7. Research Centers

MaPhySto

The Danish National Research Foundation has recently established a Centre for Mathematical Physics and Stochastics (MaPhySto) with start April 1, 1998. Its Scientific Director is Ole E. Barndorff-Nielsen. The objective of the Centre is to strengthen the areas Mathematical Physics and Stochastics (and the interplay between these), by organizing conferences, summer schools and other activities in these areas.

More information can be found at the Centre's web page at

`http://www.maphysto.dk`

or by writing to the MaPhySto address:

Department of Mathematical Sciences
University of Aarhus
Ny Munkegade
DK-8000 Aarhus C
Denmark
phone: +45 8942 3188
fax: +45 8613 1769
email: maphysto@mi.aau.dk

Summer School (MaPhySto)
Empirical Processes
August 9–20, 1999, University of Aarhus (Denmark)

The Summer School is addressed to PhD's and PostDoc's from all over the world. There will be 4 series of principal courses (approx. 7–9 lectures of 45 minutes) on various topics from the theory of empirical processes:

- Uniform Central Limit Theorems,
  R. M. Dudley (MIT).
  Some of the lectures will be based on parts of a book by the author, also called *Uniform Central Limit Theorems* to be published by Cambridge University Press, probably in the first half of 1999.
- Empirical Processes at Work in Statistics,
  A.W. Van der Vaart (Amsterdam) and J.A. Wellner (Seattle).
- Empirical and Partial-sum Processes Revisited as Random Measure Processes,
  P. Gänssler (Munich).
  The lectures will partly base on tools from modern empirical process theory as presented e.g. in Van der Vaart and Wellner [(1996): *Weak Convergence and Empirical Processes*; Springer Series in Statistics].
- Convergence in Law of Random Elements and Sets, J. Hoffmann-Jørgensen (Aarhus).

Besides the principal lectures, there will be a series of talks by invited researchers in the area and the participating PhD's and PostDoc's. To each of the principal courses there will be Lecture Notes available.

Registration

Please register via the registration form located at

`http://www.maphysto.dk/events/EmpirProc99/register.html`

before before June 1st, 1999. The registration fee is DKK 400 (approx. $60).

More Information

From the MaPhySto web-site

`www.maphysto.dk`

you may find more information on this and other events. Some travel directions are also provided. You may also obtain more information from the local organizer

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Workshop on Stochastics and Quantum Physics (MaPhySto)
October 21–26, 1999, University of Aarhus (Denmark)

The Workshop will focus on some of the areas where concepts and techniques from Stochastics (i.e. Probability and Mathematical Statistics) are, or seem likely soon to become, of real quantum physical importance.

By bringing together leading physicists and mathematicians, having an active interest in the themes of the Workshop, it is hoped to foster fruitful discussions and collaboration on the role and use of Stochastics in Quantum Physics.

Main themes of the Workshop are listed below (with confirmed key-note speakers):

- Laser Physics/Quantum Optics,
  F. Bardou, H. Carmichael, G. Mahler
- Quantum Stochastic Processes,
  A. Barchielli, V.P. Belavkin, G. Lindblad
- Wick Products, White Noise Analysis and Malliavin Calculus,
  B. Øksendal
- The Role of Generalised Measurements and Quantum Statistical Inference,
  R. Gill, S. Massar, H. Wiseman
- Quantum Information,
  A.S. Holevo, P. Høyer, A. Peres, S. Popescu

Either just before or during the first days of the workshop, B. Øksendal will give a short course on Wick Products, Malliavin Calculus and their applications in Physics.

A number of associated topics (in a random order) are: quantum stochastic analysis; free probability; Lévy processes; laser cooling; random matrices; quantum noise in practical measurements; monitoring and feedback of quantum systems: operator valued probability measures and adaptive measurements; nonlinear and/or non-Markovian systems.

More Information

Regularly updated information can be obtained from the web-page

`www.maphysto.dk/events/QuantumStoc99/`

from where you can also register and find travel information.

Workshop on Computational Stochastics (MaPhySto)
January 17–22, 2000, University of Aarhus (Denmark)

Computational stochastics is a new and expanding area of stochastics, dealing with computational methods of analyzing complex mathematical and statistical models. The workshop intends to reveal and discuss the potential strength and impact of this new discipline in a variety of applications. It is held at the Department of Mathematical Sciences, University of Aarhus, and organized by StocLab (Laboratory for Computational Stochastics) and MaPhySto, University of Aarhus.

The organizing committee consists of Søren Asmussen (Lund) and Eva B. Vedel Jensen (Aarhus).

The keynote addresses will contain a fair amount of tutorial material. The tentative list of speakers is as follows:

- Conditional Simulation,
  Adrian Baddeley (Perth)
- Computational Inference in Genetics,
  Peter Donnelly (Oxford)
- Stochastic Deformation, Ian Dryden (Leeds)
- Simulation Methodology in Applied Probability,
  Peter Glynn (Stanford)
- The Third Science—the Computer Experiment,
  Ole Mouritsen (DTU, Copenhagen)
- Numerical Methods for Markov Chains,
  William Stewart (Raleigh, NC)

Further invited speakers include Rudolf Grübel (Hannover), Jotun Hein (Aarhus), Anders Krogh (DTU, Copenhagen) and Neil Shephard (Nuffield College, Oxford; unconfirmed).

Contributions

Contributed papers should be submitted (to the address below) before October 1, 1999. Due to time- and space constraints, papers for presentation will be selected by the organizers. Other papers can be presented at poster sessions.

More Information

From the web-page

`www.maphysto.dk/events/CompStoc2000/.`

Here you also can register and find travel information. The registration fee is DKK 500 (approx. $75).

Fields Institute

NATO Advanced Studies Institute on Mathematical Problems Arising from Biology June 14–24, 1999, Fields Institute, Toronto (Canada)

Organizing Committee

Richard Durrett, Cornell University; Claudia Neuhauser, University of Minnesota.

Programme Committee

Donald Dawson, Fields Institute; Odo Diekmann, University of Utrecht; Richard Durrett, Cornell University; Simon Levin, Princeton University; Claudia Neuhauser, University of Minnesota.

Invited speakers

Odo Diekmann, University of Utrecht;
Peter Donnelly, Oxford University;
Joe Felsenstein, University of Washington;
Brian Golding, McMaster University;
Bryan Grenfell, Cambridge University;
Andreas Greven, University of Erlangen;
Robert Griffiths, Monash University;
Alan Hastings, University of California, Davis;
Richard Hudson, McMaster University;
Norm Kaplan, National Institute of Environmental Health Sciences, Research Triangle Park;
Simon Levin, Princeton University;
Hans Metz, Leiden University;
Denis Mollison, Heriott-Watt University;
Steve Pacala, Princeton University;
David Rand, University of Warwick;
David Sankoff, Centre de Recherches Mathematiques, Universite de Montreal;
Simon Tavare, University of Southern California;
Arndt von Häseler, Universität München

The workshop will focus on the many interesting mathematical problems that are motivated by a desire to understand the workings of various biological systems. In order to facilitate and stimulate interdisciplinary research, the workshop will bring together a broad range of biologists, mathematical biologists, and mathematicians. Each invited speaker will deliver two lectures. The emphasis in the first week will be ecological models, and in the second population genetics.

For further information about the workshop and the program, please see the program website

`http: www.fields.utoronto.ca/biol.html`

or contact

The Fields Institute
for Research in Mathematical Sciences
222 College Street
Second Floor
Toronto
Ontario, M5T 3J1 phone: +1 416 348 9710
Canada fax: +1 416 348 9385

Workshop on Conditional Independence Structures and Graphical Models September 27 – October 1, 1999, The Fields Institute, Toronto (Canada)

Organized within the Fields Institute Main Research Program Causal Interpretation and Identification of Conditional Independence Structures

Main Speakers

Phil Dawid, Jan Koster, Steffen Lauritzen, Azaria Paz, Michael Perlman, Glenn Shafer, Prakash Shenoy, Nanny Wermuth, Raymond Yeung, Zhen Zhang

Further Information

A web page with updated information, postscript versions of all announcements and further details is at

`http://www.utia.cas.cz/user_data/matus/toronto'99/workshop.html`

Contact Addresses

To register or to obtain the second announcement, please send an email to cis@utia.cas.cz. For registration provide your full mailing address, email address, fax and phone numbers and say whether you wish to present a paper.

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