



# Bernoulli News

Newsletter of the *Bernoulli* Society For Mathematical Statistics and Probability

Volume 16 - #2 - 2009

Published twice per year by the Bernoulli Society ISSN 1360-6727

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## Editors

Vicky Fasen & Robert Stelzer

Zentrum Mathematik  
Technische Universität München  
Boltzmannstrasse 3  
D-85747 Garching bei München  
Germany

## Contact

+49 89 289 17086 and 17437  
Fax +49 89 289 17435  
bnews@ma.tum.de

## A Word from the President

First of all, I would like to warmly thank Jean Jacod for being President of the Bernoulli Society for Mathematical Statistics and Probability (BS) during the last two years and the Executive Committee and Council members who ended their term. I would like to take the opportunity to also thank Eric Cator and Erik van Zwet who served as editors of the *Bernoulli News* (*BNews*) for the last two years and to welcome Vicky Fasen and Robert Stelzer as its new editors.

For almost fifteen years, *BNews* has been an important publication to share news about Bernoulli Society activities and members. In the contents of *BNews* and the BS Website, we find some of the most important values and strengths of the Society; its History; the high level standards of regional and international meetings organized or sponsored by the Society; the strong traditions of the Conferences on Stochastic Processes and their Applications; the role played by BS in the organization of meetings during ISI Sessions; the consistent work done by some of the standing committees and, very relevantly, the increasing prominence of the Bernoulli Society World Congresses.

Part of my work as BS President Elect was to promote a diagnosis process with the contribution of points of view, initiatives and comments kindly provided by several members. Many of the strengths of the Society have been confirmed and we have also learned various problems that BS has had for several years; some of them are similar to those currently faced by other scientific and professional societies but some are BS weaknesses in particular. Part of this diagnosis includes what has already been pointed out by Arnaldo Frigessi in his *Word from the Outgoing Scientific Secretary* (*BNews*, Vol. 15, No. 2, 2008) and by Jean Jacod in his last *A Word from the President* (*BNews*, Vol. 16, No. 1, 2009).

Strengths of the Society are also the high level standards of its official publications the Bernoulli Journal and Stochastic Processes and Their Applications, as well as the new co-sponsored open access publications Electronic Communications in Probability, Electronic Journal of Probability, Electronic Journal of Statistics, Probability Surveys and Statistics Surveys. Members of past publications committees and editors should be congratulated for the work they have done. A challenge for the present BS Executive and Publications Committees is to continue – in a strategic framework – negotiations and decisions for favorable and reasonable commercial conditions for the official publications. These were a source of tensions in the past.

Stochastics is the paradigm of the 21st Century, as was highlighted by Peter Jagers in his first *A Word from the President* (*BNews* Vol. 12, No.2, 2005). This is a challenge for our disciplines as a whole, not specific or exclusive to a single society or institution. This calls for the existence of several strong societies that assure equilibriums and necessary broadness of views. The Bernoulli Society for Mathematical Statistics and Probability must reinforce its own niche in the fortunately competing scenery of several good and bigger existing societies and continue seeking friendly cooperation with ISI and IMS, as well as with other societies.

.... Continued on page 2

**Deadline for the next issue: March 31, 2010**

## Editorial

Dear Members of the Bernoulli Society,

This is the first issue of Bernoulli News under our editorship. As you can see, the Publications Committee and we have agreed to modernize the design of the Newsletter of the Bernoulli Society in order to stress that the Bernoulli Society is a vivid organization, whose area – mathematical statistics and probability – is essential to many parts of life nowadays.

We hope that you will like the new design as much as we do. We would like to take this opportunity for a very special “thank you” to Sérgio R. Vaz, ([www.impa.br/~srvaz](http://www.impa.br/~srvaz)) for the wonderful design of the cover and to Maria Eulália Vares for making it possible for us to work with Sérgio Vaz.

When reading the newsletter you will also notice that we have introduced some new content. Our idea is that Bernoulli News should not only be a place to announce news about the Bernoulli Society and meetings related to it but also an interesting small magazine discussing probability and mathematical statistics, where our field is heading to and where it has come from. However, to make this come true, we rely on you. Please send us your contributions, such as articles about the history of our field, about current discussions from real world applications or about whatever you regard as worthwhile for your scientific colleagues in general.

To introduce ourselves: We are both postdoctoral researchers at the TU (University of Technology) in

Munich, Germany, and if you want to know more about us, just have a look at our web pages –

[www-m4.ma.tum.de/pers/fasen](http://www-m4.ma.tum.de/pers/fasen) and



[www-m4.ma.tum.de/pers/stelzer](http://www-m4.ma.tum.de/pers/stelzer).



Please feel free to tell us what you like about Bernoulli News and what can be improved. We are very interested in your feedback.

Yours sincerely,

*Vicky Fasen and Robert Stelzer*

## A Word from the President (continued from front cover)

... In particular, as a Section of the ISI, a natural question is the role that the Bernoulli Society should continue playing within ISI. I have addressed this question and about the 2013 initiative in the BS contribution to the *ISI Newsletter* Vol. 33, No. 3 (99), 2009. The present issue of *BNews* has a contribution by Council member Adam Jakubowski also on the 2013 initiative and other diagnosis thoughts.

There is a call to discuss activities and initiatives to go beyond what the Bernoulli Society has already achieved. This may include a more truly worldwide society, impacting and interacting with regional and national formations in our disciplines, as well as with learned societies in other disciplines where mathematical statistics, probability and stochastic processes continue playing relevant and increasing roles.

Finally, I would like to welcome the new members of the Executive Committee and the Council. The forthcoming years' agendas must be defined by the

challenges and opportunities already detected. In addition to these, members are welcome and encouraged to make suggestions for a stronger Bernoulli Society for Mathematical Statistics and Probability.

Last but not least, I would like to ask you, our members, to encourage your colleagues and postdocs and especially your Ph.D. students – for whom membership is free – to join the Bernoulli Society (see details on p. 27). Moreover, please suggest to your library to subscribe to our official journals – Bernoulli (see <http://isi.cbs.nl/bernoulli/index.htm>) and Stochastic Processes and Their Applications (see <http://www.elsevier.com/locate/spa>) – if it does not do so yet. For the later journal, there is an alternative institutional subscription due to negotiations of Bernoulli Society with Elsevier during the last few years.

*Víctor Pérez-Abreu, Guanajuato*

## News

### Richard Davis Forthcoming Editor of Bernoulli

The Bernoulli Society has appointed Richard A. Davis as the next editor of the journal, Bernoulli. Richard will begin his job as editor on January 1, 2010. The Publications Committee takes this opportunity to thank the present editor, Holger Rootzén, for all the work he

has done for the society as editor of Bernoulli since January 2007, and to wish Richard the best of luck in his new, and undoubtedly very interesting job as Bernoulli editor.

*Michael Sørensen, Copenhagen*

### Special Volume of Stochastic Processes and their Applications in Spring 2010

In November 2008, soon after the sad news about Professor Kiyosi Itô's passing away, the Editorial Board of the journal SPA decided to publish a special issue as a tribute in his honor. Since then, we started thinking about this volume whose main aim would be to present Itô's masterpieces:

*Stochastic Calculus and Excursion Theory,*

as well as some of their applications.

We soon were convinced that a combination of papers written, on one hand by former students of Professor Itô: Professors Masatoshi Fukushima, Nobuyuki Ikeda, Hiroshi Kunita and Shinzo Watanabe, and on the other hand, by a quartet of French probabilists: Professors Jean Bertoin, Philippe Biane, Jean-François Le Gall and Wendelin Werner, would be ideal for this purpose.

Admittedly, even with this excellent group of probabilists, the whole spectrum of K. Itô's achievements (see, e.g., his Selected Papers Volume, Springer (1987)) is far from being covered. We are confident that other probability journals will also provide tributes in honor of Kiyosi Itô, and discuss other aspects than those featured in this volume.

### News from ISI

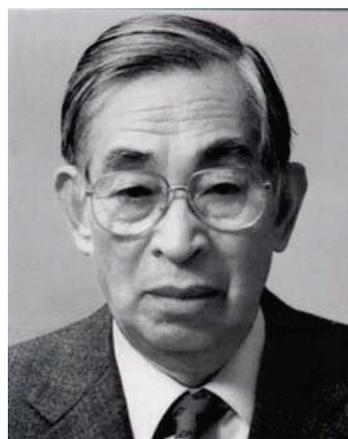
The ISI and the ISI Permanent Office (PO) have experienced many changes in the past year. With the departure of Mr. Daniel Berze as Director, the ISI Permanent Office welcomed Mr. Wim Senden as interim Director for ten months. Wim kept the ISI afloat while the ISI Executive Committee found a permanent Director. After searching for some months, Ms. Ada van Krimpen, formerly of Statistics Netherlands, joined as Director and is up for the challenges currently facing the ISI community. With Professor Emeritus Jef Teugels as ISI President, the ISI has formed a strong leadership team.

In April of this year, the ISI Executive Committee decided that ISI Sessions will in future be called ISI World Statistics Congresses starting with Dublin, which will be referred to as: "58<sup>th</sup> ISI World Statistics Congress, Dublin". The names of the paper meetings will also change as follows:

- Invited Sessions replaces Invited Paper Meetings
- Contributed Sessions replaces Contributed Paper Meetings
- Special Topic Sessions replaces Special Topic Contributed Paper Meetings

The Dublin Congress will take place from August 21-26, 2011, and will include a special Theme Day during which all papers will address, from various statistical perspectives, "Water, quality and quantity". Please consult the Congress website for more news: [www.isi2011.ie](http://www.isi2011.ie).

With the idea of modernizing as an organization, the *ISI Newsletter* is now only available online for ISI and Section members. For those who still prefer a print version, it is available by request from the ISI Permanent Office. The *ISI Newsletter* will also be undergoing a makeover of sorts next year. The first issue of 2010 is the 100<sup>th</sup> issue of the *ISI Newsletter*. If



The Special SPA Volume is expected to appear in the first semester of 2010, thanks to the diligence of the eight authors.

*M. Yor (guest editor)*

*M. E. Vares (guest co-editor)*

*T. Mikosch (SPA editor)*

you have any special ideas for this commemorative issue, please e-mail Shabani Mehta at [s.mehta@cbs.nl](mailto:s.mehta@cbs.nl).

The redesign of the ISI website is the top priority and will be focused on over the next several months. The Publications Committee will have an advisory panel to the ISI Permanent Office. This Committee has itself the task to focus on the various publications of the ISI and its sections to ensure the relationships with the publishers are of optimum quality for the ISI and sections.

When the ISI Executive Committee and ISI Council gathered in Durban for meetings, it also became apparent that a few other matters will need attention over the next couple of years. The ISI Council Members will from now on be given more specific roles to contribute to the ISI Executive Committee's goals and

decision-making. Another main area is the ISI's relationships with national statistical societies and sister societies will be nurtured so that the statistical world can benefit from each other. The forthcoming issue of the *ISI Newsletter* will give you more details on these developments.

Finally, taking into consideration the economic situation, we are all dealing with, the 2010 ISI membership fee will remain the same as in 2009.

Ms. Ada van Krimpen welcomes ideas and suggestions from Bernoulli Society members. She can be reached by e-mail at [an.vankrimpen@cbs.nl](mailto:an.vankrimpen@cbs.nl).

*ISI Permanent Office, [isi@cbs.nl](mailto:isi@cbs.nl)  
<http://isi.cbs.nl>*

## Stepping Toward 2013

Jean Jacod, the former president of our Society, in his opening address during the 7th World Congress in Probability and Statistics in Singapore, discussed the question of whether scientific societies could still play their old roles in the contemporary world. No such questions were present in the corresponding speech of Jianqing Fan, the President of the Institute of Mathematical Statistics. This fact was not caused by different temperaments of the dignified speakers but it reflected the self-awareness of the two sister institutions. While the IMS is rich, vigorous and rooted in his long tradition, the Bernoulli Society for Mathematical Statistics and Probability seems to experience a crisis of identity.

Victor Perez-Abreu, the successor of Jean Jacod, is continuing the process of diagnosis, trying to take into account as many factors, as possible. Some points, however, are obvious, without much consideration: while the "interior" activities (publications, organization of conferences, finances) go more or less smooth, the relations of the Bernoulli Society with the "exterior" (number of members, the absence of the society in the public life) are much less satisfactory. As a member of the society's council, I would like to contribute a bit to the discussion by proposing a strategy of developing national branches of the society. The strategy, if chosen and, of course, successful, should bring a substantial increase in the number of members, much better visibility of the society in the contemporary world and improvement of the society's finances.

There are some key observations in the background. First, when anyone can become a member of the society, just by paying the membership fee, the important factor of prestige disappears. Personally, I felt distinguished when invited to join the Bernoulli Society in the middle of eighties of the past century. At that time, among the members were the best Polish probabilists and statisticians. What to do in order to restore the former exclusive status of the membership, at

least partially? Create two categories of members. You can be an ordinary ("cosmopolitan") member of the Bernoulli Society, according to the present rules, but to be a member of the national branch you must be invited. All members can share benefits of the membership, but the membership in the national branch would receive a special flavour.

This idea has a continuation. The present membership fee, although not very high according to standards of some countries, can be a substantial expense in others. For instance, in Poland (and probably also in other "new members" of the European Union, which is not the poorest region of the world), 70 Euros is approximately 15% of a month's net salary of a person at the postdoc position. Perhaps this is the reason that among members of the Bernoulli Society there are only 12 people from Poland, mostly professors. A solution would be to fix the fee for membership in the national branch at the appropriate level. And then a part of the membership fees (50%?) would be transferred to the center. To prevent the society from financial losses, one could decide that the national branch can be created provided the amount of money transferred to the center would not be lower than the threshold income, defined as the average of sums paid by members of given nationality during the three years prior to the year of initiation of the national branch.

Three remarks are relevant here. This is not a very original idea. The Bernoulli Society had been functioning this way during the seventies and eighties, at least with respect to countries behind the "iron curtain". Further, national branches may apply for support in their countries. Funds obtained this way in general cannot be transferred abroad, but can be used locally for many activities, including realization of programs initiated by the center. Finally, let us notice that the IMS is basically a national institution, admitting members of foreign origin. Despite this there exists "IMS China".

It is clear to make the above system really work at the beginning; one needs some leading idea, unifying efforts of national branches in attractive direction. I see two such ideas.

First goes the proposal due to Springer to establish an online, dynamic and open access probability and statistics wiki in conjunction with statistical societies. Quoting the flyer by Springer: “The wiki will provide an authoritative reference for graduate students, researchers and practitioners. Contributors will retain copyright to their articles and the site’s name will be agreed upon by the partners.” It is very important to have competent texts in English. But the national branches could provide a support for this initiative in national languages, with clear impact on development of Probability and Statistics in local education.

The other really exciting idea is to involve national branches in the 2013 Initiative. Let me recall that the year 2013 marks the 300th anniversary of publication of *Ars Conjectandi* by Jacob Bernoulli and 250th anniversary of publication of *Essay towards solving a problem in the doctrine of chance* by Thomas Bayes. On a similar occasion, 50 years ago, Lucien Le Cam and Jerzy Neyman organized a scientific seminar in Berkeley and published its proceedings under the title “Bernoulli 1713, Bayes 1763, Laplace 1813. Anniversary Volume”, J. Neyman and L.M. Le Cam (Eds.) Springer, New York 1965. (Notice that mentioning Laplace in this context was a kind of twisting facts, for his memorable book “Théorie analytique des probabilités” was published in 1812 and the second edition – in 1814). Nowadays, the work of the great pioneers is well known and surely would not attract much public attention. On the contrary, the last 50 years witnessed an extraordinary development of probabilistic and statistical methods, in many areas of science, medicine, industry, economics, finance and social life, and this fact is certainly not commonly known. So it is not surprising that there is an idea of using the year 2013 as opportunity for promoting the achievements and ubiquitous presence of Probability and Statistics in the contemporary world.

This topic was discussed last year during the meeting of the council in Singapore. Victor Perez-Abreu collected the results of discussion as well as valuable contributions of some authorities asked for their opinions and presented the summary during this year’s meeting of the council in Berlin. Now it is time for planning the agenda. Surely several activities should be performed at the central level. For example, the anniversary must find place in programs of traditional meetings (special sessions, etc.) planned on 2012 and 2013. But again, this is in a sense “interior” action. My idea is to develop national branches and charge them with organization of local (national) celebrations of the year 2013. They can collect funds and organize events for much wider audience than the executives of the Bernoulli Society.

The ideal solution would be if UNESCO calls the year 2013 “The International Year of Probability and Statistics”, similarly as 2000 was “The Year of Mathematics”, 2005 was “The Year of Physics” and 2009 is “The International Year of Astronomy”. Let me quote here very instructive information found on the corresponding web page: “The International Year of Astronomy 2009 (IYA 2009) is a global celebration of astronomy and its contributions to society and culture and marks the 400th anniversary of the first use of an astronomical telescope by Galileo Galilei. The aim of the year is to stimulate worldwide interest, especially among young people, in astronomy and science under the central theme “The Universe, Yours to Discover”. (...) The IYA 2009 activities are taking place at global and regional levels, and especially at the national and local levels. National Nodes in each country are running activities throughout the year, aimed at establishing collaborations between professional and amateur astronomers, science centers, educators and science communicators.” I would like to stress that there are 146 National Nodes involved in the above project!

Is the Bernoulli Society in a position to appeal to UNESCO for such an action? Alone – doubtful, if we reasonably estimate our international meaning. “The International Year of Astronomy 2009” is a joint venture of UNESCO and the International Astronomical Union. So should we first create a corresponding international union, gathering everybody interested in statistics? Also, the answer seems to be no. Within the statistical profile, there are many kinds of activities, sometimes very different from probability and mathematical statistics, as we understand it. For example, next year on October 20th (observe 20-10-2010!), the United Nations Statistics Division will organize the World Statistics Day that will focus on three sub-themes: service to the nation and the world, professionalism and integrity. We cannot identify objectives of our society (“... the advancement of the sciences of probability and mathematical statistics and of their applications to all those aspects of human endeavor which are directed towards the increase of natural knowledge and the welfare of mankind”) with the above rather narrow aims of a group of professionals.

Therefore, it is important that the President will start talks to other organizations (International Statistical Institute, Institute of Mathematical Statistics) about joint initiatives preserving the essence of our thinking: “The Sciences of Probability and Statistics and their Applications”.

And what if we do not succeed with naming the year 2013 “The International Year of Probability and Statistics”? Given a created network of national branches, we can do much more by ourselves!

*Adam Jakubowski, Torun*

# Kiyosi Itô and Wolfgang Döblin

## Life and Legacy of Kiyosi Itô

### Abridgement of Masatoshi Fukushima’s presentation at the SPA 2009 in Berlin

Kiyosi Itô was born on September 7, 1915, in Mie prefecture, Japan. His father was a high school teacher on Japanese and Chinese literature. Kiyosi Itô passed away on November 10, 2008, at the age of 93. He entered Tokyo University, Department of Mathematics, in 1935 and graduated from it in 1938. After graduation, he worked in the Statistical Bureau of the Government in Tokyo until he became an Associate Professor at Nagoya University in 1943. During this period, he was also awarded a research grant of the government, and thanks to the kindness of the head of the Bureau, he was able to spend enough time on his research in the Department of Mathematics at Tokyo University.



Statistical Bureau 1942

In 1942, Itô published his first two papers [I1, I2]. The first one [I1] presented what is nowadays called the Lévy-Itô decomposition of a Lévy process. The second one [I2] was in a mimeographed handwritten Japanese journal issued from Osaka University and contained already the stochastic integral, stochastic differential equations with Lipschitz coefficients and Itô's formula. It is still hard for me to imagine how such big results could be attained in such a short period of time starting from almost nothing.

In a film, K. Itô explains how he started to work in probability theory: “In 1935 I visited with my classmates Kodaira and Kawata a bookstore, a foreign book dealer in Tokyo, and encountered Kolmogorov’s book [K1]. Kodaira told me that this is said to be Probability Theory. Of course, I knew what the word “Wahrscheinlichkeitsrechnung” meant. But I did not take it seriously at that time. After 1937, I got gradually interested in Probability Theory and realized that this book by Kolmogorov is what I had been truly looking for. Since then, I have kept it as the firm cornerstone in my mathematical thinking while advancing ahead. From my high school days, I was very fond of

mathematical descriptions in mechanics. I preferred Mathematics to Physics as it is more rigorous, but I was also concerned with the practical use of mathematics.

In the mathematical community of Japan, Probability Theory was not recognized as an independent branch of mathematics. I strongly felt that Probability Theory should be of its own interest and of its own significance as a new field in science, not just something subordinate to other branches of mathematics like Fourier Analysis, Differential Equations, etc.

When I came across the book of P. Lévy [L] where the processes of independent increments were studied on the sample path level and the Lévy-Khintchine formula was then derived by taking an

§ 7. 不定積分ノ例

例 1.  $\int_0^t x_c dx_c = \frac{1}{2} x_c^2 - \frac{1}{2} t$

例 2.  $\int_0^t x_c^2 dx_c = \frac{1}{3} x_c^3 - \int_0^t x_c d\tau$

例 3.  $\int_0^t a(x_c) dx_c = \int_0^{x_c} a(\lambda) d\lambda - \int_0^t \frac{a'(x_c)}{2} dt$

但し  $a'(\lambda)$  は  $\lambda$  ノ連続函数トスル。

例 1, 例 2, 例 3 ノ特別ノ場合林、例 3 ノ  $\int$  証明スル。

尤  $L(\epsilon)$  7

(1)  $L(\epsilon) = \int_0^\epsilon a(\lambda)$

ニヨリテ定義スル。

Itô formula in 1942

expectation, I was extremely impressed. I keenly realized that Probability Theory must be developed in this way. But, for P. Lévy, compound Poisson processes were well-known objects that had arisen in practical problems of insurance and he might have reached a general Lévy process quite constructively as their possible limit without big surprise. I then made the presentation in [L] more rigorous with a help of the idea in [D] on the concept of the regular (càdlàg) version of the sample path.

With this experience, I turned to a construction of a Markov process interpreting Kolmogorov's analytic approach in [K2] in the following way: the sample path  $\{X_t, t \geq 0\}$  of a Markov process (in the diffusion case) is a continuous curve possessing as its tangent at each time instant  $t$  the infinitesimal Gaussian process

$$\sqrt{v(t, X_t)} dB_t + m(t, X_t) dt$$

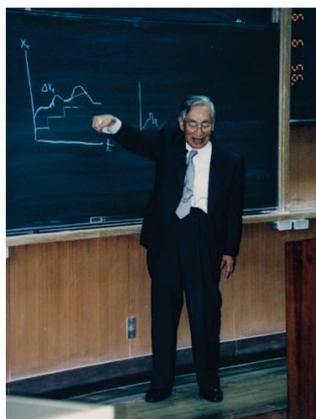
I spent almost one year by repeatedly drawing pictures of such curves before arriving at a right formulation of stochastic differential equations.

*My first daughter was 2 years old, and I remember that she said “Daddy is always drawing pictures of kites!” However, such a drawing convinced myself that a general coefficient of the equation ought to be a functional of the whole past of events  $\{X_s; s \leq t\}$ , a process adapted to a filtration  $\{\mathcal{F}_t\}$  in the modern term, and that it is really an infinite dimensional and non-linear object.”*

A few years after the end of the Second World War, Itô sent J.L. Doob a manuscript of an extended English version of his 1942 Japanese paper asking for a possible publication in the USA. No Japanese journal at that time allowed such a long paper due to the shortage of paper. Doob immediately appreciated its significance and kindly arranged its publication in [I3].

Itô became a Professor of Kyoto University in 1952. He was also a Professor of Stanford University (1961-1964), Aarhus University (1966-1969) and Cornell University (1969-1975), respectively. During these periods of being abroad, Itô occasionally came back to Kyoto and gave very influential lectures on branching processes, point processes of excursions and so on. He retired from Kyoto University in 1979. He was then a Professor of Gakushuin University, Tokyo, until 1985.

From 1954 to 1956, Itô was a Fellow of the Institute for Advanced Study at Princeton University, where W. Feller had started his investigation of the one dimensional diffusion processes.



80-th Birthday Lecture  
RIMS 1995

He tells the following about this period: “*When I was in Princeton, Feller calculated repeatedly for a one dimensional diffusion with a simple generator*

$$gu = \frac{a}{2}u'' + bu'$$

the quantities like

$$s(x) = P_x(\sigma_\alpha > \sigma_\beta),$$

$$m(x) = -\frac{E_x(\sigma_\alpha \wedge \sigma_\beta)}{ds(x)}, \quad \alpha < x < \beta.$$

*In the beginning, I wondered why he was repeating so simple computations as exercises. However, in this way, he was bringing out intrinsic topological invariants that do not depend on the differential structure. I understood that the one dimensional diffusion is a topological concept but I was not as thoroughgoing as Feller.*

*When Feller told me about this, he said he once listened to a lecture by Hilbert who mentioned “Study a very simple case very profoundly, then you will truly understand a general case.” I like to convey these words by Hilbert to you.”*

Masatoshi Fukushima, Toyonaka Osaka

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## On the Life and Mathematics of K. Itô and W. Döblin

### Abridgement of Peter Imkeller's introductory presentation at the Itô-Döblin event at the SPA Conference 2009 in Berlin

Kiyosi Itô was born on September 7, 1915, in Hokuseicho, Mie prefecture, Japan. He died last year on November 10, 2008, in Kyoto, at the age of 93. Between these two dates lies an extremely successful career: in particular, the creation of modern stochastic analysis with the central notion of the stochastic integral in his paper from 1942, “On stochastic processes”, that provides a probabilistic underpinning of Kolmogorov's

analytical approach to diffusion theory. Without these fundamental concepts, many areas of the theory of stochastic processes that are the subject of this conference are unimaginable. For his outstanding work, Itô received numerous prizes, and many honorary doctorates. He was elected to the Academies of Sciences in Japan, the US and France. Post-war Germany had no National Academy until recently. From our perspective,

Itô's work was honored by the Gauss prize sponsored by IMU and DMV. And Itô received the renowned Israeli Wolf prize.

Only about half a year before Itô, on March 17, 1915, Wolfgang Döbblin, second son of the German-Jewish novelist Alfred Döbblin, was born in Berlin. His family emigrated to Paris in 1933 and Wolfgang became French. He studied mathematics at the Sorbonne, did a doctorate with M. Fréchet in probability, was drafted for the French army in 1938. When German troops were advancing in Eastern France in summer 1940, his military unit in disarray, he took his life on June 21, 1940, in a barn in Housseras, at the age of 25. In the last two of these 25 years, during his military service, and in the period following the German attack on Poland, known in France as *la drôle de guerre*, he had worked on a manuscript which he decided to send as a sealed envelope (*pli cacheté*) to the archive of the Académie des Sciences in Paris. He was never able to withdraw the envelope himself, so his manuscript was shut away in the archive for 60 years, and made accessible only in 2000 after his brother Claude had given his consent.

Though Itô and Döbblin were born almost at the same time, it is hard to imagine two more contrasting careers. If it comes to their mathematical goals, however, surprising similarities appear. This is already indicated in the title of Döbblin's *pli cacheté* manuscript *Sur l'équation de Kolmogoroff*. Roughly, as Bernard Bru and Marc Yor found out after it was opened in 2000 in Paris, in the school pupils' exercise book in which Döbblin had scribbled his notes, were hidden elements of a weak form of Itô's stochastic approach to Kolmogorov's parabolic PDE.

I cannot and do not want to be more specific on the relationship of the mathematical work of Itô and Döbblin at this point, and also not reveal more about the tragic background story. To continue elaborating on this from the mathematical perspective, I am glad and proud to present to you two outstanding mathematicians, who have worked in the footsteps of both Itô and Döbblin, Masatoshi Fukushima from Osaka and Hans Föllmer from Berlin.

Masatoshi Fukushima received his Ph.D. with Kiyosi Itô as advisor. He is globally known and renowned for his pioneering work at the interface of stochastic processes and analysis, the mathematical field starting at Kolmogorov's and Itô's approaches to the heat diffusion, with a modern focus on Dirichlet forms. He will now talk about his impressions of the life and legacy of his teacher Kiyosi Itô.

I am now very proud to announce my colleague Hans Föllmer. Hans is a globally recognized pioneer in the area of stochastic analysis and finance. On the first sight a different area, his work witnesses the striking efficiency of mathematical concepts. Namely, Itô's and Döbblin's work, starting in paradigms of physics, can nowadays also be seen as fundamental for mathematical finance. Hans will talk about Döbblin's work and the link to Itô's.

We now return to the tragic background of Wolfgang Döbblin's short career. I must confess that during my years of study of Mathematics and Physics at the University of Munich when I heard, in my first course on Markov processes, about the famous Döbblin coupling technique, I thought that the novel "Berlin Alexanderplatz" had just been written by a multi-talent in literature and mathematics. Only after 2000, French friends told me about the *pli cacheté* and the tragic story of the writer Alfred's mathematician son Wolfgang. The story left me dumbfounded when I first heard of it.

Probably the same happened to two journalists from Hamburg and Amsterdam, Agnes Handwerk and Harrie Willems, who are both present in this room, and who got seized by the extraordinary story. They first met with Bernard Bru, professor at the university Paris 5. He reported about how in 1991 at the Académie des Sciences in Paris he came to know of the existence of a sealed envelope, while preparing a meeting in the US in memory of Wolfgang Döbblin, organized by Kai-Lai Chung and Joe Doob. Bernard Bru encouraged the journalists to work on a documentary about the story. They produced a radio presentation, followed by a video film. It is this video film, also available as a DVD from Springer that we will now present to you. Please enjoy it.

Peter Imkeller, Berlin

Further information about the conference event on Tuesday featuring K. Itô and W. Döbblin and the tragic story about the sealed envelope can be found in

- [1] M. Fukushima: On the works of Kiyosi Itô and stochastic analysis. *Japanese Journal of Mathematics* **2** (2007), 45-53
- [2] B. Bru, M. Yor: Comments on the life and mathematical legacy of Wolfgang Doeblin, *Finance and Stochastics* **6** (2002), pp. 3-47.
- [3] P. Imkeller, S. Roelly: Die Wiederentdeckung eines Mathematikers: Wolfgang Döbblin, *Mitteilungen der Deutschen Mathematikervereinigung* **15** (2007), pp. 154 - 159, ISSN 0947-4471.
- [4] Rediscovered Proof: Wolfgang Döbblin. *IMS Bulletin* **38** (3), pp. 8-9.
- [5] Handwerk, H. Willems: Wolfgang Doeblin A Mathematician Rediscovered, DVD, PAL, (English, French and German), Springer, Berlin 2007, ISBN 978-3-540-71959-5.

## Prizes

### Itô Prize for Marc Wouts

#### Abridgement of Maria Eulalia Vares' presentation at the SPA 2009 in Berlin

The Itô prize has been created in 2003 by an initiative of Philip Protter on the occasion of Professor Kiyosi Itô's 88<sup>th</sup> birthday, a special date in the Japanese tradition. It celebrates the fundamental contributions of Professor Itô to probability. This is the first edition following the sad event of his passing away, and we wish to honor his memory.

Every two years, the editorial board of the journal Stochastic Processes and Their Applications (SPA) selects one article published in SPA during the last two years, which the board considers to bring a substantial contribution to the subject. By the way, I take this opportunity to mention that Sylvie Roelly, our chair today, received the Third Itô prize, in 2007 (jointly with Michele Thieullen).

I am here today because this prize was decided by the past editorial board of SPA, whose term ended a few months ago. On behalf of the journal Stochastic Processes and their Applications, it is my big pleasure to award the fourth Itô prize to Marc Wouts, from the University of Paris 13, for the paper "A coarse graining for the Fortuin-Kasteleyn measure in random media".

Let me add a few words on this decision:

Renormalization procedures play a fundamental role in the description of the equilibrium phase coexistence in statistical mechanics models. In the classical case,

remarkable progress has been achieved in the 90s, following the development of an efficient coarse graining description by Agoston Pisztor. The extension to random environments is difficult, and requires truly new insights. The results and tools developed in the article show a wide range of potential applications.



Finally, I would like to transmit to the recipient the kind regards of Professor Itô's family, and before passing on to Thomas Mikosch, the journal editor, it is my great pleasure to call Marc Wouts to receive a certificate of our recognition for his work.

*Maria Eulalia Vares, Rio de Janeiro*

#### Curriculum Vitae of Marc Wouts

Marc Wouts entered École Normale Supérieure as a student in 2000 and graduated then at University Pierre et Marie Curie. He obtained his Masters from the University Paris Sud and then started a Ph.D. thesis at the University Paris Diderot under the direction of Thierry Bodineau. His research was concerned with the effects of dilution in the Ising model on the phenomenon of phase

During that time, he was solicited for teaching duties at University of Barcelona, ENSAE Paris, University Paris Ouest. Last year he obtained a teaching and research position (maître de conférences) at University Paris Nord.

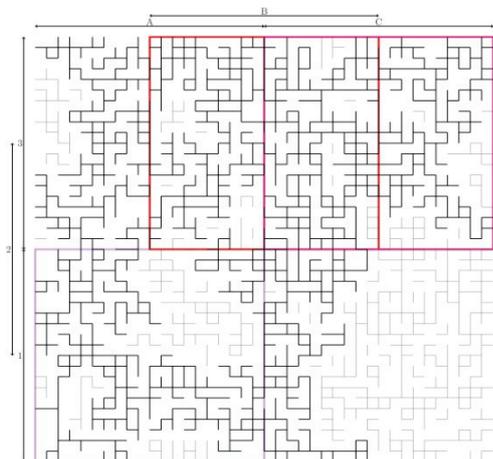


#### Abstract of the paper

The award winning paper "A coarse graining for the Fortuin-Kasteleyn measure in random media" addresses the issue of establishing a renormalization scheme for the dilute Ising model in the regime of phase transition. The Fortuin-Kasteleyn representation of the Ising model is an adequate framework for answering such a question as it provides a joint distribution on spins and edges variables, in which the geometry of clusters govern the

structure of spins. An effective description of the geometry of those clusters for the non-dilute case was given by Pisztor [PTRF 1996] and permitted a rigorous description of complex phenomena like phase coexistence in three dimensions for the Ising model. The above paper is a generalization of the work of Pisztor for a dilute model. An additional layer of randomness is introduced: the interaction strength between neighbour

spins are i.i.d. positive and bounded random variables. Although being a generalization of the uniform model, this random media version lacks an essential property of the former: the DLR equation. This makes Pisztor's scheme of proof ineffective and the author has to resort to advanced probabilistic and geometrical constructions to bypass this difficulty. The same controls as for the uniform case are established. It is proven that blocks are



good (see Figure 1) with probability close to one when the block size is large, under an assumption of slab percolation under the averaged measure. Controls on the density of the cluster are inferred as well. This renormalization framework was latter applied [CMP 2009] to the study of phase coexistence in the dilute Ising model.

**Figure 1:** An insight at renormalization. The figure presents a realization of independent percolation of parameter  $p=0.52$  on a  $40 \times 40$  square lattice. A block is good when it contains a cluster that connects every edge of the block, and when this cluster is the only one that has a diameter larger than half the size of the box. The block A1 is not good because it contains two clusters of diameter greater than 10. Blocks B3 and C3 are good. Notice that overlapping good blocks share the same main cluster. In the paper is it shown, under the slab percolation assumption, that most blocks are good when their size is large enough. This provides an effective control of the geometry of the main cluster.

Marc Wouts, Paris

## Guionnet Awarded 2009 Loève Prize

The 2009 Line and Michel Loève International Prize in Probability is awarded to Alice Guionnet of the École Normale Supérieure de Lyon. The prize, which carries a monetary award of \$30,000, will be presented at a ceremony in Berkeley in October 2009.

She received her Ph.D. in 1995, advised by Gerard Ben Arous. Her thesis dealt with Langevin dynamics in the Sherrington-Kirkpatrick model of spin glasses, via a large deviations approach. The study of dynamics for complex systems (spin systems, particle approximations to the nonlinear filtering equations and spin glasses, where logarithmic Sobolev inequalities in particular and concentration of measure methods in general are very relevant), and more specifically the study of aging phenomena, continue to be a component of her research to this day, with important collaborations with Zegarlinsky, Ben Arous, Dembo and Mazza. Maybe more important, it also naturally lead her to what would become her main area of research and best known work, namely the study of large random matrices. Starting with a proof of the large deviations principle for the spectral measure of Wigner matrices (with Ben Arous), which helped to bring to the attention of probabilists the concept of non-commutative entropy coined by Voiculescu, she quickly realized that dynamics and concentration techniques can be adapted to this context and yield a systematic approach to many open questions. Results include the full large deviation principle for the spectral measure of generalized

Gaussian matrices and concentration of the spectral measure in more general models (with Zeitouni), and later applications to the study of random matrix models, which had long been studied non-rigorously in mathematical physics. She has found rigorous arguments and elucidated connections with other mathematical fields, in topics such as first and second order expansions of the free energy and the connection with maps enumeration; stochastic analysis for random matrices and Dyson's Brownian motion; connections with "free probability"; and most recently, the study of planar algebras. A partial list of collaborators here includes B. Collins, V. Jones, D. Shlyakhtenko, and her students M. Maida and E. Maurel-Segala. This has been an extremely active field over the last years, with many workers pursuing many partly overlapping techniques and problem domains, and her lecture notes from courses in 2003 and 2006, together with a forthcoming monograph (with Anderson and Zeitouni), have helped to bring welcome clarity to the field.

*About the Prize:* The Prize commemorates Michel Loève, Professor at the University of California, Berkeley, from 1948 until his untimely death in 1979. The Prize was established by his widow, Line, shortly before her death in 1992. Awarded every two years, it is intended to recognize outstanding contributions by researchers in probability that are under 45 years old.

David Aldous, Berkeley

## Obituaries

### Kai Lai Chung, 1917-2009

Kai Lai Chung, one of the leading probabilists of the second half of the 20th century and Professor Emeritus of Mathematics at Stanford University, passed away on June 1, 2009, at the age of 91. He is survived by his wife, Lilia, three children, Daniel, Marilda, and Corinna, and four grandchildren, Alex, Adam, Davison and Vanessa. Kai Lai Chung was born in 1917 in Shanghai, China, to a family with roots in Hangzhou in the Zhejiang Province. He entered Tsinghua University in 1936 and graduated in Mathematics in 1940. During the war with Japan, major universities in the Beijing-Tianjin region moved to the southwest city of Kunming and regrouped as the National Southwestern Associated University where Chung worked in a position analogous to that of assistant professor. During this period, he first studied number theory with Lo-Keng Hua and then probability theory with Pao-Lu Hsu. In 1944, he won a highly competitive Boxer Rebellion Indemnity scholarship for study in the United States and arrived at Princeton University in December 1945. He completed his Ph.D. at Princeton in 1947 with Harald Cramér as advisor (Cramér was visiting Princeton from Sweden at the time - Samuel Wilks and John Tukey were the other members of the dissertation committee). Chung's thesis was titled "On the maximum partial sum of sequences of independent random variables". Subsequently, he held academic appointments at the University of Chicago, Columbia University, University of California at Berkeley, Cornell University and Syracuse University. He joined Stanford University in 1961 and remained there until his retirement in 1988. Over the years, he held extended visiting appointments at several institutions: University of Strasbourg (France), University of Pisa (Italy), and the ETH (Eidgenössische Technische Hochschule) of Zurich (Switzerland). He held the George A. Miller Visiting Professorship at the University of Illinois at Urbana-Champaign in 1970-71, he was a Fellow of the Institute of Mathematical Statistics, and in 1976 he was made an Overseas Fellow of Churchill College, Cambridge (UK).

Kai Lai Chung was a great innovator and his research had a major influence on several areas in probability: sums of independent random variables, Markov chains in continuous time, time reversal of Markov processes, probabilistic potential theory, Brownian excursions and gauge theorems for the Schrödinger equation. He authored 133 journal articles spanning a period of 70 years. A selection of his works was recently published by World Scientific in celebration of his 90th birthday. In addition to his research articles, Kai Lai Chung's eleven books have influenced generations of students of probability, both graduate and undergraduate. He was well known for his elegant style, his clarity and precision in exposition, and his lively prose. His widely used graduate text "A Course in Probability Theory" is now in its third edition, and his popular undergraduate

text, "Elementary Probability and Stochastic Processes" (with Farid AitSahlia as coauthor for the current fourth edition), has appeared in English, Chinese, German, Persian, Russian and Spanish.



Kai Lai Chung taught probability for nearly 40 years and supervised 14 Ph.D. students: Warren Hirsch, Rafael Chacon, William Pruitt, Norman Pullman, Naresh Jain, Arthur Pittenger, Robert Smythe, Michael Chamberlain, Christopher Nevison, Michael Steele, Ruth Williams, Elton Hsu, Ming Liao and Vassilis Papanicolaou.

The Mathematics Genealogy project currently lists a total of 119 academic descendants for Kai Lai Chung. His enthusiasm for mathematics was evident in his energetic classroom and research presentations and in his lively one-to-one discussions. He had a spirited and candid delivery style. He is particularly remembered by collaborators and colleagues for his stimulating questions, delivered in person, or by letter and phone, and in later years by fax.

In 1981, Kai Lai Chung, along with Erhan Cinlar and Ronald Gettoor, initiated the "Seminars on Stochastic Processes." These conferences, with their innovative structure of just a few formal talks, allowing plenty of time for informal discussions and research problem sessions, continue as highly successful annual meetings to this day. The 1987 Seminar, held at Princeton University, honored Kai Lai Chung and Gilbert Hunt around the time of their retirements. Among the other participants were Claude Dellacherie, Paul-Andre Meyer and Jacques Neveu, who came from France to honor Chung and Hunt, and also to tell of their respective important influences on the French probability school. The 2010 Seminar, to be hosted by the University of Central Florida, will have a session to

commemorate Kai Lai Chung's contributions to probability.

Kai Lai Chung also played an influential role in the development of probability theory in his native China immediately after the chaotic years of the Cultural Revolution (1966-1976). His visit to China in 1978 (together with Joseph Doob and Jacques Neveu) was the starting point for renewed contact of Chinese probabilists with the West. He visited China many times after that giving numerous lectures and short courses, and helped young Chinese students to gain opportunities to study in the United States. He also served as an external examiner for several Universities in the Asian region, including the National University of Singapore.

Kai Lai's rest for life, combined with his energetic curiosity, was apparent to all who knew him, both within and outside of the community of mathematics. Besides his pursuit of mathematics, he had broad cultural interests. Educated in a classical Chinese tradition, he was deeply familiar with literary traditions and forms of the Chinese language. His family recalls how, in his many travels to China from 1978 onward, he sought out and helped re-establish the stature of writers, poets, painters and calligraphers he counted as old friends. His passion for culture was not restricted to that

### Erich L. Lehmann, 1917-2009

Professor Erich Lehmann, a major figure in our field of statistics, died on September 12, 2009, at the age of 91. Lehmann, who taught in Berkeley's Statistics Department, touched the lives of many people in statistics and beyond. He was a leading figure in the second generation of statisticians, following the establishment of the modern field by Neyman, Fisher and Wald before and shortly after the Second World War. As is usual after a period of explosive innovation, confusion reigned. It was Lehmann's great talent to clear the fog and build a coherent theoretical structure. This was reflected in his great books, *Testing Statistical Hypotheses* (1959) and *Theory of Point Estimation* (1983), which were the centerpieces of graduate statistical education for most of the last half of the century, and have been translated into many languages. The structures he built incorporated much of his own research into decision theoretic questions, the theory of unbiased estimation, rank based methods including their asymptotic theory and many other areas of statistics, including concepts of dependence, multiple comparison procedures, the history of statistics and much else.

Lehmann achieved all the major honors awarded in the field and beyond: the prestigious Wald and Fisher lectureships, the presidency of the Institute of Mathematical Statistics and the editorship of its main journal, *The Annals of Mathematical Statistics*. He was granted a remarkable three Guggenheim Fellowships in 1955, 1966 and 1980 and was elected to the American Academy of Arts and Sciences in 1975 and to the National Academy of Sciences in 1978. The Universities of Leiden and Chicago awarded him

of his homeland. In his extensive travels, he always made sure to see important historical, cultural or natural sites. He surprised many with his wide ranging and intimate knowledge of literature and music, especially opera. He spoke several languages, and particularly delighted in practicing Italian, which he taught himself in his retirement.

We are grateful for having known Kai Lai, for his inspiration and guidance, and his many engaging conversations over the years. He was unique and highly memorable; he will be missed.

*Farid AitSahlia, Stanford University*

*Erhan Cinlar, Princeton University*

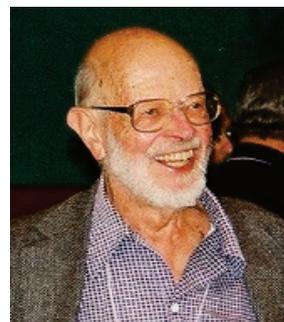
*Elton P. Hsu, Northwestern University*

*Ruth J. Williams, University of California*

### Postscript:

A memorial service, to be held at Stanford University, is being planned for the fall. The family requests that charitable donations in memory of Kai Lai Chung be made to the Kai Lai Chung memorial fund at Stanford University, Mathematics Department.

honorary doctorates. At Berkeley, he held Miller Professorships twice and served reluctantly but very effectively as Department Chair.



Born in Strasbourg, France in 1917, Lehmann was raised in Frankfurt am Main, where his family had deep roots. Fleeing the Nazis with his family in 1933, he graduated from high school in Switzerland and attended college in Cambridge, England. He enrolled in Berkeley as a graduate student in 1940 and never left, save for stints in the Air Force during World War II, when he was stationed in Guam, and leaves at Columbia, Princeton and Stanford. Obtaining his Ph.D. in 1946, he embarked on a teaching career that included the supervision of more than 40 doctoral students of his own, several of whom became leaders in the next generation of statisticians. This achievement was due not only to his great scientific stature but also to remarkable personal qualities. He was kind and generous of spirit, had an unusual sensitivity to the feelings of others and a great astuteness about the world, what could be achieved, and how to do it. As a

consequence, his impact on his students and colleagues went well beyond the scientific. They honored him with a Festschrift (1983) for his 65<sup>th</sup> birthday, a series of three Lehmann Symposia (2002, 2004, 2007), and a forthcoming volume of selected works.

In addition to his masterpieces, Lehmann published three important, less advanced texts: *Basic Concepts of Statistics* (with his longtime collaborator and friend J. L. Hodges, Jr.) *Nonparametrics: Statistics Based on Ranks*, and *Elements of Large Sample Theory*. After a second edition of his classic *Testing Statistical Hypotheses* in 1986, he recruited young collaborators for further editions of his major texts – George Casella for *Estimation* in 1998 and Joe Romano for a third edition of *Testing* in 2005. These were major revisions that brought the books back to the frontiers of research. In his last decade, he turned his energies to the history of the field in whose development he played such an important part, publishing his professional autobiography, *Reminiscences of a Statistician: The*

*Company I Kept*, and an account of the productive rivalry between Fisher and Neyman tentatively titled *Fisher, Neyman, and the Creation of Classical Statistics*, completed shortly before his death, to be published by Springer. He also enjoyed a lifelong passion for literature and in retirement translated stories by favorite authors such as Adalbert Stifter and Wilhelm Raabe, seeking to give them a wider audience than they previously enjoyed. At the time of his death, he was working with Fritz Scholz, a former student, on a new edition of his *Nonparametrics* to be used in conjunction with the popular “R” statistical language.

He is survived by his wife, Juliet Popper Shaffer, herself an accomplished member of our field and a collaborator during the later part of his life, and a loving blended family that includes his three children, Stephen, Barbara and Sophia; three step-children, Ron, Len and Tanya; eight grandchildren and two great-grandchildren with a third on the way.

*Peter Bickel, Berkeley, and the Family*

## Past Conferences, Meetings and Workshops

### SPA 2009 in Berlin

The “33rd Conference on Stochastic Processes and their Applications (SPA 2009)” took place in Berlin, from the 27th to the 31st of July 2009. The meeting, which was co-sponsored by the IMS, brought together a group of about 630 researchers from about 50 countries in the field of stochastic processes. More than 300 plenary, special session and contributed talks and 40 posters have been presented. The meeting was therefore despite the financial crisis, easily among the biggest SPA meetings ever.

The conference has been organized by the probability groups at HU Berlin, TU Berlin and U Potsdam under the auspices of the Bernoulli Society.



The Program Committee consisted of:

David Aldous (Berkeley), Martin Barlow (Vancouver), Gérard Ben Arous (New York), Mu-Fa Chen (Beijing), Hans Föllmer (Berlin), Nina Gantert (Münster), Luis Gorostiza (México), Dmitry Kramkov (Pittsburgh), Russ Lyons (Bloomington), Anna de Masi (L'Aquila),

Sylvie Méléard (Paris), Claudia Neuhauser (St. Paul), Hirofumi Osada (Kyushu), Youssef Ouknine (Marrakech), Josef Teichmann (Vienna), Ed Waymire (Corvallis), Wendelin Werner (Paris), Ofer Zeitouni (Minneapolis)

and the members of the Organizing Committee were

Dirk Becherer, Jochen Blath (chair), Anton Bovier, Jean-Dominique Deuschel, Jürgen Gärtner, Peter Imkeller (co-chair), Uwe Küchler, Sylvie Roelly, Michael Scheutzow.

The main venues was the Mathematical Institute of TU Berlin, conveniently located in the center of Berlin, which could accommodate up to 14 parallel sessions, and whose main lecture hall, with its 807 seats, provided a generous frame for the plenary lectures and main events. The plenary lectures were given by

Jinho Baik (Ann Arbor, MI), Sourav Chatterjee (Berkeley), Freddy Delbaen (Zurich), Amir Dembo (Stanford, Lévy Lecture), Saïd Hamadène (Le Mans), Claudia Klüppelberg (Munich, IMS Medallion Lecture), James Martin (Oxford), Servet Martinez (Santiago), Pierre Mathieu (Marseille), Jonathan Mattingly (Durham, NC), Peter Mörters (Bath), Ed Perkins (Vancouver, Doob Lecture), Gesine Reinert (Oxford), Laurent Saloff-Coste (Ithaca, NY), Alexander Schied (Munich), Gordon Slade (Vancouver, IMS Medallion Lecture), Stanislav Smirnov (Geneva), Masayoshi Takeda (Tohoku), Anton Wakolbinger (Frankfurt a. M.), Feng-Yu Wang (Beijing).

The conference featured a broad range of scientific and special events, highlighted by the following.

During a reception in the historic TU Lichthof on Monday evening (see picture), Ruth Williams (San

Diego) provided an obituary for the recently deceased Kai Lai Chung. Staatssekretär Hans-Gerhard Husung welcomed the participants on behalf of the Senate of Berlin, Sylvie Roelly, Alice Adenot-Meyer and Térése Dourdent presented musical intermezzi, and Ed Perkins (Vancouver) announced the winner of the Loève-prize 2009, namely Alice Guionnet (Lyon).

On Tuesday evening, the past and present editors of the SPA Journal, Eulalia Vares (Rio de Janeiro) and Thomas Mikosch (Copenhagen), awarded the 2009 Itô prize to Marc Wouts (Paris), who delivered an invited lecture on his prize winning article.



*Masatoshi Fukushima*

After a reception and a musical intermezzo, Masatoshi Fukushima and Hans Föllmer commemorated two

legendary founding fathers of probability, Wolfgang Döblin and Kiyosi Itô (see pages 6 to 8 for more information), and a recent documentary on Wolfgang Döblin's life and mathematical legacy had been screened.

The general assembly of the Bernoulli Society took place on Wednesday evening, where, after the annual report of the Bernoulli Society president Jean Jacod, several new members joined the BSoc.

Finally, more than 300 attendants participated in the conference dinner at the historic Alte Pumpe for a barbecue and buffet.

The conference has been closed on Friday by Victor Perez-Abreu (Mexico) and Marta-Sanz Solé (Barcelona). Finally, the organizers of the 34th SPA in Osaka, represented by Ishiro Shigekawa, announced their meeting next year in Japan.

Please note that, for the first time, a proceedings volume featuring survey articles of most of the plenary speakers will be published with the EMS publishing house and is expected to appear in 2010.

The conference has been supported by the Deutsche Forschungsgemeinschaft (DFG), Landesbank Berlin (LBB), Deutsche Bank Quantitative Products Laboratory (DBQPL), Elsevier, Springer, Total, Berlin Mathematical School (BMS), TU Berlin, Französische Botschaft in Berlin, Fachgruppe Stochastik der DMV.

*Sylvie Roelly, Potsdam*

*Peter Imkeller, Berlin*

*Jochen Blath, Berlin*

## 57<sup>th</sup> Session of the International Statistical Institute

With an extensive scientific program as is customary, the 57<sup>th</sup> Session of the International Statistical Institute took place in Durban, South Africa, August 16–22, 2009, under the heading “Statistics: Our Past, Present & Future.” With the attendance of over 2,500 registered delegates, the venue was the splendid Durban International Convention Centre, located in the business district and situated just a few meters from the Indian Ocean. Thirteen Invited Paper Meetings (IPMs) were organized by the Bernoulli Society.

Ursula Gather acted as general coordinator, representing BS in the ISI Scientific Program Committee. She is to be commended for keeping all IPM organizers within deadlines, and for systematically promoting the notion that IPMs should be aimed at an all-embracing public. Indeed, expository reviews either at the beginning or throughout, that served as general introductions to general topics were the norm, as well as were varied topics. A Tribute Session to David G. Kendall (1918–2007) was one IPM highlight. Elements of his life and importance for ISI and BS were recapitulated as well as were some of his theoretical developments on stochastic geometry and the statistical theory of shape that were

motivated by applications in biology and other fields.



Overall, the IPM sessions collectively spanned a quite broad range of topics and interests, spanning from applications in specific fields to state-of-the-art advances in stochastic models and statistics. Meetings were characterized by overall quality and pertinence. The scope is so comprehensive, that to explicitly mention their titles here is highly illustrative:

Stochastics of Genome; Statistics in Biodiversity; Statistical Modeling and Data Analysis for Neural Coding; Relative Survival; Complex Data Analysis, Dimension Reduction and Sparsity; Functional Data Analysis: Theory and Applications; Inference under Qualitative Restrictions; Semi- and Nonparametric Statistics; Model Building and Regularization, Stochastic Geometry with Applications; Concentration Inequalities; The Role of Chance in Evolution and the IPM in Honour of David G. Kendall. The complete details of these IPMs can be found online on the BS website, under “Meetings.”

Average attendance for BS IPMs was of the order 18–30. In a setting that had some 20 parallel sessions in place — a testament to the sheer size of the congress — these numbers are typical and favorable, but raisable. Because attendance was relatively small when compared to registered delegates, this issue arose in the BS General Assembly on Thursday the 20<sup>th</sup>. Possible actions to increase audiences were discussed, including

appealing choices for some meeting titles when fitting, as well as alternate ways of publicizing abstracts to mitigate any preconception that BS may bring regarding mathematical sophistication.

The inaugural event was a spectacular gala of South African color, music and dance in a theatrical production setting, followed by a fine banquet. Local organizers also prepared a choice of exciting optional tours. Many of us enjoyed the Durban city tour, as well as side trips to impressive surrounding areas such as Suni Pass (a trip by rough-road across the Drakensberg Mountains), bird and game safaris, and highlights of the Zulu culture.

ISI Sessions henceforth will become known under the label “ISI World Congresses”, and the 58<sup>th</sup> of these will be held in Dublin, August 21–28, 2011, ([www.isi2011.ie](http://www.isi2011.ie)). IPMs organized by BS will also be featured, this time coordinated by José M. Corcuera.

*Miguel Nakamura, Guanajuato*

## European Meeting of Statisticians

The European Meeting of Statisticians is an established central event for statistics and probability in Europe and worldwide. The 27<sup>th</sup> European Meeting of Statisticians (EMS 2009) took place from July 20<sup>th</sup> to 24<sup>th</sup> at the Université Paul Sabatier, France, and was held under the auspices of the Bernoulli Society, the IMS and ISI. The University is close to the beautiful old town of Toulouse, located between the quays of the Garonne and the banks of the Canal du Midi of Toulouse, France. The scientific program consisted of three plenary lectures, eight special invited lectures, 24 invited paper sessions and many contributed paper sessions. A number of themes from the Special Invited Lectures were continued into the Invited Paper Sessions, and also reappeared in some of the Contributed Paper Sessions. These themes included climatology, compressed sensing, computer experiments, neuroscience, nonparametric and semiparametric Bayesian procedures, random walks and statistical learning. These and the many other sessions together covered a broad range of topics in statistics and probability.



The conference got off to an excellent start with the Opening Lecture, delivered by Emmanuel Candes. Emmanuel discussed compressive sensing from a statistical perspective, starting from a set of examples

that nicely illustrated the phenomenon of sparsity.

The Forum Lectures this year were presented by Aad van der Vaart, who is currently Chairman of the European Regional Committee of the Bernoulli Society. Aad’s masterful presentation, delivered over two 1½ hour sessions, gently led the participants through the latest developments in theoretical properties of Bayesian procedures in infinite-dimensional parameter spaces, including consistency and convergence rates. The Closing Lecture was enthusiastically delivered by Jeff Steif, who treated his audience to a fascinating overview of percolation theory and of recent developments in that field.

The conference featured a varied social program. On the first evening, delegates were treated to a talk on, and demonstration of the virtual piano “Pianoteq”, developed by researchers at INSA Toulouse and the Institute of Mathematics at Université Paul Sabatier. The Pianoteq is able to deliver piano sounds constructed in real time. This was followed by an outdoor “dégustation de vins et fromages”. A Reception at the magnificent “Capitole” in the old town of Toulouse took place on the Tuesday evening, and many delegates took the opportunity to sign up to one of a number of mid-conference organized excursions to places of interest in the region. The social program was rounded off by the Conference Dinner on the penultimate evening, which took place in one of the tallest buildings in Toulouse and featured excellent traditional regional cuisine.

Although we had hoped for a rather higher number, the number of delegates was around 270, which made for a lively conference and created a friendly atmosphere. This was a similar number to the recent EMS conferences in Toruń, Aarhus and Prague, but considerably less than the 600 delegates in Oslo in 2005. At the end of the closing session, the chair of the scientific program committee announced the next EMS

conference, due to take place at the University of Piraeus in Athens, Greece, in 2010.

Finally, we should like to thank our respective committees for all their hard work over the past two

### The First IMS Asia Pacific Rim Meeting

The inaugural meeting of the new IMS meeting series, IMS Asia Pacific Rim Meeting (IMS-APRM), took place at Seoul National University (SNU) in Seoul, Korea, during the period June 28 - July 1, 2009. SNU is the nation's top education and research institute located in the southern part of Seoul. The meeting was organized by the Korean Statistical Society (KSS), and co-sponsored by the IMS, the International Chinese Statistical Association, the International Indian Statistical Association and the Japan Statistical Society.



The Local Organizing Committee, consisting of 15 members including 3 secretaries, Sunyoung Shin, Soojin Roh and Jung Hwan Yoon, was chaired by Byeong U. Park. The Scientific Program Committee was co-chaired by Feifang Hu and Runze Li. The program covered a wide range of topics in statistics and probability, presenting recent developments and the state of the art in a variety of modern research topics and in applications. The program included two plenary lectures presented by Peter Bickel (statistics) and Masatoshi Fukushima (probability). There were 17 Distinguished Lecture sessions, whose formats are similar to those of IMS Medallion Lectures, 44 invited sessions, 16 topic-contributed sessions, 13 contributed sessions and 1 large poster session. The 17 Distinguished Lecturers were: Tony Cai, Louis Chen, Jianqing Fan, Peter Hall, Xuming He, Sangyeol Lee, Xihong Lin, Zhengyan Lin, Jun Liu, J. S. Marron, Rahul Mukerjee, Sastry G. Pantula, John Robinson, Xiaotong Shen, John Jen Tai, Katsuto Tanaka, Mark van der Laan. The total number of presentations including 35 posters was 386. Classifying the 386 presentations by countries the presenters were affiliated with, the largest was the US (135) followed by Korea (106). There were 15 speakers from 8 European countries. The meeting was prepared and held amid the outbreak of H1N1 (swine) flu and the global economic crisis. Some people canceled their planned trips to the meeting due to the flu pandemic or a drastic cutback in funding for international travels. Despite of these hurdles, more than 700 participants from 23 countries attended the meeting. Fortunately, no

years on the development of the scientific program and the local organization.

*Trevor Sweeting, London  
Jean-Claude Fort, Toulouse*

one from abroad was reported quarantined on the way to the meeting.

The meeting opened with the poster session on Sunday afternoon, June 28, and was followed by a Welcome Reception held in the University Cultural Center. The second day of the meeting began with opening remarks delivered by Byeong U. Park (Chair of the Local Organizing Committee), Shin Bok Kim (Vice-President of SNU), Jongwoo Jeon (President of KSS), Jianqing Fan (IMS Past-President), Sastry Pantula (President-Elect of the American Statistical Association), Peter Bickel (Statistics Plenary Speaker) and Runze Li (Co-Chair of the Scientific Program Committee). The two plenary lectures ran in parallel immediately after the opening remarks. Peter Bickel spoke on some approaches taking advantages of sparsity in large  $p$  small  $n$  problems, and Masatoshi Fukushima gave a review on stochastic calculus in Markov processes.



*From left: Jongwoo Jeon (President of KSS), Byeong U. Park, Jianqing Fan, Peter Bickel, Masatoshi Fukushima and his wife, Jae C. Lee (ISI President-Elect)*

A half-day conference excursion was made to some touristic points in Seoul on Tuesday afternoon, June 30. On that night, there was the Conference Banquet at Hotel Lotte, one of the premium hotels in Korea. About 300 people attended the banquet and enjoyed a cultural program featuring some of the most popular Korean traditional music and dances performed by 17 dancers of ChumDaSom Dance Company.

The meeting concluded successfully on July 1, 2009. The local organizing committee and the scientific committee would like to acknowledge the generous finance support from SNU, Seoul Metropolitan Government, Korea Research Foundation, The Bank of Korea and The Korean Federation of Science and Technology Societies. The 2<sup>nd</sup> IMS-APRM will be held in Japan in 2011.

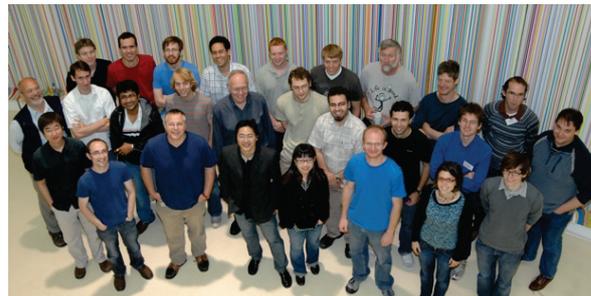
*Byeong U. Park, Seoul National University  
Feifang Hu, University of Virginia  
Runze Li, Pennsylvania State University*

## Probability at Warwick Young Researchers Workshop

From 20-24 July 2009, the Warwick Department of Statistics played host to over 30 young researchers from the UK and further afield at the third “Probability at Warwick Young Researchers' Workshop”. The workshop was built around lecture courses given by the two highly distinguished probabilists: David Aldous, who described “One methodology for random graphs and random networks”, and Tom Kurtz, speaking on “Separation of time scales and averaging of fast subsystems for stochastic chemical reactions”. There were also many excellent talks given by the participants.

Further information about the meeting, which was organized by David Croydon and Jon Warren, and received funding from the Warwick University Institute of Advanced Study and the London Mathematical Society, can be found here:

[www2.warwick.ac.uk/fac/sci/statistics/paw/paw2009](http://www2.warwick.ac.uk/fac/sci/statistics/paw/paw2009)



Hopefully there will be a fourth workshop in the series at some point in the near future!

*David Croydon, Warwick*

## European Young Statisticians Meeting 2009

The European Young Statisticians Meeting 2009 took place from August 24-28, in Bucharest, Romania.

The exquisite work done by the International Organizing Committee members in recommending the participants was highlighted by the 42 young statisticians from 21 European countries, who presented their papers in a clear, rigorous and utmost professional manner. The participants' speeches were included in 11 sections on theoretical and applied statistics. The

conference webpage is [www.eysm2009.ase.ro/](http://www.eysm2009.ase.ro/). The Local Organizing Committee strived to combine in the best way the scientific and the social programs. A trip outside Bucharest for half a day and a visit to the Parliament Palace (the world's second largest civilian administrative building) were included in the very “dynamic” social program of EYSM 2009.

*Roxana Ciumara, Bucharest*



## Workshop on Infinitely Divisible Processes

This international workshop was held in Guanajuato, Mexico, March 16-20, 2009, as part of the celebration of the XXth Anniversary of the Probability and Statistics Program of the Center for Research in Mathematics (CIMAT) in Guanajuato. There were 22 invited talks and 45 participants.

The goal of the workshop was to bring together a group of researchers working on theoretical and applied aspects of infinitely divisible (ID) processes (Markovian

and non-Markovian) from different perspectives. The program included talks on different aspects of generalized Ornstein-Uhlenbeck processes, generalizations of Dynkin's isomorphism theorem and the related infinite divisibility of Gaussian squares, central limit theorems in the Malliavin calculus framework, normal approximation on the Poisson space, random operators and ID laws, path and fractal properties of stable random fields, long range

dependence and extremal behavior of stable point processes, statistical analysis and applications of Levy-based models to finance, risk and telecommunications, ergodic theory for ID dynamical systems, large deviations for stationary ID processes, infinite divisibility on cones, Markovian bridges, stochastic heat equations with Levy Laplacian, among other topics.

The variety of perspectives on ID processes and laws represented at the meeting stimulated vigorous discussions and opened several new collaborations. New interesting topics for future research were identified, in particular related to non-Markovian ID processes, and other new related areas, such as free infinite divisibility, were discussed.

The workshop was well attended by young researchers and graduate students. The financial support was provided by CIMAT, Statistics Laboratory of CIMAT, the Guanajuato State Council for Science and Technology, the Mexican Mathematical Society and Tequila Sauza.



The full program, name of speakers, talks or abstracts and some pictures can be found at

<http://www.cimat.mx/Eventos/workshopIDP>

*Victor Pérez-Abreu, Guanajuato*  
*Jan Rosinski, Knoxville*  
*Gennady Samorodnitsky, Ithaca*

### Statistical Inference for Lévy Processes with Applications to Finance

A Workshop on Statistical Inference for Lévy Processes with Applications to Finance has been held on July 15-17, 2009, at EURANDOM, Eindhoven, The Netherlands, and was attended by some 60 participants.

This workshop may be considered as the 4th in a series of workshops dedicated to Lévy processes and their applications in Mathematical Finance, where the previous workshops were (1) Applications of Lévy Processes in Financial Mathematics (EURANDOM, 2001), (2) Exotic Option Pricing under Advanced Lévy Models (EURANDOM, 2004), (3) Credit Risk under Lévy Models (Edinburgh, 2006).

Models based on Lévy processes have an appealing feature, their ability to reproduce important stylized features of financial time series. As any stochastic model, these models depend on various parameters (finite, or possibly infinite-dimensional). Estimation of these parameters, or in financial terminology, calibration of the model to the available data, is of critical importance to successful applications of these models in practice. This is a new and challenging area of statistical research. The workshop aimed to contribute to the development of this area and to emphasize more the statistical challenges of modeling with Lévy processes than focusing on probabilistic properties (path properties, fluctuation theory).

Invited lectures have been given by Nick Bingham (Multivariate elliptic processes), Jose Manuel Corcuera (Completeness and hedging in a Lévy bond market), Fabienne Comte (Nonparametric estimation for pure jump Lévy processes with fixed sample step), Valentine Genon-Catalot (Nonparametric estimation for pure jump Lévy processes based on high frequency data), Ernst Eberlein (Correlation based calibration in Lévy interest

rate models), Markus Reiß (Nonparametric estimation for Levy processes from low-frequency observations), Yacine Aït-Sahalia (Analyzing the Spectrum of Asset Returns: Jump and Volatility Components in High Frequency Data), Alexander Szimayer (Semiparametric Continuous Time GARCH Models: An Estimation Function Approach), Amel Bentata and Rama Cont (Mimicking the marginal distributions of a semimartingale), Mark Podolskij (Inference for discretely observed semimartingales plus noise) and Antonis Papapantoleon (A new approach to LIBOR modeling)

Twelve contributed lectures on various topics (including implied volatility, interest rate modelling, discrete observations (with high frequency data), bipower variation, semi- and non-parametric estimation, tail dependence in copula models, fractional order) completed the programme.

For more information, please visit the workshop website at

[www.eurandom.tue.nl/events/workshops/2009/Levy\\_processes/](http://www.eurandom.tue.nl/events/workshops/2009/Levy_processes/)

The proceedings of the workshop will appear as a special issue of *Statistica Neerlandica* (published by Wiley, see also

[www.wiley.com/bw/journal.asp?ref=0039-0402](http://www.wiley.com/bw/journal.asp?ref=0039-0402))

scheduled to appear in fall 2010, with articles by most of the invited speakers. The workshop was organized by Chris Klaassen, Shota Gugushvili and Peter Spreij.

*Peter Spreij, Amsterdam*

## Forthcoming Conferences, Meetings and Workshops

### Workshop on Ambit Processes, Non-Semimartingales and Applications

January, 24 – 28, 2010

Sandbjerg Estate, Sønderborg, Denmark

The meeting will address recent developments in the theory and applications of ambit processes. The ambit processes form a general class of processes for tempo-spatial modeling, but have interesting and non-trivial aspects already in the purely temporal case.

Ambit processes are generally not of the semimartingale type, and the subject of ambit processes thereby links closely to another topic of substantial current interest, that of properties and applicability of non-semimartingales. Applications to turbulence, finance and cell growth will be discussed, with particular focus on the former area. For the study and solution of key problems in the fields concerned the newly established results on multipower variation and on central limit theory in the context of Malliavin calculus are essential, and such material will be covered in some of the survey talks.

Themes of the Meeting:

- Ambit Processes and Brownian Semi-stationary Processes
- Non-Semimartingale Issues

- Multipower Variation and CLT in Malliavin Calculus
- Basics and Phenomenology of the Physics of Turbulence
- Stochastic Processes and Modelling of Turbulences: Temporal and Tempo-Spatial Modelling
- Turbulence and Finance
- Application of Ambit Processes in Energy Markets

The meeting will consist of a mixture of survey talks and research talks, and it is hoped to attract senior researchers with special interest in the topics of the meeting as well as younger researchers at the Ph.D. and postdoc levels.

Organizing Committee:

*Ole E. Barndorff-Nielsen, Aarhus University*

*José-Manuel Corcuera, University of Barcelona*

*Jürgen Schmiegel, Aarhus University*

*Almut Veraart, Aarhus University*

Detailed information is available at

<http://www.ambitprocesses.au.dk/>

### 9th German Open Conference on Probability and Statistics

Continuing the series of Conferences in Marburg 1993, Freiberg 1996, München 1998, Hamburg 2000, Magdeburg 2002, Karlsruhe 2004, Frankfurt 2006 and Aachen 2008, the DMV-Fachgruppe Stochastik jointly with the University of Leipzig organizes the 9th German Open Conference on Probability and Statistics ("Leipziger Stochastik-Tage"). Tuesday, March 2nd to Friday, March 5<sup>th</sup>, 2010.

In the tradition of the previous conferences, it provides an international forum for presentation and discussion of new results in the area of probability and statistics. Participants from universities, business, administration and industry are welcome.

Detailed information is available at

<http://www.gocps-leipzig2010.com/>

*Wolfgang König, University of Leipzig*

### 6th International Conference on Lévy Processes: Theory and Applications

This conference will be held at the Technical University at Dresden, Germany, from July 26 to 30, 2010. It will focus on recent developments in the theory of Lévy and jump processes and their applications. There will be invited talks and poster sessions. Scientific Committee: Jean Bertoin (Paris VI, France), Serge Cohen (Toulouse, France), Davar Khosnevisan (Utah, USA), Andreas Kyprianou (Bath, UK), Alexander Lindner (Braunschweig, Germany), Makoto Maejima (Keio, Japan), Thomas Mikosch (Copenhagen, Denmark),

Victor Pérez-Abreu (CIMAT, Mexico), Jan Rosinski (U. Tennessee, USA), Réne Schilling (Dresden, Germany).

Further information:

Website: [www.math.tu-dresden.de/levy2010](http://www.math.tu-dresden.de/levy2010)

Email: [levy2010@tu-dresden.de](mailto:levy2010@tu-dresden.de)

It is also possible to contact Réne Schilling (TU Dresden) or Alexander Lindner (TU Braunschweig) directly.

## Satellite Summerschool to the 6th International Conference on Lévy Processes: Theory and Applications

There will be a satellite summer school on Lévy processes and their applications at the Technical University at Braunschweig from July 22 to 24, 2010.

Four lecture series will be given by

- David Applebaum (Nottingham),
- Claudia Klüppelberg (Munich)
- Szymon Peszat (Warsaw)
- Yimin Xiao (Michigan),

covering topics such as an introduction to Lévy processes, applications to risk theory, stochastic partial differential equations driven by Lévy noise, or path properties of Lévy processes.

All participants will have the possibility to present a poster or talk, but the total number of participants is limited.

Further information can be found under

[www.tu-braunschweig.de/stochastik/levyschool](http://www.tu-braunschweig.de/stochastik/levyschool)

Email: [levy2010@tu-dresden.de](mailto:levy2010@tu-dresden.de)

It is also possible to contact Réne Schilling (TU Dresden) or Alexander Lindner (TU Braunschweig) directly.

# SPA OSAKA 2010

## 34th Conference on Stochastic Processes and Their Applications



The 34th Conference on Stochastic Processes and their Applications is organized under the auspices of the Bernoulli Society for Mathematical Statistics and Probability. It will be held in Osaka, Japan, during September 6-10, 2010. The main venue will be the Senri Life Science Center, located in Toyonaka, Osaka Prefecture.

Organizing committee chair: Ichiro Shigekawa

Scientific Program Committee chair: Hirofumi Osada

Web: <http://stokhos.shinshu-u.ac.jp/SPA2010/index.html>

Description:

The conference is the major annual meeting for researchers working in the field of Stochastic Processes. The conference covers a wide range of active research

areas, in particular featuring 18 invited plenary lectures presented by the following leading specialists: Terry Lyons, Claudio Landim, Gregory Lawler, Rami Atar, Marek Biskup, Martin Hairer, Masanori Hino, Jean Jacod, Monique Jeanblanc, Davar Khoshnevisan, Takashi Kumagai, Gregory Miermont, L.C.G Rogers, Timo Seppäläinen, Karl-Theodor Sturm, Shanjian Tang, Jonathan Taylor, David Wilson.

In addition, there will be a large variety of special and contributed sessions, consisting of three/four talks each. We also have special lectures in memory of Kiyosi Itô.

We are looking forward to meeting you in Osaka in 2010!

*Ichiro Shigekawa, Kyoto*

## International Congress of Mathematicians – Satellite Conference

The International Congress of Mathematicians (ICM) meeting for the year 2010 is scheduled to be held in India at Hyderabad in August. As part of this, a satellite conference is being organized on Probability and Stochastic Processes. The satellite conference will be held in Bangalore, from August 13 to August 17, 2010, in the campus of the Indian Statistical Institute, Bangalore Centre. For more details visit the conference web site:

[www.isibang.ac.in/~statmath/icmprobsat/](http://www.isibang.ac.in/~statmath/icmprobsat/)

Plenary Speakers: S. R. S. Varadhan, Alain-Sol Sznitman, Erwin Bolthausen, Andrea Montanari, Alison Etheridge, Louis Chen, Maury Bramson, Gabor Lugosi.

Topics of Invited Lectures: Stochastic Networks, Random Media, Concentration Inequalities, SLE, Random Matrices, SPDE, Rough Path Analysis, Polymer Models, Malliavin Calculus.

In addition to the above, there will be contributed sessions in all areas of Probability and Stochastic Processes. Speakers can submit titles and abstracts along with the registration process.

*Srikanth Iyer, Bangalore*

## European Meeting of Statisticians (EMS)

The European Meetings of Statisticians have already been established among the major international meetings covering a broad area of disciplines, such as mathematical statistics, biostatistics, computational statistics, financial statistics, probability and applied probability. The meetings are held under the auspices of the Bernoulli Society for Mathematical Statistics and Probability, the IMS and ISI.

The 28<sup>th</sup> European Meeting of Statisticians (EMS 2010), will be held from August 17 to August 22, 2010, at the University of Piraeus in Greece.

The purpose of EMS 2010 is to provide a forum where researchers from Universities throughout the world, as

well as practitioners, can discuss current problems, new approaches and future directions in the field of Probability and Statistics. Young researchers and Ph.D. students are especially invited to contribute papers.

The Scientific Programme Committee consists of Enno Mammen, University of Mannheim, Germany (Chair), Viktor Benes, Gerda Claeskens, Arnoldo Frigessi, Adam Jakubowski, Markos Koutras, Pascal Massart and Andy Wood.

Chairman of the Local Organizing Committee is Markos Koutras. Further information is on the website: <http://stat.unipi.gr/ems2010>

## Calendar of Events

This calendar lists all meetings which 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 Website [isi.cbs.nl/calendar.htm](http://isi.cbs.nl/calendar.htm)

### January 2010

- January, 24<sup>th</sup> – 28th, 2010, *Workshop on Ambit Processes, Non-Semimartingales and Applications*, Sandbjerg Estate, Sønderborg, Denmark, [www.ambitprocesses.au.dk/](http://www.ambitprocesses.au.dk/)

### March 2010

- March, 2nd – 5th, 2010, *9th German Open Conference on Probability and Statistics*, University of Leipzig, Germany, [www.gocps-leipzig2010.com](http://www.gocps-leipzig2010.com)

### June 2010

- June 28<sup>th</sup> – July 2nd, 2010, *10th International Vilnius Conference on Probability and Mathematical Statistics*, Vilnius University, Lithuania, [www.vilniusconference10.com](http://www.vilniusconference10.com)

### July 2010

- July, 22nd – 24th, 2010, *Satellite Summerschool to the 6th International Conference on Lévy Processes: Theory and Applications*, Technical University at Braunschweig, Germany, [www.tu-braunschweig.de/stochastik/levyschool](http://www.tu-braunschweig.de/stochastik/levyschool)

- July, 26th – 30th, 2010, *6th International Conference on Lévy Processes: Theory and Applications*, University of Dresden, Germany, [www.math.tu-dresden.de/levy2010](http://www.math.tu-dresden.de/levy2010)

### August 2010

- August, 9th – 13th, *IMS Annual Meeting*, Chalmers University, Gothenburg, Sweden, [www.ims-göthenburg.com](http://www.ims-göthenburg.com)
- August, 9th – 13th, *ICM Satellite Conference on Probability and Stochastic Processes*, Indian Statistical Institute, Bangalore, India [www.isibang.ac.in/~statmath/icmprobsat](http://www.isibang.ac.in/~statmath/icmprobsat)
- ☺ August, 17th – 22nd, 28th European Meeting of Statisticians, Piraeus, Greece

### September 2010

- ☺ September, 6th – 10th, 2010, *34th Conference on Stochastic Processes and their Applications*, Osaka, Japan, <http://stokhos.shinshu-u.ac.jp/SPA2010/index.html>

### June 2011

- ☺ June, 19th – 25<sup>th</sup>, 2010, *35th Conference on Stochastic Processes and their Applications*, Oaxaca, Mexico

### August 2011

- August, 21st – 26th, *58th ISI World Statistics Congress*, Dublin, Ireland, [www.isi2011.ie/](http://www.isi2011.ie/)

### July 2012

- ☺ July, 9th – 14th, 2012, *8th World Congress of the Bernoulli Society*, Istanbul, Turkey

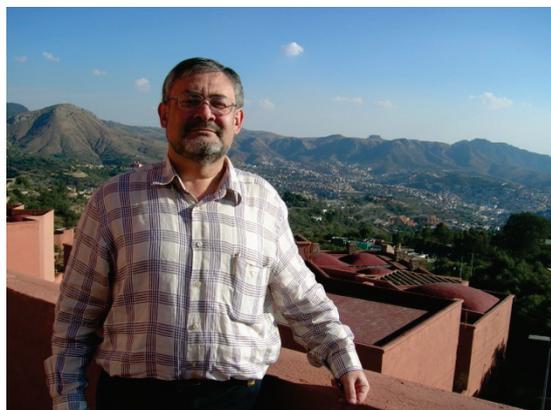
## New Executive Members in the Bernoulli Society

### President: Victor Pérez-Abreu

Victor Pérez-Abreu is a researcher in the Probability and Statistics Department at the Research Center for Mathematics, CIMAT, in Guanajuato, Mexico. He received a Bachelor's degree in Physics and Mathematics from the National Polytechnic Institute in Mexico City and his Master's degree in mathematics at the same school. He also has a Ph.D. in Mathematical Statistics from the University of North Carolina at Chapel Hill. He joined CIMAT in 1986 where he was appointed as the General Director from 1997 to 2003 and Chair of its Probability and Statistics Department during several periods. While at CIMAT, he has organized more than 25 national and international meetings in probability, statistics and their applications at the research and the educational levels. He has been a member of several committees of BS, IMS and ISI, President of the Latin-American Chapter of BS and local organizing committee Chair of the 2000 World Congress in Mathematical Statistics and Probability in Guanajuato.

His research interests include multiple Wiener-Itô integrals and chaos expansions, stochastic processes on

infinite dimensional spaces, goodness of fit tests and environmental statistics.



More recently his interests have been in Lévy processes and infinitely divisible aspects of random matrices and distributions on cones as well as infinite divisibility in classical and free probability, and their connections to other branches of mathematics.

### President Elect: Edward Charles Waymire

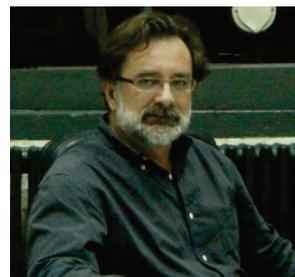
Edward Charles Waymire holds a joint appointment as Professor in the Department of Mathematics and in the Department of Statistics at Oregon State University. He has a 1976 Ph.D. degree in Mathematics from the University of Arizona. Waymire recently completed a three year term as editor in chief of the Annals of Applied Probability, and currently serves as an Associate Editor for Probability Surveys and the Proceedings of the American Mathematical Society. He is a past editor of the journal Bernoulli. Waymire has served on numerous committees of professional societies, including chair of the Bernoulli Society's

Committee on Probability and Statistics in the Physical Sciences (CPS<sup>2</sup>) and Committee on Conferences in Stochastic Processes (CCSP). He is co-author with Rabi Bhattacharya of Stochastic Processes with Applications, Wiley (1990) and reprinted in the Classics in Applied Mathematics Series by SIAM, 2009, and A Basic Course in Probability Theory, Springer (2007). His most recent research interests concern skew Brownian motion and/or multiplicative cascades in connection with broad classes of applications involving dispersion, flow and disorder in heterogeneous environments.

### Treasurer: José Manuel Corcuera

José Manuel Corcuera is professor at the University of Barcelona, where he currently teaches Statistics and Quantitative Finance in the Faculty of Mathematics. He was born in San Sebastián (Spain), and studied physics at the University of the Basque Country. Then he moved to Barcelona where he studied Mathematics as well. He did his Ph.D. in the Department of Statistics of the University of Barcelona in 1995. He has written more than 30 papers on different issues, e.g. Information Geometry, Prediction and Asymptotics, Mathematical Finance, Inference for Stochastic Processes. He has given more than 40 talks around the world. His last works "Multipower variation for Brownian Semistationary Processes" (in collaboration with Ole E. Barndorff-Nielsen and Mark Podolskij), "Dynamic complex hedging in additive Markets" (with Joao

Guerra) and "Malliavin Calculus and Statistical Inference" (with Arturo Kohatsu-Higa) is a good sample of his research interests.



Web Page: [www.mat.ub.es/~corcuera/](http://www.mat.ub.es/~corcuera/)

### Council Member: Probal Chaudhuri

Probal Chaudhuri was born in 1963 in Calcutta, India. He obtained his B-Stat and M-Stat degrees from Indian Statistical Institute in the years 1983 and 1985 respectively. After that, he went to the University of California at Berkeley and worked under the supervision of Prof. Charles J. Stone to earn his Ph.D. degree in statistics in the year 1988. He returned to India in the December of 1990 to join the Theoretical Statistics and Mathematics Unit of Indian Statistical Institute, Calcutta, as a lecturer. He is working there since then and is currently a professor there.

He has a diverse research interest and made contributions in several areas of theoretical and applied statistics. He has authored and co-authored more than sixty research articles that have been published mostly in statistics, computer science and biology journals.

He has served as an editor of *Sankhya: the Indian Journal of Statistics* in the past. He is currently an associate editor of the *Journal of the American Statistical Association*, *Statistica Sinica* and *Advances*

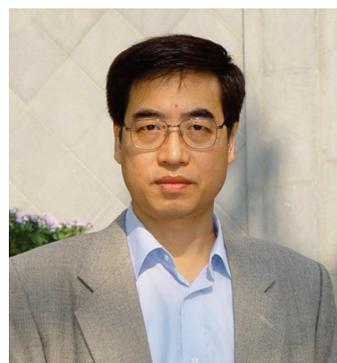
in *Statistical Analysis*, a Journal of the German Statistical Society.



He is a recipient of many prestigious national awards including the C.R.Rao National Award in Statistics and the Shanti Swarup Bhatnagar Award in Mathematical Sciences both awarded by the Government of India. He is a fellow of all three science academies of India and also a fellow of the IMS.

### Council Member: Zenghu Li

Zenghu Li received his Ph.D. in 1994 from Beijing Normal University. He is now a Chang Jiang Scholar Chair Professor in Beijing Normal University, a Vice President of the Chinese Society of Probability and Statistics (2006-2010), a member of the Editorial Committee of “*Acta Mathematica Sinica*” (since 2009) and an Associate Editor of “*Statistics and Probability Letters*” (since 2009). He was a plenary speaker at the “31st Conference on Stochastic Processes and their Applications” (Paris, France, 2006, July, 17-21). His research area covers measure-valued processes (superprocesses), branching processes and infinite particle systems.



### Council Member: Peter Spreij

Peter Spreij was born in Amsterdam in 1956. He studied mathematics at the Vrije Universiteit (VU) in Amsterdam, after which he held short term lectureships at VU and Twente University. He conducted his Ph.D. research at the Center for Mathematics and Computer Science in Amsterdam under the supervision of Jan van Schuppen on stochastic systems theory. He obtained the doctoral degree in 1987 at Twente University. In the same year, he joined the Econometrics department at VU and moved to the Korteweg-de Vries Institute for Mathematics at the Universiteit van Amsterdam (UvA) in 1999, which is also his current affiliation. His research interests are mainly in stochastic systems, statistics for stochastic processes, financial mathematics and linear algebra. He is on the council of the Bernoulli Society since 2007.



### Chair of the Committee for Conferences on Stochastic Processes: Marta Sanz-Solé

Marta Sanz-Solé is Professor at the Faculty of Mathematics, University of Barcelona, and the leader of the research group on stochastic analysis at this University. She has published many research papers on random fields, large deviations, anticipating calculus, Malliavin calculus, stochastic partial differential equations and a book on Malliavin calculus with applications to SPDEs. In 1998, she received the Narcis Monturiol Award of Scientific and Technological Excellence, granted by the autonomous government of Catalonia.

She was elected Dean of the Faculty of Mathematics for the period 1993-1996 and appointed Vice President of the Division of Sciences for the period 2000-2003 at the University of Barcelona.

She has been an elected member of the Executive Committee of the European Mathematical Society for the period 1997-2004, Secretary of Organization of the Third European Congress of Mathematics (3ecm, Barcelona 2000), and Chair of the Local Program Committee of the International Congress of Mathematicians ICM 2006.



She likes to be involved in many different aspects of mathematical activity, going from those of purely scientific and academic character and scientific policy, to those related with social and projection structures for the mathematical community.

### Editor Bernoulli: Richard Davis

Richard Davis is the Howard Levene Professor of Statistics at Columbia University. He received his Ph.D. degree in Mathematics from the University of California at San Diego in 1979, where he studied under the direction of Professor Murray Rosenblatt. Davis is a fellow of the Institute of Mathematical Statistics and the American Statistical Association, and is an elected member of the International Statistical Institute. He is co-author (with Peter Brockwell) of the bestselling books, "Time Series: Theory and Methods", "Introduction to Time Series and Forecasting", and the time series analysis computer software package, "ITSM2000"; and co-editor (with Torben Andersen, Jens-Peter Kreiss, and Thomas Mikosch) of the "Handbook in Financial Time Series." In 1998, he won (with collaborator W.T.M. Dunsmuir) the Koopmans Prize for Econometric Theory. His research interests include time series, applied probability, extreme value theory, and spatial statistics. Currently, he is chair-elect of the Business and Economic Statistics Section of the American Statistical Association, serves as an associate editor for Bernoulli, Statistical Science, Stochastic Processes and Their Applications, and Extremes, and is



co-organizer (with James Stock of Harvard and Ruey Tsay of Chicago) of the annual time series workshops sponsored by the National Bureau of Economic Research and the National Science Foundation. He has advised or co-advised over 25 Ph.D. students and has received 30 years of continuous research funding from the National Science Foundation.

## About the Bernoulli Society

The Bernoulli Society for Mathematical Statistics and Probability was founded in 1975 as a Section of the International Statistical Institute (ISI). The objectives of the Bernoulli Society are the advancement of the sciences of probability (including stochastic processes) and mathematical statistics and of their applications to all those aspects of human endeavour which are directed toward the increase of natural knowledge and the welfare of mankind.

Among the activities of the Bernoulli Society are organizing, supporting or sponsoring international meetings and publications on its own or jointly with other professional societies that further the objectives and interests of the Society.

The Bernoulli Society has two official journals; *Bernoulli* and *Stochastic Processes and Their Applications* (Elsevier). In addition, the Society co-sponsors the following open access online publications: *Electronic Communications in Probability*, *Electronic Journal of Probability*, *Electronic Journal of Statistics*, *Probability Surveys* and *Statistics Surveys*.

Published twice a year, *Bernoulli News* (BNews) provides detailed information about activities and initiatives of the Society. In addition, Bernoulli Society contributes to the *ISI Newsletter* where a broad overview of ISI activities and additional information of interest to statisticians can be found.

Some of the international meetings organized or sponsored by the Bernoulli Society are the *World Congress in Probability and Statistics* every four years, the *Conference on Stochastic Processes and their Applications* (SPA) organized every year (except the years of the Bernoulli Society World Congress), *ISI World Statistics Congress* (formerly ISI Session), *European Meeting of Statisticians* (EMS) organized every year, and the *Latin American Congress in Probability and Mathematical Statistics* (CLAPEM) organized every two or three years.

The Elsevier journal *Stochastic Processes and Their Applications* sponsors the Itô Prize and the Lévy Lecture.

For additional information see the Bernoulli website <http://isi.cbs.nl/BS/bshome.htm>

## Journals of the Bernoulli Society

### Official publications of the Bernoulli Society:

- Bernoulli  
Editor: Holger Rootzén  
[isi.cbs.nl/bernoulli/](http://isi.cbs.nl/bernoulli/)
- Stochastic Processes and Their Applications  
Editor: Thomas Mikosch  
[www.sciencedirect.com/science/journal/03044149](http://www.sciencedirect.com/science/journal/03044149)

### ISI Publications

- International Statistical Review  
Editor: Ali S. Hadi  
[www.wiley.com/bw/journal.asp?ref=0306-7734](http://www.wiley.com/bw/journal.asp?ref=0306-7734)

### Journals Co-Sponsored with the Institute of Mathematical Statistics:

- Electronic Communications in Probability  
Editor: Timo Seppäläinen  
[www.math.washington.edu/~ejpecp/ECP](http://www.math.washington.edu/~ejpecp/ECP)
- Electronic Journal of Probability  
Editor: Bálint Tóth  
[www.math.washington.edu/~ejpecp/](http://www.math.washington.edu/~ejpecp/)
- Electronic Journal of Statistics  
Editor: Larry Wasserman  
[www.i-journals.org/ejs/index.php](http://www.i-journals.org/ejs/index.php)
- Probability Surveys  
Editor: Geoffrey R. Grimmett  
[www.i-journals.org/ps/](http://www.i-journals.org/ps/)
- Statistics Surveys  
Further cosponsors: American Statistical Association, Statistical Society of Canada  
Coordinating Editor: Wendy L. Martinez  
[www.i-journals.org/ss/index.php](http://www.i-journals.org/ss/index.php)

## Who is Who in the Bernoulli Society

### Executive Committee 2009-2011

<i>President</i>	Victor Pérez-Abreu (Guanajuato, Mexico)	pabreu@cimat.mx
<i>Past President</i>	Jean Jacod (Paris, France)	jean.jacod@upmc.fr
<i>President Elect</i>	Edward Waymire (Corvallis, USA)	waymire@math.orst.edu
<i>Executive Secretary</i>	Ada van Krimpen (ISI Office, Netherlands)	an.vankrimpen@cbs.nl
<i>Membership Secretary</i>	Josef Steinebach (Cologne, Germany)	jost@math.uni-koeln.de
<i>Scientific Secretary</i>	Nakahiro Yoshida (Tokyo, Japan)	nakahiro@ms.u-tokyo.ac.jp
<i>Treasurer</i>	José Manuel Corcuera (Barcelona, Spain)	jmcrcuera@ub.edu

### Council Member 2007-2011

2007-2011	Adam Jakubowski (Torun, Poland)	adjakubo@mat.uni.torun.pl
2007-2011	Claudia Klüppelberg (Munich, Germany)	cklu@ma.tum.de
2007-2011	Alexander Novikov (Sydney, Australia)	alex.novikov@uts.edu.au
2007-2011	Philip Protter (Ithaca, USA)	pep4@cornell.edu
2007-2011	Peter Spreij (Amsterdam, Netherlands)	spreij@science.uva.nl
2007-2011	Maria Eulalia Vares (Rio de Janeiro, Brazil)	eulalia@cbpf.br

### Council Member 2009-2013

2009-2013	Paolo Baldi (Rome, Italy)	baldi@mat.uniroma2.it
2009-2013	Probal Chaudhuri (Calcutta, India)	probal@isical.ac.in
2009-2013	Bärbel Finkenstädt (Warwick, UK)	b.f.finkenstadt@warwick.ac.uk
2009-2013	Ricardo Fraiman (Buenos Aires, Argentina)	ricardo.fraiman@adinet.com.uy
2009-2013	Zenghu Li (Beijing, China)	lizh@bnu.edu.cn
2009-2013	Nancy Reid (Toronto, Canada)	reid@utstat.utoronto.ca

### Committee Chairs

<i>Conferences on</i>	Marta Sanz-Solé (Barcelona, Spain)	marta.sanz@ub.edu
<i>Stochastic Processes</i>		
<i>Probability and Statistics in</i>	Wojbor A. Woyczyński (Cleveland, USA)	waw@case.edu
<i>the Physical Sciences</i>		
<i>Publications Committee</i>	Michael Sørensen (Copenhagen, Denmark)	michael@math.ku.dk
<i>Stochastic Science Institutes</i>	N.N.	N.N.

### Regional Committee Chairs

<i>European</i>	Aad van der Vaart (Amsterdam, Netherlands)	aad@cs.vu.nl
<i>East-Asian and Pacific</i>	Tim Brown (Canberra, Australia)	tim.brown@latrobe.edu.au
<i>Latin America</i>	José León (Caracas, Venezuela)	jose.leon@ciens.ucv.ve

### Editors

<i>Bernoulli</i>	Holger Rootzén (Gothenburg, Sweden)	rootzen@math.chalmers.se
<i>Stochastic Processes and</i>	Thomas Mikosch (Copenhagen, Denmark)	mikosch@math.hu.dk
<i>Their Applications</i>		
<i>International Statistical Review</i>	Ali Hadi (Cairo, Egypt)	ahadi@aucegypt.edu
<i>Bernoulli News</i>	Vicky Fasen (Munich, Germany)	bnews@ma.tum.de
	Robert Stelzer (Munich, Germany)	

### Web Editor

<i>Bernoulli Society</i>	Björn Böttcher (Dresden, Germany)	bjoern.boettcher@tu-dresden.de
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## Becoming a Member of the Bernoulli Society

The Bernoulli Society for Mathematical Statistics and Probability is a section of the International Statistical Institute. It is an autonomous society which seeks to

develop and improve statistical and stochastic methods and their applications through the promotion of international activity and cooperation.

### Membership Fees for 2010:

- Regular BS membership fee is EUR 70 and the reduced BS membership fee is EUR 35.  
This includes access to the online versions of the *Bernoulli Journal* and *Stochastic Processes and Their Applications*. New BS members receive half price (only one reduction possible).
- Entrance fee for BS *extraordinary membership* is EUR 19.
- Joint IMS-BS membership fee is USD 148.
- Joint BS-IMS-ISI fee is EUR 139.

### Subscription Rates for "Bernoulli" in 2010

- online for *BS members* is included in the membership fee.
- hardcopy for *BS members* is EUR 25 (reduced membership: EUR 15).
- online for *non BS members* is EUR 33.
- hardcopy and online for *non BS members* is EUR 58.
- online for BS *extraordinary members* is EUR 19.
- hardcopy and online for BS *extraordinary members* is EUR 34.

### Details

As an incentive to become a member, the Bernoulli Society offers:

- 50% fee reduction for the first year of membership of new members
- Ph.D. Students join for free
- 50% fee reduction for the first two years for postdocs.

Retired persons, couples and members from developing countries (please refer to the list at <http://isi.cbs.nl/developing.htm>) continue to receive a 50% fee reduction.

All the above members receive the full membership benefits of a regular member.

The Bernoulli Society has partnered with some societies to offer joint membership with reduction in dues by joining both organizations at the same time. Regular members who would also like to be members of the *Institute of Mathematical Statistics* (IMS) can apply for

a joint BS-IMS membership. You will also receive full IMS membership benefits. If you are an *elected member of ISI*, you have the option to apply for a BS-IMS-ISI joint membership.

Permanent residents of developing countries (please see <http://isi.cbs.nl/developing.htm>) can apply for membership with '*extraordinary*' status. There are no annual dues, but an entrance fee is charged to cover administrative costs of membership, but otherwise extraordinary members will enjoy the usual benefits of individual membership of the Bernoulli Society such as voting rights, eligibility to offices of the Bernoulli Society, lower registration fees at conferences of the Bernoulli Society, and reductions to journal subscriptions. However, members with extraordinary status will not receive the official publications of the Bernoulli Society free of charge, but may subscribe to them at special rates.

### Online Application Forms

*Bernoulli Society membership* :

<http://isi.cbs.nl/bern-form.asp>

*Joint IMS-BS membership*: [www.imstat.org/secure/orders/IndMember.asp](http://www.imstat.org/secure/orders/IndMember.asp)

*Joint BS-IMS-ISI membership*:

[http://isi.cbs.nl/Bern\\_IMS\\_ISI-form.asp](http://isi.cbs.nl/Bern_IMS_ISI-form.asp).

### Contact Information

Applications for *reduced membership* fees or *extraordinary status* should be sent to:

J. Steinebach (Membership Secretary)  
Mathematical Institute  
University of Cologne  
Weyertal 86-90  
D-35931 Köln, Germany  
Tel.: +49 221 4702891  
Fax: +49 221 4706073  
e-mail: [jost@math.uni-koeln.de](mailto:jost@math.uni-koeln.de)

Applications for *regular* or *retired memberships* should be sent to:

Margaret de Ruyter-Molloy (Membership Officer)  
c/o ISI  
P.O. Box 24070  
2490 AB The Hague, The Netherlands  
Tel.: +31 70 337 5726  
Fax: +31 70 386 0025  
e-mail: [mmlly@cbs.nl](mailto:mmlly@cbs.nl)

# Probability Surveys



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Probability Surveys is a peer-reviewed open-access electronic journal, jointly sponsored by the Bernoulli Society and the Institute of Mathematical Statistics. It is available at <http://www.i-journals.org/ps/>, where guidance on the submission process may be found.

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*Geoffrey Grimmett, Managing Editor*