



MAPHYSTO

CENTRE FOR MATHEMATICAL PHYSICS AND STOCHASTICS

Introduction

The Centre for Mathematical Physics and Stochastics — **MaPhySto** — is a mathematical research centre funded by the Danish National Research Foundation. The Centre came into existence on 1 April 1998 and it is located administratively at Department of Mathematical Sciences, University of Aarhus.

The Scientific Director is Ole E. Barndorff-Nielsen and a group of about twenty mathematicians, from the universities of Copenhagen, Odense, Aalborg and Aarhus, are associated with the Centre as “Principal Investigators”. In addition, the Centre comprises a number of “Associated Investigators”.

Up-to-date information on the Centre may be found at www.maphysto.dk. Here you may also find more elaborate information on past and future events, publications, guests at the Centre etc.

Areas of Research

The main fields of activity of **MaPhySto** are Mathematical Physics (e. g. quantum mechanics, statistical mechanics, quantum field theory), Stochastics (e. g. stochastic analysis, interactive particle systems, stochastic matrices, free probability), with some particular emphasis on the interplay between these two fields.

Aspects of Stochastic Computation, Inverse Problems and Analytic Number Theory are also part of the ambit of the Centre.

Activities

The personal research of the participating investigators form the backbone of the Centre activities. Based on this, **MaPhySto** aims to build up knowledge and research in parts of the above-mentioned areas that seem of key importance for future developments in mathematics, whether theoretical or applied. It is sought, in particular, to expand and make more coherent the spectrum of competence represented in mathematics in Denmark.

Concretely, **MaPhySto** seeks to achieve this through a broad range of activities: short and long term visits by leading international researchers; workshops; conferences; concentrated advanced courses; and summer-schools. Longer lecture series by international or Danish mathematicians are also given.

As an important element in securing a lasting effect of these endeavours the Centre has a number of postdoc positions, that are generally announced internationally.

Publications

The Centre distributes three series of research publications:

Research Reports: For fast communication of new results obtained by researchers affiliated to the Centre.

Lecture Notes Series: This series contains conference proceedings, lecture notes from summer schools/concentrated advanced courses etc.

Miscellanea: Various publications.

Furthermore, the Centre is bi-annually distributing a short news pamphlet **MaPhySto News** about the Centre and its activities.

Danish Participants

The above-mentioned investigators are:

- Jan Ambjørn (Copenhagen),
- Jørgen Ellegaard Andersen (Aarhus),
- Søren Asmussen (Lund),
- Erik Balslev (Aarhus),
- Ole E. Barndorff-Nielsen (Aarhus),
- Jørgen Christensen-Dalsgaard (Aarhus),
- Bergfinnur Durhuus (Copenhagen),
- Svend Erik Graversen (Aarhus),
- Uffe Haagerup (Odense),
- Martin Bøgsted Hansen (Aalborg),
- Jørgen Hoffmann-Jørgensen (Aarhus),
- Bo Holm-Jacobsen (Aarhus),
- Martin Jacobsen (Copenhagen),
- Arne Jensen (Aalborg),
- Eva B. Vedel Jensen (Aarhus),
- Jens Ledet Jensen (Aarhus),
- Steffen L. Lauritzen (Aalborg),
- Klaus Mølmer (Aarhus),
- Klaus Mosegaard (Copenhagen),
- Jesper Møller (Aalborg),

- Goran Peskir (Aarhus),
- Michael Sørensen (Copenhagen),
- Erik Skibsted (Aarhus),
- Jan Philip Solovej (Copenhagen).

International Collaboration

The participating investigators all have close ties with international colleagues. Collaborative ties with other European centres and groups, having interests close to those of **MaPhySto**, are continuously developed.

More Information

The Centre may be contacted at:

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Do not hesitate to contact the staff of the Centre to obtain further information:

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