15: Duke University, Durham, NC. Probability Theory and Combinatorial Optimization **w** http://sites.duke.edu/steele2015/

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

NEW March 16–18: Islamia College University, Peshawar, Pakistan. 13th International Conference on Statistical Sciences **w** http://www.isoss.net/conferences

NEW March 23–26: London, UK. Limit Theorems in Probability **w** http://wwwf.imperial.ac.uk/~amijatov/IP/LimitTheorems/LTP.html

April 2015

April 8–10: NIMBioS, Knoxville, Tennessee, USA. **Information and Entropy w** http://www.nimbios.org/workshops/WS_entropy

May 2015

May 18–29: Singapore. **Workshop on New Directions in Stein's Method w** http://www2.ims.nus.edu.sg/Programs/015wstein/

May 26–28: Haikou, Hainan, China. **24th International Workshop on Matrices and Statistics (IWMS-2015) w** http://iwms2015.csp.escience.cn/dct/page/1

May 31–June 5: Ascona, Switzerland. **Workshop on Statistical Learning of Biological Systems from Perturbations w** http://www.cbg.ethz.ch/news/ascona2015

June 2015

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

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

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

ims June 21–24: Boise, Idaho, USA. 2015 **WNAR/IMS Annual Meeting w** TBC

NEW ims June 22–24: Columbia University, New York, NY. Fifth International Workshop in Sequential Methodologies (IWSM) **w** TBC

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

ims June 22–25: Raleigh, NC, USA. 10th **Conference on Bayesian Nonparametrics w** https://stat.duke.edu/bnp10/

NEW ims June 25–27: Rutgers Student Center, New Brunswick, NJ. 2015 Workshop on Finance, Insurance, Probability and Statistics (FIPS 2015) **w** http://www.fsrm.rutgers.edu/fips2015

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

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

July 2015

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

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

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

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

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

NEW July 20–24: Pescara, Italy. ISIPTA'15 **w** http://www.sipta.org/isipta15

International Calendar *continued*

July 2015 *continued*

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

August 2015

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

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

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

September 2015

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

March 2016

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

June 2016

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

June 20–24: University of California at San Diego. **Stochastic Networks Conference w** TBD

July 2016

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

ims July 11–15: Toronto, ON, Canada. **IMS Annual Meeting at 9th World Congress in Probability and Statistics w** TBC

July 2017

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

July 2018

ims July 28 – August 2: Vancouver, Canada. **JSM 2018 w** TBC

July 2019

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

August 2020

ims August 1–6: Philadelphia, PA, USA. **JSM 2020 w** TBC

Are we missing something? If you know of any statistics or probability meetings which aren't listed here, please let us know. You can email the details to Elyse Gustafson at erg@imstat.org, or you can submit the details yourself at http://www.imstat.org/submit-meeting.html We'll list them here in the Bulletin, and on the IMS website too, at www.imstat.org/meetings

Membership and Subscription Information

Journals

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

Individual and Organizational Memberships

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

Individual and General Subscriptions

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

IMS Bulletin

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

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

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Information for Advertisers

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

Advertising job vacancies

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

Advertising meetings, workshops and conferences

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

Rates and requirements for display advertising

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

	Dimensions: width x height	Rate
1/3 page	4.9" wide x 4" high (125 x 102 mm)	$240
1/2 page	7.5" wide x 4" high (190 x 102 mm)	$295
2/3 page	4.9" wide x 8" high (125 x 203 mm)	$350
Full page (to edge, including 1/8" bleed)	8.75" wide x 11.25" high (222 mm x 286 mm)	$400
Full page (within usual *Bulletin* margins)	7.5" wide x 9.42" high (190 mm x 239 mm)	$400

Deadlines and Mail Dates for *IMS Bulletin*

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

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the next issue is January/ February 2015

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

DEADLINES for submissions

December 1, then **February 1**

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

Journal alerts

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

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

IMS: Organized September 12, 1935

THE ANNALS
of
APPLIED
STATISTICS

An Official Journal of the
Institute of Mathematical Statistics

Articles

Continued on back cover

Vol. 8, No. 3—September 2014