



THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

IMA CONFERENCE ON MATHEMATICS IN THE SCIENCE OF COMPLEX SYSTEMS

18 - 21 September 2006 - Warwick University, UK

CALL FOR PAPERS

Synopsis

The science of complex systems is providing radical new ways of understanding the physical, biological, ecological, and social universe. Mathematics has a central role in complex systems science and this conference is an opportunity for leading researchers in the field to disseminate their work to a wide audience, and for mathematicians and scientists to get an overview of the contribution mathematics is making in complex systems science. The conference will address all aspects of mathematics and its applications to complex systems in all domains. Contributions to the conference will be accepted on the basis of an abstract (300-500 words), which should be submitted to the Institute of Mathematics, preferably electronically to Lucy.Nye@ima.org.uk by 31 July 2006.

Invited Speakers include:

Dieter Armbruster (Arizona State University)
Geoffrey Grimmett, (University of Cambridge)
Jürgen Jost, (Max Planck Institute, Leipzig)
Christian Maes, (Katholieke Universiteit Leuven)
Norman Packard - (ProtoLife)
Ian Stewart - (University of Warwick)

The proceedings of the conference will be published online by the European Complex Systems Society. Selected papers will be published in the Interface Journal of the Royal Society.

Organising Committee:

Jeffrey Johnson (Chair) (Open University)
Peter Allen (Cranfield)
David Arrowsmith (QMUL)
David Broomhead (UMIST)
Chris Budd (University of Bath)
Frank den Hollander (Universiteit Leiden)
Henrik Jensen (Imperial College)
Marcus Kirkilionis (Warwick University)
Robert MacKay (Warwick University)

The conference will include a half-day mini-symposia. Suggested themes include:

Networks
Systems Biology/Neuroscience
Many-body quantum mechanics
Control of complex systems/Policy
Spatially extended stochastics
Game theory/Interacting agents
Self-organisation/Evolution Social behaviour and Socio-technical systems
Large deviation theory/power laws/extreme events
Macro from Micro
Inference from data
Turbulence
Ecology
Climate and climate change
Seismology

The Organising Committee will select proposals for mini-symposia according to their scientific merits, including radically new mathematical approaches, and their integration into the general themes of the conference. Those interested in organising a mini-symposium should contact Jeff Johnson by email (j.h.johnson@open.ac.uk) outlining their proposal and potential speakers. Proposals can be discussed informally with him on +44-(0)1908-652627. In order to allow time to organise workshops, the Organising Committee will respond to proposals within two to three weeks of them being received, and early submission is recommended.

The conference will be held at the Mathematics Institute at Warwick University <http://www.maths.warwick.ac.uk/>. En-suite and standard accommodation will be available.

This event will meet the requirements of the IMA Continuing Professional Development Scheme.

If you are interested in attending or contributing to this conference please register your interest by emailing Lucy.Nye@ima.org.uk