Bernoulli News

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A VIEW FROM THE PRESIDENT

Dear Members of the Bernoulli Society,

These times of hardship and worry about the pandemic are not yet over, and many of us are back to virtual teaching and virtual meetings. Like most of you, I have spent my summer mainly at home, and I must admit, not all of it was negative.

With great interest and some pride, I attended the *Bernoulli-IMS One World Symposium 2020* in August. It was a memorable experience with exciting live talks, more than 600 videos uploaded, and 3000 registered participants. We could not even announce these plans in the previous May issue of this Newsletter, because the idea only arose at the end of May (at a zoom meeting between Scientific Program Committee Chair Siva Athreya, Local Organizing Committee Chair Hee-Seok Oh, IMS President Susan Murphy, and myself). The Bernoulli Society had only in April created the new position of a *Virtual Events Coordinator* and was extremely lucky to elect Leif Döring to this position. Leif took the idea of a virtual symposium in his able hands and, jointly with a small committee, he created this meeting out of nothing. You can read more about this exciting event in a report on page 10, and also what we learnt from this new adventure in an interview with Leif Döring by the members of our new *Young Researcher Committee*. A short bio of Leif and the members of the new committee is provided in this Newsletter.

We also take pride in announcing several awards. We shall soon invite nominations for the *Newbold Prize*, and we have created a new prize jointly with the Royal Statistical Society, namely the *David G Kendall Award for Young Researchers*, nominations for which are currently welcome. The Kendall award is founded upon donations, which can be made either through the ISI, or the Royal Statistical Society which is a registered UK charity. The Bernoulli Society and the Awardees are grateful for your contributions. Furthermore, as the Bernoulli Society belongs to the Friends of COPSS network, members of the Society can nominate eligible candidates for *COPSS Awards* and for the *COPSS Leadership Academy*. Details of all these Awards may be found in this Newsletter and on the Bernoulli Society website.

Some of you may recall the SPA Conference in Berlin in 2009, where Wolfgang Doeblin played a prominent posthumous role. At that meeting, Marc Yor presented the   [. . .]

Deadline for the next issue: **31 March, 2021**
Send contributions to: *manuele.leonelli@ie.edu*

A View from the President (continued from front cover)

unbelievable story of Doeblin's *pli cacheté*, a sealed envelope with a mathematics manuscript that remained at the Paris Académie des Sciences after his death in 1940 until its opening was permitted in 2000 and its content became finally known. Also at that SPA conference, a movie about Doeblin's life and this story was presented. Moreover, the Doeblin Prize of our Society was created — it was another two years before its formal announcement. Now the collected works of Wolfgang Doeblin have appeared, and you can find an advertisement from Springer to this volume with some explanatory words in this Newsletter.

These highlights and more information about the

various activities of the Bernoulli Society are presented here, and I hope you enjoy reading our news, and can participate in our activities. Before I finish, however, I also want to mention how much we regret the death in July of our past-president Willem van Zwet. We honour Willem as a person and for his untiring work for the Bernoulli Society and our entire scientific community.

May we all stay healthy and in good spirits!

Claudia Klüppelberg
President of the Bernoulli Society
Munich

News from the Bernoulli Society

New Opt-In System for Bernoulli News

The Publicity Committee of the Bernoulli Society with the approval of the Executive Committee has decided to adopt a new opt-in system for receiving printed copies of Bernoulli News. This "green" initiative is brought forward to make the society even more environmentally friendly.

Every member of the Society receives the newsletter electronically by email immediately after it has been created. However, you can still receive a printed copy of Bernoulli News in your mailbox with no ex-

tra fees. Members who enjoy receiving the printed copy of Bernoulli News are warmly welcome to opt in by filling the form at http://www.bernoulli-society.org/publications/bernoulli-news/subscription-form.

I hope you will continue to enjoy reading Bernoulli News either in a printed or online format!!!

The Editor
Madrid

Willem R. Van Zwet (1934–2020) - In Memoriam

Former BS President Willem R. van Zwet passed away on 2 July 2020 in Oegstgeest, The Netherlands, at the age of 86. Willem had been professor of Mathematical Statistics at Leiden University from 1965 until his retirement in 1999. He had served the Bernoulli Society in several eminent functions, most notably as member and chair of the European Regional Committee (1969–1980) that organizes the European Meetings of Statisticians, as BS President (1987–1989), and as Editor-in-Chief of Bernoulli (2000–2003). Further outstanding functions included his terms as President of the Institute of Mathematical Statistics (1991–1992), as Editor-in-Chief of The Annals of Statistics (1986–1988), and as ISI President (1997–1999). In the early 1970s Willem was among the founding fathers of the Bernoulli Society. For several decades, he was one of the most influential scholars in the world of Probability Theory and Mathematical Statistics in Europe. His significant and unceasing support of statisticians behind the iron curtain had a major impact there and earned him an honorary doctorate from Charles University, Prague. In the 1990s, Willem was the driving force behind the creation of Eurandom, the European Institute for Stochastics in Eindhoven, and

he served as Eurandom's founding scientific director (1997–2000). The Bernoulli Society and the academic world of Stochastics mourn the loss of one of their most eminent members.

An extended obituary is available at https://www.isi-web.org/index.php/news/20196-in-memoriam-willem-van-zwet.

Willem Rutger van Zwet: 1934–2020.

Claudia Klüppelberg
President of the Bernoulli Society
Munich

Collected Works of Wolfgang Doeblin

Since 2011, the Bernoulli Society awards the Wolfgang Doeblin Prize to honour the scientific work of Wolfgang Doeblin. It is awarded bi-annually and generously supported by Springer to recognise and promote outstanding work by researchers at the beginning of their mathematical careers in the field of Probability. For more details see http://www.bernoulli-society.org/prizes?id=158. Springer has recently published the collected works of Wolfgang Doeblin.

Wolfgang Doeblin grew up in Berlin before he followed his family into exile in 1933, first to Zurich and then to Paris. His decision to study mathematics was initially motivated by applications to economics and the social sciences. It is all the more breathtaking how, within a few years in Paris, he emerged as one of the greatest probabilists of the last century, until as a soldier in the French Army, in the face of the advancing German troops, he put an end to his life on June 21, 1940 .

Paul Lévy wrote in 1955: "To imagine the level on which one has to place him, I believe I can say that since Abel and Galois one can count on one hand the mathematicians who died so young and have left such an extensive work". This high assessment of Wolfgang Doeblin could at this time only be based on part of his work, especially on his fundamental contributions to the theory of Markov chains. The full extent of his creative power only became visible in 2000, after the opening of the *pli cacheté* that was deposited

in the Paris Académie des Sciences shortly before his death. Inside this sealed envelope was a manuscript, in which Wolfgang Doeblin developed his own calculus for Brownian motion; its central transformation formula has been called the Doeblin – Itô formula since then.

Doeblin's case shows in a dramatic way how big the crack was, which went through the development of German science in 1933. It wasn't just well-known scientists who, because of their Jewish origins were marginalized and expelled, but also many young talents, whose scientific development lay ahead but could no longer develop in Germany. Wolfgang Doeblin is a particularly painful example of this enormous loss.

With their symposium "The sealed formula. Wolfgang Doeblin and the origins of Stochastic Analysis" on November 19th in 2007 in Berlin, the Académie des Sciences and the Berlin-Brandenburg Academy of Sciences have jointly honoured the work of Wolfgang Doeblin. This Symposium also gave the impulse to launch the project of publishing the collected works of Wolfgang Doeblin under the auspices of both academies. It is due to the tremendous dedication of Bernard Bru and Marc Yor (*1949–†2014) that the present volume could finally be completed.

Excerpt from the Geleitwort of the volume, with permission of the author Hans Föllmer.

Wolfgang Doeblin, Marc Yor, Bernard Bru (Eds.)

Œuvres Complètes— Collected Works

- Contains all the publications of Wolfgang Doeblin (1915–1940) and a reproduction of the pli cacheté
- Presents for the first time, material that Doeblin wrote in 1940.
- Includes presentations and commentaries by specialists from various areas

This book contains all of Wolfgang Doeblin's publications. In addition, it includes a reproduction of the pli cacheté onl'équation de Kolmogoroff and previously unpublished material that Doeblin wrote in 1940. The articles are accompanied by commentaries written by specialists in Doeblin's various areas of interest. The modern theory of probability developed between the two World Wars thanks to the very remarkable work of Kolmogorov, Khinchin, S.N. Bernstein, Romanovsky, von Mises, Hostinsky, Onicescu, Fréchet, Lévy and others, among whom one name shines particularly brightly, that of Wolfgang Doeblin (1915–1940). The work of this young mathematician, whose life was tragically cut short by the war, remains even now, and indeed will remain into the future, an exemplar of originality and of mathematical power. This book was conceived and in essence brought to fruition by Marc Yor before his death in 2014. It is dedicated to him.

WOLFGANG DOEBLIN

Œuvres Complètes
Collected Works

≜ Springer

1st ed. 2020, XVII, 748 p.

Printed book
Hardcover
74,99 € | £64.99 | $89.99
[1]80,24 € (D) | 82,49 € (A) | CHF 88,50

Nominations for the European Regional Committee

According to the statutes of the European Regional Committee of the Bernoulli Society, eight of the sixteen members will step down by the end of 2020. In addition, one member is stepping down early for personal reasons. As a result, nine new members need to be elected for a four-year term starting on Jan 1st 2021. The European Regional Committee nominates the following candidates:

- Axel Bücher, Heinrich Heine University Düsseldorf, Germany

- Mathias Drton, Technical University of Munich, Germany

- Sebastian Engelke, University of Geneva, Switzerland

- Anne-Laure Fougères, University of Lyon, France

- Pauliina Ilmonen, Aalto University, Finland

- Sonia Petrone, Bocconi University, Italy

- Rajen Shah, University of Cambridge, United Kingdom

- Lukas Steinberger, University of Vienna, Austria

- Botond Szabó, Leiden University, The Netherlands

A group of at least five European members of the Bernoulli Society can nominate further candidates. Additional nominations should be sent by email to maathuis@stat.math.ethz.ch, including documentation of the support of the five nominating members and of the willingness of the nominees to serve on the committee. Additional nominations will force an election among European members of the Bernoulli Society. If no further nominations are received by Friday December 10th 2020, the nine candidates listed above will be declared elected.

Marloes Maathuis
Chair of the European Committee
Zurich

Awards and Prizes
Inaugural David G. Kendall Award: Call for nominations

The award committee invites nominations for the Bernoulli Society-Royal Statistical Society David G Kendall Award for Young Researchers. The award is open to those who obtained their PhD after January 1st 2013 (with extensions for disruptions to the candidate's work available at the committee's discretion).

This new prize for an excellent young researcher will be awarded every two years. The subject will alternate between probability and mathematical statistics. The inaugural award, to be made in Summer 2021, is dedicated to probability theory.

The name of the prize honours David G Kendall, who was the first president of the Bernoulli Society and was awarded the RSS Guy Medal in Gold in 1981.

The prize will be presented at either a Bernoulli Society conference (typically the Bernoulli-IMS World Congress or the ISI-WSC) or RSS conference (as specified by the applicant). The prize consists of a certificate and the award of €2,000 to cover the expenses of attendance at the conference.

Nominations should be communicated to the award committee through grg@statslab.cam.ac.uk and be signed by two members of the BS or the RSS. They must include the name, affiliation, and brief curriculum vitae (including a list of publications) of the nominee, a statement of no more than 100 words summarizing the case for nomination, a list of the best 3 articles, and a review of no more than 2 pages of the nominee's research contributions.

The award committee consists of:

- Geoffrey Grimmett (Cambridge University and Heilbronn Institute)

- Saul Jacka (University of Warwick and Alan Turing Institute)

- Gesine Reinert (Oxford University and Alan Turing Institute)

- Ruth Williams (University of California, San Diego)

Deadline for nominations: Sunday 31 January 2021.

Details available at https://tinyurl.com/y3227dtg.

The Editor
Madrid

Call for Nominations: Newbold Prize 2021

The Bernoulli Society's Newbold Prize Committee invites nominations for the fourth Ethel Newbold Prize. The prize for excellence in statistics is awarded every two years, next time in Spring 2021 and is generously supported by Wiley. Nominations as well as any inquiries about the award should be sent to Jon Wellner: jonw@uw.edu. The deadline for accepting nominations is November 30, 2020. More details are provided at http://www.bernoulli-society.org/index.php/prizes?id=207.

Carlos Améndola
Editor of e-Briefs
Munich

Nominations Sought for 2021 COPSS Awards

The Bernoulli Society is a Friends of COPSS, the Committee of Presidents of Statistical Societies, who organizes an awards ceremony at the Joint Statistical Meetings recognizing outstanding members in the statistical profession. Nominations are sought for the Presidents' Award, the Distinguished Achievement Award and Lectureship, the F.N. David Award and Lectureship, and the George W. Snedecor Award, to be presented at the 2021 Joint Statistical Meeting. More details at https://tinyurl.com/y2onyfep.

Carlos Améndola
Editor of e-Briefs
Munich

COPSS Leadership Academy for Emerging Leaders in Statistics

The Committe of Presidents of Statistical Societies, COPSS, has passed the proposal for the COPSS Leadership Academy awards. The purpose of the prize is to recognize early career statistical scientists who show evidence of and potential for leadership and who will help shape and strengthen the field. For this year, submissions are due on January 15, 2021. Details at https://tinyurl.com/y62ujfze.

The Editor
Madrid

Nike Sun Awarded the 2020 Doeblin Prize

Nike Sun, associate professor of mathematics at the Massachusetts Institute of Technology, has been awarded the 2020 Wolfgang Doeblin Prize, awarded bi-annually by the Bernoulli Society for Mathematical Statistics and Probability. Nike's research lies at the intersection of probability, statistical physics, combinatorics, and theory of computing The prize is awarded to a single individual for outstanding research in the field of probability, and who is at the beginning of their mathematical career.

Congratulations Nike!
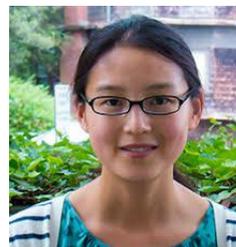
The Editor
Madrid

Schramm Lectures in 2021 and 2022

Omer Angel

Louigi Addario-Berry

The Schramm Lecture, named in honor of Oded Schramm (1961–2008), is an annual IMS–Bernoulli Society joint lecture. *Omer Angel* (University of British Columbia) is going to give the Schramm Lecture at the Bernoulli–IMS 10th World Congress in Probability and Statistics, in Seoul, July 19–23, 2021. The fol-

lowing year, *Louigi Addario-Berry* (McGill University) will give the Schramm Lecture at the 42nd Conference on Stochastic Processes and their Applications (SPA)

in Wuhan, China, June 27–July 1, 2022.

The Editor
Madrid

The Bernoulli Journal Read Paper at BS-IMS WC 2021

Matthew Van Hala

Soutir Bandyopadhyay

Soumendra Nath Lahiri

Daniel J. Nordman

The editors of the Bernoulli Journal, Mark Podolskij and Markus Reiss, have appointed the following paper as the Bernoulli journal read paper at BS-IMS WC: "*A General Frequency Domain Method for Assessing Spatial Covariance Structures*" by Matthew Van Hala,

Soutir Bandyopadhyay, Soumendra Nath Lahiri, and Daniel J. Nordman.

Congratulations to the authors!

The Editor
Madrid

New Executive Members in the Bernoulli Society

Virtual Event Coordinator: Leif Döring

Short Bio: Leif Döring is a full professor in the Institute of Mathematics at the University of Mannheim in Germany. He studied Mathematics and Computer Science at the University of Konstanz and Yale University and obtained his doctorate degree in 2009 in probability theory from the Technical University Berlin. Before joining the University of Mannheim he was a postdoc in Oxford, Paris and Zurich. His research interests focus on theoretical aspects of stochastic processes, currently mostly on variants of Lévy processes. During the 2020 Covid-19 pandemic he started with others the virtual One World Probability Seminar and initiated a series of further one world seminars. Presently, he is an associated editor of the Electronic Journal of Probability.

Young Researchers Committee: Imma Curato

Short Bio: Imma Curato earned her B.Sc. in Mathematics in 2006 and her M.Sc. in Applied Mathematics in 2009 from the University of Florence in Italy. She then received her Ph.D. in Mathematical Finance at the University of Pisa in 2013 and she has since then joined the Institute of Mathematical Finance at Ulm University in Germany as a teaching assistant and post-doctoral researcher. Her research is centered on developing statistical methodologies for stochastic volatility models, mixed moving average processes, and random fields. In particular, Curato and co-authors have shown the inheritance of strong mixing and weak dependence conditions under renewal sampling. These results imply that essentially all central limit theorems available in the literature for strongly mixing or weakly dependent processes can be applied when renewal sampled observations are at disposal. More recently, she has analyzed the asymptotic properties of sample moments of mixed moving average and ambit fields under weak dependence conditions.

Young Researchers Committee: Sandro Gallo

Short Bio: Sandro Gallo got his B.Sc. from University Paris VI in 2004 and his M.Sc. from University of Aix-Marseille in 2005, both in fundamental physics. In 2009 he earned the Ph.D. from the University of São Paulo. He is now an associate professor at the Federal University of São Carlos. Since his Ph.D. he had worked extensively on one-dimensional stochastic processes. Initially, he was interested in the relation between the local conditional rules and some global phenomenon such as existence, uniqueness and mixing properties of the specified measures, as well as their simulation. More recently, he started to study some asymptotic properties of Poincaré recurrence times, on the border line between dynamical systems and stochastic processes.

Young Researchers Committee: Zhenhua Lin

Short Bio: Zhenhua Lin earned his B.Sc. degree from Fudan University, his M.Sc. degree from Simom Fraser University, and his Ph.D. degree from University of Toronto. He is now a Presidential Young Professor at National University of Singapore. Lin's research interest includes functional data analysis, high-dimensional statistics and non-Euclidean data analysis. A recent focus is on construction of geometric spaces and development of intrinsic methods for statistical analysis of random sequences or functions that take values in a nonlinear space. Lin also studies geometric properties of symmetric positive-definite matrices and their applications in statistics.

ISNPS2021

INTERNATIONAL SYMPOSIUM ON NONPARAMETRIC STATISTICS

JUNE 14-18, 2021

PAPHOS, CYPRUS

REGISTER

Special Issue of the Journal of Nonparametric Statistics on ISNPS2021

Call for Papers

Submissions will be possible within the time frame: May 15th – August 20th 2021.

More details coming soon.

An Interview with Leif Döring

Interviewers: Imma Curato, Sandro Gallo, Zhenhua Lin

Leif Döring is a full professor in the Institute of Mathematics at the University of Mannheim in Germany and has been recently appointed as Virtual Event Coordinator of the Bernoulli Society. Leif has been promoting decentralized online activities with a very generous attitude, in particular he was involved in the creation of what is now the One World Probability Project. Furthermore, he acted as chair of the organizing committee of the very first Bernoulli-IMS One World Symposium. This symposium was meant to bring together the research community of probability and mathematical statistics and to give as many researchers as possible the opportunity to present their recent research results. This interview, carried out by the new Young Researchers Committee of the Bernoulli Society and comprising of Imma Curato, Sandro Gallo and Zhenhua Lin, is a retrospective on the event to reflect on the possibilities as well as the challenges of the new online environment. The event was so successful that Leif received a recognition from the President of the Bernoulli Society, Claudia Klüppelberg, and the President of the Institute of Mathematical Statistics, Susan Murphy (see the pictures below and at the end of the interview).

What were the main goals of the first virtual Bernoulli-IMS One World Symposium?

From the very beginning there were two major goals, namely to open the virtual scene for young researchers and to use the opportunity for a clear sign towards changing the travel attitude in our research community. Most virtual seminars that appeared in 2020 cover almost exclusively well-known senior speakers (including the One World Probability Seminar that I am involved in). Young researchers can now attend many talks, which is nice, but have little space to present their own results. We thought it is important to set up a large event in which as many people as possible could present and discuss their recent work. Additionally, 2020 seemed to be the right year for major improvements towards a more ecological research world. Already for some years we have been discussing with many people how to reduce our carbon footprint by transforming parts of our meetings into the virtual world, but we never managed to get started. A big advantage of this special year seems to be that people are very forgiving, so with the symposium we tried to do several steps at once. We hoped to introduce new virtual features and prove that large scale meetings can work without any traveling.

Can you give us a quick overview of the positive and negative outcomes of the 2020 Online World Symposium?

Like many other virtual activities this year, the symposium was set up without much preparation and without any past experience. This makes me cautious about feeling too negative about parts that went less well than others. The main lesson we - and other organisers of virtual conferences - learnt this year is that the online environment of a virtual conference creates different dynamics. Participants are more selective. A direct translation of regular conferences to the virtual world does not work particularly well. Regular conferences seem to profit strongly from group effects which are absent in the virtual setting. In the virtual world it is more important to involve participants actively, and it is harder to have strong participation in plenary events. That being said, the most positive outcome were the pre-recorded talks with the live-discussions. Roughly 600 participants registered to present a talk, and almost all managed to produce a 10 minute video themselves, which were of a very high standard. In inverted-classroom style videos were made accessible to all participants a week before the symposium, and were discussed in 110 live sessions during the sym-

posium week. Many live discussions went extremely well, with some having 50 participants discussing 3-8 talks, the average was about 20 participants. I would also count the new researcher events as being very successful. Events of that kind should be continued in the future in a virtual format to give young researchers without a travel budget access to insider information. On the negative side, I should mention some more experimental features that we tried. "Ask me anything" sessions, where a senior researcher offered 30 minutes of their time to all interested young researchers for a virtual discussion, were not very well attended. This was a surprise as such meetings are hard to have during regular conferences. It also took some time until the coffee gardens (places for social interactions during coffee breaks) were frequented more. The lesson we learnt is to carefully explain and communicate all new features!

Can we say that the 2020 Online World Symposium established in some sense a new paradigm for big meetings? Do you think the virtual format could/should become preferable for such meetings? Still in the same direction: do you think that online events could "completely substitute" in-person events?

There is no doubt that most of us researchers like to travel, and would prefer to continue as we are used to. In a perfect world I would also rather attend a conference in person, not least for the social aspects, but this is unfortunately not the world we live in. Climate change forces all parts of society to rethink their behaviour, and for our community this means drastically changing our travel habits. Do we have a choice of whether to move more towards virtual events or not? Not in my view.

I do believe that small specialist workshops are still preferable in person, since this is where the real work is done and young researchers get to know their close community in person. The situation is different for big generalist conferences, which I think should always become virtual - with the exception of local meetings where people can travel without flying. The symposium has proven that a large generalist conference can be completely substituted, and in some ways improved, by moving to the virtual world. Since a big meeting is aimed far more towards gaining an overview over different fields than on specific research work with collaborators, the selective nature of virtual events becomes an advantage. We had enthusiastic feedback from many participants concerning the possibility of browsing (some at speed 1.5) through many pre-recorded talks and then discussing the ones of specific interest with the speaker during the live sessions. With this more efficient way of attending talks participants can be simultaneously more broad and more specialised with the same investment of time. The symposium was also more inclusive than

comparable events as by nature it did not require travel budgets. We saw many participants from developing countries who could not afford long-distance travel. Since big meetings aim at gathering the community, an increase of inclusivity is a big plus.

We have a unique opportunity to use the situation in 2020/2021 to take a big step towards a more sustainable research world. I am happy the symposium was one example among many others that proved that more ecological substitutes can really work!

Do you think that attending online conferences brings a better work/life balance? On the one hand, many more people are able to attend the event, but on the other it is possible that they are less able to dedicate themselves fully to it (due to being at home, family, teaching duties...)

This year we are facing two effects at once: the rise of virtual activities and the COVID pandemic. The pandemic forces all of us to spend far too much time in video calls, and for many has also created delicate family situations at home. This naturally decreases the desire to spend more time online in virtual seminars and conferences. It will be interesting to see the reaction to virtual conferences in regular times, when we are not so tired of online activities.

It will also take some time for the community to accept that a virtual conference is a conference and as such should be treated as a full-time commitment. I had a chat in the coffee gardens with a postdoc who claimed the symposium was the most useful conference he had attended, both in terms of Mathematics and socialising/networking. Just as for a regular conference he committed his entire week to the symposium in order to get as much as possible from the symposium (several ask-me-anything sessions, plenty of live discussions and plenary talks, and discussions in the coffee gardens continued by extensive discussions on zoom). This is something to learn for future virtual events in non-pandemic times: fix the week, go to the office, close your office door, pretend you are away for a conference. I definitely consider evenings spent at home with family and friends and no weekends or nights at airports to be a better work/life balance!

Could you give us some details on the way the event was organized. For instance, in practice, how many people were involved in organising the conference? How much time did the organisation take? And another important point: according to your experience, do you feel it required less work than organising a standard in-person event?

Three months before the symposium we started to discuss first ideas, set up a website, and sent out the announcement. Things moved very fast, and we were still clarifying the main ideas in the weeks running up to the event. The organisation team consisted of Siva Athreya, Andreas Kyprianou, Jean-Christophe Mour-

rat, Christian Robert, and myself. Since there was not enough time to involve further committees, all decisions were taken by ourselves and the presidents of the Bernoulli Society (Claudia Klüppelberg) and IMS (Susan Murphy). The lack of time forced us to be extremely efficient regarding discussions and decisions, and a topic rarely took more than a day from first idea to decision. This is very unusual but is the only way to organise a major conference in so little time.

I found the organisation of virtual activities to be far simpler than is typical for in-person events. The focus of a virtual event lies almost entirely on the scientific content, and much of the work required by a regular event - coffee breaks, conference dinner, hotels for participants, venues, etc - is non-existent. I estimate that the entire organisation of the symposium would have taken 10 weeks for one person working full-time. Since this was the first edition it was hard to delegate work; for future events the work could be significantly optimised. It is crucial to use good tools for registration, but all are available for free. A professional partner could be involved to reduce the workload, but in my eyes the benefits do not justify the costs. By not in-

volving a professional partner we were able to run the symposium completely free of charge for everyone, a goal we set ourselves at the outset in order to be as inclusive as possible.

Do you have any advice for the organisers of an online conference in the future?

Do not try to mimic a regular conference, be more interactive: the inverted-classroom style talks seem to be a step in the right direction. All new features must be explained well if they are not already commonly used in your community, otherwise people won't take advantage of them. It is also important to explain to participants how they can get the most out of the conference. In particular, young researchers might be encouraged to rethink how to organize their time in an optimal way. A virtual conference should be seen as a legitimate conference, with serious time devoted to all opportunities. From the technical side, be careful when selecting streaming software. Currently zoom seems a good choice as it can handle large audiences and is cheap, but there will certainly be alternatives appearing in the next few years.

The Bernoulli Society for Mathematical Statistics & Probability
and
The Institute of Mathematical Statistics

recognise

Leif Döring

For exceptional creativity and commitment, bringing our community together through the very first Bernoulli-IMS One World Symposium.

Claudia Klüppelberg , Bernoulli President   *Susan Murphy, IMS President*

Bernoulli Society
for Mathematical Statistics
and Probability

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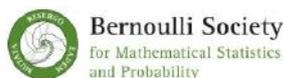
Past Conferences, Meetings and Workshops

Organized, Sponsored and Co-Sponsored by Bernoulli-IMS One World Symposium
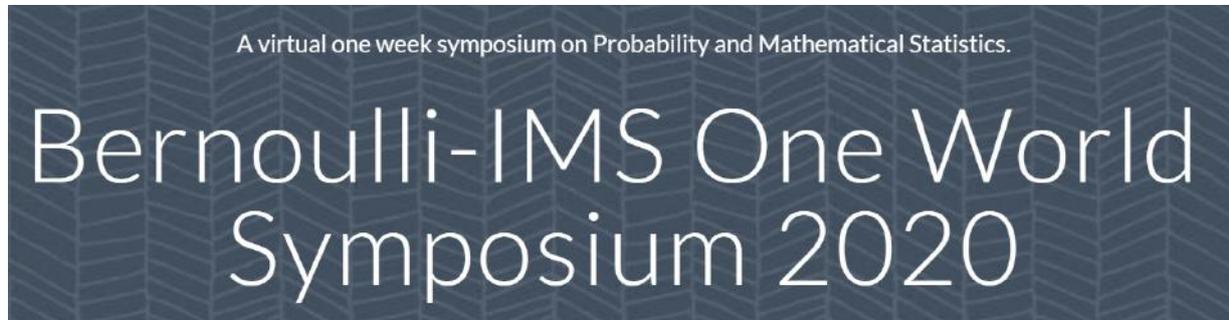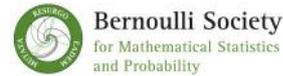
Due to the global Covid-19 pandemic, the Bernoulli-IMS 10th World Congress in Probability and Statistics, to be held in Seoul and originally planned for the summer of 2020, had to be rescheduled for the dates of 19–23 of July 2021. With the purpose of still bringing together researchers in the community of probability and mathematical statistics during the Covid-19 pandemic, the Bernoulli Society and the Institute of Mathematical Statistics decided to organize a new virtual event which was eventually called the *Bernoulli-IMS One World Symposium*. The event was held virtually from the 24th to the 28th of August and included a number of new experimental features which turned out to be highly successful. The organizing committee was chaired by Leif Döring (University of Mannheim) and comprised of Siva Athreya (Indian Statistical Institute), Andreas Kyprianou (University of Bath), Jean-Christophe Mourrat (New York University) and Christian Robert (University of Warwick).

The common denominator of the event was inclusivity and this was reflected by many features of the symposium as well as by one of its slogans "*Accessible for everyone from everywhere*". First, participation at the symposium was free. Second, early career researchers were highly encouraged to present their work. Third, plenary live sessions took place twice to ensure participants from any time zone could attend live.

The symposium featured four plenary speakers: Emmanuel Candes (Stanford University) "*Conformal Prediction in 2020*"; Martin Hairer (Imperial College) "*Stochastic Yang-Mills*"; Kerrie Mengersen (Queensland University of Technology) "*Modelling and Analysis of Crowdsourced Data*"; Wendelin Werner (ETH Zurich) "*How to Derive the Values of Some Divide-and-Color Exponents*". Plenary sessions included presentations of early career awards, namely the *Bernoulli Society New Researcher Award* (by Nina Holden, Xin Sun and Li-Cheng Tsai), the *IMS Lawrence D. Brown Ph.D. Student Award* (by Yuqi Gu, Didong Li and Ash-

win Pananjady) and *Tweedie New Researcher Award* (by Adel Javanmard).

More than 600 contributed talks, organized in 23 themed sessions ranging from random matrices to Bayesian statistics, were delivered in an innovative yet successful way. One week before the event, each contributor uploaded a ten minute video which was accessible to all participants since it was posted on YouTube channels. Participants then had the possibility of interacting with the speaker as well as discussing the presentation with others in three ways: by commenting the YouTube video, by posting on an appropriate Slack channel, or during a live discussion which took place remotely during the symposium using an "inverted classroom" approach. Around 100 contributed posters were additionally presented at the conference.

Novel methods for interaction were used during the symposium which, whilst not fully used by participants at the beginning, eventually turned out to be highly successful. Initiatives included: *career path discussions*, where senior academics addressed job market topics for different parts of the world; a *coffee garden*, which emulated in-person, usual coffee-breaks at conferences in the virtual setting; *ask me anything* sessions where participants had the possibility of, indeed, ask anything to an experienced academic; and *icebreaker* sessions, which consisted of random pairing of participants for a "speed-date".

Despite the virtual nature of the event, the level of engagement and the number of interactions even exceeded those of an in-person traditional conference. The event was highly successful thanks to the great efforts of the organizing committee. As a matter of fact, the lessons learnt from the symposium, which has been one of the first academic conferences to fully take place virtually, paves the way for all future virtual academic meetings and for a more environmentally-friendly academic world.

The Editor
Madrid

The One World Extremes Seminar

Sometimes we become witnesses of events that happen only once in a while, but whose (adverse) effects shape our lives more profoundly than those that we experience in what we might refer to as "normal" times. Members of the Bernoulli Society will have their own preferences on how to capture these concepts in mathematical terms, but eventually we might agree that the pandemic that has hit the globe in 2020 can be considered an extreme event - one that also challenges us to rethink the ways in which scientific exchange and scientific community can be kept alive. While there needs to be more than one answer to this, it has been encouraging to see the mathematical sciences embracing a new online seminar culture, one that also brings along several benefits: easier accessibility, widening participation, enabling more diversity and inclusion, reducing carbon emissions and travel time. Recently, I even learned from colleagues that they enjoy discussing seminar talks, while they are happening, something that would not be feasible when part of an audience in one room.

Just as the One World Probability project (https://www.owprobability.org) has taken a lead in establishing online platforms of exchange when it comes to core probability themes, it has also been an inspiration for many other communities to follow a similar route along their own specific needs. This is how the One World Extremes seminar (https://sites.google.com/view/ow-extremes) has been born in consultation with the board of the journal Extremes (https://www.springer.com/journal/10687). It seeks to keep researchers with an interest in Extreme Value Theory (EVT) virtually connected. Speaking for the organisers, we are glad that the Bernoulli Society has agreed at short notice to support this initiative and I would also like to thank its president, Claudia Klüppelberg, for her personal encouragement to bring this seminar series to life, and my co-organisers Raphaël Huser (KAUST), Marco Oesting (Stuttgart), Gilles Stupfler (ENSAI) and Yizao Wang (Cincinnati) for being so readily available in all aspects of the practical implementation. Huge thanks also to Gilles for setting up a world-wide Extreme Value Analysis mailing-list and newsletter in parallel! (To subscribe,

please contact e.v.analysis.news@gmail.com).

At present One World Extremes seminars take place on a monthly basis and try to keep a balance among a variety of EVT themes (including theory and applications). The organising team tried to be mindful of the reality that most academics will already spend a lot of their time in digital environments. That said, I would like to point out that the series is still in an experimental stage, and feedback is always highly welcomed. Schedules and implementation will be revised and adapted according to the community response that the organisers seek to collect during the next international conference on Extreme Value Analysis (28th June - 2nd July 2021, https://www.maths.ed.ac.uk/school-of-mathematics/eva-2021).

Something that I find personally delightful about EVT as a research area is the way it builds bridges between beautiful (and often challenging) mathematics on the one hand and its critical role in applications, many of which concern all of us, on the other. The One World Extremes seminars may still be very young, but I am pleased that we have seen already part of this breadth (and depth!) in the first talks: Johan Segers (Louvain) shared latest findings on classification in extreme regions, Dan Cooley (CSU), who is a passionate ambassador for "climo-statistics", gave an overview over developments on transformed linear models for studying extremes; Gennady Samorodnitsky (Cornell) explained how extreme values cluster under moderate long range dependence and moderately heavy tails. Given that we are living through a global pandemic quite naturally the question arises: What do we know about extremes in public health? This September Valérie Chavez-Demoulin (UNIL) gave us new insights on modelling the extremes of seasonal viruses and hospital congestion.

As I am writing this short reflection, several parts of the world see increased transmission of COVID-19, my own city being no exception. It is not a situation that will pass by quickly and regardless of the developments related to the pandemic, virtual seminars are here to stay as part of our research exchange (also for very good reasons). The kick-off meeting of the One World Extremes seminar in June 2020 attracted an in-

ternational audience of more than 120 participants. Since then, to me, they have become a monthly highlight of my academic life. Beyond the scientific exchange it has also been reassuring to see colleagues from around the world participate and - just as me - being thrilled by the joy when you realize somebody on the other end of the world is there, whom you have hardly ever seen for a couple of years. I enthusias-

tically look forward to our next meeting on 20th October, when Chen Zhou (Rotterdam) will go "back to the roots" of EVT introducing the "All block maxima" method. Please feel welcome to join!

Kirstin Strokorb
Chair of the Organizing Committee
Cardiff

Calendar of Events

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

A more comprehensive calendar of events is available on the BS Website `www.bernoulli-society.org/index.php/meetings`.

May 2021

- 🔘 June 14–18 (2021), *Frontier Probability Days*; Las Vegas, USA

June 2021

- 🔘 June 14–18 (2021), *International Symposium on Nonparametric Statistics*; Paphos, Cyprus

- 🔘 June 28–July 01 (2021), *Rényi 100*; Budapest, Hungary.

- 🔘 June 28–July 02 (2021), *International Conference on Robust Statistics*; Wien, Austria.

- 🔘 June 28–July 02 (2021), *Extreme Value Analysis*; Edinburgh, Scotland.

July 2021

- July 11–15 (2021), *63rd ISI World Statistics Congress*; online.

- 🔘 July 19–23 (2021), *Bernoulli-IMS World Congress*; Seul, Korea.

- 🔘 July 20–31 (2021), *São Paulo School of advanced science on singular stochastic partial differential equations and their applications*; Campinas, Brazil

Postponed

- 🔘 *23rd Conference of the Romanian Society of Probability and Statistics*; Timisoara, Romania.

- 🔘 *40th Finnish Summer School on Probability and Statistics*; Lammi, Finland.

- 🔘 *The 6th IMS Asia Pacific Rim Meeting*; Melbourne, Australia.

Quote of the Issue:

"*We have a unique opportunity to use the situation in 2020/2021 to take a big step towards a more sustainable research world. I am happy the symposium was one example among many others that proved that more ecological substitutes can really work!*"

Leif Döring

Recent Issues of Official Publications

Bernoulli   Vol. 26, No. 4: November 2020

Editors-in-Chief: M. Podolskij & M. Reiß

http://projecteuclid.org/current/euclid.bj

"A general frequency domain method for assessing spatial covariance [...]," M. Van Hala, S. Bandyopadhyay, S.N. Lahiri, D.J. Nordman, 2463–2487.
"Deviation inequalities for random polytopes in arbitrary convex bodies," V.E. Brunel, 2488–2502.
"Nested covariance determinants and restricted trek separation in Gaussian graphical models," M. Drton, E. Robeva, L. Weihs, 2503–2540.
"High-dimensional general linear hypothesis tests via non-linear spectral shrinkage," H. Li, A. Aue, D. Paul, 2541–2571.
"Exact long time behavior of some regime switching stochastic processes," F. Lindskog, A. Pal Majumder, 2572–2604.
"Fundamental limits of exact support recovery in high dimensions," Z. Gao, S. Stoev, 2605–2638.
"Estimating linear and quadratic forms via indirect observations," A. Juditsky, A. Nemirovski, 2639–2669.
"Learning the distribution of latent variables in paired comparison models [...]," R. Diel, S. Le Corff, M. Lerasle, 2670–2698.
"Fractional stochastic wave equation driven by a Gaussian noise rough in space," J. Song, X. Song, F. Xu, 2699–2726.
"Signature cumulants, ordered partitions, and independence of stochastic processes," P. Bonnier, H. Oberhauser, 2727–2757.
"Distance covariance for discretized stochastic processes," H. Dehling, M. Matsui, T. Mikosch, G. Samorodnitsky, L. Laleh, 2758–2789.
"Rate-optimal nonparametric estimation for random coefficient regression models," H. Holzmann, A. Meister, 2790–2814.
"Inference for semiparametric Gaussian copula model adjusted for linear regression [...]," Y. Zhao, I. Gijbels, I. Van Keilegom, 2815–2846.
"Asymptotic properties of penalized splines for functional data," L. Xiao, 2847–2875.
'A perturbation analysis of Markov chains models with time-varying parameters," L. Truquet, 2876–2906.
"Testing and inference for fixed times of discontinuity in semimartingales," V. Todorov, 2907–2948.
"Penalisation techniques for one-dimensional reflected rough differential equations," A. Richard, E. Tanré, S. Torres, 2949–2986.
"Sign tests for weak principal directions,"D. Paindaveine, J. Remy, T. Verdebout, 2987–3016.
"A k-points-based distance for robust geometric inference," C. Brécheteau, C. Levrard, 3017–3050.
"Estimation of Monge matrices," J.C. Hütter, C. Mao, P. Rigollet, E. Robeva, 3051–3080.
"Nodal lengths in shrinking domains for random eigenfunctions on S^2," A.P. Todino, 3081–3110.
"Area anomaly in the rough path Brownian scaling limit of hidden Markov walks," O. Lopusanschi, D. Simon, 3111–3138.
"Concentration inequalities for random tensors," R. Vershynin, 3139–3162.
" Goodness-of-fit testing for copulas: A distribution-free approach," S.U. Can, J.H.J. Einmahl, R.J.A. Laeven, 3163–3190.
"Concentration function and heat kernel bounds," T. Grzywny, K. Szczypkowski, 3191–3223.
"Some properties of a Cauchy family on the sphere derived from the Möbius transformations," S. Kato, P. McCullagh, 3224–3248.
"Coupling and perturbation techniques for categorical time series," L. Truquet, 3249–3279.
"Bump detection in the presence of dependency: Does it ease or does it load?," F. Enikeeva, A. Munk, M. Pohlmann, F. Werner, 3280–3310.

Stochastic Processes and their Applications   Vol. 130, No. 11: November 2020

Editor-in-Chief: S. Méléard

http://www.sciencedirect.com/science/journal/03044149

"An optimal Gauss–Markov approximation for a process with stochastic drift [...]'', G. Ascione, G. D'Onofrio, L. Kostal, E. Pirozzi, 6481–6514.
"Reflected BSDEs with jumps in time-dependent convex càdlàg domains," M. Eddahbi, I. Fakhouri, Y. Ouknine, 6515-6555.
'Reflected backward stochastic differential equation driven by -Brownian motion with an upper obstacle," H. Li, S. Peng, 6556–6579.
"Genetic composition of an exponentially growing cell population," D. Cheek, T. Antal, 6580–6624.
"Penalizing fractional Brownian motion for being negative," F. Aurzada, M. Buck, M. Kilian, 6625–6637.
"Posterior contraction rates for support boundary recovery," M. Reiss, J. Schmidt-Hieber, 6638–6656.
"No-arbitrage with multiple-priors in discrete time," R. Blanchard, L. Carassus, 6657–6688.
"Quenched asymptotics for a 1-d stochastic heat equation driven by a rough spatial noise," P. Chakraborty, X. Chen, B. Gao, S. Tindel, 6689–6732.
"Ergodic control of diffusions with compound Poisson jumps [...]," A. Arapostathis, G. Pang, Y. Zheng, 6733–6756.
"Hydrodynamics of the weakly asymmetric normalized binary contact path process," X. Xue, L. Zhao, 6757–6782.
"Quenched asymptotics for interacting diffusions on inhomogeneous random graphs," E. Luçon, 6783–6842.
"Modifiers of mutation rate in selectively fluctuating environments," F. Baumdicker, E. Sester-Huss, P. Pfaffelhuber, 6483–6862.
"On the cover time of λ-biased walk on supercritical Galton–Watson trees," T. Bai, 6863–6879.
"Size biased sampling from the Dickman subordinator," Y. Ipsen, R. Maller, S. Shemehsavar, 6880–6900.
"Discontinuous Nash equilibrium points for nonzero-sum stochastic differential games," S. Hamadène, R. Mu, 6901–6926.
"Mean field games with controlled jump–diffusion dynamics [...]," C. Benazzoli, L. Campi, L. Di Persio, 6927–6964.
'Positive Harris recurrence for degenerate diffusions with internal variables [...]," S. Holbach, 6965–7003.
"Minimizing a stochastic convex function subject to stochastic constraints and some applications," R. Jacobovic, O. Kella, 7004–7018.

Bernoulli Society Bulletin e-Briefs   Vol. 42: September 2020

Editor-in-Chief: C. Améndola

http://goo.gl/G9AOgl
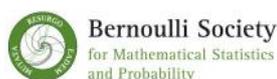
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Have a look at http://goo.gl/7EP2cZ for the latest articles in *Electronic Communications in Probability*, *Electronic Journal of Probability*, *Electronic Journal of Statistics*, *Probability Surveys* and *Statistics Surveys*, as well as *International Statistical Review*.

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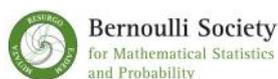
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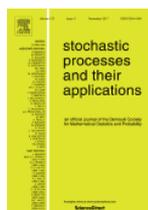
Publications and Meetings

The Bernoulli Society official journals are *Bernoulli* and *Stochastic Processes and their Applications*. In addition, the BS co-sponsors the following open-access online publications: *Electronic Communications in Probability*, *Electronic Journal of Probability*, *Electronic Journal of Statistics*, *Latin American Journal of Probability and Mathematical Statistics*, *Probability Surveys* and *Statistics Surveys*. Published twice a year, *Bernoulli News* provides detailed information about activities of the Society, while *Bernoulli* e-*Briefs* is a bimonthly electronic information bulletin that summarizes and draws the attention of relevant information to the membership.

The Bernoulli Society organizes or sponsors several international meetings which have a prominent relevance in the fields of mathematical statistics, probability, stochastic processes and their applications. These meetings are often held in conjunction with the ISI and other ISI Associations, the IMS or by the BS Regional and Standing Committees. Some of the meetings with a proud tradition are the *Bernoulli–IMS World Congress in Probability and Statistics* every four years, the *Conference on Stochastic Processes and their Applications* (SPA) organized every year, the *ISI World Statistics Congress* (formerly ISI Session), the *Latin American Congress in Probability and Mathematical Statistics* (CLAPEM) organized every two or three years, the *European Meeting of Statisticians* (EMS) organized every two years and the *European Young Statisticians Meeting* (EYSM) organized every two years.

Benefits of Joining the Bernoulli Society

- Reduced registration fees for meetings organized or sponsored by the Bernoulli Society.

- Free online access to *Bernoulli* (back to the first issue in 1995) and to *Stochastic Processes and their Applications* (back to the first issue in 1973).

- Receive the print version of *Bernoulli News* and the electronic information bulletin *Bernoulli* E-*Briefs*.

- Reduced subscription rates are available for print copies of *Bernoulli* and to online version of the ISI *International Statistical Review*.

- 10% discount on SpringerBriefs.

- Members with a BS-IMS joint membership have free on line access to the IMS journals: *Annals of Statistics*, *Annals of Probability*, *Annals of Applied Probability*, *Annals of Applied Statistics* and *Statistical Science*. They also have reduced subscription rates to print IMS publications.

Membership Application and Fees

Online Applications for Membership

- Bernoulli Society membership
  `http://isi.cbs.nl/bern-form.asp`

- Joint BS–IMS membership
  `https://secure.imstat.org/secure/orders/IndMember.asp`

- Joint BS–IMS–ISI membership
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Membership Fees for 2020

- Full members: €80.

- First year of membership for members from developed countries: €40.

- Members from developing countries, first two years of postdoc, retired members: €24.

- Joint BS–IMS memberhip: $150.

- Joint BS–IMS–ISI membership (only for elected ISI Members): €180.

- PhD Students: Free!!!