MAX-PLANCK-INSTITUT FÜR PHYSIK KOMPLEXER SYSTEME, DRESDEN, GERMANY

International Workshop on

ENRAGEing Perspectives - Random Geometry and Random Matrices: From Quantum Gravity to Econophysics

May 18 - 22, 2009

Scientific Coordination:
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Germany

Organisation:
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Germany

A primary focus of the ENRAGE network on “Random Geometry and Random Matrices: From Quantum Gravity to Econophysics” within the Marie Curie Research and Training Network Program of the EU is the further systematic development of non-perturbative analytic and numerical tools from the theory of discrete random geometries, and their application to some fundamental problems. These methods are rooted in quantum field theory and the theory of critical phenomena. They are ideally suited for a non-perturbative description of quantum-gravitational and string theories, because they do not require any a priori distinguished background geometry.

This concluding conference of the ENRAGE network is devoted to a discussion of our knowledge on the dynamics of lower-dimensional geometries such as graphs and surfaces and the closely related theory of random matrices. Pioneering advances will be reported in the study of the critical behaviour of higher-dimensional random geometries. Other challenging applications range from spin-glass and other disordered materials over combinatorial optimization problems to quantum field theory treatments of complex networks. Also new numerical algorithms for simulating random geometries, non-equilibrium mass transport studies and contributions to econophysics will be reviewed.

Invited speakers: (to be confirmed)*

Jan Ambjørn (Copenhagen)
David H. Bailey* (Berkeley)
Bernd A. Berg (Tallahassee)
Elmar Bittner (Leipzig)
Richard Blythe (Edinburgh)
Steven Boughn (Haverford)
Zdzisław Burda (Krakow)
Leticia Cugliandolo* (Paris)
François David (Saclay)
Domenec Espriu (Barcelona)
Martin Evans (Edinburgh)
Rudolf Hilfer (Stuttgart)
Des Johnston (Edinburgh)
Thórdur Jónsson (Reykjavik)
Jerzy Jurkiewicz (Krakow)
Ralph Kenna (Coventry)
Hagen Kleinert (Berlin)
Edwin Laermann (Bielefeld)
Renate Loll (Utrecht)
Michael Moore (Manchester)
Bengt Petersson (Berlin)
Martin Reuter (Mainz)
David Saad (Aston)
George Savvidy (Athens)
Eugene Stanley (Boston)
Graziano Vernizzi (Evanston)
Martin Weigel (Mainz)
Tilo Wettig (Regensburg)
John Wheater (Oxford)
Paul Zinn-Justin (Paris)

Applications for participation and poster contributions are welcome and should be made by using the application form on the workshop web page (please see URL below). The number of attendees is limited. The **registration fee** for the workshop is **100 €** and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses. Please note that childcare is available upon request.

Deadline for registration is March 15, 2009.

For further information please contact:
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