Bernoulli News

Newsletter of the Bernoulli Society For Mathematical Statistics and Probability

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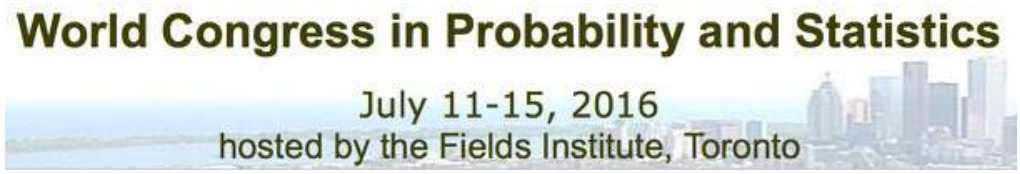

A VIEW FROM THE PRESIDENT

Dear Bernoulli Society Members,

This time the view starts with a personal perspective on the perception of mathematics, probability and statistics. If people ask me what I do for a living, I usually say I am a mathematician. This typically causes enough shock for an uneasy moment of silence. But sometimes people want to know more and ask what kind of math I do. Then I say, I do statistics. A confession which comes like a bomb. Even today, with statistics all around us, people frequently do a step aside when statistics is mentioned.

In The Netherlands there are the so-called "wiskundemeisjes" which can be translated as "math girls". A while ago I read an interview with one of them and she was asked what she thinks about people's reaction when she says she is a mathematician. I quote her answer as I recall it:

Usually people say: "What! I was very bad in math at school!" But this is a very strange reaction. If someone tells me he is a painter, imagine I would respond by saying: "What! I have even no idea how to hold a brush!"

A long time ago Miklós Csörgő told me a story. As I remembered it, it was about how to answer if people ask you what you do for a living. He sent me however the following correct version: It actually had happened some 30 years ago while having lunch with David Mason in a cafeteria of the University of Wisconsin, in the midst of working on our paper in SPA 21 (1985) 119-132. We ended up sitting and conversing with a group of workers. When they told us that they were construction workers, we responded by saying: "We are also construction workers". Really, they say, and what do you construct? Our response in turn: "We construct probability spaces".

All in all, people have different professions or are part of different communities and sometimes it is difficult to understand why they are not as excited about our work as we might think they should be. Conversely, we often do not understand what drives them! Narrowing down again to probabilists, statisticians and mathematicians, they should communicate with each other and indeed, they have always done so. Let me present two examples of great initiatives for further contacts. In March this year the 27th Nordic Conference of Mathematicians took place in Stockholm. There is a arrangement between the Bernoulli Society and the European Mathematical Society to have joint lectures. Yearly alternating, a lecture is given by a statistician at an EMS chosen conference or by a mathematician (who is not a statistician...) at an BS chosen conference. This year I am the statistician at the math conference.

…. Continued on page 1

Deadline for the next issue: **30 September, 2016**
Send contributions to: mdecarvalho@mat.puc.cl

A View from the President (continued from front cover)

The question is now: What to present? Usually, when talking to mathematicians I am inclined to tell them that statistics contains `real math'. I once gave a lecture in the mathematics colloquium in Zurich about high-dimensional statistics. The reaction from the mathematicians was: "Are there any applications of this all?" This time, in Stockholm, I again decided to show some links with `real math'. But also, I wanted to stress that statistics is about inferring something about unknown quantities from data. Unknown quantities are the unknown parameters of interest but also their accuracy. In my slides, I colored observed quantities blue and everything unknown red. So I had slides covered with red. To explain that this cannot easily be dealt with and noting the fact that the famous mathematician Harald Cramér was born and lived in Stockholm, I explained an uncertainty principle. To quote Marc Hoffmann and Oleg Lepski: "You know adaptive estimators converge very fast if the function is very smooth (or has a prescribed complexity) but you can tell nothing about the estimated function itself." (Random Rates in Anisotropic Regression," *Annals of Statistics*, 30, 325–396). The reaction to my version was: "Why be so negative?"

So my discussion with the mathematicians is still going on. Meanwhile, it was very inspiring to hear mathematical talks not related to my field, for example the lecture of Peter Sarnak on finding integer solutions of polynomial equations.

The question on randomness of the set of solutions even made me feel at home. Another great initiative is the embedding of StatProb, the Encyclopedia sponsored by Statistics and Probability Societies into the Encyclopedia of Mathematics. In a joint effort, Springer and the European Mathematical Society have made the Encyclopedia of Mathematics freely accessible. Under

www.encyclopediaofmath.org/index.php/Category:Statprob

you can find the StatProb category. For example, you can read there about Harald Cramér in the article

www.encyclopediaofmath.org/index.php/Cramér,_Harald

It has taken several years and the help of many people to get the StatProb embedding realized, and I am extremely thankful to Ulf Rehmann, to the authors of the articles, and to everyone else involved, for putting this up.

So far for the various communities. I am greatly looking forward to meet many members of our community in the upcoming Ninth World Congress in Probability and Statistics. This is one of those enjoyable occasions where we can share research as well as experiences and maybe work on taking away some cold feet about probability and statistics. The program promises to be very interesting covering a wide range of fields.

Let me express here the importance of sponsorship of special lectures by publishers. The Levy lecture will be held by Servet Martínez and is sponsored by SPA Elsevier. The Doeblin prize is sponsored by Springer, and its awardee will be announced at the World Congress in Toronto. The Doeblin Prize Lecture will take place at next Conference on Stochastic Processes and their Applications in Moscow 2017.

The Ethel Newbold prize is sponsored by Wiley. It was awarded last year to Judith Rousseau, who will present her Newbold Lecture at the World Congress.

Take note also of the Pre-Meeting for New Researchers. It has Big Data as one of its themes and will provide an extremely relevant mix of theory and applications.

Events coming soon are the Frontier Probability Days 2016, Salt Lake City, May 9–11, on probability and its applications, and the 4th Institute of Mathematical Statistics Asia Pacific Rim Meeting, at the Chinese University of Hong Kong, June 27–30. Looking further ahead, there is 61st World Statistics Congress—ISI2017—in Marrakech. I hope many of you have submitted session proposals!

There are quite a few colleagues who have assisted me in this first 'presidential' period and I am very grateful for their engagement. I thank Bálint Tóth, the past Chair of the Committee for Conferences on Stochastic Processes, for his invaluable work, and warmly welcome his successor Kavita Ramanan and the new members of the committee. I thank Ilia Zaliapin, the past Chair of the Committee on Probability and Statistics in the Physical Sciences. A welcome aboard to the new Chair Kostia Zuev and the new members!

The new statutes have come into effect which means among other things that we can greet new members of the Bernoulli Council. We are very happy that Thomas Mikosch, the Chair of the Publications Committee, could accept to be Publications Secretary in Council.

The chairs of the regional committees Richard Samworth and Carenne Ludeña are now members of Council as well.

Eric Moulines is finalizing his excellent work as Editor-in-Chief of the *Bernoulli* Journal. Holger Dette is the new Editor-in-Chief, and he took up the task with great enthusiasm.

Let me express my deep sorrow over the passing away of Peter Hall.

Peter has been tremendously important for our community. I owe him a lot personally. He had a great mind and must have had more than two hands getting so much work through. Peter Hall was President of the Bernoulli Society during the years 2001–2003.

His close colleague and friend Hans-Georg Müller has kindly accepted to write an obituary in this issue. Peter will live on through his many influential works.

Sara van de Geer
President of the Bernoulli Society
Zürich

News from the Bernoulli Society

Publications Secretary

The new Bernoulli Society (BS) statutes added a new post on the Executive Committee called "Publications Secretary". The main background for this change is that PubCom (Publications Committee) chair increasingly plays an executive role and thus BS needs to keep him/her in the information loop. Because of this, Publications Secretary should normally be PubCom chair.

According to our new statutes (Article 6.11), Sara van de Geer as President of BS consulted this matter with Council and is about to appoint Thomas Mikosch (the current PubCom chair) as Publications Secretary of BS. The appointment shall be confirmed at the next General Assembly during the 9th World Congress in Probability and Statistics (Toronto, July 11–15, 2016).

Byeong Park
Scientific Secretary of Bernoulli Society

C(PS)^2: Recent Past and Plans for the Future

The Committee on Probability and Statistics in the Physical Sciences, C(PS)^2 in short, has been re-assembled in August 2011, under the auspices of the Bernoulli Society for Mathematical Statistics and Probability. According to the group mission "The main venue for accomplishing the committee mission is by involvement/participation/initiative in the organization of workshops, conferences or special sessions within major international conferences of the mathematical/statistical/physical interest." The committee has begun its third 2-year working cycle in September 2015. During 2013–2015, the committee members were organizing/co-organizing the following sessions/workshops (most recent first):

- *Financial Networks: Statistical Inference and Probabilistic Modeling* (Invited Paper Session), 60th World Statistics Congress, ISI 2015; Rio de Janeiro, Brazil, July 2015.
- *Statistical Modeling and Inference for Spatial and Spatio-Temporal Extremes"* (Invited Paper Session), 60th World Statistics Congress, ISI 2015; Rio de Janeiro, Brazil, July 2015.
- "*Mathematics and Observations of Earth Systems"* (Union Symposium 03) 26th Genera Assembly of the International Union of Geodesy and Geophysics; Prague, Czech Republic, June 2015.
- *30th IUGG Conference on Mathematical Geophysics*; Merida, Yucatan, Mexico, June 2014.
- *Mathematics of Planet Earth* (Union Session 11A). Fall AGU Meeting; San Francisco, CA, December 2013.
- *Extreme Events, Stochasticity and Multiscaling,* (NG24A) Fall AGU Meeting; San Francisco, CA, December 2013.
- *Dynamics of Seismicity, Earthquake Clustering and Patterns in Fault Networks*, SAMSI Workshop; NC, October 2013.

The committee members for 2013–2015 were: Ilya Zaliapin (Chair, U of Nevada, Reno, USA), Julie Carreau (Université Montpellier 2, France), Jan Picek (Technical U of Liberec, Czech Republic), Bala Rajaratnam (Stanford, CA, USA), Jorge Mario Ramirez Osorio (Universidad Nacional de Colombia, Medellin, Colombia), and Konstantin Zuev (CalTech, CA, USA).

The committee members for 2015–2017 are: Konstantin Zuev (Chair, CalTech, CA, USA), Michael Beer (Leibniz U Hannover, Germany), Julie Carreau (IRD, Montpellier, France), Francisco Alejandro Diaz De la O (U of Liverpool, UK), Maksim Kitsak (Northeastern U, Boston, USA), Aleksey Polunchenko (Binghamton U, USA), Marcos Valdebenito (Santa Maria U, Valparaiso, Chile), Ilya Zaliapin (U of Nevada, Reno, USA), and Fengliang Zhang (Tongji U, Shanghai, China).

For the ongoing activities, check the committee web site:

www.aueb.gr/bs-cpsps

The current C(PS)^2 committee consists of nine members with diverse research interests and representing various geographical areas. They work in applied probability, both theoretical and computational statistics, and its applications to physical, geophysical, and engineering sciences. Four members represent North America, three Europe, one South America, and one Asia. The list of current members is published at *www.aueb.gr/bs-cpsps*.

In the near future, the following sessions and mini-symposia will be organized under the auspices of the committee:

- *Recent Advances in Nonlinear Dynamics and Control: A Stochastic Perspective*, by M. Beer, I. A. Kougioumtzoglou, A. A. Pantelous, D. Yurchenko, at the 2016 EMI International Conference; Metz, France, October 25–27, 2016 (MS 7).
- *Imprecise Probabilities in Engineering Mechanics*, by M. Beer, U. Nackenhorst, W. Graf, M. Broggi, E. Patelli, at the 2016 EMI International Conference; Metz, France, October 25–27, 2016 (MS 18).
- *High-Dimensional Extremes: Models, Inference, and Challenges*, by R. Huser, at the 61st ISI World Statistics Congress; Marrakech, Morocco, July 16–21, 2017.

The committee members also plan to organize a session at the New England Statistics Symposium, 2016, and a session at the 48th Days of Statistics (JdS2016), 2016.

The list is continuously updated and available at the C(PS)^2 "Activities" page:

www.aueb.gr/bs-cpsps/index.php?cid=6

Ilia Zaliapin
Reno
Konstantin Zuev
Committee Chair C(PS)^2
Pasadena

Awards and Prizes

Royal Decoration for Sara van de Geer

Sara van de Geer

His Majesty the King of the Netherlands appointed Sara van de Geer to Knight in the Order of Oranje-Nassau. The ceremony took place on December 3, 2015, at the occasion of the colloquium "Four facets of modern statistics, and a surprise!" held at ETH Zürich. The representative of the Dutch embassy in Switzerland (Kees Smit Sibinga) presented the royal decoration to Sara, in presence of the Rector of ETH Zurich (Sarah Springman) and many colleagues, friends and family.

Sara has received the royal decoration for her outstanding contributions to mathematics and statistics, for her leading role as a scientist worldwide, and for her dedication and commitment for the community of probability and statistics.

The Seminar for Statistics at ETH Zürich is very proud of having Sara and that she received this special honor and recognition!

Peter Bühlmann
Zürich

And the Wolfgang Doeblin Prize goes to...

The Prize Committee has reached a decision and chosen the awardee of the third Wolfgang Doeblin Prize. As mentioned in the View From the President, the prize will be announced during the 9th World Congress of Probability and Statistics in Toronto, Canada.

Leonardo T. Rolla
Bernoulli e-Briefs Editor
Buenos Aires

Tenth Statistics Day Celebrations: 29 June, 2016; C. R. Rao Adv. Inst. Math. Statist. Comp. Sci., Hyderabad, India

In recognition of the notable contributions made by Professor Prasanta Chandra Mahalanobis in the fields of economic planning and statistical development, the Government of India has designated 29th June every year, coinciding with his birth anniversary, as the Statistics Day in the category of Special Day to be celebrated at the national level. In order to raise awareness of statistics, and to encourage those with an aptitude for numbers and numerical reasoning to study statistics, half a decade ago Dr. C. R. Rao suggested conducting a Statistics Olympiad.

CR Rao AIMSCS conducted Statistics Olympiad for the first time in the whole world in 2009 in India and is continuing to do so every year to bring to the attention of students the importance of statistics and the need to produce statisticians for national development.

Prizes for the winners of the 8th statistics Olympiad will be distributed on 29th June 2016.

The theme is *Statistics for the People, Scientists, Business, and the Nation*. Topics include:

- Statistics for policy decisions and planning
- Statistics for scientific research
- Statistics for business
- Statistics for public

Venkata Sundaranand Putcha
Telangana

New Executive Members in the Bernoulli Society

President Elect: Susan Murphy

Susan Murphy is the H. E. Robbins Distinguished University Professor of Statistics & Professor of Psychiatry at the University of Michigan and a Research Professor at the Institute for Social Research. Her research focuses on sequential decision making with applications in mobile health. Susan is a Fellow of the Institute of Mathematical Statistics, a Fellow of the College on Problems in Drug Dependence, a former editor of the *Annals of Statistics*, a member of the US National Academy of Medicine and a 2013 MacArthur Fellow.

Committee Chair, Conferences on Stochastic Processes: Kavita Ramanan

Kavita Ramanan is a professor of Applied Mathematics at Brown University. She was formerly a Professor at the Mathematical Sciences department at Carnegie Mellon University and also a Member of Technical Staff at Bell Labs. Her research lies in the area of probability theory, stochastic processes and their applications, including large deviations, Markov random fields, stochastic analysis and applications to stochastic networks. She was awarded the Erlang Prize of the Applied Probability Society, elected fellow of the IMS (Institute for Mathematics and Statistics) and was an IMS Medallion lecturer. She has given numerous plenary lectures and invited tutorials worldwide including the 2007 Seminar on Stochastic Processes in Toronto, the 2013 conference on Stochastic Processes and their Applications in Boulder, the 2014 ICM Satellite Conference on Stochastic Analysis in Seoul and the 2015 annual INFORMS meeting in Philadelphia. She has served on the editorial boards of several journals, including the *Annals of Probability*, *Annals of Applied Probability*, *Mathematics of Operations Research*, *Queueing Systems* and *Stochastic Analysis and Applications*. She is the faculty founder of the AWM student chapter at Brown University and also leads a math outreach group called the *Math CoOp* at Brown University.

Committee Chair, Probability and Statistics in the Physical Sciences: Konstantin Zuev

Konstantin Zuev is a Special Lecturer in Computing and Mathematical Sciences at the California Institute of Technology. He obtained his PhD in Mathematics (2008) from Moscow State University. Simultaneously he received his PhD in Civil Engineering from the Hong Kong University of Science and Technology (2009). Before joining Caltech in 2015, he was an NTT Assistant Professor of Mathematics at the University of Southern California (2011–2013) and a Research Associate at the Northeastern University (2014–2015). Konstantin is an applied mathematician with broad research interests. Most of his research falls under the umbrella of applied probability and statistics, and it has a strong geometric flavor. In particular, his is interested in hyperbolic geometry of complex networks, Markov chain Monte Carlo algorithms, rare event estimation, Bayesian inference, and integrable Hamiltonian systems. He is currently an Honorary Supervisor at the Institute of Risk and Uncertainty, University of Liverpool, UK, and a Guest Editor for the ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems. In 2013–2015 he served as a member of the Committee on Probability and Statistics in the Physical Sciences, and in 2015 he was elected as a chair of the Committee. More information can be found at *www.its.caltech.edu/~zuev*.

A View on the on the C(PS)^2 Committee

The mission of the C(PS)^2 committee is to foster interdisciplinary communication of statistical and probabilistic methods and their applications in the realm of physical sciences at large. In particular, this assumes involvement, participation, and organization of workshops, conferences, or mini-symposia and special sessions within major international conferences. In the next two years, the committee plans to expand its efforts from the traditional areas of geosciences, statistical seismology, and hydrology to engineering sciences. The committee also plans to focus on complex network data modeling. Recent years have witnessed an explosion of network data in science, engineering, and businesses. It is thus crucial to provide an arena for experts where they can present and discuss the latest developments in the field. To encourage collaboration between the research communities, C(PS)^2 plans to support and contribute through its activities to the efforts of the Engineering Mechanics Institute, which provides an important platform for interdisciplinary communication of statistical and probabilistic methods and their applications in the realm of engineering sciences.

Konstantin Zuev

Pasadena

Committee Chair C(PS)^2

Executive Committee Publications Secretary: Thomas Mikosch

Thomas Mikosch is a professor for insurance mathematics at the Department of Mathematical Sciences, University of Copenhagen (Denmark). He gained his PhD in 1984 from the University of St. Petersburg. His research interests are in applied probability theory, mathematical statistics and stochastic processes, in particular in time series analysis, extreme value theory and asymptotic theory. He published more than 100 articles in scientific journals and is the (co-)author of 5 monographs. Thomas Mikosch has served as Associate Editor of several journals. He was the Editor-in-Chief of *Stochastic Processes and their Applications* 2009–2012 and has been Area Editor of *Bernoulli* since 2013. Since 2014 he has been Editor-in-Chief of *Extremes*. He is also one of the editors of the Springer Series in Operations Research and Financial Engineering. Thomas Mikosch is Elected Fellow of the IMS, member of the Bernoulli Society, Foreign Fellow of the Danish Royal Academy of Sciences and Letters. Since 2013 he has been member of the Publications Committee of the Bernoulli Society, in October 2014 he became its chair. In agreement with the new statutes of the Bernoulli Society he was appointed as the first Publications Secretary on the BS Executive Committee.

A View on the on the Post of Publications Secretary

More than twenty years ago the Bernoulli Society did not have its own journal. There was no need for a Publications Committee. The first issue of the *Bernoulli* Journal appeared in 1995. Now the BS sponsors *Stochastic Processes and their Applications* (SPA) and also the *SpringerBriefs* series since 2015. Bernoulli Society members may purchase these publications on discount.

The importance of the PubCom of the BS has grown with its tasks. The PubCom proposes the Editors-in-Chief of the journals *SPA* and *Bernoulli* as well as the SpringerBriefs. Publications matters have become increasingly important for the BS. Jointly with IMS, ASA, ISI, and other professional organizations the BS faces the challenges of electronic publishing, increasing subscription prices, negotiations with commercial publishers, creation of new publications. Together with the mentioned organizations the BS has a regulatory and advisory function on publications matters.

In agreement with the new Statutes of the BS the new post of Publications Secretary on the BS Executive Committee was created. I am very much honored to become the first secretary. Since I am also the chair of PubCom the new position will help to make the flow of information and ideas between the Executive Committee and the PubCom more efficient. Typically, the chair of the PubCom communicated only with the President of the BS (and the President-Elect who is a member of PubCom according to the Statutes). The post of Publications Secretary will allow me to get involved in the general decision process of the BS and in its activities and to raise my voice. I am looking forward to the challenges of my new function.

Thomas Mikosch
Chair of the PubCom of the BS
Copenhagen

Articles and Letters

Tales of an Applied Statistician in a Functional World

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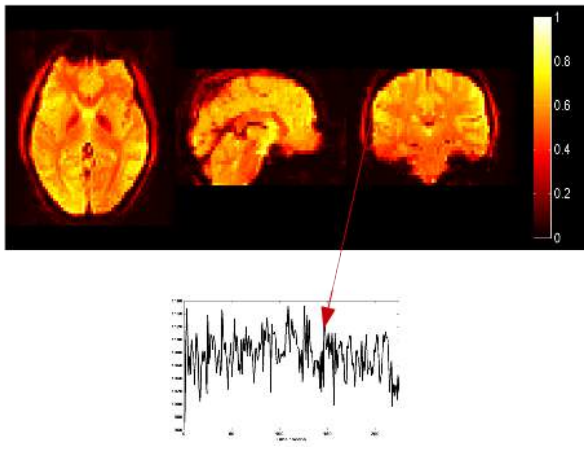
Communicated by Wilfrid Kendall

§1. Introduction

One of the greatest features of modern applied statistics is the fact that you can blend rigorous statistical theory with real-world applications. This is possibly nowhere more evident than in functional data analysis (FDA) and its recent counterpart, object data analysis (ODA). By taking a continuum approximation to the data, it is possible to ignore, what is in many cases, the somewhat arbitrary nature of the discretization of the data. FDA has a long history with early developments by Grenander (1950) and Rao (1958), and the establishment of the field in its own right arguably with the publication of the book by Ramsay and Silverman (1997). Most of this early work was concerned with developing methods for i.i.d. 1-dimensional curves, but modern data collected often comes in the form of dependent, multidimensional (e.g. images) data which may lie on some structured manifold. By requiring that such information is incorporated into the analysis, not only can major gains be made in the application, but statistical theory can also be given a suitable framework for development.

While examples of the application of FDA/ODA abound, I'd like to highlight two areas where such analysis has proved of interest; namely brain image analysis and statistical linguistics.

§2. FDA of Functional Brain Imaging



Functional brain imaging data is a classic example of the maxim from ODA (Marron and Alonso, 2014) that you must understand the data object before doing the analysis. For example, functional MRI (fMRI) data could be considered as spatially dependent observations of 1-D time curves, or temporally dependent observations of 3-D (brain) functions, or even 4-D objects replicated over individuals (in the case of population studies) (see figure above). This yields a wealth of analysis opportunities, but as always, the best analysis will depend on the underlying question at hand.

One popular fMRI experiment is resting state fMRI where subjects are asked to lie at rest in the scanner, with the aim to understand the underlying nature of passive brain function. Most analysis is then predicated on the assumption that the resulting data is stationary over time. However, this assumption is one which is worthy of testing, and as such we will assume that we have time series of 3-D functions and ask if those time series are stationary; our data objects are 3-D functions.

There has been considerable emphasis in FDA on using the functional analogue of PCA, based on the Karhunen-Loève (K-L) expansion (see for example, Yao, Müller and Wang, 2005). However, obtaining a 3-D K-L expansion for the (typical) million spatial locations in fMRI from a time series of (typically) 100-400 time points is problematic, as the principal components are based on the decomposition of the empirical covariance function. Additionally, the fMRI measurements are dependent over time, with a complex dependency structure.

By considering separable approximations for the covariance, and then developing theory for hypothesis testing for epidemic changes in functional time series, it has been possible to investigate stationarity assumptions for resting state fMRI (Aston and Kirch, 2012), and determine that approximately 50% of scans seem to deviate from stationarity, implying care at the very least needs to be taken in any subsequent analysis.

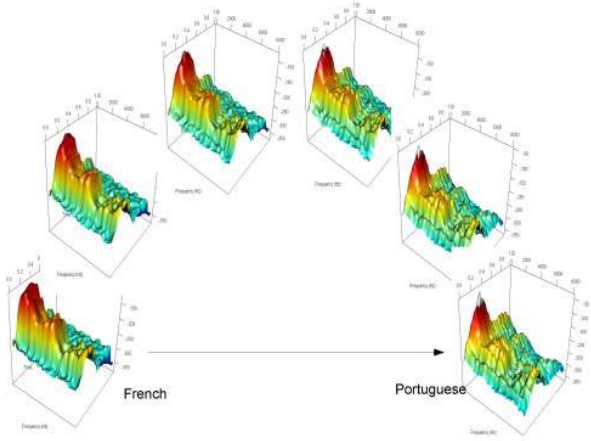
However, this is certainly not the end of the story, and in reality most brain activity is localized on the thin cortical surface of the brain. Recent methods have allowed functional PCA to be extended to manifold domains (see Lila, Aston, and Sangalli 2016, for example), allowing the possibilities to build even more relevant structure into the analysis.

§3. Functional Manifolds in Statistical Phonetics

A seemingly diverse application to that of brain imaging is phonetics, the investigation of sounds produced during speech. However, again a functional /object approach can be taken. In this case, the data object is the covariance function itself, as this is a good (partial) description of the phonetic properties of a language. The covariances help encode the variations that are typical to a language over and above the specific words being said.

Covariance functions are not linear objects, as they are positive definitive and an arbitrary linear combination of covariance functions may no longer be positive definite.

Therefore, theory needs to be developed to enable the statistical analysis and comparison of different languages. By borrowing ideas from shape statistics, Procrustes metrics can be extended to the infinite dimensional space of these covariance functions, and indeed geodesics used to allow the traversal of spaces between covariance functions (Pigoli *et al.* 2014).



Using these geodesics, it is possible to generate new phonetic sounds both along a path between two existing languages (see figure above for path for word "one" from French to Portuguese) and even from extrapolations of such a path. These covariances can be used to generate typical examples of the sounds, and as a result it is possible to actually listen to the results of the statistical analysis, and possibly even project such ideas into the realms of generating past and future speech sounds (see Pigoli *et al.* 2015, for examples).

Acknowledgements

This piece is a synopsis of part of the Bernoulli Society Presidential Invited Lecture given at the ISI World Congress 2015 in Rio de Janeiro. The author very much thanks both Wilfrid Kendall for the invitation to give the lecture and Miguel de Carvalho for the opportunity to reproduce some of it in print in *Bernoulli News*.

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Obituary: Peter Hall

Hans-Georg Müller, Department of Statistics, University of California, Davis
hgmueller@ucdavis.edu

Communicated by Sara van de Geer

Peter Hall in his office at UC Davis, while visiting in the Fall of 2003, after which he joined the Department of Statistics as a part-time faculty member.

Peter Gavin Hall was born on November 20, 1951 in Sydney, Australia. He grew up in a suburban area of Sydney, where he went to high school and then completed a bachelor of science at the University of Sydney in 1974, after which he received a M.Sc. in Mathematics from the Australian National University in Canberra, and a DPhil from the University of Oxford in the U.K. in 1976.

Peter was an eminent scientist with a most distinguished career as a mathematical statistician. He received all major honors that statistics bestows, and more, including Foreign Associate of the National Academy of Sciences (USA), Officer of the Order of Australia, Fellow of the Royal Society of London, the Guy Medal in Silver, the Samuel S Wilks Memorial Medal, the Gottfried E Noether Senior Award for Nonparametric Statistics, and the COPSS award, among numerous other awards and fellowships in various academies. He received honorary doctorates from the Université Catholique de Louvain, Universidad de Cantabria, University of Glasgow, and University of Sydney. His service to the profession was equally distinguished and included terms as President of the Bernoulli Society, of the Institute of Mathematical Statistics, and of the Australian Mathematical Society, as well as Co-Editor of the *Annals of Statistics* and of *Statistica Sinica*, along with many other high profile appointments.

Peter's mother, Ruby Payne-Scott, was a distinguished radio astronomer (Goss and McGee, 2010), who published in *Nature*, while his father, Bill Hall, worked as a telephone technician. His mother was employed at the Australian research organization CSIRO and was politically left leaning. Discrimination against women at the workplace was openly practiced at the time, and when she was pregnant with Peter she had to leave CSIRO, as it was against the law for a married woman to be so employed. Peter is survived by his wife, Jeannie Hall, who worked as a cabinet secretary in the Australian government, and his sister, Fiona Hall, who is a famous artist in Australia and like Peter, received the honor of an Officer of the Order of Australia.

Peter's entry into the field of Statistics followed a circuitous path. As an undergraduate, he was initially interested in physics, then mathematics and for his graduate research he chose to work in probability. An

extended version of his master's thesis on martingale limit theory was published as a book (Hall and Heyde, 1980). He met his wife Jeannie in Oxford while he was working on his PhD thesis on the convergence of sums of random variables, advised by John Kingman. Jeannie and Peter married in 1977. Jeannie was a cabinet secretary in the Australian government, a high ranking position. After completing his DPhil in 1976, Peter moved back to Australia and accepted an offer from the University of Melbourne. Peter did not receive tenure at Melbourne, undoubtedly one of the worst tenure decisions in the history of statistics! So in 1978, he moved to the Australian National University (ANU) in Canberra, where he stayed until 2006, when he moved back to the University of Melbourne. When he accepted the position at the ANU, he was told that he would have to move into statistics. This requirement may have been a major reason that Peter became a statistician.

In his later years, Peter had his positions funded by prestigious Australian fellowships, which allowed him to focus more on his research. After visiting in 2003–4, he accepted a 25% faculty position as Distinguished Professor at the Department of Statistics at UC Davis and joined the Davis faculty in 2005. Peter would reside in Davis every Spring quarter and would teach two courses every second Spring. The courses he taught were upper division undergraduate probability and a special topics graduate course on the bootstrap. He liked Davis for its character as a small university town, climate, the department, and as a good basis for traveling within the U.S.

Peter's commitment to both his research and the profession was legendary. Many of those who had the privilege to know Peter realized that he was the hardest working scientist they would ever encounter. Upon discovering that statistics was the field he was most interested in, Peter devoted all of his inexhaustible energy to it. He would often create a complete and complex theory within days after learning about a problem that interested him. In the process, he would typically produce an almost final error-free write-up that did not require much further editing.

He has written more than 600 papers, most of which appeared in top journals, and thus has been the most productive scientist in the history of statistics. In his later career, he would increasingly write jointly with other researchers. Statisticians whom he met during his numerous and frequent travels would bring a problem to his attention and Peter would devise methodology and theory to address it and provide the core of the writing. Peter's typical approach was to take up those problems for which his sophisticated toolkit would be useful. He would often mold a given problem in a way that it became amenable to the formidable mathematical and probabilistic tools that he mastered; this enabled him to propose solutions to many pressing problems that had proven difficult.

A characteristic of Peter was his humility and kindness to others. He was not just superficially friendly, but treated those around him gently and with genuine respect, be it staff, students, or colleagues, who liked and admired him. He enjoyed mentoring young researchers and supporting their careers. He advised a large number of PhD students and always had several post-docs working with him. Even while he was working hard, often simultaneously on various things demanding full concentration, he rarely if ever betrayed any outward sign of impatience or irritation, even when intrusions distracted him from his work. He regularly attended the faculty meetings in Davis when he was in residence, where his presence had a welcome calming effect and improved the quality of discussions and decisions.

Peter established his reputation in statistics with early work on the bootstrap in the 1980s, where he made seminal contributions and wrote several influential papers, for example on bootstrap confidence intervals, the block bootstrap for dependent data, and the double bootstrap, just to name a few. He also wrote an introductory textbook on the bootstrap (Hall, 1992) and when he joined UC Davis in 2005 as a part time faculty, he elected to teach a graduate topics course on the bootstrap every second year. He had an excellent rapport with the graduate students in Davis and his course was always well attended. His fondness for the bootstrap evolved in later years into work on empirical likelihood, where he employed the method of distribution tilting to many problems that came to his attention. Another area of Peter's early work was nonparametric curve estimation in all its facets, notably density estimation and the estimation of conditional distributions and quantiles, where some of his most influential work dealt with various theoretical aspects of bandwidth choice, and also characterizing the stochastic behavior of deviation measures such as integrated squared error. His work in this area included influential papers on variance estimation in nonparametric regression and the treatment of boundary effects. Notable is also his early work on the estimation of ridges and modes, an area that recently has become fashionable.

Peter worked on an incredible number of problems in diverse areas that include point processes, time series, extreme values, quantification of the roughness of surfaces and small area estimation, among others. In addition to bootstrap, empirical likelihood and curve estimation, another focus area of Peter was deconvolution and errors in variables. In this area he quickly became a leader. With his collaborators he investigated a multitude of models and schemes for this inherently difficult problem. More recently he devoted some of his efforts to high-dimensional data analysis, where in a seminal paper he studied the linearity of random projections and where he also investigated the selection of variables and interactions in high-dimensional regression problems.

In recent years, Peter developed a new research focus in functional data analysis, which he approached from a theoretical perspective. His work in this area was ground breaking, and he was able to introduce new perspectives and work out challenging expansions and arguments due to his mathematical and probabilistic

background. His pioneering work includes a new approach for the theoretical analysis for functional principal component analysis in both the fully observed and sparsely sampled scenarios, theory of estimation and prediction in functional linear regression, the selection of optimal predictor points in functional regression, a functional version of partial least squares, a study of the density problem in function space, and various functional classification methods, where he introduced the concept of a perfect classifier in the context of functional data. His work in this area alone would have been sufficient for a distinguished career.

Peter was always inclined to travel and along the way encounter new problems to work on. He thrived on traveling and was uniquely able to not let exhaustion, jet lag or other inconveniences impede him in any way. He had the unique ability to hold many complex terms of a higher order expansion simultaneously in his working memory, juggle these terms in his mind and in real time obtain results that he wrote as they emerged. He seemingly could pause this process at will for a brief e-mail or office distraction, which would not throw him off his mental thread; he would simply pick up where he had left the argument, without apparent need to recollect his mind. Many ordinary statisticians working with pencil and paper would require undisturbed time to work out the argument term by term, would make mistakes along the way, and then would need extra time to reconcile the various terms and to recheck everything multiple times.

Conversing with Peter was always a pleasure and usually illuminating, as he had wide ranging interests that included all aspects of statistics and also mathematics, politics, economics, and science, especially the hard sciences and engineering. But the topics most dear to him were trains, primarily non-electric trains and especially steam trains, as well as airplanes, aeronautic engineering and piloting. He knew everything about various plane models and their features, and whenever a plane crash happened somewhere, he would provide an insightful analysis. It is likely that he would have become an extremely successful aeronautic engineer if he would not have become a probabilist and statistician. It was most fortunate that his calling was statistics.

Peter's main hobby was photographing, for which he had great talent. His favorite motives were landscapes and trains. He knew everything about cameras and their optics and his photos were often impressive. Since the most convenient way to move around in Davis is bicycling, Peter bought an old, not particularly fancy used bike, which he used for shopping and commuting to the office. One day he came to my office and told me that he was (uncharacteristically for him) stuck in the middle of a difficult proof and that he needed to take some time off. He wanted me to help him find a good spot from where to photograph trains. So off we went with our bicycles over dirt roads in the agricultural fields surrounding Davis. Eventually we found a place right next to the tracks that was to Peter's liking. He then would spend hours at this strategic spot to wait for interesting locomotives and trains to zip by so he could photograph them. While he complained that the trains were (unsurprisingly for U.S. standards) not following the schedules he had found on the internet, this hunting for photo-worthy trains and locomotives nevertheless did help him break the impasse with his proof.

Peter passed away on January 9, 2016 in Melbourne, Australia. He will be missed as a great friend, caring mentor, good colleague, and leader of modern statistics.

Acknowledgments

I am indebted to Aurore Delaigle and Matt Wand for making available a preprint of their informative article on a conversation with Peter Hall that is to appear in Statistical Science (Delaigle and Wand, 2016), from which I have borrowed heavily. I also wish to thank Raymond Carroll for sharing a talk he gave in remembrance of Peter Hall, as well as Rudy Beran, Aurore Delaigle, Jeannie Hall, and Jane-Ling Wang for sharing personal reminiscences.

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Past Conferences, Meetings and Workshops

UK Easter Probability Meetings: April 4–8, 2016; Lancaster, UK

The 2016 UK Easter Probability Meeting took place from 4-8 April 2016 at Lancaster University, and was attended by over 80 participants from 12 countries. Since 2008, there has been a tradition of holding a UK probability workshop (roughly annually) around Easter time. The purpose of these workshops is to provide opportunities for UK researchers to learn from and to collaborate with experts in four related areas of modern probability. Previous meetings have been hosted by the Universities of Warwick (twice), Oxford, Cambridge, Bath, and Imperial College London.

This year, the workshop was on *Random Structures Arising in Physics and Analysis*. The main themes were "random matrices and free probability", "concentration of measure", "random geometry" and "random walks in random environments", and mini-courses on these topics were given by Alice Guionnet, Michel Ledoux, Jason Miller and Vladas Sidoravicius. In addition, there were 12 research talks on complementary topics, 6 talks by PhD students, a poster session, and break-out groups in which to discuss open problems. Delegates also enjoyed an excursion and dinner-cruise on Windermere in the Lake District National Park.

Further details, including slides from the talks, are available on the meeting website:

www.lancaster.ac.uk/maths/easter-probability-meeting

The next meeting will be hosted by the University of Sheffield in 2018.

Amanda Turner
Lancaster

12th German Probability and Statistics Days: March 1–4, 2016; Bochum, Germany

Following two years of intensive preparation, the 12th German Probability and Statistics Days (GPSD 2016) took place on the campus of the Ruhr-University Bochum from 1 to 4 March 2016. The meeting was organized by the Stochastics section of the German Mathematical Society DMV in cooperation with the Faculty of Mathematics of Ruhr-University Bochum.

GPSD 2016 stood in the tradition of earlier meetings in Marburg (1993), Freiberg (1996), München (1998), Hamburg (2000), Magdeburg (2002), Karlsruhe (2004), Frankfurt (2006), Aachen (2008), Leipzig (2010), Mainz (2012), and Ulm (2014). What began in Marburg as a small conference mostly attended by German probabilists and statisticians, has now become one of the major international conferences of its kind in Europe.

Members of the Scientific Programme Committee of GPSD 2016 were Herold Dehling (Bochum), Holger Dette (Bochum), Peter Eichelsbacher (Bochum, Chair), Vicky Fasen (Karlsruhe), Hajo Holzmann (Marburg), Christof Külske (Bochum), Angelika Rohde (Bochum), Thorsten Schmidt (Freiburg), and Evgenij Spodarev (Ulm).

Welcome Reception and Poster Exhibition.

The scientific programme of GPSD 2016 was impressive. Plenary lectures were delivered by professors Martin Hairer (Warwick), Laszlo Erdös (Vienna), Walter Schachermayer (Vienna), Sandrine Dudoit (Berkeley) and Iain Johnstone (Stanford). A special highlight was the Ising Lecture, delivered by Laszlo Erdös. With this lecture, the organizers intended to honor and commemorate Ernst Ising (1900–1998), who in his thesis proposed what is now known as the Ising model. Ernst Ising grew up in Bochum, attended school here, and graduated in 1919 from the Gymnasium am Ostring. During the Nazi period, when anti-Jewish laws made life for Jews in Germany unbearable, the Ising family had to flee. Ernst Ising survived in Luxembourg, and later emigrated to the US. Before the Ising lecture, Prof. Sigismund Kobe (Dresden) gave a talk about the life of Ernst Ising, including the audio of an interview with Ernst Ising taken in the 1990s.

The major part of the scientific programme took place in 12 sessions, covering a wide range of topics from stochastic analysis to applied statistics. Each session had a 60-minute invited talk, and a large number of 30-minute contributed talks. The invited talks were given by Erwin Bolthausen (Zürich), Jean-Francois Coeurjolly (Grenoble), Jose E. Figueroa-Lopez (St. Louis), Christophe Garban (Lyon), Ben Hambly (Oxford), Valen Johnson (Austin), Davar Khoshnevisan (Utah), Piotr Kokoszka (Fort Collins), Finn Lindgren (Bath), Thomas Møller (Kopenhagen), Alessandro Rinaldo (Pittsburgh), and Mathieu Rosenbaum (Paris).

Opening Ceremony: Peter Eichelsbacher, Mar- tin Hairer, Michael Röckner (President-elect of the DMV), Axel Schölmerich (Rector), Herold Dehling.

Both scientifically as well as socially, GPSD 2016 was a great success. In total, 360 talks were delivered in parallel sessions from Tuesday to Friday morning. During a special *Welcome Reception and Poster Exhibition*, sponsored by Elsevier publishers on the first evening of the conference, 30 posters were presented. The conference was attended by 560 researchers, with 30% of the participants coming from outside of Germany. All lectures could be held either in the lecture hall of the Audimax or in one of the adjacent buildings on the campus of the Ruhr-University, which proved to be a superb location for a meeting of this size.

Herold Dehling
Bochum

Forthcoming Conferences, Meetings and Workshops, and Calendar of Events

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for Mathematical Statistics
and Probability

2016 Frontier Probability Days: May 9–11, 2016; University of Utah, Salt Lake City, US

A three-day conference is proposed, Frontier Probability Days 2016, to be held at the University of Utah, May 9–11, 2016. The purpose of the meeting is to bring together leading regional and national researchers in probability theory and its applications, along with graduate students and others, to foster interactions and stimulate research activity. Given that contemporary applied mathematics is rich with problems involving stochastic phenomena, the conference seeks in part to build bridges of communication between the community of probability and other communities for mutual benefit. These meetings are held roughly every other year in the

Intermountain West of the United States, and have been successful the previous four times they have run in 2007 (Boulder), 2009 and 2011 (Utah), and 2014 (Arizona). NSF support in 2014 allowed the conference to be greatly expanded in scope and support the participation of many young researchers. The format consists of 7 plenary talks and several shorter presentations. A distinguishing feature of the proposed meeting is its attention to applications of probability theory; in particular, two of the plenary talks will focus on deep applications to biology and dynamical systems.

The plenary speakers for the conference will be Alan Hammond (UC Berkeley), Kay Kirkpatrick (UIUC), Tai Melcher (Virginia), Soumik Pal (Washington), Sebastien Roch (Wisconsin-Madison), Eric Vanden-Eijnden (NYU), and Balint Virag (Toronto). These distinguished speakers will present recent research at the forefront of probability theory and its applications. Topics of their talks include statistical mechanics, stochastic processes on Lie groups, random matrices, and applications of probability to biology and dynamical systems.

As in past years, several junior participants, including many graduate students, will attend. Roughly 30–50 outside participants will come to Utah for the conference. There will be plentiful opportunity for interaction among conference members, and also chances to give short lectures.

The organizing committee spreads among 3 universities in the Intermountain West region: Oregon State University, University of Arizona and the University of Utah. In recent years this region has shown increased vitality in probability theory and its applications. With the attention to applications the meeting will help broaden participation with other fields, providing a source of inspiration for both more applied and theoretical aspects of probability.

Byeong Park
Seoul

4th IMS Asian Pacific Rim: June 27–30, 2016; Hong Kong

The 4th Institute of Mathematical Statistics, Asia Pacific Rim Meeting 2016 (IMS-APRM 2016) will be held during June 27–30, 2016 at The Chinese University of Hong Kong, Hong Kong. The conference is an important event for experts and researchers worldwide to share and discuss recent advancements in all branches of statistics and probability.

The program includes Plenary Lectures by Professor Persi Diaconis and Professor Iain Johnstone, distinguished lectures by leading specialists, 60 invited sessions, as well as contributed talks and poster sessions. The APRM offers early bird discount for any individual registration submitted on or before April 15, 2016 and the online registration ends on May 31, 2016.

More details of the conference can be found at the conference homepage:

http://ims-aprm2016.sta.cuhk.edu.hk/

Qi-Man Shao
Hong Kong

9th World Congress of Probability and Statistics: July 11–15, 2016; Toronto, Canada

The 9th World Congress of Probability and Statistics is the latest in a series organized jointly by the Bernoulli Society and the Institute of Mathematical Statistics. Held every four years, it is a worldwide event covering all branches of statistics and probability. This includes theoretical, methodological, applied and computational statistics and probability, as well as stochastic processes. The latest scientific developments in all of these fields are showcased.

Confirmed plenary speakers include: David Brillinger (Tukey Lecture), Vanessa Didelez (IMS Medallion Lecture), Arnaud Doucet (IMS Medallion Lecture), Sara van de Geer (Wald Lecture), Christina Goldschmidt (IMS Medallion Lecture), Frank den Hollander (IMS Medallion Lecture), Valerie Isham (Bernoulli Lecture), Servet Martínez (Levy Lecture), Pierre del Moral (IMS Medallion Lecture), Byeong Park (Laplace Lecture), Scott Sheffield (Doob Lecture), Ruth Williams (Kolmogorov Lecture), Bin Yu (Rietz Lecture), Ofer Zeitouni (Schramm Lecture).

The deadline for abstract submission is April 22. More information can be found at:

https://goo.gl/YdjeOu

Another related conference is the *Pre-World Congress Meeting of New Researchers in Statistics and Probability*, which will take place in Toronto, during

July 7–8. This two-day event has one day dedicated to academic talks and a short course on big data and is open to all who wish to attend. The second day is a series of talks focused on career development.

Leonardo T. Rolla
Bernoulli e-Briefs Editor
Buenos Aires

XIV Latin American Congress of Probability and Mathematical Statistics: December 5–9, 2016; San José, Costa Rica

The Latin American Congress of Probability and Mathematical Statistics is the main event in probability and statistics in the region, having been held roughly every two or three years for almost 30 years. It is organized under the auspices of the Bernoulli Society for Mathematical Statistics and Probability and the Latin-American Society on Probability and Mathematical Statistics. The series of CLAPEMs has greatly contributed to the development of probability and statistics in Latin America by promoting regional cooperation, increasing the scholarly level of the research work in the region, facilitating the collaboration between Latin American researchers and colleagues from the rest of the world.

Invited speakers include: Graciela Boente, Alexei Borodin, Pietro Caputo, Rick Durrett, Onésimo Hernández, Jean-Michel Loubes, Eric Moulines, Susan Murphy, David Nualart, Gavin Shaddick, and Barry Simon.

The deadline for early-bird registration is July 15; more details can be found at:

http://goo.gl/5tI90L

Leonardo T. Rolla
Bernoulli e-Briefs Editor
Buenos Aires

Other Events

12th Conference on Stochastic Networks: June 20–24, 2016; San Diego, US

This week-long event continues a tradition that was started in 1987 and has now become a biennial event. The aim of the conference is to bring together researchers who share an interest in stochastic network models, to survey recent developments, and to identify future research directions.

Speakers include: Emmanuel Abbe, Anima Anandkumar, Rami Atar, Francois Baccelli, Maury Bramson, Guy Bresler, Fan Chung Graham, Jim Dai, Itai Gurvich, Weining Kang, Tom Kurtz, Mark Lewis, Yi Lu, Siva Maguluri, Laurent Massoulie, Angelia Nedich, Kavita Ramanan, Philippe Robert, Neil Walton, Galit Yom Tov, and Bert Zwart.

More information can be found at:

http://goo.gl/OqWuAC

Leonardo T. Rolla
Bernoulli e-Briefs Editor
Buenos Aires

26th Nordic Conference on Mathematical Statistics: June 27–30, 2016; Copenhagen, Denmark

This week-long event continues a tradition that was started in 1987 and has now become a biennial event. The aim of the conference is to bring together researchers who share an interest in stochastic network models, to survey recent developments, and to identify future research directions.

Speakers include: Emmanuel Abbe, Anima Anandkumar, Rami Atar, Francois Baccelli, Maury Bramson, Guy Bresler, Fan Chung Graham, Jim Dai, Itai Gurvich, Weining Kang, Tom Kurtz, Mark Lewis, Yi Lu, Siva Maguluri, Laurent Massoulie, Angelia Nedich, Kavita Ramanan, Philippe Robert, Neil Walton, Galit Yom Tov, Bert Zwart.

More information can be found at:

http://goo.gl/OqWuAC

Leonardo T. Rolla
Bernoulli e-Briefs Editor
Buenos Aires

XX Brazilian School of Probability: July 4–9, 2016; ICMC/USP, São Carlos, Brazil

The year 2016 marks the twentieth edition of the Brazilian School of Probability. Over the years, the EBP series has been instrumental in shaping the directions and interests of Brazilian probabilists, and has contributed to the vigorous growth of our area in the country. Strong international participation has been both a major cause and a positive consequence of these developments. The same is true about the continued support EBP has received from funding agencies and major academic institutions in Brazil.

As in previous years, the 2016 EBP will consist of five and a half days of minicourses—by Sebastien Bubeck (Microsoft) and Serguei Popov (Unicamp)—plenary talks, contributed talks and poster sessions, all presented in a relaxed atmosphere. This will be our first edition in the *São Carlos* Campus of the *Universidade de São Paulo* (USP), which is home to one of Brazil's top ranked Mathematics departments. Registration, local information, and a call for contributed talks and posters are all available from the link:

www.impa.br/opencms/en/eventos/store_2016/evento_1613

Roberto Imbuzeiro Oliveira
Rio de Janeiro

1st Latin American Conference on Statistical Computing: July 22–24, 2016; Gramado, Brazil

The 1st Latin American Conference on Statistical Computing (LACSC) will be held in Gramado, State of Rio Grande do Sul, Brazil, during July 22–24, 2016. The organization of this meeting will be carried out jointly by the International Association of Statistical Computing (IASC), the Brazilian Statistical Association (ABE), and the Department of Statistics at the Federal University of Rio Grande do Sul.

The conference theme is *Statistical Computing for Data Science*, and aims to furnish a forum for the discussion and exchange of new ideas, concepts, and recent methods regarding statistical computing for an information society. Intellectual stimulation of research on statistical computing for Data Science is expected at this meeting.

The Scientific Program Committee of the 1st LACSC is now soliciting suggestions for Invited Paper Sessions (IPS, 90 minutes with three speakers) to be considered as part of the scientific program of the conference. Please submit formal proposals before April 30, 2016, to the Chair of the Scientific Program Committee (Paulo Canas Rodrigues; *paulocanas@gmail.com*), include title, brief description of the topic, and a list of speakers and discussant who have agreed to be part of the session.

Abstracts for contributed talks and contributed posters can be submitted online until May 30, 2016; further details about the conference can be found at:

www.redeabe.org.br/lacsc2016/paginas/1st-lacsc

Paulo Canas Rodrigues
Salvador

4th International Workshop on Functional and Operatorial Statistics: June 15–17, 2017; A Coruña, Spain

The purpose of the series of workshops called IWFOS (International Workshop on Functional and Operatorial Statistics), initiated by the working group STAPH of Toulouse at year 2008, is to highlight the major trends in different areas of functional statistics through the exchange of ideas and the promotion of collaboration between researchers from different countries. It aims at contributing to future developments of such areas.

IWFOS 2017 will be held in A Coruña, Spain, during June 15–17, 2017. The scientific program will include invited talks, contributed talks and contributed posters. The scientific policy of this workshop will privilege all the topics linked with "infinite-dimensional problems or methods" with special emphasis on statistical modeling for functional variables, functional data analysis, operator-based statistics, and background for statistics for infinite-dimensional spaces.

For this fourth edition we wish to encourage also contributions in high-dimensional statistics in order to develop further relations between all these different fields of modern statistics and to contribute to their future development. More information is available at the web site:

iwfos2017.udc.es

Germán Aneiros
A Coruña

Calendar of Events

This calendar lists all meetings that have been announced in this and previous issues of Bernoulli News together with forthcoming meetings organized under the auspices of the Bernoulli society or one of its Regional Committees (marked by).

A more comprehensive calendar of events is available on the ISI Websites

www.bernoulli-society.org/index.php/meetings

www.isi-web.org/index.php/activities/calendar

May 2016

- May 17–20, 2016, *Fractality and Fractionality*; Leiden, The Netherlands.

June 2016

- June 20–24, 2016, *12th Conference on Stochastic Networks*; San Diego, USA.
- June 27–30, 2016, *4th IMS Asia Pacific Rim Meeting*; Hong Kong.

July 2016

- July 22–24, 2016, *1st Latin American Conference on Statistical Computing*; Rio Grande do Sul, Brazil.
- July 7–8, 2016, *Pre-Meeting to the Bernoulli Society World Congress for Young Researchers*; Toronto, Canada.
- July 11–15, 2016, *9th Bernoulli Society World Congress—World Congress in Probability and Statistics*; Toronto, Canada.

November 2016

- November 29–December 4, 2016, *21st International Congress on Modelling and Simulation*; Queensland, Australia.

December 2016

- December 5–9, 2016, *XIV Latin American Congress of Probability and Mathematical Statistics*; San José, Costa Rica.
- December 17–19, 2016, *9th Conference of the Asian Regional Section of the IASC*; Singapore.

July 2017

- July 16–21, 2017, *61st World Statistics Congress*; Marrakesh, Morocco.
- July 24–28, *39th Conference on Stochastic Processes and their Applications (SPA)*; Moscow, Russia.
- July 24–28, 2017, *31st European Meeting of Statisticians*; Helsinki, Finland.

Quote of the Issue: *Usually people say: "What! I was very bad in math at school!" But this is a very strange reaction. If someone tells me he is a painter, imagine I would respond by saying: "What! I have even no idea how to hold a brush".* Sara van de Geer

Recent Issues of Official Publications

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Bernoulli

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Editor-in-Chief: H. Dette
http://projecteuclid.org/current/euclid.bj

"Estimation of Inverse Autocovariance Matrices for Long Memory Processes," C.-K. Ing, H.-T. Chiou & M. Guo, 1301–1330.
"Goodness of Fit tests in Terms of Local Levels with Special Emphasis on […]," V. Gontscharuk, S. Landwehr & H. Finner, 1331–1363.
"Exit Identities for Lévy Processes Observed at Poisson Arrival Times, H. Albrecher," J. Ivanovs & X. Zhou, 1364–1382.
"Integration Theory for Infinite Dimensional Volatility Modulated Volterra Processes," F. E. Benth & A. Süss, 1383–1430.
"New Results on Mixture and Exponential Models by Orlicz Spaces," M. Santacroce, P. Siri & B. Trivellato, 1431–1447.
"A Stochastic Volatility Model with Flexible Extremal Dependence Structure," A. Janssen & H. Drees, 1448–1490.
"Passage Time and Fluctuation Calculations for Subexponential Lévy Processes," R. Doney, C. Klüppelberg & R. Maller, 1491–1519.
"Performance of Empirical Risk Minimization in Linear Aggregation," Guillaume Lecué & Shahar Mendelson," 1520–1534.
"Borrowing Strength in Hierarchical Bayes: Posterior Concentration of the Dirichlet Base Measure," X. Nguyen, 1535–1571.
"Approximation of a Stochastic Wave Equation in Dimension Three […]," F. J. Delgado-Vences & M. Sanz-Solé, 1572–1597.
"L^p-Wasserstein Distance for Stochastic Differential Equations Driven by Lévy Processes," J. Wang, 1598–1616.
"Robust Estimation on a Parametric Model Via Testing," Mathieu Sart, 1617–1670.
"Functional Limit Theorems for Generalized Variations of the Fractional Brownian Sheet," M. S. Pakkanen & A. Réveillac, 1671–1708.
"Approximation of Improper Priors," C. Bioche & P. Druilhet, 1709–1728.
"Optimal Classification and Nonparametric Regression for Functional Data," A. Meister, 1729–1744.
"On High-dimensional Sign Tests," D. Paindaveine & T. Verdebout, 1745–1769.
"Quantile Spectral Processes: Asymptotic Analysis and Inference," T. Kley, S. Volgushev, H. Dette & M. Hallin, 1770–1807.
"Markov Chain Monte Carlo Confidence Intervals," Y. F. Atchadé, 1808–1838.
"On the Optimal Estimation of Probability Measures in Weak and Strong Topologies," B. Sriperumbudur, 1839–1893.
"Quadratic Covariation Estimation of an Irregularly Observed Semimartingale with Jumps and Noise," Y. Koike, 1894–1936.
"An Analysis of Penalized Interaction Models," J. Zhao & C. Leng, 1937–1961.

Stochastic Processes and Their Applications

Vol. 126, No. 7: July 2016

Editor-in-Chief: H. Dehling
http://www.sciencedirect.com/science/journal/03044149

"On the functional CLT for stationary Markov chains started at a point," D. Barrera, C. Peligrad & M. Peligrad, 1885–1900.
"Importance Sampling and Statistical Romberg Method for Lévy Processes," M. B. Alaya, K. Hajji & A. Kebaier, 1901–1931.
"Long Time Asymptotics for Fully Nonlinear Bellman Equations: A Backward SDE Approach," A. Cosso, M. Fuhrman & H. Pham, 1932–1973.
"Exponential Extinction Time of the Contact Process on Finite Graphs," T. Mountford, J.-C. Mourrat, D. Valesin & Q. Yao, 1974–2013.
"Risk-consistent Conditional Systemic Risk Measures," H. Hoffmann, T. Meyer-Brandis & G. Svindland, 2014–2037.
"Perpetual American Options in Diffusion-type Models with Running Maxima and Drawdowns," P. V. Gapeev & N. Rodosthenous, 2038–2061.
"Affine Realizations with Affine State Processes for Stochastic Partial Differential Equations," S. Tappe, 2062–2091
"Statistical Inference for Time-changed Lévy Processes via Mellin Transform Approach," D. Belomestny & J. Schoenmakers, 2092–2122.
"Simulation of BSDEs with Jumps by Wiener Chaos Expansion," C. Geiss & C. Labart, 2123–2162.
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