Volume 45 • Issue 7

IMS Bulletin

October/November 2016

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Presidential Address 2016

"Are We Meeting the Challenge?"

Richard Davis delivered his IMS Presidential Address at the World Congress in Probability and Statistics, at the Fields Institute in Toronto on July 11, 2016. The video of this talk, which includes slides and three embedded videos can be accessed from **http://www.fields.utoronto.ca/video-archive** or **http://www.stat.columbia.edu/~rdavis/PresidentAddress2016.ogv** (the address starts at the 14:45 mark).

Toronto, a world-class city with experience in hosting large statistics meetings, is a near-perfect venue for this Congress. Toronto has been on the regular circuit for JSMs since 1983 and is also a beacon for high level research in both probability and statistics.

David Brillinger (right), with Murray Rosenblatt. Murray will be turning 90 later this year and there is a conference in his honor later this fall, co-organized by Dimitris Politis and Ruth Williams

So I would like to begin this address by acknowledging some people who have strong connections to both Toronto and IMS. I will start with David Brillinger *(pictured with Murray Rosenblatt)*. He is a former president of IMS, and also a professional hockey player wannabe. His enthusiasm for statistics, and life, is infectious and makes him a great ambassador for statistics. He will be delivering the Tukey lecture tomorrow and who better to talk about Tukey than David.

The second person I would like to acknowledge is Nancy Reid. She is also a former president of IMS and has won virtually every trophy in statistics that one can win. Now she has gone beyond that: she became an Officer of the Order of Canada last year, and just a few months ago she was named a Foreign Associate of the National Academy of Sciences. This is quite a year to have both of those honors bestowed on her.

Nancy Reid, pictured with 'father of statistics in Canada' Don Fraser

I had a difficult time coming up with a title for this talk. After all, it's not every day that one gives a President's Address. For inspiration, I looked at the addresses from the previous three IMS presidents [you can read these at http://bulletin.imstat.org/category/presidential-address/]. Hans Künsch spoke about *Ars Conjectandi* in 2013, the 300th anniversary of the publication of Bernoulli's masterpiece. An easy choice, I thought. Interestingly, he

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Executive Committee

IMS Members' News

Vlada Limic next *Bulletin* Editor

We are delighted to announce that Vlada Limic will be the next Editor of the *IMS Bulletin,* taking over from Anirban DasGupta when his three-year term ends in December 2016.

Vlada is a CNRS research director at Université Paris Sud 11. She has been a contributing editor of the *IMS Bulletin* for three years, writing "Vlada's Point" columns [look out for her final one in the next issue]; she is also an associate editor of the *Annals of Applied Probability*.

Harrison Zhou, chairing the Committee to Select Editors, said, "Vlada has made fundamental contributions in probability theory, stochastic processes, and applied probability. Her book with Greg Lawler, *Random Walk: A Modern Introduction*, is becoming a classical textbook for random walks. Based on her exceptional scholarly achievements and her editorial experiences, the committee believes Vlada Limic would be an excellent Editor for the *IMS Bulletin*. We are grateful for her acceptance to this important service."

Vlada Limic's website is http://www.math.u-psud.fr/~limic/izmars/indexmars.html

Tati Howell will remain as Assistant Editor.

Terry Speed interview in *Amstat News*

Our columnist Terry Speed is interviewed in the September 2016 issue of *Amstat News*, in the section on influential mentors. He talks with Jean Yang about interdisciplinary research, his career and the role of mentors. You can read the full interview at http://magazine.amstat.org/blog/2016/09/01/terryspeedinterview/

David Hand receives ENBIS Box Award

ENBIS, the European Network for Business and Industrial Statistics, established three awards to honour individuals who have helped to broaden the use of statistics in business and industry. Among these is the Box Medal, awarded for outstanding contributions to business and industrial statistics. It is named after George Box, the first recipient of the medal. The 2016 ENBIS Box Medal is awarded to David Hand.


David Hand

Professor David Hand is Senior Research Investigator and Emeritus Professor of Mathematics at Imperial College, London, where he formerly held the Chair in Statistics. He is also Chief Scientific Advisor to Winton Capital Management. He is a Fellow of the British Academy, and an Honorary Fellow of the Institute of Actuaries, and has served twice as President of the Royal Statistical Society. He is a non-executive director of the UK Statistics Authority, and is Chair of the Board of the UK Administrative Data Research Network.

David is one of the *IMS Bulletin* Contributing Editors. He has published 300 scientific papers and 28 books, including *Principles of Data Mining*, *Information Generation*, *Measurement Theory and Practice*, *The Improbability Principle*, and *The Wellbeing of Nations*. In 2002 David was awarded the Guy Medal of the Royal Statistical Society, and in 2012 he and his research group won the Credit Collections and Risk Award for Contributions to the Credit Industry. In 2013 he was made OBE (Officer of the Most Excellent Order of the British Empire) for services to research and innovation.

ENBIS described David as "an ambassador of statistics; some of his books and articles have addressed important societal problems, with the merit of being accessible not only to specialists but also to the general reader."

More Members' News

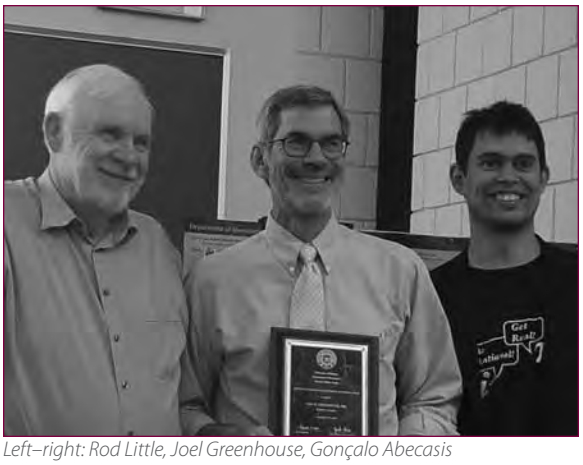
IMS Fellow

Newly elected IMS Fellow Herold Dehling was unable to be in Toronto for the presentation ceremony, but a few weeks afterwards he and Richard Davis were at the same conference in Louvain-la-Neuve, so they took the opportunity and Richard presented Herold with his plaque.

Herold Dehling (left) with Richard Davis

Joel Greenhouse presents Rod Little Distinguished Lecture

Joel B. Greenhouse, Professor of Statistics in the Department of Statistics at Carnegie Mellon University, was invited to present the inaugural Rod Little Distinguished Lecture in the Department of Biostatistics at the University of Michigan. The award honors the many significant contributions to the statistical sciences of Rod Little, the Richard Remington Distinguished University Professor of Biostatistics. Greenhouse's lecture, entitled *Statistical Thinking and Public Health*, was presented at a symposium that also celebrated the 75th anniversary of the University of Michigan's School of Public Health in September.



Left–right: Rod Little, Joel Greenhouse, Gonçalo Abecasis

Tweedie Award presentation

In the April/May 2016 issue we reported that the winner of the 2016 Tweedie New Researcher Award was Alexandre Bouchard-Côté. Alexandre presented the Tweedie New Researcher Invited Lecture at the IMS New Researchers Conference, held at the University of Wisconsin–Madison from July 28–30, immediately before JSM.

The call for nominations for next year's Tweedie Award is on page 9.

Alexandre Bouchard-Côté (right) with Richard Davis

= access published papers online

IMS Journals and Publications

Annals of Statistics: Ed George and Tailen Hsing
http://imstat.org/aos
http://projecteuclid.org/aos

Annals of Applied Statistics: Tilmann Gneiting
http://imstat.org/aoas
http://projecteuclid.org/aoas

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

Annals of Applied Probability: Bálint Tóth
http://imstat.org/aap
http://projecteuclid.org/aoap

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

IMS Collections
http://imstat.org/publications/imscollections.htm
http://projecteuclid.org/imsc

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

IMS Co-sponsored Journals and Publications

Electronic Journal of Statistics: Domenico Marinucci
http://imstat.org/ejs
http://projecteuclid.org/ejs

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

Electronic Communications in Probability: Sandrine Péché
http://ecp.ejpecp.org

Current Index to Statistics: George Styan
http://www.statindex.org
log into members' area at imstat.org

Journal of Computational and Graphical Statistics: Diane Cook
http://www.amstat.org/publications/jcgs
log into members' area at imstat.org

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

Probability Surveys: Ben Hambly
http://imstat.org/ps
http://www.i-journals.org/ps/

IMS-Supported Journals

ALEA: Latin American Journal of Probability and Statistics: Victor Perez Abreu
http://alea.impa.br/english

Annales de l'Institut Henri Poincaré (B): Gregory Miermont, Christophe Sabot http://imstat.org/aihp
http://projecteuclid.org/aihp

Bayesian Analysis: Bruno Sansó
http://ba.stat.cmu.edu

Bernoulli: Holger Dette
http://www.bernoulli-society.org/
http://projecteuclid.org/bj

Brazilian Journal of Probability and Statistics: Francisco Louzada Neto http://imstat.org/bjps
http://projecteuclid.org/bjps

Stochastic Systems: Assaf Zeevi
http://www.i-journals.org/ssy/

IMS-Affiliated Journals

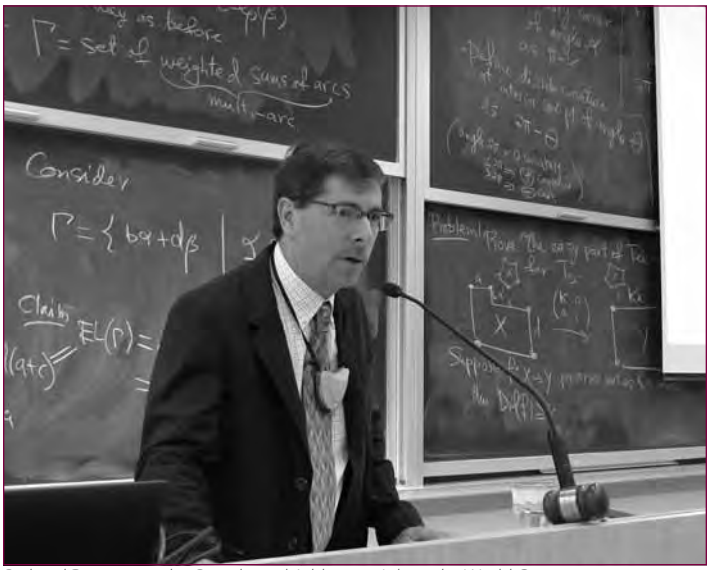
Probability and Mathematical Statistics: K. Bogdan, M. Musiela, J. Rosiński, W. Szczotka, & W.A. Woyczyński
http://www.math.uni.wroc.pl/~pms

Presidential Address continued

Continued from **cover**

included comments on neuroscience and, in particular, predictive reverse engineering. Towards the end of this address, I'll mention an example from neuroscience that illustrates exactly that sort of issue. Two years ago, Bin Yu inspired us with her talk on *"Let Us Own Data Science"* [also at https://www.youtube.com/watch?v=92OjsYQJC1U], about how we should get our act together relative to data science. And then last year, Erwin Bolthausen lamented the potential separation between probability and statistics. He worried that the two disciplines may be drifting apart.

I finally settled on the title—*"Are we meeting the challenge?"*—which may sound a little lame. The answer to this question is an unequivocal *yes!* (You don't ask a question like this without delivering a positive answer.) Of course, the question is not well defined until one specifies the *challenge*. You can make the challenge anything you want. So that was essentially the challenge: to determine what the challenge should be. The challenge here is to adapt and be relevant to the changing advances in technology and science. And where did I come up with something like this? I was inspired by Miron Straf's 2002 ASA President's Address, *"Statistics: The Next Generation"*[1]. The 2002 JSM happened to be in New York, about 10 months after 9/11. The mood was still subdued in New York. And Miron gave what I viewed as a somber and depressing address, and not because of 9/11. Miron is an extremely articulate and engaging person. He was the Associate Director of Behavioral and Social Sciences of the National Academy of Sciences and for number of years wrote a humor column on the last page of *Chance*. I don't usually attend President's Addresses but I happen to attend this one since I had just become an ASA fellow[2]. Miron delivered what I viewed as a pessimistic long view of the future of statistics. To reinforce his point, he quoted from Leo Breiman's 2001 article, "Statistical Modeling: The Two Cultures"[3] that appeared in *Statistical Science* as a discussion paper with a distinguished group of discussants consisting of Cox, Efron, Hoadley and Parzen. Although a relatively new article at the time of Miron's address, Breiman's paper has become rather influential with over 1400 citations. Breiman also appeared a bit depressed about the future direction of statistics. In a recent unpublished manuscript, "50 years of Statistical Science"[4], David Donoho provides an excellent discussion of Breiman's two cultures and delves into the comments by the discussants.



Richard Davis gave this Presidential Address in July at the World Congress

Returning to Miron's address, he was certainly prescient in his prediction of the impact of technology on virtually all aspects of our lives. In describing how our discipline will have to change he says, "...change for us is not an option. Technology and its interaction with social, political, and economic factors will force change upon us. Suppose we as a profession do not change our ways, while the world around us changes. Imagine then, *our* world in 2020." I cherry-picked some of the items that he forecasted for statistics in the year 2020. (Remember, it was 2002 when he gave this talk.)

- Decentralized work environment—impact of generation III of internet
- Academics selling distance learning courses
- Demand for statistics degrees diminishes—statistics departments dissolve
- Printed journals (and even refereed ones) will give way to online journals
- Big meetings will be replaced by Web-based alternatives ("with air travel unsafe and unnecessary")

So as a method of keeping score on the predictions, I will award a ✓ or ✗ for correct/wrong forecasts. The first item has certainly come to fruition. We shop from home, work from home, even teach from home. This item

1 Straf, Miron L. "Statistics." *Journal of the American Statistical Association* (2011). See: http://www.straf.net/pdfs/jsm-speech-jasa.pdf

2 Like IMS, ASA couples the awards banquet with the President's Address in order to get a larger audience. As an aside, this is one reason I have been pushing to have more fellows in IMS: to increase attendance at our awards banquet.

3 The use of the colon in titles was popular in the early 2000's!

4 Donoho presented this paper at the Tukey Centennial birthday celebration at Princeton in 2012

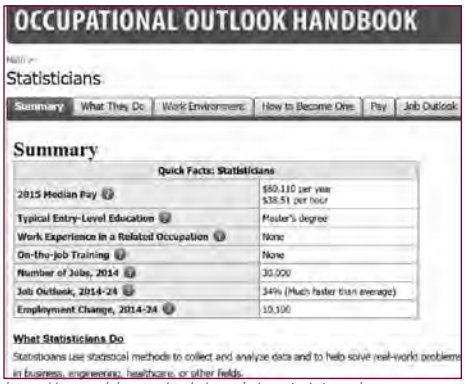
definitely gets a ✓. The next item also gets a ✓. What university administrator does not want to market online courses—it's believed to be another way to generate income for declining university budgets. The third item, that the demand for statistics degrees and some stat departments may dissolve, is way off the mark. I will award this item with two ✗'s. I will show some data later demonstrating that the demand for statistics is healthier than ever. (If it's not clear by now, this is going to be an upbeat message about the statistics profession!) In item four, Miron is spot on and receives a ✓. Many printed journals, even refereed ones, have given way to online journals. As for the last item, big meetings will be replaced by web-based alternatives, because air travel is unsafe (again, recall this was in 2002, and the mindset was that people would severely scale back air travel), he got this one wrong. The impressive attendance at this World Congress is evidence that we still attend conferences in person.

Let's return for a minute to Breiman's two-culture paper. The two cultures refer to data modeling and algorithmic modeling (or as it is better known today as predictive modeling). In data modeling, the setup is traditional. We entertain a statistical or stochastic model for the data, fit the model to the data, and then do the traditional model assessment and inference. In algorithmic modeling, it is more like a "black box" approach, where you try to fit some type of model to the training data and assessment of the model's performance is governed primarily by its ability to predict well. What I found interesting is at the end of Breiman's rejoinder to the discussants, he appears exasperated and writes, "Many of the best statisticians I have talked to over the past years have serious concerns about the **viability of statistics as a field**. . . .The danger is that if we define the boundaries of our field in terms of **familiar tools and familiar problems**, we will fail to grasp the new opportunities" (emphasis added). This perspective is echoed to a large extent by Straf. My outlook on the state of the profession and its future is more upbeat.

- By its very nature, the statistics discipline is necessarily **nimble** and **adaptable** to new scientific disciplines, to new types of data forms, to new scientific questions, etc.
- Why would this view change in the face of the technological onslaught with "big data"? It may take more time and more manpower, but it will happen and is happening!
- The warning issued by Straf and Breiman seemed mostly **pessimistic** in view of the history of the subject? Maybe this pessimism was essentially a **"call to arms?"**
- It is a **false choice** between **theory and applications** or "empirical corroboration" vs "theoretical mathematical validation"[5]
- Is the "theory" vs "applied" mindset based on a zero-sum principle? Can't we embrace both—need a **"larger tent"** for statistics.

My view is we should argue for a bigger tent that embraces both "theory" and "applications." Or as Efron wrote—as only he can with such clarity—in his comment to Breiman's paper: "There are enough physicists to handle the physics case load, but there are fewer statisticians and more statistics problems, and we need all the help we can get."

So how are we doing? Let's use some subjective metrics. In the media, the view about statistics has changed. In the late 1990s, early 2000s, when Miron delivered his address, there were rumblings that computer science was going to eat our lunch and we would be out of a job. It wasn't the most popular of fields and statistics was struggling to cope with new forms of data. But look at how the perception of statistics has changed in the media. Nate Silver (fivethirtyeight.com) is a statistician who made a name for himself with his nearly spot on predictions of the 2012 US elections featuring Romney versus Obama in the presidential race. To many democrats, he provided much needed sanity in the face of conservatives who were convinced that Romney was going to win easily. In the regular and online media, *"Triumph of the Nerds: Nate Silver Wins in 50 States"* was a common post-election refrain. Of course, everyone knows the famous and often repeated quote by Hal Varian, the chief economist for Google. The extended quote, which appeared in 2009[6], is "I keep saying the sexy job in the next ten years will be statisticians. People think I'm joking but who would've guessed that computer engineers would've have been the sexy job of the 1990s?" Everyone was gravitating towards computer science in the late 1990s, early 2000s. Notice the phrase "the next ten years": the expiration date is nearly upon us. We only have a few years to enjoy being sexy. I'm not sure what happens after that...


OCCUPATIONAL OUTLOOK HANDBOOK

Statisticians

Summary | What They Do | Work Environment | How to Become One | Pay | Job Outlook

Summary

Quick Facts: Statisticians

2015 Median Pay	$80,110 per year $38.51 per hour
Typical Entry-Level Education	Master's degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2014	30,000
Job Outlook, 2014-24	34% (Much faster than average)
Employment Change, 2014-24	10,100

What Statisticians Do

Statisticians use statistical methods to collect and analyze data and to help solve real-world problems in business, engineering, healthcare, or other fields.

http://www.bls.gov/ooh/math/statisticians.htm

The Bureau of Labor Statistics listed the 2015 median pay as $80,000 for just a master's degree in statistics [*see table above*].

Continues on **page 6**

5 Terms used in Straf's president's address.

6 *The McKinsey Quarterly*, 2009

Presidential Address continued

Continued from **page 5**

That's not a bad situation. In the next ten years, 2014–24, they forecast a 34% increase in the number of jobs in statistics. That translates to 10,100 new jobs. As many of you know Columbia has a large master's program so that we have dibs on half of those new positions for our students!

How about in academia? Let's think about the way we train statisticians of the future.

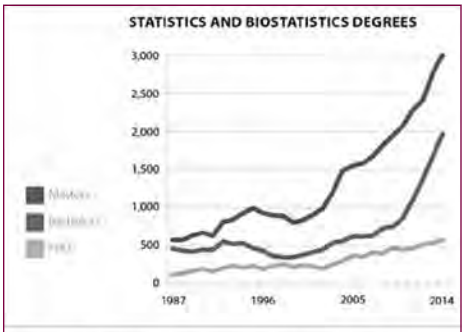


Figure 1: Statistics and biostatistics degrees at the bachelor's, master's, and doctoral levels in the United States.Data source: NCES IPEDS.

The graph [*above*] shows the trends for the number of awarded degrees [*from top to bottom, the lines represent Master's, Bachelor's and PhDs*] in statistics and biostatistics from 1987 through 2014 (data from Steve Pierson, *Amstat News* Oct 2015 and NCES). The top curve, corresponding to masters degrees, has shown impressive growth from around 2000. This is perhaps due primarily to an influx of Asian students populating our US master's programs. I took a quick look at some statistics departments, mostly in the US, that have MA stat programs and have displayed a summary of the sizes of the respective programs in Table 1 [*right*]. For many of these universities, the professional Master's degrees represent an extra revenue source for the university. The curriculum for these professional programs has changed markedly from the traditional training in statistics. It is no longer the usual, probability, math statistics, linear regression style-curriculum, but sprinkles in required or elective courses in a suite of subjects that one could call machine learning, data science, and/or statistical computing. So this aspect of how we train the next generation of statisticians has changed.

In Miron's address, he mentioned how statistics departments need to change. I think it is worth pausing to examine the sort of changes that have already occurred. First, the makeup of faculty in terms of their background has changed. It used to be that maybe only half a dozen statistics departments had someone who didn't have a degree in mathematics or statistics. But now, many of the top departments who are expanding and who are infected with the data science bug, are hiring researchers with a broader background in computer science, electrical engineering, OR, neuroscience, etc. And this goes back to what Bin was saying in her address. I don't think we need to hire a more disciplinary diverse group of faculty at the expense of excluding theory and the core, that's the zero-sum mindset. We need to expand and get larger.

Let me finish with an example from neuroscience. This example is based on the work of John Cunningham, one of my colleagues in the statistics department at Columbia, and Mark Churchland, a neuroscientist at Columbia. This particular example has to do with how the motor cortex in the brain controls voluntary movement. There are perhaps hundreds of neurons of many millions that control this movement. [*A video is displayed of a paraplegic male who is attempting to draw a circle on a computer screen using a bionic mouse that is receiving "instructions" from multiple neurons.*] This video is maybe fifteen years old and the results are not so great, but not horrible either. In another example, consider a research subject trying to touch his/her finger on top of a red square located on a computer screen. The red square keeps moving and the research subject tries to keep up. Signals in the form of spike trains are received from neurons that control the movement of the arm. For each dot displayed on the screen, a large number of time series (100, say) are recorded together with the location of the research subject's finger. One might consider the following state–space model for this situation.

Let $X_t=(pos_t, vel_t)^T$ be the position/velocity of the research subject's fingertip

Table 1: Size* of professional Master's stat programs in some North American universities

Harvard	30
Duke	54
Carnegie Mellon	22
Penn State	75
Michigan	116
Wisconsin	44
Washington	42
Berkeley	30–40
Colorado State	40
Toronto	50
UC Davis	55
Cornell	50
Texas A&M	50
Columbia	300 + 100 MAFN**

** Many of these figures are approximate as the data was not so easy to gather*

*** Mathematics of Finance*

A schematic diagram to illustrate the hundreds of neurons in the motor cortex, of the many millions in the brain, that control artificial limb movement

at time t. In addition, we also have the time series Y_t generated from the 100 neurons. A simple model takes the following form.

Training Data:

fingertip position/velocity: $X_t=\begin{bmatrix} pos_t \\ vel_t \end{bmatrix}\in\mathbb{R}^4$

state of the 100 neurons: $Y_t\in\mathbb{R}^{100}$

Model:

$X_t=AX_{t-1}+\epsilon_t$

$Y_t=CX_t+w_t$

The coefficient matrices $A_{4\times4}$, $C_{100\times4}$, and noise characteristics are estimated from a training data set (X_t,Y_t), $t=1, ..., T$. Now for newly collected neuron data, $Y_1, Y_2, ...$, the goal is to predict X_t, $t\geq1$, based on knowledge of the instructions produced from the neuron firings $Y_1, Y_2, ..., Y_t$. In other words, one needs to compute $E(X_t \mid Y_1, ..., Y_t)$. Assuming the noise terms are iid and Gaussian, this is a fairly straightforward calculation using the Kalman filter. In the video clip, one can see how well a research subject can control a bionic mouse, which is receiving instructions from the controller connected to his brain. The controller receives the Y_t's, calculates the conditional expectations of the X_t's, and uses this information to control the mouse. There are a number of limitations in this modeling framework such as:

- the data are not Gaussian; on fine time-scales, the data Y_t are multivariate counts.
- Y_t may be under-dispersed, which can be harder to model.
- Observation model is not linear and a more general distribution for $Y_t \mid X_t$ should be specified. In this case, the computation of $E(X_t \mid Y_1, ..., Y_t)$ is more complex.

John and his collaborators have worked on various aspects of these extensions. With a more sophisticated approach, one can see in the second video the improved performance of the controller.

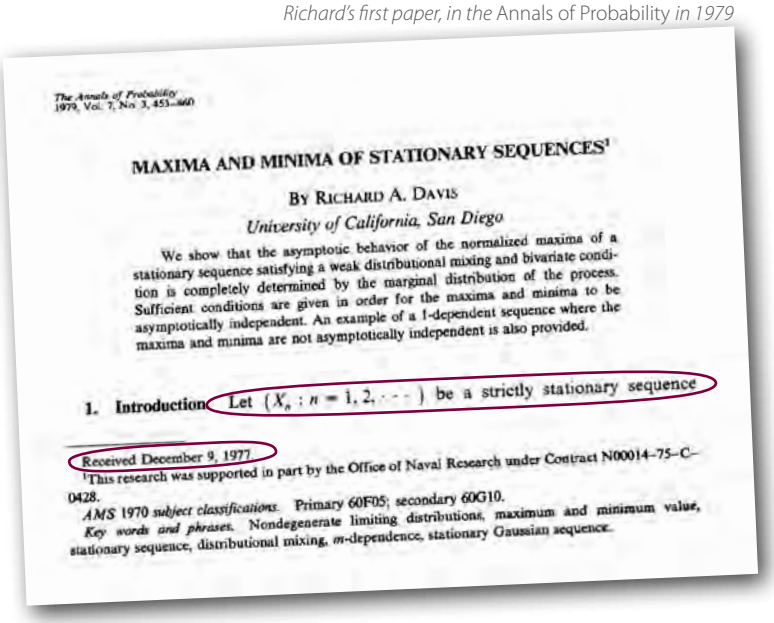
This neuroscience example exemplifies how statisticians are *meeting the challenge*. First, this illustrates the collaboration between a statistician and a scientist. Second, John, the statistician in this activity, has broad training in statistics, computer science and electrical engineering. The tools brought to bear on this problem come from all three disciplines, including statistical theory and computation. Third, the research has a real societal impact. It not only has the potential of making people's lives better, but it is enhancing understanding of how the brain works.

Like many others, I believe we have entered a golden era of statistics. It may be difficult to pinpoint the start of this era, but let's hope we are not in a bubble that will burst anytime soon. Challenges still remain. As Bin mentioned in her president's address, we need to be players in new initiatives that are coming down the pike, from data science and bigger data to precision medicine. So, while I think we are meeting the challenge and are doing reasonably well, there is still a lot to do. We will continue to see an evolution of the fundamentals of statistics and probability in the coming years, which is as it should be.

I would like to finish on a personal note. The first paper I ever published, which I wrote while in graduate school appeared in the *Annals of Probability* in 1979. Back then it was not so typical that students would publish while in graduate school. You would first complete your thesis and then publish the chapters later. As you can see [*first page is displayed on projector*] the paper was first received in 1977. Some things, like a backlog, never change in the *Annals of Probability*! Even the start of the first sentence—"Let X_n, $n=1, 2, ...$, be a stationary sequence of random variables..."—doesn't change. I presented this paper at the 1978 JSM in San Diego. I met a number of people there and one or two of them became long-time collaborators. I became a member of IMS that same year in 1978, and when I joined I didn't think to ask the question *what does IMS do for me?* It just seemed like the right thing to do. Perhaps like many people starting out, I never knew if I would write another paper. I think back then students had to pay dues for IMS (it is now free for students!) and I have continued to pay my annual dues out of my own pocket. Maybe that's laziness, because I could pay the fees from research funds—I just need to provide the invoice to the department accountant. But maybe there's another reason why I continue to pay myself: to me, being a member of IMS is not just professional, it's also personal.

Thank you.

Richard's first paper, in the Annals of Probability *in 1979*



The Annals of Probability
1979, Vol. 7, No. 3, 453–460

MAXIMA AND MINIMA OF STATIONARY SEQUENCES[1]

By Richard A. Davis

University of California, San Diego

We show that the asymptotic behavior of the normalized maxima of a stationary sequence satisfying a weak distributional mixing and bivariate condition is completely determined by the marginal distribution of the process. Sufficient conditions are given in order for the maxima and minima to be asymptotically independent. An example of a 1-dependent sequence where the maxima and minima are not asymptotically independent is also provided.

1. **Introduction** Let $(X_n : n = 1, 2, \cdots)$ be a strictly stationary sequence

Received December 9, 1977.

[1]This research was supported in part by the Office of Naval Research under Contract N00014-75-C-0428.

AMS 1970 subject classifications. Primary 60F05; secondary 60G10.

Key words and phrases. Nondegenerate limiting distributions, maximum and minimum value, stationary sequence, distributional mixing, m-dependence, stationary Gaussian sequence.

Call for nominations: Newbold Prize

The Bernoulli Society's Newbold Prize Committee invites nominations for the Ethel Newbold Prize. The Ethel Newbold Prize for excellence in statistics is awarded every two years, next time in spring 2017. The name of the prize recognizes a historically important role of women in statistics. The prize itself is for excellence in statistics without reference to the gender of the recipient. The Ethel Newbold Prize is generously supported by Wiley.

Bernoulli Society for Mathematical Statistics and Probability

Description

The Ethel Newbold Prize is to be awarded to an outstanding statistical scientist for a body of work that represents excellence in research in mathematical statistics and/or excellence in research that links developments in a substantive field to new advances in statistics.

In any year in which the award is due, the prize will not be awarded unless the set of all nominations includes candidates from both genders. The award consists of the prize amount of 2,500€ together with an award certificate.

For this call, the prize winner will be selected in spring 2017. The prize will be awarded at a following Bernoulli World Congress, Bernoulli-sponsored major conference, or ISI World Statistics Congress. The awardee will also be invited to present a talk at one of these conferences.

Further information about the Ethel Newbold Prize (and other prizes of the Bernoulli Society) may be found at http://www.bernoulli-society.org/index.php/prizes.

The first Ethel Newbold Prize was awarded to Judith Rousseau at the ISI World Statistics Congress 2015 in Rio de Janeiro.

Submission of nominations

Each nomination should include a letter outlining the case in support of the nominee, along with a curriculum vitae. Nominations as well as any inquiries about the award should be sent to Oddbjørg Wethelund, Department of Mathematics, Aarhus University, email: oddbjorg@math.au.dk. The deadline for accepting nominations is November 30, 2016.

About Ethel Newbold

Ethel May Newbold (1882–1933) was an English statistician and the first woman to be awarded the Guy Medal in Silver by the Royal Statistical Society, in 1928. A detailed biography of Ethel Newbold may be found in her obituary: Greenwood, M. (1933). Ethel May Newbold. *Journal of the Royal Statistical Society*, **96**, No. 2 (1933), 354 – 357. http://www.jstor.org/stable/2341811

The Newbold Prize Committee

The members of the committee are Eva B. Vedel Jensen (chair), Claudia Klüppelberg and Jon A. Wellner.

If you hear news of any IMS member or Fellow, or items of interest to IMS members, please tell us, and we'll tell everyone else!

Email your news to bulletin@imstat.org today.

IMS Awards: nominate or apply now

Tweedie New Researcher Award

Richard Tweedie played a significant role throughout his professional career in mentoring young colleagues at work and through professional society activities. With funds donated by his friends and family, the IMS created the Tweedie New Researcher Award to finance the winner to present the Tweedie New Researcher Invited Lecture at the IMS New Researchers Conference. Next year's conference will be held at Johns Hopkins, immediately before JSM in Baltimore.

To be eligible for the 2017 award, the new researcher must have received their doctoral degree in 2011–16, and the nominee should be a member of the IMS at time of nomination. The nomination deadline is December 1, 2016.

For details and requirements of the nomination process, please visit http://www.imstat.org/awards/tweedie.html

Harry C. Carver Medal

Nominations are invited for the Carver Medal, created by the IMS in honor of Harry C. Carver, founding editor of the *Annals of Mathematical Statistics* and one of the founders of the IMS. The medal is for exceptional service specifically to the IMS and is open to any member of the IMS who has not previously been elected President. All nominations must be received by February 1, 2017. Please visit http://www.imstat.org/awards/carver.html

Previous recipients:

Krzysztof Burdzy (2016) [*pictured below*]; Patrick Kelly (2015); Edward Waymire (2014); Peter Jagers (2012); Ross Leadbetter (2011); Julia A. Norton (2010); Don Truax (2009); Richard A. Johnson (2008); William Harkness (2007); Robert V. Hogg (2006); Jessica Utts (2005); Paul Shaman (2004); George P.H. Styan (2003); Bruce Trumbo (2002).

Krzysztof (Chris) Burdzy received the Carver Medal this year from Richard Davis

IMS Fellowship

The candidate for IMS Fellowship shall have demonstrated distinction in research in statistics or probability, by publication of independent work of merit. This qualification may be waived in the case of:

(1) a candidate of well-established leadership whose contributions to the field of statistics or probability other than original research shall be judged of equal value; or

(2) a candidate of well-established leadership in the application of statistics or probability, whose work has contributed greatly to the utility of and the appreciation of these areas.

Candidates for Fellowship should be members of IMS on December 1 of the year preceding their nomination, and should have been members of the IMS for at least two years.

All nominations must be received by January 31, 2017.

For details and requirements of the nomination process, please visit http://www.imstat.org/awards/fellows.htm

IMS Travel Award

The purpose of the IMS Travel Award is to fund travel, and possibly other expenses, to present a paper or a poster at an IMS sponsored or co-sponsored meeting, for those who otherwise would not be able to attend the meeting. (Note: the Travel Award cannot be used to fund any part of travel to the IMS New Researcher's Conference, as that conference is already funded separately.)

The travel awards are available to IMS members who are New Researchers. This means any IMS member who was awarded a PhD within the 5 years immediately preceding the year of the application deadline or who has or will receive her/his PhD in the same year as the application deadline. For one third of the total available funds, New Researchers from countries with reduced membership dues will have first priority. For the remaining funds, first priority will go to New Researchers who already have their PhD at the application deadline and second priority will go to PhD students. Applicants must be members of IMS, though joining at the time of application is allowed (don't forget that student membership is free! See http://www.imstat.org/membership/student.htm for details) and New Researchers also qualify for substantially reduced rates. To become a member, please see http://www.imstat.org/orders/

Application deadline is February 1, 2017.

For more information on the application process, please visit http://www.imstat.org/awards/travel.html

XL-Files: Statistics vs Data Science: a 30-year-old prediction?

Xiao-Li Meng writes: Writing the last *XL-Files* on "Peter Hall of Fame" reminded me of a piece that I have wanted to write since attending Chin Long Chiang's memorial workshop on November 15, 2014. Professor Chiang was a pioneer of biostatistics long before I survived a course on survival analysis. Thus I was honored when I was invited to provide a statistician's perspective on a debate between Chiang and another pioneer of biostatistics, Marvin Zelen. The debate apparently started with Zelen (1983, *Biometrics*), in a piece titled "Biostatistical Science as a Discipline: A Look into the Future," whose abstract begins: "The field of biostatistics is enjoying unparalleled developments. Never before have members of our profession been in such demand. Current applications are significantly influencing the direction of research in statistical methodology. It is not clear whether there is a discipline which can be termed 'biostatistics,' but we are part of the emergence of a discipline which is termed 'biostatistical science'. It refers to the applications of statistics, probability, computing and mathematics to the life sciences, with the goal of advancing our knowledge of a subject-matter field in this area. This paper discusses the role of computing, some aspects of training, and future directions of biostatistical science."

What strikes me most is the relevance of Zelen's thoughts on *biostatistics* vs *biostatistical science* for today's discussion of *statistics* vs. *data science*. His description of biostatistical science could easily serve as one for data science, save for its restriction to life science. His question regarding the disciplinary identity of biostatistics within biostatistical science parallels the current question of whether statistics will survive as a viable discipline, given the emergence of the more encompassing discipline of data science.

Zelen suggested that the term *biostatistics* or *biometrics* "refers to a collection of statistical techniques which are primarily used in applications to the biological and biomedical sciences. ... However, a discipline is not a collection of techniques." But what is a *discipline*?

In his discussion, Bernard Greenberg listed three criteria for being a discipline: there must be a body of knowledge; it must be transmissible via educational methods; and it must undergo constant changes as a result of research performed by persons identified as its members. For Greenberg, if biostatistics was not a discipline, additional criteria would have to be articulated. Although Zelen did not directly respond to Greenberg's challenge, he was clear that the key difference between *biostatistics* and *biostatistical science* was that the latter places far more emphasis and training on computing and substantive scientific knowledge. Biostatistics, then, was implicitly not a viable discipline because its "body of knowledge" was not sufficiently broad.

In his commentary "What is Biostatistics?" (1985, *Biometrics)*, Chiang defined, and defended, biostatistics as "a discipline that is concerned with the development and application of statistical theory and methods for the study of phenomena arising in the life sciences." Chiang reasoned that biostatistics was well qualified to be a discipline after 1950 because of "the amount and quality of knowledge that has been developed and accumulated in the field," and because, "Since then graduates with strong backgrounds in mathematical statistics and mathematics have entered the field and treated biostatistical topics with a different attitude." For Chiang, biostatistics possessed depth; for Zelen, biostatistics lacked breadth.

Perhaps the sharpest difference between Chiang and Zelen lies in their predictions of the future. Chiang predicted that "theoretical development, not statistical software, will be the centerpiece of biostatistics" and that "the future of biostatistics lies in the direction of stochastic processes." Chiang believed that Zelen had overemphasized the role of computing and statistical software, remarking that, "His misplacement of emphasis made him feel insecure when he realized 'the computer will become an intelligent data analyst' in less than 10 years. The 'computer data analyst' may come sooner than he thinks. But biostatistics will continue to flourish and biostatisticians will not be out of a job."

Zelen, however, considered Chiang's emphasis on theoretical model building to be "totally naive unless one takes a serious interest in the subject matter and the appropriate data." Zelen went on to conclude that, "Time will tell whether computing or stochastic processes will dominate biostatistics or biostatistical science. However, one need not go too far to verify that nearly all Departments of Biostatistics are currently adding computing courses in their curricula. We have a revolution in our midst. Why should one deny it!"

No one today is denying the revolution in our midst, and nearly all Departments of Statistics are currently adding computing courses in their curricula. Zelen's prediction is spot on beyond biostatistics, thanks to the two Vs of Big Data—*volume* and *velocity*. We need more computing, and we need to compute fast. But Chiang's prediction captures the third V of Big Data, *variety*, which demands more sophisticated stochastic temporal-spatial models, network models, etc, as well as newer and deeper theory. Chiang was also correct that as long as we deepen our foundations while expanding our horizons, (bio)statistics will continue to flourish and (bio)statisticians will not be out of a job.

Marvin Zelen passed away on the day of Chiang's memorial workshop. A sad coincidence, or the reunion of two visionary scholars, whose collective predictions capture the very essence of what we experience today and, likely, for generations to come?

Obituary: Theodore Anderson

1918–2016

Photo: Stanford University Department of Statistics

Ted W. Anderson

Stanford Professor Emeritus Theodore W. "Ted" Anderson, a giant in mathematical statistics and econometrics, and a "prophet" of the era of big data, died of heart failure on September 17. He was 98.

Anderson, who retired from teaching in 1988, continued his work and close association with Stanford colleagues. Until recently, he regularly attended campus seminars and social gatherings, and continued to engage with and inspire younger faculty and students.

"Amazingly, Ted submitted his last technical paper less than a month ago," said Emmanuel Candès, chair of the Department of Statistics at Stanford, who said Anderson has been a towering intellectual figure in the department for nearly 50 years. "His wide-ranging contributions to statistics and econometrics have had an enormous influence on the field and a lasting value. His 1958 textbook, *An Introduction to Multivariate Statistical Analysis*, educated a generation of theorists and applied statisticians, rapidly assuming the status of a classic with its extraordinary impact."

Anderson's published papers in mathematical statistics as well as econometrics are famous for their rigor, their attention to detail and a clarity of exposition that makes difficult things seem easy, Candès said.

In 1990, Wiley published *The Collected Papers of T. W. Anderson: 1943–1985*, comprising 109 papers and 16 commentaries, edited by George P. H. Styan.

David L. Donoho, also at Stanford, said Anderson pioneered and systematized the science of using high-dimensional data to detect, characterize, classify and predict phenomena subject to multiple measurements.

"Among other things, I would say that Ted was a prophet of the big data era, where multiple measurements on a person's behavior or characteristics, such as weight, height, age, IQ, GPA, could be used to predict other characteristics or properties," he said. "Today this sort of multivariate analysis is routinely used in all sorts of scientific studies. In everyday life we now see it used in consumer credit scoring, in prediction of survival probabilities in breast and prostate cancer, in fraud detection and in identifying risky portfolios of investments."

John B. Taylor, a professor of economics at Stanford who wrote his doctoral dissertation under Anderson's tutelage, recalled his "crystal clear, rigorous and insightful lectures, his intellectual leadership in the department's econometrics seminar and the genuine personal interest he took in students."

"Ted instilled a unique degree of rigor to econometric research through his influential book *The Statistical Analysis of Time Series* and the attention to mathematical clarity and precision he shared in his interactions with his students and colleagues," Taylor said.

In statistics, his name is associated with the Anderson–Darling test of fit, Anderson–Bahadur algorithm and Anderson–Stephens statistic for data on a sphere. Colleagues also pointed to the so-called Anderson's Lemma as a frequently used tool in the theory of high-dimensional probability.

Cheng Hsiao, a professor of economics at the University of Southern California, characterized Anderson's influence in econometrics "as no less than extraordinary."

"Ted pioneered the limited information approach to estimate complex economic systems, laid the rigorous foundation for inference with nonstationary time series models and interactive effects for panel data models," Hsiao said. "His name is associated with the Anderson–Rubin test of over-identification in simultaneous equations models, the Anderson–Taylor multi-period least squares control of linear input-output models and the Anderson–Hsiao estimate in dynamic panel data models."

In 2008, Stanford held a two-day conference to celebrate Anderson's 90th birthday. The invited speakers included many of his former students, co-authors and colleagues, including Kenneth Arrow, 1972 Nobel laureate in economics.

That same year, at the 17th International Workshop on Matrices and Statistics, held in Tomar, Portugal, colleagues honored Anderson's long and distinguished career with an address based on a 12-page annotated and illustrated bibliography of his work.

Anderson was elected to the National Academy of Sciences, as well as the American Academy of Arts and Sciences. He was a Fellow of IMS, American Statistical Association, the Royal Statistical Society, the Econometric Society and the American Association for the Advancement of Science.

Anderson, who was born June 5, 1918, in Minneapolis, earned a PhD in mathematics at Princeton University in 1945. After graduating, he spent a year at the University of Chicago working as a research assistant on the Cowles Commission for Research in Economics, which was established to facilitate the economic transition from wartime to peacetime. In 1946 he joined the faculty of Columbia University, teaching until 1967, when he began his Stanford career.

He enjoyed many activities outside his professional life, including international travel, classical music, opera and fine arts,

Continues on **page 12**

Obituary: Emmanuel Parzen

1929–2016


Photo: Texas A&M University

Carol and Manny Parzen at his 75th birthday tribute

Professor Emanuel Parzen, a long time faculty member in the Statistics Department at Texas A&M University, and expert in signal detection theory and time series analysis, died on Saturday, February 6, 2016, in Boca Raton, Fla. He was 86.

Parzen, who was born on April 21, 1929, in New York City, received his master's degree in mathematics in 1951 and a PhD in mathematics and statistics in 1953 from the University of California, Berkeley after earning an undergraduate degree in mathematics from Harvard University in 1949. He had held faculty appointments at Columbia University (1953–56), Stanford University (1956–70) and State University of New York (SUNY) in Buffalo (1970–78), prior to coming to Texas A&M as a University Distinguished Professor. At Texas A&M he worked with the inaugural head of Statistics, H.O. Hartley, and subsequent administrators throughout his three-decade Texas A&M career to establish the department as one of the nation's leading programs in both graduate education and scholarly research. He had been a fellow at Imperial College London, IBM Systems Research Institute and the Center for Advanced Study in the Behavioral Sciences at Stanford, as well as a visiting professor at the Sloan School of MIT, the Department of Statistics at Harvard and the Department of Biostatistics at Harvard.

Among other career achievements, Parzen pioneered the use of kernel density estimation—named the Parzen window in his honor—and authored six books, including *Modern Probability Theory and Its Applications*, which is considered one of the classic defining texts in probability theory. Thanks to him, Texas A&M is home to the Emanuel Parzen Prize Lecture Series, established in the Department of Statistics in his honor in 1994 and presented in even-numbered years to North American statisticians in recognition of outstanding careers in the discipline and profession of statistics.

"Manny Parzen was a pioneer in statistics during its nascent stages of development in the 1960s," said Dr. Valen E. Johnson, professor and head of Texas A&M Statistics. "He played a central role in the development of the theory of stochastic processes and was a pioneer in the fields of time series and spectral analyses in addition to making important contributions in the area of nonparametric statistics. His textbook *Modern Probability Theory and its Applications* is a classic text that continues to be widely used as reference in the field today."

"I will miss Manny so much," said Dr. H. Joseph Newton, who came to Texas A&M along with Parzen in 1978 with his encouragement and knew Parzen for 45 years—first as his PhD student at SUNY Buffalo and later as Parzen's department head (1990–97) and dean (2002–15). He also interviewed Parzen for Project Euclid in 2002.

Parzen was an elected fellow of the American Statistical Association, the IMS and the American Association for the Advancement of Science.

In 1994, he was honored with the ASA's prestigious Samuel S. Wilks Memorial Medal, "for outstanding research in time-series analysis, especially for his innovative introduction of reproducing kernel spaces, spectral analysis and spectrum smoothing; for pioneering contributions in quantile and density quantile functions and estimation; for unusually successful and influential textbooks in probability and stochastic processes; for excellent and enthusiastic teaching and dissemination of statistical knowledge; and for a commitment to service on society councils, government advisory committees and editorial boards."

Most recently, Parzen received the 2005 Gottfried E. Noether Award, "for a lifetime of outstanding achievements and contributions in the field of nonparametric statistics, both in research and teaching."

Parzen is survived by his wife of 57 years, Carol; his daughter Sarah and son-in-law Martin; his son Michael and daughter-in-law Andrea; and six grandchildren.

Written by H. Joseph Newton, Texas A&M University

Obituary: Theodore "Ted" Anderson

Continued from previous page

tennis, reading and family gatherings. He also enjoyed dancing with his wife, Dorothy, his love of 70 years. They met in 1946 when Dorothy was a graduate student in social work at the University of Chicago, and married in 1950. They had three children and five grandchildren.

Anderson's family is discussing plans for a gathering of remembrance. Colleagues also are organizing a memorial for Anderson at the next Joint Statistical Meetings in Baltimore next summer.

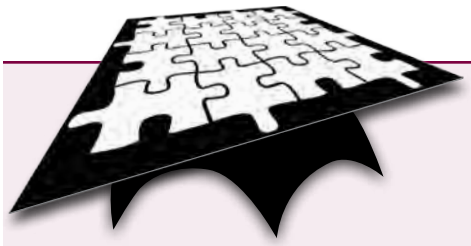
This obituary is edited from the one written by Kathleen J. Sullivan, Stanford News Service, at http://news.stanford.edu/2016/09/23/theodore-w-anderson-scholar-mathematical-statistics-econometrics-dies/

Recent papers: *Annals of Statistics*

Volume 44, number 5: October 2016. **Special Issue in memory of Peter G. Hall.** Access papers at http://projecteuclid.org/aos.

Recent papers: *Annals of Applied Statistics*

Volume 10, no 2: June 2016. Access papers at http://projecteuclid.org/aoas



Student Puzzle Corner 16

It is the turn of a problem on statistics this time. This is the sixteenth problem in this problem series, and we must have had a good time, because we have already come to the end of three years since the series started. Here is the exact problem, the final one in 2016, and this one is going to be a pretty good teaser:

Deadline October 23

Let $X_1, X_2, \cdots, X_n \overset{\text{iid}}{\sim} F$, where $F(.)$ is a CDF on the real line; F is assumed to be unknown. Assume that F has a density $f(x)$, that $E_F(X^2) < \infty$, denote $E_F(X)$ by μ, and assume that $f(\mu) > 0$. Derive an asymptotically correct 95% confidence interval for $\theta = \theta(F) = F(\mu)$.

Note: You have to spend some time thinking if some additional control on the density f is needed to make this go through.

Student IMS members are invited to submit solutions (to bulletin@imstat.org with subject "Student Puzzle Corner"). The deadline is **October 23, 2016**. The names and affiliations of those submitting correct solutions, and the answer to the problem, will be published in the next issue. The Editor's decision is final.

Solution to Puzzle 15

Editor Anirban DasGupta writes:

Promit Ghosal

Well done to Promit Ghosal at Columbia University [*right*], who sent a careful answer to this problem.

The problem asked was this. Take an integrable function f on the unit interval, and for x in the interval $[j/2^n, (j+1)/2^n)$, define $f_n(x)$ to be the average of f over $[j/2^n, (j+1)/2^n)$. Then, f_n converges pointwise to f for almost all x, and also converges to f almost uniformly.

First, the specific partition $[j/2^n, (j+1)/2^n), j = 0, 1, \cdots, 2^n - 1$ does not have much to do with the pointwise convergence; neither does the unit interval. We can conclude from real analysis that for any f which is merely locally integrable, for almost all x,

$$\lim_{h \to 0} \frac{1}{2h} \int_{x-h}^{x+h} |f(t) - f(x)| dt \to 0 \text{ as } h \to 0.$$

A point x satisfying this property is what analysts call a *Lebesgue point* of f. Almost all points x are Lebesgue points for a locally integrable function. The result generalizes to higher dimensions, and to well shaped shrinking neighborhoods.

Now, how does one prove this probabilistically? Consider the family of sets $\mathcal{A}_n = \{[j/2^n, (j+1)/2^n), j = 0, 1, \cdots, 2^n - 1\}$, and consider $\mathcal{F}_n$, the sigma-algebra generated by $\mathcal{A}_n$. Fix an x. Then in the probability space $([0, 1], \mathcal{B}, P)$, where P is Lebesgue measure on $[0, 1]$, the sequence $f_n(x)$ is a martingale for the filtration $\mathcal{F}_n$. This is a straight verification. It therefore follows from Doob's martingale convergence theorem that $f_n(x) \overset{\text{a.s.}}{\to} f(x)$. Moreover, the convergence is almost uniform by *Egoroff's theorem*.

***Annals of Applied Statistics* 10(2):** continued from previous page

IMS meetings around the world

Joint Statistical Meetings: 2017–2022

IMS sponsored meeting

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

w https://www.amstat.org/meetings/jsm/2017/index.cfm

Join us in Baltimore, Maryland, for one of the biggest statistical events of the year: with more than 6,000 attendees (including over 1,000 students) from 52 countries, and over 600 sessions, it's a busy few days! The theme is *"Statistics: It's Essential."*

IMS sponsored meetings: JSM dates for 2018–2022

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

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

JSM 2020
August 1–6, 2020
Philadelphia, PA

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

2022 Joint Statistical Meetings
August 6–11, 2022
Washington, D.C.

IMS co-sponsored meeting

Bernoulli/IMS 10th World Congress
August 17–21, 2020
Seoul, South Korea

w TBC

The next World Congress in Probability and Statistics will be in Seoul, South Korea, in August 2020.

IMS co-sponsored meeting

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

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

The tenth ICSA international conference will be held at Xuhui campus of Shanghai Jiao Tong University in China, from December 19–22, 2016. The theme is Global Growth of Modern Statistics in the 21st Century. The plenary speakers are: Jim Berger, Tony Cai, Kai-Tai Fang, Zhiming Ma, Marc A. Suchard, Lee-Jen Wei and C.F. Jeff Wu.

IMS co-sponsored meeting

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

w TBC

The 39th Conference on Stochastic Processes and their Applications (SPA 2018) will be held July 24–28, 2017, in Moscow.

IMS sponsored meeting

WNAR/IMS Meeting

UPDATED

June 24–28, 2017. Santa Fe, New Mexico, USA

The WNAR/IMS 2017 Meeting will be in Santa Fe, New Mexico, at the Eldorado Hotel & Spa. The social program includes a Welcome Reception on Sunday June 25, the Reception after Presidential Invited Speaker on Monday June 26, and Banquet dinner on Tuesday June 27.

IMS co-sponsored meeting

40th Conference on Stochastic Processes and their Applications (SPA)
June 11–15, 2018
Chalmers University of Technology, Gothenburg, Sweden

w TBC

The 40th Conference on Stochastic Processes and their Applications (SPA 2018) will be held June 11–15, 2018, at the Chalmers University of Technology in Gothenburg, Sweden. Details and website to follow.

At a glance:

forthcoming IMS Annual Meeting and JSM dates

2017

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

2018

IMS Annual Meeting: Vilnius, Lithuania, **July 2–6, 2018**

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

2019

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

2020

IMS Annual Meeting/ 10th World Congress: Seoul, South Korea, **August 17–21, 2020**

JSM: Philadelphia, **August 1–6, 2020**

2021

IMS Annual Meeting @ JSM: Seattle, WA, **August 7–12, 2021**

More IMS meetings around the world

NEW

ENAR 2017 Spring Meeting
March 12–15, 2017
Washington DC

The 2017 ENAR Spring Meeting will be held at the Washington Hilton in Washington, DC from March 12–15, 2017. The meeting brings together researchers and practitioners from academia, industry and government, connected through a common interest in Biometry.

Take advantage of the scientific program which will cover a wide range of topics of great interest to both researchers and practitioners, such as, data sciences (big data), genomics, clinical trials, neuroimaging, biomarkers, health policy, electronic health records, ecology, and epidemiology.

Participate

Abstract Submission — Contribute to the scientific meeting program and your profession! The abstract submission deadline for all contributed and invited papers/posters is 11:59 p.m. EDT October 15, 2016. Registration to the ENAR Spring Meeting is required and must be completed before submitting your abstract submission.
Fostering Diversity in Biostatistics Workshop (http://www.enar.org/meetings/FosteringDiversity/)
Junior Biostatisticians in Health Research — The submission deadline for applications is October 31, 2016 (http://www.enar.org/meetings/JuniorBiostatisticiansResearch/)
Distinguished Student Paper Awards — The submission deadline is 11:59 p.m. EDT October 15, 2016 (http://www.enar.org/meetings/StudentPaperAwards/)

Learn

The 2017 ENAR Spring Meeting offers a superb program of short courses, tutorials and roundtables. Presented by well-known experts from academia, government, and industry, the short courses and tutorials will cover a variety of topics including: Bayesian methods in drug development, personalized medicine trial designs, analysis of brain imaging data, data sciences and high performance statistical computing, early phase clinical trials, statistical leadership and influence, graphics for clinical trial data, and software applications for group sequential and adaptive designs, Bayesian modeling and analysis, and multiplicity problems.

Network

Meet new friends and reconnect with colleagues during the ENAR Spring Meeting!

IMS co-sponsored meeting

Random processes and time series: theory and applications (A conference in honor of Murray Rosenblatt)
October 21–23, 2016
La Jolla, California, USA

w http://www.math.ucsd.edu/~rosenblattconf/

This conference will feature research on the topic of random processes and time series, both theory and applications. The conference celebrates the research of IMS Fellow Murray Rosenblatt. Further information about Professor Murray Rosenblatt is at http://math.ucsd.edu/~williams/mrosenb.html

The conference will launch the Murray and Adylin Rosenblatt Endowed Lecture Series in Applied Mathematics. The two inaugural lecturers are Cathy Constable, Scripps Institution of Oceanography, UC San Diego, and Robert Engle, New York University.

The conference will also feature the following plenary speakers: Richard Bradley, Indiana University; David Brillinger, UC Berkeley; Richard Davis, Columbia University; Larry Goldstein, USC; Keh-Shin Lii, UC Riverside; Magda Peligrad, University of Cincinnati; Dimitris Politis, UC San Diego; Philip Stark, UC Berkeley; Murad Taqqu, Boston University; and Wei Biao Wu, University of Chicago.

Registration—free but required—is open to researchers who have a research interest in the topic of random processes and time series and are affiliated with Universities or industrial or government research institutions. This includes current postdocs and PhD students.

More IMS meetings around the world

IMS sponsored meeting

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

w TBC

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

IMS co-sponsored meeting

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

w TBC

Local organizing committee chair: Zijia Peng, Guangxi University for Nationalities, China **e** pengzijia@126.com. Scientific program committee chair: Ming Yuan, University of Wisconsin–Madison, USA **e** myuan@stat.wisc.edu. The website is under construction.

IMS co-sponsored meeting

19th Meeting of New Researchers in Statistics and Probability
July 27-29, 2016 *(provisionally: check the website)*
Baltimore, MD

w http://groups.imstat.org/newresearchers/conferences/nrc.html

The 19th Meeting of New Researchers in Statistics and Probability will be happening in Baltimore this year during its usual time right before JSM. Please check the website for more details and information about applying to attend the meeting.

Host: Johns Hopkins University

Organizers: Elizabeth Ogburn, Department of Biostatistics, Bloomberg School of Public Health; Vince Lyzinski, Department of Applied Math and Statistics, Whiting School of Engineering

Funding: The meeting is graciously supported by the National Science Foundation (DMS-1623541).

The purpose of the conference is to promote interaction and networking among new researchers in statistics and probability. Anyone who has received a Ph.D. on or after 2012, or expects to receive a Ph.D. by the end of 2017, is eligible to apply.

IMS co-sponsored meeting

6th Workshop on Stochastic Methods in Game Theory
May 5–13, 2017
Erice, Sicily, Italy

IMS Representative(s) on Program Committees: Marco Scarsini

w https://sites.google.com/site/ericegametheory2017

The 6th Workshop on Stochastic Methods in Game Theory (May 5–13, 2017) will be held in beautiful Erice, Sicily. Many decision problems involve elements of uncertainty and of strategy. Most often the two elements cannot be easily disentangled. The aim of this workshop is to examine several aspects of the interaction between strategy and stochastics. Various game theoretic models will be presented, where stochastic elements are particularly relevant either in the formulation of the model itself or in the computation of its solutions.

The speakers are scholars in different fields—stochastics, economics, operations research, computer science, mathematics, control engineering. Those who have tentatively agreed to give a talk at the workshop are listed at https://sites.google.com/site/ericegametheory2017/speakers.

The members of the Organizing committee are Jérôme Renault, Université de Toulouse; Marco Scarsini, LUISS; and Rann Smorodinsky, Technion.

IMS co-sponsored meeting

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

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

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

ENAR 2017–2019 dates

IMS sponsored meetings

March 12–15, 2017: in Washington DC
March 25–28, 2018: in Atlanta, GA
March 24–27, 2019: in Philadelphia, PA
March 22–25, 2020: in Nashville, TN

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

Other meetings and events around the world

Third STAR workshop on Random Graphs NEW
January 26–27, 2017
Utrecht, The Netherlands
w http://www.math.uu.nl/stochsem/WorkshopRGs2017/
The workshop will take place on Thursday 26 and Friday 27 January 2017, on the campus of the University of Utrecht (more details of the location and schedule will be added later). This will be the 3rd STAR Workshop on Random Graphs. The first took place in 2012 and the second in 2015.

We are very pleased to announce the following prominent researchers have agreed to deliver plenary talks: Marián Boguñá (Barcelona), Mihyun Kang (Graz), Vincent Tassion (Geneva/Zürich), Nick Wormald (Melbourne).

A limited number of slots for contributed talks are available. If you would like to propose a short talk, please let us know by e-mailing Ben Hansen at benhansen09@gmail.com. (In case of too much interest, selection will be based on relevance of the talk and the career stage of the speaker.) The workshop is open to all and free of charge, but please register to let us know that you are coming by sending an e-mail to: benhansen09@gmail.com

ICORS 2017 NEW
July 3–7, 2017
Wollongong, NSW, Australia
w http://niasra.uow.edu.au/icors2017/index.html
Contact: Samuel Mueller samuel.mueller@sydney.edu.au
The aim of the International Conference on Robust Statistics (ICORS) is to bring together researchers and practitioners interested in robust statistics, data analysis and related areas. This includes theoretical and applied statisticians as well as data analysts from other fields, and leading experts as well as junior researchers and graduate students.

XXXIV International Seminar on Stability Problems for Stochastic Models NEW
August 25–29, 2017
Debrecen, Hungary
w https://arato.inf.unideb.hu/isspsm2017/index.php
Contact: Anett Rácz isspsm2017@inf.unideb.hu
Seminars on Stability Problems for Stochastic Models have a long tradition. They were founded by Vladimir Zolotarev in the 1970s. The seminars were attended by leading probabilists from all over the world. The seminars traditionally aim at bringing together people from Eastern and Western parts of Europe to share their expertise and new results, exchange ideas and discuss open problems.

"KPZ Universality and Directed Polymers", a semester of NEW
the Jean-Morlet Chair organized from January to June 2017 at the beautiful CIRM-Luminy centre in the south of France. This semester will feature large workshops and other smaller events. See the website
w http://khanin-shlosman.weebly.com/
Principal organizers: Konstantin Khanin (Toronto) and Senya Shlosman (Aix-Marseille). Deadline for registrations: February 2017

Random Structures in Statistical Mathematical Physics
March 6–10, 2017
w http://khanin-shlosman.weebly.com/research-school.html
The first main workshop entitled *Random Structures in Statistical Mathematical Physics* is a graduate school with 6 mini-courses: Last Passage Percolation (Eric Cator), Directed Polymers in Random Environment (Francis Comets), Random Hamilton-Jacobi Equation (Kostya Khanin), Airy Processes (Daniel Remenik), Solvable Models for Directed Polymers (Timo Seppäläinen) and Phase Separation and Related Problems (Senya Shlosman).

Qualitative Methods in KPZ Universality
April 24–27, 2017
w http://khanin-shlosman.weebly.com/conference.html
Contact: Celine Montibeller **e** celine.montibeller@cirm-math.fr
The second workshop is a conference on *Qualitative Methods in KPZ Universality* (April 24–27, 2017). Universality of Kardar-Parisi-Zhang (KPZ) scalings is a very active area in statistical mechanics and mathematical physics. Big progress was achieved recently in deriving exact formulas related to Tracy-Widom distributions and Airy processes. However, despite very clean and concrete predictions and a wide belief in the validity of the conjectures, little progress has been achieved in our understanding of the problem of universality. The proposed workshop aims to concentrate on this. Tentative speakers include Alexey Borodin, Ivan Corwin, Martin Hairer, Neil O'Connell, Etienne Pardoux, Jeremy Quastel, Timo Seppäläinen and Herbert Spohn.

Luminy, in the south of France

17th Applied Stochastic Models and Data Analysis (ASMDA)

NEW

June 6–9, 2017

De Morgan House, London Mathematical Society, London, UK

w www.asmda.es

The 17th ASMDA conference will focus on new trends in theory, applications and software of Applied Stochastic Models and Data Analysis. In this conference we will celebrate the 36 years from the first ASMDA organized in Brussels (1981).

ASMDA main objective is to welcome papers, both theoretical or practical, presenting new techniques and methodologies in the broad area of stochastic modeling and data analysis. An objective is to use the methods proposed for solving real life problems by analyzing the relevant data. Also, the use of recent advances in different fields will be promoted such as for example, new optimization and statistical methods, data warehouse, data mining and knowledge systems, computing-aided decision supports and neural computing.

Particular interest will be given to interesting applications in engineering, productions and services (maintenance, reliability, planning and control, quality control, finance, insurance, management and administration, inventory and logistics, marketing, environment, human resources, biotechnology, medicine).

In ASMDA2017 we celebrate Prof. Gilbert Saporta's 70th birthday and honour his contributions to Applied Statistics and Data Analysis and his support and participation to ASMDA activities. Gilbert Saporta is Emeritus Professor of Applied Statistics, Conservatoire National des Arts et Métiers (CNAM), Paris, France. Other plenary talks:

Robert J. Elliott, University of Calgary, Canada, and University of South Australia: "Malliavin Calculus in a Binomial Framework"

Sally McClean, Ulster University, Northern Ireland: "Markov and semi-Markov models for Health and Social Care Planning"

Anatoliy Swishchuk, University of Calgary, Canada: "Financial Mathematics: Historical Perspectives and Recent Developments"

For Demographics2017 Workshop, Rebecca Kippen, Monash University, Australia: "Projecting life expectancy: a global history"

For more information and abstract/paper submission and special and invited session proposals please visit the conference website at: http://www.asmda.es or send email to secretariat@asmda.com.

The same event will host the Demographics2017 International Workshop (http://www.asmda.es/demographics2017.html).

Thera Stochastics:

NEW

A Mathematics Conference in Honor of Ioannis Karatzas

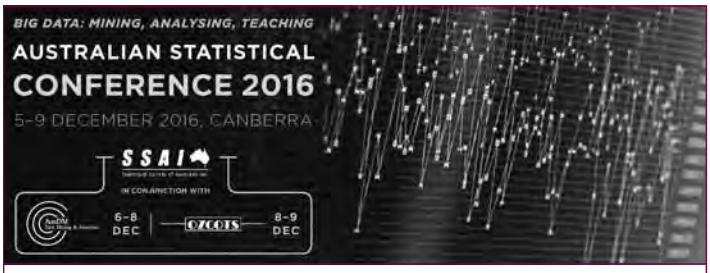
May 31–June 2, 2017

Fira, Santorini, Greece

w http://www.math.columbia.edu/department/thera/

Contact: Marcel Nutz **e** mnutz@columbia.edu

A conference in Probability, Stochastic Analysis and Mathematical Finance, in honor of Ioannis Karatzas' birthday. Ioannis is Eugene Higgins Professor of Applied Probability at Columbia University. Due to capacity constraints we encourage early registration. Registration (free but required) is open until March 15, 2017 or until we reach full capacity.



Australian Statistical Conference 2016

December 5–9, 2016

Hotel Realm, Canberra, Australia

w www.asc2016.com.au

On behalf of the Statistical Society of Australia (SSA), the Organising Committee invites you to attend the 23rd Australian Statistical Conference which is to be held in conjunction with the 14th Australasian Data Mining Conference (AusDM) and the 9th Australian Conference on Teaching Statistics (OZCOTS). This Conference will provide unique insight into statistics, data mining and statistics teaching.

The major focus of the Conference will be Big Data: Mining, Analysing and Teaching. It aims to bring together the statistical approaches to data analysis with the techniques of data mining and their use in teaching statistics. Application to Big Data will be of particular interest.

Attending ASC 2016 will give each delegate a unique opportunity to meet, discuss and learn with meet like-minded individuals.

Conference dates: SSAI program 5–9 December 2016; AusDM program 6–8 December; OZCOTS program 8–9 December.

For more information and to register visit www.asc2016.com.au

More meetings around the world

2016 Blackwell-Tapia Conference and Award Ceremony NEW
October 28–29, 2016
Knoxville, Tennessee, USA
w http://www.nimbios.org/education/blackwell_tapia
The conference will include scientific talks, poster presentations, panel discussions, ample opportunities for discussion and interaction, and the awarding of the Blackwell-Tapia Prize to Dr. Mariel Vazquez. Participants will come from all career stages and will represent institutions of all sizes across the country, including Puerto Rico.

ICSTC-2016: Second International Conference on Statistics for Twenty-First Century NEW
December 21–23, 2016
Kerala, Trivandrum, India
w http://icstckerala.com/
Organized by the Department of Statistics at the University of Kerala, Trivandrum, India, this conference aims to bring forth recent developments in the field of Statistics and related areas, with an objective of formulating statistical strategies to solve the newly emerging problems of the twenty-first century. The main theme of the Conference is "Statistics as a Key Technology for the Well-being of a Society".

A pre-conference workshop is also proposed during 19–20 December 2016 at the Seminar Hall of Department of Statistics, University of Kerala.

We plan to publish the conference proceedings as an edited volume through a well-known publisher, provided adequate number of original articles are received.

Certain best paper presentation awards will be given to young researchers (below 35 years of age), selected from the contributory presentations.

37th International Symposium on Forecasting NEW
June 25–28, 2017
Cairns, QLD, Australia
w https://forecasters.org/isf/
Contact: Pamela Stroud **e** pamstroud@forecasters.org
The International Symposium on Forecasting (ISF) is the premier forecasting conference, attracting the world's leading forecasting researchers, practitioners, and students. Through a combination of keynote speaker presentations, academic sessions, workshops, and social programs, the ISF provides many excellent opportunities for networking, learning, and fun.

Applied Probability @ The Rock NEW
An international workshop celebrating Phil Pollett's 60th birthday
April 17–21, 2017
Yulara (Ayers Rock Resort), NT, Australia
w http://www.maths.adelaide.edu.au/APatR/
Contact Person: Joshua Ross **e** joshua.ross@adelaide.edu.au
AP@R is an international workshop on Applied Probability, bringing together leading researchers from around the world to share recent discoveries and begin new collaborations. It also provides an opportunity to celebrate the 60th birthday of one of Australia's prominent Applied Probabilists, Professor Phil Pollett. The workshop aims to showcase the full range of topics in Applied Probability, and includes particular themes of "Networks in Queueing and Telecommunications", "Stochastic Models in Biology" and "Limits and Approximation". These themes are reflected in the interests of the keynote speakers: Frank Kelly, Ruth Williams, Andrew Barbour and Erik van Doorn.

Important Dates

Early-bird registration ends Sunday 5th February, 2017. Abstract submission deadline is Friday 30th December, 2016. Discount accommodation rate ends Friday 10th February, 2017

Data, Information, Knowledge using Annual Survey of Math Science & CBMS Survey (*a session at the Joint Mathematics Meetings*) NEW
January 5, 2017
Atlanta, Georgia, USA
w http://jointmathematicsmeetings.org/meetings/national/jmm2017/2180_progfull.html
Chairs of mathematical sciences departments may be confronted with strategic questions and decision-making problems whose solutions depend on accurate and timely information about the mathematical community. At the same time, finding and analyzing the right data can be daunting. The presenters Tom Barr, AMS Special Projects officer, and Ellen Kirkman, Professor of Mathematics at Wake Forest University, will provide an orientation to the Annual Survey, CBMS survey, and other relevant sources of information about such topics as degrees awarded, enrollments, employment experiences, tenure, and salaries, as well as illustrative examples. They will also assist participants as they engage in their own hands-on problem solving. Bring a notebook computer (with USB port, PDF reader software, and a spreadsheet program). To allow for a more focused and meaningful workshop, the panelists invite those who anticipate attending to send (either to thb@ams.org or kirkman@wfu.edu) their own data-based questions ahead of time. Questions received by December 15, 2016 will be most helpful in formulating the agenda.

New Challenges for Big Data in Economics and Finance Conference
NEW

November 11–12, 2016
The Fields Institute, Toronto, Canada

w http://www.fields.utoronto.ca/activities/16-17/BigDataEcoFin

The topic of the conference concerns the new datasets becoming available in Economics and Finance, and the modelling and statistical techniques to treat these data. Typical examples are scanned data on household expenditures available for millions of customers, in real time and for a large number of goods, the individual preferences Net data set type, or the continuous geolocation of drivers by GPS used to store the risk of accidents for car insurance. These data were not available before. They require new structural economic models, but also new structural tools for analyzing large datasets ("Big data" framework).

13th Workshop on Stochastic Models, Statistics and Their Applications
NEW

February 20–24, 2017
Berlin, Germany

w http://agzqs.stochastik.rwth-aachen.de/

The workshop will put together recent advances and trends in areas related to stochastic modeling, statistical inference and their applications. Invited sessions are devoted to active research topics such as High-dimensional Statistics, Copulas, Change Detection, Survival Analysis, Statistics for Stochastic Processes, Functional Data, Spatial Statistics, Big Data, Image Processing. Plenaries will be given by A. Gut (Uppsala), H. Dette (Bochum) and J. Jureckova (Prague). Selected papers will be published in *Appl. Stoch. Mod. Bus. Ind.*

20th International Conference on Artificial Intelligence and Statistics (AISTATS)
NEW

April 20–22, 2017
Fort Lauderdale, Florida, USA

w www.aistats.org

Paper submission deadline: October 13, 2016, with final decisions made on Jan 24, 2017. AISTATS is an interdisciplinary gathering of researchers at the intersection of artificial intelligence, machine learning, statistics, and related areas. New this year:

Fast-track for Electronic Journal of Statistics: Authors of a small number of accepted papers will be invited to submit an extended version for fast-track publication in a special issue of the *Electronic Journal of Statistics* (EJS) after the AISTATS decisions are out. Details on how to prepare such extended journal paper submission will be announced after the AISTATS decisions.

Review-sharing with NIPS: Papers previously submitted to NIPS 2016 are required to declare their previous NIPS paper ID, and supply a one-page letter of revision (similar to a revision letter to journal editors; anonymized) in supplemental materials. We will be using duplication detection software on NIPS data to detect revised resubmitted papers that were not declared. AISTATS reviewers will have access to the previous anonymous NIPS reviews. Other than this, all submissions will be treated equally.

Continuing from last year:

Requests for code: Reviewers may request public or non-proprietary code (and as necessary, accompanying data) as part of the initial reviews for the purpose of better judging the paper. The authors will then provide the code/data as part of the author response. This might be, for instance, to check whether the authors' methods work as claimed, or whether it correctly treats particular scenarios the authors did not consider in their initial submission."

Paper Submission: Electronic submission of PDF papers is required. See the website for details

Topics: Since its inception in 1985, the primary goal of AISTATS has been to promote the exchange of ideas from artificial intelligence, machine learning, and statistics. We encourage the submission of all papers in keeping of this objective. Solicited topics include, but are not limited to:

Supervised, unsupervised and semi-supervised learning, kernel and Bayesian methods

Stochastic processes, hypothesis testing, causality, time-series, nonparametrics, asymptotic theory

Graphical models and inference, manifold learning and embedding, network analysis, statistical analysis of deep learning

Sparse models and compressed sensing, information theory

Reinforcement learning, planning, control, multi-agent systems, logic and probability, relational learning

Learning theory, game theoretic learning, online learning, bandits, learning for mechanism design

Convex and non-convex optimization, discrete optimization, Bayesian optimization

Algorithms and architectures for high-performance computing

Applications in biology, cognition, computer vision, natural language, neuroscience, robotics, etc.

Topological data analysis, selective inference, experimental design, interactive learning, optimal teaching, and other emerging topics

Organizing a meeting? Tell us about it!

Meeting announcements will be placed on the IMS website and in the *IMS Bulletin*. Please send announcements to Elyse Gustafson, IMS Executive Director, erg@imstat.org. There is no charge for this service. Meeting listings are updated on the website daily, and will be included in the next available printed *IMS Bulletin*.
For more details on size and run limitations for announcements in the *IMS Bulletin*, please see below.

Announce Early

As soon as the meeting name, dates, location, and web page are set for the meeting, submit this information (by email to erg@imstat.org). We will place it immediately into the web (www.imstat.org/meetings) and *IMS Bulletin* (bulletin.imstat.org) calendars. This will help people put it on their radar screen. The sooner, the better for this: we can place this information months or even years in advance.

Print Advertisements

IMS publishes meeting advertisements as a service to its members and the statistical community. There is no charge to run a meeting advertisement. All advertisements are subject to editorial approval and may be edited.

Advertisements should be limited to about 200 words or a third of a page. Meetings that are not IMS sponsored/co-sponsored are limited to one advertisement, though the meeting will remain in the Bulletin's Calendar until it happens. IMS sponsored and co-sponsored meetings are not limited in the number of advertisements: these can (*and should*) be re-written as new information becomes available, to keep them fresh. IMS meetings also appear in the monthly emailed eBulletin, to all IMS members.

When, and what, to advertise

Advertisements should be submitted at least 6–9 months prior to the meeting. Special consideration should be given to deadlines when placing advertisements. You want to ensure people have a chance to see the ad in time to make your deadlines. Mail dates for the *Bulletin* can be found here. Most members will receive the *Bulletin* by 3–4 weeks after the mail date, and it is available free online 1–2 weeks before the mail date.

Advertisements should include:

- Meeting name, dates and location
- Meeting web address
- Important deadlines (abstract submission, registration)
- Titles of plenary sessions and speakers
- Other items to entice attendees. This may vary from meeting to meeting (locations, speakers, etc).
- If you have a suitable print quality image of the location, you can include this. Must be at least 300dpi tiff, jpeg, etc. Overall the goal of the ad is grab readers' attention; they then should be directed to the web site to get more information and register. Advertisements should not include general items that can be found on the web site, i.e. registration forms, local information, abstracts.

Do it yourself

You can submit the meeting information yourself via our meetings form: www.imstat.org/submit-meeting.html

Report afterwards

Once the dust has settled, if you like, you can write a report of the meeting for the *Bulletin*: email it to bulletin@imstat.org

Meeting organizer's to-do list

www.imstat.org/submit-meeting.html

Employment Opportunities around the world

Australia: Melbourne

University of Melbourne

Professor in Statistics (Data Science)

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=29838260

Australia: Melbourne

University of Melbourne

Peter Hall Chair in Mathematical Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=29838106

Australia: Sydney

University of Sydney

Lecturer/Senior Lecturer in Statistics, or Financial Mathematics and Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30667285

Austria: Klosterneuburg

IST Austria

Tenure-Track Assistant Professor and Tenured Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30369569

Canada: Toronto, Ontario

York University, Department of Mathematics and Statistics

CRC Tier 2 in Applied Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30508275

Canada: Waterloo, Ontario

University of Waterloo, Department of Statistics & Actuarial Science

Tenure-track or tenured faculty positions in Statistics or Biostatistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30377912

Canada: Waterloo, Ontario

University of Waterloo, Department of Statistics & Actuarial Science

Tenure-track or tenured faculty positions in Actuarial Science

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30377426

Canada: Montreal, Quebec

McGill University, Department of Mathematics and Statistics

Tenure-Track Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30560997

Canada: Montreal, Quebec

Université de Montréal, Département de mathématiques et de statistique. Tenure-Track Assistant Professor in Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30735207

Israel: Jerusalem

Department of Statistics, Hebrew University

Tenure-Track Faculty Position

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=29992814

Italy: Milan

Bocconi University

Assistant Professor Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30507740

Lebanon: Beirut

The American University of Beirut

Assistant professors in mathematics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30651205

Switzerland: Lausanne

EPFL

Faculty Position in Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30273500

Taiwan: Taipei

Academia Sinica, Institute of Statistical Science

Regular Research Positions

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30570613

The Institute of Statistical Science, Academia Sinica, is seeking candidates for tenure-track or tenured research positions at the level of assistant, associate or full research fellow available in 2017. Candidates should have a Ph.D. degree in statistics or areas related to data science. Application materials must include (1) a curriculum vita, (2) three letters of recommendation, and (3) representative publications and/or technical reports. Additional supporting materials such as transcripts for new Ph.D. degree recipients may also be included. Except for the letters of recommendation, electronic submissions are encouraged. Applications should be submitted to

Dr. Jing-Shiang Hwang,
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: recruit@stat.sinica.edu.tw

Application materials should be received by December 29, 2016 for consideration, but early submissions are encouraged.

Employment Opportunities around the world

United Kingdom: Glasgow

University of Glasgow

Lecturer in Statistics, 2 positions

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=29897979

United States: Berkeley, CA

UC Berkeley Statistics Department

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30411930

United States: Berkeley, CA

Neyman Visiting Assistant Professor

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30667129

United States: Davis, CA

University of California, Department of Statistics

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30121134

United States: San Diego, CA

UC San Diego, Department of Mathematics

Assistant Professor - Excellence

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30685513

United States: Stanford, CA

Stanford University, Department of Statistics

Assistant Professor of Statistics or Probability

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30411514

United States: Santa Barbara, CA

University of California, Santa Barbara

Statistics/Applied/Probability, UCSB invites applications. Tenure track Assistant Professor position in Statistics; starting 7/1/2017. Qualifications: research/teaching excellence; PhD Statistics, Biostatistics or related fields.

https://recruit.ap.ucsb.edu/apply/JPF00835

The University of California is an EO/AA Employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.

United States: Phoenix, AZ

Arizona State University

Arizona State University seeks a statistician for a tenured or tenure-track Assistant or Associate Professor position in the School of Mathematical and Natural Sciences. Successful candidates will develop productive research programs, mentor/teach diverse students in our undergraduate and developing graduate programs, provide service to university/profession. Application deadline: December 9, 2016; if not filled, every Friday thereafter until search closed. Visit https://newcollege.asu.edu/jobs for complete advertisement.

Arizona State University is a VEVRAA Federal Contractor and an Equal Opportunity/Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law. See https://www.asu.edu/aad/manuals/acd/acd401.html and the complete non-discrimination statement at: https://www.asu.edu/titleIX/).

United States: Athens, GA

University of Georgia

Tenure-track assistant professorship in statistics, Department of Statistics, University of Georgia, starting August 2017. Requires Ph.D. in Statistics or a closely related discipline by August 1, 2017, and a strong commitment to teaching and research in statistics.

For details, see http://www.stat.uga.edu.

To apply, use https://facultyjobs.uga.edu/postings/1246

Applications received by January 2, 2017, will be assured consideration.

The University of Georgia is an Equal Opportunity/Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, gender identity, sexual orientation or protected veteran status.

United States: Atlanta, GA

Georgia Tech

The School of Mathematics at Georgia Tech is accepting applications for faculty positions at all ranks and in all areas of Pure and Applied Mathematics and Statistics. Applications by highly qualified candidates, and especially those from groups under-represented in the mathematical sciences, are particularly encouraged.

See www.math.gatech.edu/resources/employment for more details and application instructions.

United States: Stanford, CA

Stanford University, Department of Statistics

Stein Fellow in Statistics or Probability

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30411442

United States: Iowa City, IA

University of Iowa, Department of Biostatistics

Tenure-track faculty positions

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=29982555

United States: Champaign, IL

University of Illinois at Urbana-Champaign, College of Liberal Arts & Sciences, Department of Statistics

College of Liberal Arts & Sciences: Open Rank Faculty - Department of Statistics (F1600086)

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30614344

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=30614076

United States: Chicago, IL

University of Illinois at Chicago

Assistant Professor in Statistics - Tenure Track

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30667225

United States: Normal, IL

Illinois State University

Assistant Professor of Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30684795

United States: Normal, IL

Illinois State University, Department of Mathematics

Assistant Professor of Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30684795

United States: Notre Dame, IN

University of Notre Dame

Assistant, Associate, or Full Professor of Statistics (Multiple Positions)

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30121843

United States: Lawrence, KS

University of Kansas

Assistant Professor of Probability and Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30365616

United States: Chicago, IL

University of Illinois at Chicago

Department of Mathematics, Statistics, and Computer Science

Tenure Track Assistant Professor in Statistics

The Department of Mathematics, Statistics, and Computer Science seeks to recruit an outstanding statistician with a strong academic background, an outstanding research record, and evidence of strong teaching ability. Applicants must have a Ph.D. or equivalent degree in statistics. The salary is negotiable. The position is effective August 16, 2017. Final authorization of the position is subject to the availability of state funding.

The Department of Mathematics, Statistics, and Computer Science has active research programs in a broad spectrum of centrally important areas of pure mathematics, computational and applied mathematics, mathematical computer science, probability and statistics, and mathematics education. See http://www.math.uic.edu for more information.

Applicants should provide a vita, research and teaching statements, and at least three (3) letters of recommendation. Applications should be submitted through mathjobs.org. No applications will be accepted by surface mail or e-mail. To ensure full consideration, application materials must be received by November 1, 2016, but applications will be accepted through December 9, 2016.

The University of Illinois at Chicago is an affirmative action/equal opportunity employer, dedicated to the goal of building a culturally diverse pluralistic faculty and staff committed to teaching in a multicultural environment. The University of Illinois may conduct background checks on all job candidates upon acceptance of a contingent offer. Background checks will be performed in compliance with the Fair Credit Reporting Act. We strongly encourage applications from women, minorities, individuals with disabilities and covered veterans.

United States: Lawrence, KS

Department of Mathematics, University of Kansas

Visiting Assistant Professor of Probability and Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30614037

United States: College Park, MD

University of Maryland, College Park

Postdoctoral Fellow

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30422090

United States: Ann Arbor, MI

Department of Statistics, University of Michigan

Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30507849

Employment Opportunities around the world

United States: Ann Arbor, MI

The University of Michigan

Tenure-track Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=18619140

United States: Ithaca, NY

Cornell University

Faculty Position - All Ranks

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30103998

United States: Minneapolis, MN

University of Minnesota - School of Statistics

Tenure Track Assistant Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30536715

United States: New York, NY

Columbia Business School, DRO Division

Assistant/Associate Professor (Tenure Track)

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30121037

United States: New Brunswick, NJ

Rutgers,The State University of New Jersey

Open Rank Tenure-Track Faculty Positions

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30533756

United States: Cincinnati, OH

Xavier University

Assistant Professor, Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30328265

United States: Princeton, NJ

Princeton University

Lecturer Position in Operations Research and Financial Engineering

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30290808

United States: Corvallis, OR

Oregon State University College of Business

Instructor (1.0 FTE) - Analytics/Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30411784

United States: Research Triangle Park, NC

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Postdoctoral Fellowships for 2017

The Statistical and Applied Mathematical Sciences Institute (SAMSI) is soliciting applications from statistical and mathematical scientists for up to **6** postdoctoral positions for the SAMSI Research Programs for 2017-2018: **Program on Mathematical and Statistical Methods for Climate and the Earth System (CLIM)** and **Program on Quasi-Monte Carlo and High-Dimensional Sampling Methods for Applied Mathematics (QMC)**. Appointments will begin in August 2017 and will typically be for two years, although they can also be arranged for one year. Appointments are made jointly between SAMSI and one of its partner universities, where teaching opportunities may be available. The positions offer extremely competitive salaries, travel stipend, and health insurance benefits.

Criteria for selection of SAMSI Postdoctoral Fellows include demonstrated research ability in statistical and/or applied mathematical sciences, excellent computational skills and the ability to communicate both verbally and in written form. Finally, the preferred applicant will have a strong interest in the SAMSI program areas offered. The deadline for full consideration is December 15, 2016, although later applications will be considered as resources permit.

Please specify which of the two SAMSI research programs you are applying for in your cover letter and why you believe you would be a good fit for SAMSI and the program you choose.

To apply, go to mathjobs.org: SAMSIPD2017 Job #8986

To see these programs visit: www.samsi.info/QMC and www.samsi.info/CLIM

SAMSI is an Affirmative Action/Equal Opportunity employer

United States: Brookings, SD

South Dakota State University

Assistant Professor of Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30611711

United States: College Station, TX

Texas A&M University, Department of Statistics

Faculty Positions Available

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30207079

United States: Salt Lake City, UT

University of Utah College of Science

Assistant/Associate/Full Professor

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30153601

United States: Salt Lake City, UT, USA

University of Utah, Mathematics Department

Assistant/Associate/Full Professor of Statistics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30685457

United States: Norfolk, VA, USA

Statistics - Associate or Full Professor

Old Dominion University – Norfolk, VA, United States

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30685490

United States: Philadelphia, PA

Wharton Department of Statistics, University of Pennsylvania
Tenure-track Position(s)

The Department of Statistics of the Wharton School, University of Pennsylvania, is seeking applicants for full-time, tenure-track faculty position(s) at any level: Assistant, Associate, or Full Professor. Applicants must show outstanding capacity and achievement in research, as well as excellent teaching and communication skills. Applicants must have a Ph.D. (expected completion by June 30, 2018 is acceptable) from an accredited institution. The appointment is expected to begin July 1, 2017.

Please visit our website, https://statistics.wharton.upenn.edu/recruiting/facultypositions, for a description of the department and link to submit a CV and other relevant material. Any questions can be sent to statistics.recruit@wharton.upenn.edu.

The University of Pennsylvania is an EOE. Minorities/Women/Individuals with disabilities/Protected Veterans are encouraged to apply.

United States: New York, NY

Department of Statistics, Columbia University
Lecturer in Discipline Positions Starting Spring 2017

The Department of Statistics invites applications for positions at the rank of Lecturer in Discipline to begin January 1, 2017. These are full-time appointments with multi-year renewals contingent on successful reviews. These positions are targeted to participate in the Department's burgeoning MA Programs.

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 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 30 faculty members, 45 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: academicjobs.columbia.edu/applicants/Central?quickFind=63456

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

Review of applications begins on December 1, 2016 and will continue until the positions are filled.

Columbia University is an Equal Opportunity/Affirmative Action employer.

United States: Seattle, WA

Fred Hutchinson Cancer Research Center

Assistant or Associate Member - Biostatistics and Biomathematics

http://jobs.imstat.org/c/job.cfm?site_id=1847&jb=30642327

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.
Please submit your meeting details and any corrections to Elyse Gustafson: erg@imstat.org

October 2016

October 12–14: Columbia, South Carolina, USA. **Latent Variables 2016 Conference** w http://www.stat.sc.edu/latent-variables-2016

October 13–14: Poznan, Poland. **eRum 2016 (European R users meeting)** w http://erum.ue.poznan.pl/

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

October 15: Pittsburgh, PA, USA. A celebration in honor of Steve Fienberg w http://www.stat.cmu.edu/fienberg2016

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

IMS October 21–23: La Jolla, California, USA. Random processes and time series: theory and applications (A conference in honor of Murray Rosenblatt) w http://www.math.ucsd.edu/~rosenblattconf/

NEW October 28–29: Knoxville, TN, USA. **2016 Blackwell-Tapia Conference and Award Ceremony** w http://www.nimbios.org/education/blackwell_tapia

November 2016

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

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

NEW November 11–12: Toronto, Canada. **New Challenges for Big Data in Economics and Finance Conference** w http://www.fields.utoronto.ca/activities/16-17/BigDataEcoFin

November 18–19: Ghaziabad (Delhi NCR), India. **International Conference on Computer Systems & Mathematical Sciences** w http://www.its.edu.in/iccsms-2016

December 2016

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

December 5–9: San José, Costa Rica. **XIV CLAPEM** w http://www.clapem.emate.ucr.ac.cr/

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

December 10–12: Parkville, Australia. ACEMS Workshop in Honour of Peter Gavin Hall w http://acems.org.au/news-events/events/acems-workshop-in-honour-of-peter-gavin-hall/

December 12–15: Multan, Pakistan. 14th International Conference on Statistical and Allied Sciences (ICCS-14)

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

December 19–21: College of Engineering Pune, Maharashtra, India. **IEEE International Conference on Computing, Analytics and Security Trends** w http://cast2016.coep.org.in/

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

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

NEW December 21–23: Kerala, India. **ICSTC-2016: Second International Conference on Statistics for Twenty-First Century** w http://icstckerala.com/

December 21–23: Kolkata, India. **Platinum Jubilee International Conference on Applications of Statistics** w http://stat.caluniv.in/platinum/

January 2017

NEW January 5: Atlanta, GA, USA. **Data, Information, Knowledge using Annual Survey of Math Science & CBMS Survey** w http://jointmathematicsmeetings.org/meetings/national/jmm2017/2180_progfull.html

January 23–25: Eindhoven, The Netherlands. **Young European Statistician (YES VIII)** w http://www.eurandom.nl/events/workshops/2017/YES_VIII/

January 23–25: Lunteren, The Netherlands. **16th Winter school on Mathematical Finance** w https://staff.fnwi.uva.nl/p.j.c.spreij/winterschool/winterschool.html

NEW January 26–27: Utrecht, The Netherlands. **Third STAR workshop on Random Graphs** w http://www.math.uu.nl/stochsem/WorkshopRGs2017/

January 30–February 3: Bangkok, Thailand. Bangkok Workshop on Discrete Geometry and Statistics w http://thaihep.phys.sc.chula.ac.th/BKK2017DSCR/

February 2017

NEW February 20–24: Berlin, Germany. **13th Workshop on Stochastic Models, Statistics and Their Applications** w http://agzqs.stochastik.rwth-aachen.de/

March 2017

NEW March 6–10: CIRM-Luminy, France. **Random Structures in Statistical Mathematical Physics** w http://khanin-shlosman.weebly.com/research-school.html

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

NEW ims March 12–15: Washington DC, USA. **ENAR Spring Meeting** w http://www.enar.org/meetings/future.cfm

April 2017

NEW April 17–21: Yulara (Ayers Rock Resort), NT, Australia. **Applied Probability @ The Rock** w http://www.maths.adelaide.edu.au/APatR/

NEW April 20–22: Fort Lauderdale, Florida, USA. **20th International Conference on Artificial Intelligence and Statistics (AISTATS)** w www.aistats.org

NEW April 24–27: CIRM-Luminy, France. **Qualitative Methods in KPZ Universality** w http://khanin-shlosman.weebly.com/conference.html

April 30–May 5: Ascona, Switzerland. Statistical Challenges in Single-Cell Biology w https://www.bsse.ethz.ch/cbg/cbg-news/ascona-2017.html

May 2017

ims May 5–13: Erice, Sicily, Italy. **Stochastic Methods in Game Theory** w https://sites.google.com/site/ericegametheory2017

NEW May 31–June 2: Santorini, Greece. **Thera Stochastics: A Mathematics Conference in Honor of Ioannis Karatzas** w http://www.math.columbia.edu/department/thera/

June 2017

NEW June 6–9: London, UK. **17th Applied Stochastic Models and Data Analysis (ASMDA)** w www.asmda.es

June 20–23: Riverside, CA, USA. **10th International Conference on Multiple Comparison Procedures** w http://www.mcp-conference.org/hp/2017

ims June 24–28: Santa Fe, NM, USA. **2017 WNAR/IMS Meeting** w TBC

June 26–30: Delft, The Netherlands. **10th Conference on Extreme Value Analysis: EVA 2017** w www.eva2017.nl

NEW June 25–28: Cairns, QLD, Australia. **37th International Symposium on Forecasting** w https://forecasters.org/isf/

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

July 2017

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

NEW July 3–7: Wollongong, NSW, Australia. **ICORS 2017** w http://niasra.uow.edu.au/icors2017/index.html

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

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

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

Continues on **page 30**

International Calendar *continued*

June 2017 *continued*

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

Come to JSM 2017: this is Baltimore Inner Harbor at night (photo by Mitch Lebovic)

August 2017

NEW August 25–29: Debrecen, Hungary. **XXXIV International Seminar on Stability Problems for Stochastic Models** w https://arato.inf.unideb.hu/isspsm2017/index.php

August 28–September 1: Vienna, Austria. **CEN-ISBS Vienna 2017 Joint Conference on Biometrics & Biopharmaceutical Statistics** w www.cenisbs2017.org

March 2018

NEW March 25–28: Atlanta, GA, USA. **ENAR Spring Meeting** w http://www.enar.org/meetings/future.cfm

July 2018

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

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

July 16–20: Bristol, UK. 33rd International Workshop on Statistical Modelling w http://www.statmod.org/workshops.htm

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

March 2019

NEW March 24–27: Philadelphia, PA, USA. **ENAR Spring Meeting** w http://www.enar.org/meetings/future.cfm

July 2019

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

March 2020

NEW March 22–25: Nashville, TN, USA. **ENAR Spring Meeting** w http://www.enar.org/meetings/future.cfm

August 2020

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

August 17–21: Seoul, Korea. **Bernoulli/IMS World Congress on Probability and Statistics** w TBC

August 2021

August 7–12: Seattle, WA, USA. **IMS Annual Meeting at JSM 2021** w http://amstat.org/meetings/jsm/

August 2022

August 6–11: Washington DC, USA. **JSM 2022** w http://amstat.org/meetings/jsm/

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

Membership and Subscription Information

Journals

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

Individual Memberships

Each individual member receives the *IMS Bulletin* (print and/or electronic) and may elect to receive one or more of the five scientific journals. Members pay annual dues of $115. An additional $74 is added to the dues of members for each scientific journal selected ($49 for *Stat Sci*). **Reduced membership** dues are available to full-time students, new graduates, permanent residents of countries designated by the IMS Council, and retired members.

Individual and General Subscriptions

Subscriptions are available on a calendar-year basis. **Individual subscriptions** are for the personal use of the subscriber and must be in the name of, paid directly by, and mailed to an individual. Individual subscriptions for 2016 are available to *The Annals of Applied Probability* ($199), *The Annals of Applied Statistics* ($199), *The Annals of Probability* ($199), *The Annals of Statistics* ($199), *Statistical Science* ($174), and *IMS Bulletin* ($125). **General subscriptions** are for libraries, institutions, and any multiple-readership use. Institutional subscriptions for 2016 are available to *The Annals of Applied Probability* ($475), *The Annals of Applied Statistics* ($475), *The Annals of Probability* ($475), *The Annals of Statistics* ($475), *Statistical Science* ($270), and *IMS Bulletin* ($118). Airmail rates for delivery outside North America are $135 per title.

IMS Bulletin

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

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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Advertising job vacancies

A single 60-day online job posting costs just $285.00. We will also include the basic information about your job ad (position title, location, company name, job function and a link to the full ad) in the *IMS Bulletin* at no extra charge. See http://jobs.imstat.org

Advertising meetings, workshops and conferences

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

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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

the **next** issue is

December 2016

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http://bulletin.imstat.org

DEADLINES for **submissions**

November 1,
then **December 1**

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An Official Journal of the Institute of Mathematical Statistics

Articles

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