

CONFERENCE PROGRAM

Sunday, December 16, 2012

8:00 – 9:00 Registration and breakfast

9:00 – 9:25 H. Kojima, Rutgers University

Simultaneous Measurements of Torsional Oscillation and 10 MHz Ultrasound Propagation in Solid He-4 at Low Temperatures

9:25 – 9:50 M. Anisimov, University of Maryland

Entropy-driven liquid-liquid transitions in pure substances

9:50 – 10:15 D. Lathrop, University of Maryland

Characterization of Quantized Vortices in Superfluid Helium

10:15 – 10:45 Coffee

10:45 – 11:10 J. Ortiz Zarate, Universidad Complutense Madrid

Fluctuating hydrodynamics for nonequilibrium steady states

11:10 – 11:35 E. Andrei, Rutgers University

Electronic Cloaking of impurities through Landau level filling in graphene

11:35 – 12:00 P. Fendley, University of Virginia

The Uses of Topology for Spin Systems

12:00 – 12:35 S. Sachdev, Harvard University

Conformal field theories in 3 dimensions, and holography

12:25 – 2:00 Lunch

2:00 – 2:25 M. Rigol, Georgetown University

Nonequilibrium dynamics of a quasi-disordered quantum system after a quench

2:25 – 2:50 M. Kastner, National Institute for Theoretical Physics - Wallenberg Research Centre

Relaxation timescales in closed long-range quantum spin models

2:50 – 3:15 M. Dykman, Michigan State University

Quantum heating and switching via quantum activation in modulated systems

3:15 – 3:40 G. Stanley, Boston University

The fragility of interdependency: Coupled networks and switching phenomena

3:40 – 4:10 Coffee

4:10 – 4:35 S. Leibler, Rockefeller University

TBA

4:35 – 5:00 D. Hekstra, University of Texas Southwestern
Making histories: population fluctuations in replicate closed ecosystems

5:00 – 5:25 B. Mulder, FOM Institute AMOLF
Taking directions: Principles of self-organisation in the plant cortical array

5:25 - 5:50 H. Levine, Rice University
Cell Motility - getting from the individual to collective tissue motion

6:00 – 7:00 COCKTAILS AND CONCERT SPONSORED BY SPRINGER, PUBLISHER OF JOURNAL OF STATISTICAL PHYSICS AND COMMUNICATIONS IN MATHEMATICAL PHYSICS. ALL ARE INVITED.

7:00 – 8:00 CONCERT, Trio Affettuoso: Elena Chernova-Davis, Michael Davis and Daniel Merriman

8:00 BANQUET. ADVANCED RESERVATIONS ARE REQUIRED.

Monday, December 17, 2012

7:45 – 8:30 Registration and breakfast

8:30 – 9:30 Short talks, Session A

9:30 – 10:00 Coffee

10:00 – 10:25 J. Zhang, New York University
Experimental attempts to simulate continental drift

10:25 – 10:50 D. Stein, New York University
Interfaces in Short-Range Spin Glasses

10:50-11:15 J. Banavar, University of Maryland
Network architectures of mutualistic ecological communities

11:15 – 11:40 A. Bertozzi, University of California Los Angeles
Mathematics of crime

11:40 – 12:05 F. Dyson, Institute for Advanced Studies
New strategies for prisoner's dilemma

12:05 – 12:35 Human Rights session with ...

12:35 – 2:00 Lunch

2:00 – 2:25 J. Beamish, University of Alberta, Canada
Elastic and Plastic Behavior in Solid Helium?

2:25 – 2:50 M. Chan, Pennsylvania State University
The rise and fall of supersolidity

2:50 – 3:15 M. Sano, Tokyo University
Directed Percolation and Transition to Turbulence in Sheared Liquid Crystals

3:15 – 3:40 Coffee

3:40 – 4:10 I. Procaccia, The Weizmann Institute of Science
Plasticity and Shear Bands in Amorphous Solids

4:10 – 4:25 P. Fratzl, Max Planck Institute of Colloids and Interfaces
Modeling the phase transformation which controls the mechanical behavior of a protein filament

4:25 – 5:00 A. Panagiotopoulos, Princeton University
Anisotropic Structures from Isotropic Building Blocks: Grafted Nanoparticle Systems

5:00 – 5:25 W. Zhang, University of Chicago
Still water Dead zones and collimated ejecta from the impact of granular jets

5:25 – 5:50 R. Goldstein, Cambridge University
Shape of a Ponytail and the Statistical Physics of Hair Fiber Bundles

6:00 – 8:00 Cocktails and dinner

8:00 – 9:15 On the contributions of our guests of honor: Michael Fisher, Chair

8:00 – 8:25 John Reppy by Moses Chan

8:25 – 8:50 Jan Sengers by Robert Dorfman

8:50 – 9:15 Harry Swinney by Ray Goldstein

Tuesday, December 18, 2012

8:00 – 9:00 Registration and breakfast

10:30 – 10:55 G. Gallavotti, Università di Roma La Sapienza & Rutgers University
Formal perturbation analysis of a non equilibrium stationary state

10:55 – 11:20 J. Chen, University of Waterloo
Structures induced from a polymer-membrane interaction: Monte Carlo simulations

11:20 – 11:45 M. Kardar, MIT
Polymer-mediated entropic forces between scale-free objects

11:45 – 12:10 J. Froehlich, ETH Zurich
Dissipative Motion from a Hamiltonian Point of View

12:10 – 1:30 Lunch

1:30 – 1:55 T. Sasamoto, Chiba University
The stationary correlations of the 1D KPZ equation

1:55 – 2:20 I. Corwin, Clay Mathematics Institute and MIT
Integrability in the Kardar-Parisi-Zhang universality class

2:20 – 2:45 J.P. Eckmann, University of Geneva
Non-equilibrium steady states for networks of springs

2:45 – 3:10 C. Giardinà, University of Modena and Reggio Emilia
Exactly solvable diffusions and heat conduction

3:10 – 3:35 R. Seiler, Technische Universität Berlin
The Quantum Sanov Theorem: A Cradle for Fundamental Results in Information Theory

3:35 – Short talks, Session C